

PROJECT MANUAL - VOLUME 1

Issued for Bidding: June 1, 2015
Project No.: 14-004

MULTI-PURPOSE FACILITY Bid Package 1

M-02A Excavation, Grading, & Site Utilities
for

Joliet Junior College

1215 Houbolt Road
Joliet, Illinois 60431



DEMONICA KEMPER ARCHITECTS

125 N. Halsted Street, Suite 301
Chicago, Illinois 60661
Phone: 312.496.0000



JOLIET JUNIOR COLLEGE

1901

(Business & Auxiliary Services)
1215 Houbolt Road
Joliet, Illinois 60431-8938

INSTRUCTIONS TO BIDDERS

Sealed proposals are invited for **BID RELEASE 1 - MULTIPURPOSE FACILITY: M-02A EXCAVATION, GRADING, AND SITE UTILITIES** pursuant to specifications.

PROPOSALS:

Proposals will be received and publicly read aloud by the Joliet Junior College District #525, Joliet, Will County, Illinois, at the place, date and time hereinafter designated. You are invited to be present if you so desire.

PLACE: Joliet Junior College District #525
Office of Business & Auxiliary Services
A-BUILDING Room #A3100
1215 Houbolt Road
Joliet, IL 60431-8938

DATE: **JUNE 30, 2015**

FAXES ARE NOT ACCEPTABLE

TIME: **2:00 PM**

Proposals received after this time will not be accepted.

Proposals must be made in accordance with the instructions contained herein. They shall be submitted on the forms provided on the College's website in a sealed envelope addressed to the Director of Business & Auxiliary Services, A-Building Room A3100, plainly marked, with the Bidder's Name and Address and the notation:

BID: **BID RELEASE 1 - MULTIPURPOSE FACILITY: M02-A EXCAVATION, GRADING, AND SITE UTILITIES**

A public bid opening will take place at 2:00 pm on June 30, 2015 at the Main Campus, T Building, Room T1000, 1215 Houbolt Road, Joliet, IL. *Bids will not be accepted at this location.*

PRE-BID MEETING:

A mandatory pre-bid meeting will be held on **JUNE 11, 2015 at 9:00AM**. The meeting will be at the Main Campus, T Building, Room T1000, 1215 Houbolt Road, Joliet, IL. Bidders who do not attend the mandatory pre-bid meeting will have their bid returned unopened.

DELIVERY:

All prices must be quoted F.O.B., Joliet Junior College, 1215 Houbolt Road, Joliet, IL 60431 unless otherwise noted.

TAX EXEMPTION:

Joliet Junior College District #525 is exempt from Federal, State, and Municipal taxes.

SIGNATURE ON BIDS:

Joliet Junior College District #525 requires the signature on bid documents to be that of an authorized representative of said company.

Each bidder, by making his bid, represents that he has read and understands the bidding documents and that these instructions to bidders are a part of the specifications.

BIDDING PROCEDURES:

1. No bid shall be modified, withdrawn, or cancelled for sixty (60) days after the bid opening date without the consent of the College Board of Trustees.
2. Changes or corrections may be made in the bid documents after they have been issued and before bids are received. In such case, a written addendum describing the change or correction will be issued by the College to all bidders of record. Such addendum shall take precedence over that portion of the documents concerned, and shall become part of the bid documents. Except in unusual cases, addendum will be issued to reach the bidders at least five (5) days prior to date established for receipt of bids.
3. Each bidder shall carefully examine all bid documents and all addenda thereto, and shall thoroughly familiarize themselves with the detailed requirements thereof prior to submitting a proposal. Should a bidder find discrepancies or ambiguities in, or omissions from documents, or should they be in doubt as to their meaning, they shall, at once, and in any event, not later than ten (10) days prior to bid due date, notify the College who will, if necessary, send written addendum to all bidders. The college will not be responsible for any oral instructions. All inquiries shall be directed to the Director of Business & Auxiliary Services. After bids are received, no allowance will be made for oversight by bidder.

SUBSTITUTIONS:

1. Each bidder represents that his bid is based upon the materials and equipment described in the bidding documents.
2. Any dealer bidding an equal product must specify brand name, model number, and supply specifications of product. The Board shall be the sole judge of whether an article shall be deemed to be equal.
3. A bidder's failure to meet the minimum specifications as listed may result in disqualification of his bid.

REJECTION OF BIDS:

The bidder acknowledges the right of the College Board to reject any or all proposals and to waive informality or irregularity in any proposal received and to award each item to different bidders or all items to a single bidder. In addition, the bidder recognizes the right of the College Board to reject a

proposal if the proposal is in any way incomplete or irregular. The College Board may also award, at its discretion, only certain items quoted on. The College Board also reserves the right to reject the proposal of a Bidder who has previously failed to perform properly or complete on time contracts of a similar nature or a bid of a Bidder when investigation shows that Bidder is not in a position to perform the contract.

ACKNOWLEDGEMENT OF ADDENDA:

Signature of company official on original document shall be construed as acknowledgement of receipt of any and all addenda pertaining to this specific proposal. Identification by number of addenda and date issued should be noted on all proposals submitted.

FAILURE TO ACKNOWLEDGE RECEIPT OF ADDENDA ON PROPOSAL SUBMITTED MAY RESULT IN DISQUALIFICATION OF PROPOSAL.

Bidders who obtain a copy of the bid from our web site are responsible for checking back on the site for any addenda issued.

CLERICAL ERRORS:

If applicable, all errors in price extensions will be corrected by Joliet Junior College and totals for award determination corrected accordingly, unless the bidder specifies that no change be made in the total submitted. In this case, all incorrect price extensions will be noted at "lot", and award determination made on the basis of total price submitted.

SAMPLES:

Bidder may be required to furnish samples upon request and without charge to the College.

BID SECURITY:

A certified check or bank draft or bid bond, made payable to Joliet Junior College District #525, Will County, Illinois, **MUST** be submitted with the bid in the amount of **ten (10) percent of your total bid**. The bid security will be forfeited by the successful bidder in the event of the bidders failure to enter into a contract. Checks or drafts of unsuccessful bidders will be returned as soon as practicable after opening and checking the bids.

PAYMENTS:

Certified Payroll

1. With each pay application, contractors shall submit certified payroll in a format acceptable to Junior College District #525.

Partial Lien Waivers

1. The contractors' partial lien waiver, for the full amount of the payment, shall accompany the first payment application. Each subsequent payment application shall be accompanied by the contractor's partial waiver, and by partial waivers from all subcontractors and suppliers who were included in the immediately preceding payment application, to the extent of that payment.
2. Lien waivers from the Contractor and all subcontractors and suppliers shall accompany the first payment application when the amount of payment exceeds 50 percent of the total contract sum.

Final Lien Waivers: The contractor's request for final payment shall include:

1. The contractor's final lien waiver in the full amount of the contract.

2. Final lien waivers in the full amount of their contracts from all subcontractors and suppliers for which final lien waivers have not previously been submitted.

INSURANCE:

The successful bidder will be required to furnish a certificate of insurance in the following amounts:

The insurance coverage required here-in-under shall be the minimum amounts maintained by the Contractor and Subcontractors until all Work is completed and accepted by the Owner.

The Contractor will purchase and maintain "all risks" Builder's Risk property insurance subject only to such exclusions as have been specifically approved by the Owner in writing.

A. Workers Compensation

1. State: Statutory
2. Applicable Federal: Statutory
3. Employer's Liability:
 - a. \$1,000,000 per Accident
 - b. \$1,000,000 Occupational Disease

B. Commercial Comprehensive Liability

1. Each Occurrence: \$2,000,000
2. Products/Completed Operations Aggregate: \$2,000,000
3. Personal/Advertising Injury: \$2,000,000
4. General Aggregate: \$2,000,000
5. Policy shall include: \$2,000,000
 - a. Premises: Operations
 - b. Independent Contractors Liability
 - c. Products and Completed Operations: Maintained for minimum of one year after date of final Certificate for Payment, in full amount of the limits specified above.
 - d. Contractual Liability
 - e. Coverage for explosion (x), collapse (c), and underground (u).
6. The Commercial Comprehensive Liability policy shall include a contractual liability endorsement insuring the indemnity required by the contract. The indemnities shall be named as additional insured on the Contractor's Commercial Comprehensive Liability policy using Form CG 20 10 or its equivalent and shall name Joliet Junior College, its Board of Trustees, officers, employees and agents as additional insured's at a minimum. The Contractor hereby agrees to effectuate the naming of such additional insured's as unrestricted additional insured's on the Contractor's policy. The additional insured endorsement shall provide the following:
 - a. That the coverage afforded the additional insurance will be primary insurance for the additional insurance with respect to claims arising out of operations performed by or on behalf of the Contractor.
 - b. That the policy shall contain a thirty (30) day notice of cancellation prior to the effective date thereof.
 - c. That the additional insureds have other insurance which is applicable to the loss, such other insurance will be on an excess or contingent basis.

- d. That the amount of the company's liability under the insurance policy will not be reduced by the existence of such other insurance.
- e. That the additional insureds will not be given less than thirty (30) days prior written notice of any cancellation thereof.
- f. That the Contractor agrees to indemnify the College for any applicable deductibles.
- g. That the insurance policy from an A.M. Best rated "secured" Illinois State licensed insurer.
- h. The Contractor shall provide the College with a copy of its insurance policy or in the alternative and subject to the College's agreement, an excerpt of a page from the actual policy evidencing the additional insureds as provided for herein.
- i. Contractor acknowledges that failure to obtain such insurance on behalf of the College constitutes a material breach of the contract and subjects Contractor to liability for damages, indemnification and all other legal remedies available to College. The Contractor is to provide the College at all times with a certificate of insurance, evidencing the above requirements have been met. The failure of the College to object to the contents of the certificate or the absence of it shall not be deemed a waiver of any and all rights held by the College.
- j. That enclosed is a copy of the endorsement providing additional insured's status and that the Contractor will furnish a Certificate of insurance evidencing the foregoing provisions.
- k. Please include clause below in the policy:
It is agreed that Joliet Junior College, its Board of Trustees, officers, employees, agents and (Architect/Engineer Name) are additional insureds on the policy.

C. Business Auto Liability (including owned, non-owned and hired vehicles).

1. Bodily injury
 - a. \$1,000,000 per person
 - b. \$2,000,000 per accident
2. Property damage: \$1,000,000 OR
3. Combined Single limit: \$1,000,000

D. Umbrella

1. Umbrella Excess Liability: \$4,000,000
2. If the Contractor's Workers Compensation, Commercial General Liability and Business Auto policies do not have these minimum limits, an Umbrella policy written by an insurance company acceptable to the Owner may be used to meet the minimum limits required.

All such policies of insurance shall be written by companies approved by the College and Certificates of Insurance shall be furnished to the College. The College shall be listed as an additional insured under such policies. Each policy shall require at least 30 days notice to the College in the event of cancellation. The contractor agrees to indemnify, defend, and hold harmless the College from and against all suits or claims, which may be based upon any injury to or death of any person or persons or damage to property, which may occur or which may be alleged to have occurred in the course of

the performance of this Agreement by the Contractor, whether such sum claim shall be made by an employee of the Contractor, by a third person or their representatives, or whether or not it shall be claimed that the said injury, death, or damage or cause through a negligence act or omission of the Contractor; and the all charges of attorneys and all costs and other expenses arising there from or incurred in connection therewith; and if any judgment shall be rendered against the College in any such action or actions, the Contractor, at its own expense, shall satisfy and discharge the same.

PERFORMANCE BONDS:

The successful bidder on this proposal must furnish a performance bond and a labor and material payment bond made out to Junior College District #525, prepared on an approved form, as security for the faithful performance of their contract, within ten (10) days of their notification that their bid has been accepted. The surety thereon must be such surety company or companies as are authorized and licensed to transact business in the State of Illinois and have an A-XIV best rating. Attorneys in fact who sign bid bonds must file with each bond a certified copy of their power of attorney to sign said bonds. The performance bond is an amount equal to one hundred and ten percent (110%) of the contract sum. Such bonds shall be in force from the date of signing of the contract until one year after issuing of final certificate of payment. The cost of the bonds shall be included in the bidder's proposal.

LAWS AND ORDINANCES:

In execution of the work, the Contractor shall comply with applicable state and local laws, ordinances and regulation, the rules and regulations of the Board of Fire Underwriters, and OSHA standards.

SEX OFFENDER REGISTRATION REQUIREMENT NOTIFICATION:

Illinois Compiled Statutes (730 ILCS 150/2) requires that any person who is required by law to register as a sex offender and who is either a student or an employee at an institution of higher education, must also register with the police department of the institution they are employed by or attending. For purposes of this act, a student or employee is defined as anyone working at or attending the institution for a period of five (5) days or an aggregate period of more than thirty (30) days during a calendar year. This includes persons operating as or employed by an outside contractor at the institution. Anyone meeting the above requirements is required to register at the Campus Police Department located in G1013, within five (5) days of enrolling or becoming employed. Persons failing to register are subject to criminal prosecution.

DAMAGE AND NEGLIGENCE:

The Contractor agrees to indemnify and save harmless the College and employees from and against all loss, including costs and attorney's fees, by reasons or liability imposed by law upon the College for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damage to property including loss of use thereof as provided in the General Conditions and Supplementary Conditions.

College shall not be responsible for damages, delays, or failure to perform on its part resulting from acts or occurrences of force majeure. "Force majeure" means any (a) act of God, landslide, lightning, earthquake, hurricane, tornado, blizzard, floods and other adverse and inclement weather conditions; (b) fire, explosion, flood, acts of a public enemy, war, blockade, insurrection, riot or civil disturbance; (c) labor dispute, strike, work slow down, picketing, primary boycotts, secondary boycotts or boycotts of any kind and nature, or work stoppages; (d) any law, order, regulation ordinance, or requirement of any government or legal body or any representative of any such government or legal body; (e) inability to secure necessary materials, equipment, parts or other

components of the project as a result of transportation difficulties, fuel or energy shortages, or acts or omission of any common carriers; or (f) any other similar cause or similar event beyond the reasonable control of College.

INVESTIGATION OF BIDDERS:

The College will make any necessary investigation to determine the ability of the bidder to fulfill the proposal requirements. Joliet Junior College reserves the right to reject any proposal if it is determined that the bidder is not properly qualified to carry out the obligation of the contract.

APPRENTICESHIP AND TRAINING PROGRAMS:

The bidder and all bidder's subcontractors must participate in applicable apprenticeship and training programs approved by and registered with the United States Department of Labor Bureau of Apprenticeship and Training. The apprenticeship and training programs(s) must be in the same trade in which the firm shall be performing work on behalf of the College under the Contract. This provision shall not apply to federally funded construction projects if, in the opinion of College, such application would jeopardize the receipt or use of federal funds in support of such project.

A STATEMENT TO THE ABOVE EFFECT HAS BEEN ADDED TO THE BID FORM. BIDDERS MUST BE A MEMBER OF AN APPROVED APPRENTICESHIP PROGRAM PRIOR TO BID OPENING ON THE PROJECT. FAILURE TO LIST REQUIRED INFORMATION MAY RESULT IN DISQUALIFICATION OF BID”.

SUBCONTRACTORS:

Bidders must state on the proposal form all subcontractors he intends to use for this project. Failure to do so may be cause for rejection of bid.

PREVAILING WAGE RATE:

The successful bidder must pay not less than the prevailing hourly wage rate determined by the Illinois Department of Labor for the county where the contract is executed and the craft or type of worker needed to execute the contract. See the prevailing wage scale attached.

If, during the course of work under this contract, the Department of Labor revises the prevailing rate hourly wages to be paid under this contract for any trade or occupation, Owner, will notify Contractor and each Subcontractor of the changes in the prevailing rate of hourly wages. Contractor shall have the sole responsibility and duty to ensure that the revised prevailing rate of hourly wages is paid by contractor and all Subcontractors to each worker to whom a revised rate is applicable. Revisions to the prevailing wage as set forth above shall not result in an increase in the Contract Sum.

In compliance with the Office of the Attorney General the following is also required of all bidders:

Payment of Prevailing Wage:

- The Act requires that all laborers, workers and mechanics employed by or on behalf of a public body in the construction of public works be paid the general prevailing rate of hourly wages (including allotments for training and approved apprenticeship programs, health and welfare, insurance, vacation and pension benefits) for work of a similar character in the locality in which the work is performed. See 820 ILCS 103/3. The Act contains all relevant definitions, including those for the terms “public body”, “public works” and “general prevailing rate of hourly wages”, which will assist you in the understanding its requirements and your responsibilities. See 820 ILCS 130/2.
- The Illinois Department of Labor publishes the current prevailing wage rate. See

<http://www.state.il.us/agency/idol/rates/rates.htm>. The rate is revised regularly and such revision takes effect immediately.

Specifications and Contractual Language:

- Public bodies must insert a provision or stipulation requiring the payment of the prevailing wage rate into every public works resolution or ordinance, call for bids, project specification and contract. See 820 ILCS 130/4(a).
- Contractors and subcontractors must insert a provision or stipulation regarding the payment of the prevailing wage rate into every public works project and bid specification, subcontract, and contractor's bond. See 820 ILCS 130/4(b), (c).
- Contractors or construction managers who have been awarded public works contracts must post the relevant prevailing wage rate(s) at a location on the project site that is easily accessible by workers. See 820 ILCS 130/4(f).

Record-Keeping Responsibilities:

- All contractors and subcontractors must create and keep for at least three years, records of all laborers, mechanics, and other workers employed by them on a public works project. See 820 ILCS 130/5(a) (1).
- These records must include each worker's name, address, telephone number (if available), social security number, classification(s), hourly wages paid in each pay period, number of hours worked each day, and the starting and ending times of each work day. Each contractor and subcontractor is required to make these records available for inspection by the public body's agents or Illinois Department of Labor officials at a reasonable time and place upon seven business days notice. See 820 ILCS 130/5(a) (1), (b).

Certified Payroll Records:

- A contractor or subcontractor participating in a public works project must also submit a Certified Payroll the public body every month. This Certified Payroll must consist of a complete copy of the records required to be kept under Section 5(a)(1) of the Act, discussed above (with the exception of daily work starting and ending times). See 820 ILCS 130/5(a)(2).
- The monthly Certified Payroll shall also include a statement signed by the contractor or subcontractor submitting that: (1) the records are true and accurate; (2) the hourly rate paid to each worker is not less than the general prevailing wage rate required; and (3) the contractor or subcontractor is aware that filing a Certified Payroll that he or she knows to be false is a class B misdemeanor. See 820 ILCS 130/5(a)(2).
- The Act requires that a public body shall keep all Certified Payrolls submitted pursuant to the Act for at least three years. See 820 ILCS 130/5(a)(2). The retention of these monthly Certified Payroll submissions for three years by public bodies is crucial to the State of Illinois' efforts to enforce the Act and will be of particular interest to the Attorney General's office in the coming months.

Failure to comply with the Act's Requirements:

- No public works project may be instituted unless the provisions of the Act have been met. The Illinois Department of Labor is empowered to sue for injunctive relief against the awarding of any public works contract, or continuation of work under any such contract, if it is not in compliance with the Act's prerequisites. Contracts that are not in compliance with the Act's prerequisites are void as against public policy. See 820 ILCS 103/11.

Please note that this is not a complete list of all relevant requirements and prerequisites under the Act. All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, including but not limited to, all wage, notice and record keeping duties. For a full understanding of all of the Act's requirements and prerequisites, as well as the text of the Act and all related regulations, please see the Illinois Department of Labor's website at www.state.il.us/agency/idol/laws/Law130.htm.

BLACKOUT PERIOD:

After the College has advertised for bids, no pre-bid vendor shall contact any College officer(s) or employee(s) involved in the solicitation process, except for interpretation of bid specifications, clarification of bid submission requirements or any information pertaining to pre-bid conferences. Such bidders or sub-bidders making such request shall be made in writing at least seven (7) days prior to the date for receipt of bids. No vendor shall visit or contact any College officers or employees until after the bids are awarded, except in those instances when site inspection is a prerequisite for the submission of a bid. During the black-out period, any such visitation, solicitation or sales call by any representative of a prospective vendor in violation of this provision may cause the disqualification of such bidder's response.

OTHER:

This contract is subject to and governed by the rules and regulations of the Illinois Human Rights Act. The Customer reserves the right to request additional information after your proposal has been submitted.

BID QUANTITIES:

The College Board will reserve the right to increase or decrease, within reasonable limits, such quantities as need requires and at the unit price stated.

BID AWARDS:

The successful contractor, and/or any contractor shall not proceed on this bid until it receives a purchase order from the college. Failure to comply is the risk of that contractor.

TERMINATION OF FUNDING:

JJC's contractual obligations will be subject to termination and cancellation without penalty, accelerated payment, or other recoupment mechanism as provided herein in any fiscal year for which the Illinois General Assembly or other legally applicable funding source fails to make an appropriation to make payments under the terms of this Contract. In the event of termination for lack of appropriation, the Vendor shall be paid for services performed under this Contract up to the effective date of termination. JJC shall give notice of such termination for funding as soon as practicable after JJC becomes aware of the failure of funding.

CHANGES TO CONTRACT AFTER BID AWARD:

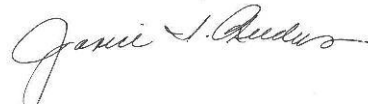
There shall be no deviations from any work without a written change order. All change orders must be approved by the Director of Business & Auxiliary Services or Vice President of Administrative Services as well as executed by the successful contractor.

If a change order or aggregate of change orders are 10% or more of the contract price, and such change orders are not approved, in writing, by either the Director of Business & Auxiliary Services or Vice President of Administrative Services, the successful contractor shall not be entitled to any type of compensation for services or materials provided.

GENERAL:

Joliet Junior College is committed to a policy of non-discrimination on the basis of sex, handicap, race, color, and national or ethnic origin in the admission, employment, educational programs, and activities it operates. Inquiries should be addressed to the Director of Human Resources.

The contractor (or vendor) shall agree to save and hold harmless the Joliet Junior College District #525, the members of its College Board, its agents, servants and employees, from any and all actions or causes of action, or claim for damages, including the expense of defending suit, arising or growing out of the performance of, or failure to perform its contract.



Janice Reedus
Director of Business & Auxiliary Services

JOLIET JUNIOR COLLEGE
ILLINOIS COMMUNITY COLLEGE DISTRICT #525
(Business & Auxiliary Services)
1215 Houbolt Road
Joliet, Illinois 60431-8938
Telephone: (815) 280-6640
Fax: (815) 280-6631

INFORMATION PERTAINING TO OUR BIDS CAN BE FOUND AT THE FOLLOWING WEBSITE:
<http://www.jjc.edu/info/purchasing>

QUESTIONS PERTAINING TO OUR BIDS CAN BE EMAILED TO:
purchasing@jjc.edu

M-02A EXCAVATION, GRADING, AND SITE UTILITIES

SCOPE OF WORK

1. Description of Work Included:

Except for those items (if any) specifically noted in the section below entitled "Work Excluded From This Bid Package", the work of this Bid Package shall INCLUDE, but is not necessarily limited to, all of the following:

- a. All items of work required by, and/or specified in, those sections of the Specifications which are listed herein under Section I. SPECIFICATIONS.
- b. All items of work related to the "Scope of Work", which are shown on the Drawings listed herein under Section J. CONTRACT DRAWINGS.

Perform complete all "**Excavation, Grading and Site Utilities Work**" and related work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work defined in the following specification sections, except for those noted exclusions or clarifications listed below.

The Project Schedule is aggressive and will require work to be performed simultaneously at different locations in the building. This Trade Contractor will work in each zone simultaneously. The Trade Contractor is cautioned that its work will control the schedule of some of the work of other Trade Contractors. The schedule for this package is not an independent activity which can be completed early without concurrence from other affected Trade Contractors. This provision shall be considered as a part of the cost of this Bid Package. This Trade Contractor agrees to estimate and perform the contract work necessary to achieve the completion dates as outlined in the **Construction Milestone Schedule and Section H. Milestone Schedule Dates (in this proposal form)**;, including multiple mobilizations, overtime, multiple crews, supervision and multiple shifts.

The following "Specific Items to be Included" are related to those required by the above referenced documents and are to be provided under, and hereby form a part of, the Scope of Work of this Bid Package (Contract). Should any conflict exist between this written Scope of Work and any scope items implied by the above referenced documents, this Scope of Work shall govern.

A.

1. **Excavation Work:** Perform all Mass Excavation including but not limited to building pad, footings/foundations, sidewalks and pavement, site excavation and grading for detention / retention basins sub-grade preparation work per "Report of Subsurface Exploration" (Soils Report) prepared by ECS, dated 1/29/2015. See site logistics plan, and schedule for areas of work.
 - a. **Top Soil:** Removal and stock pile Topsoil. Re-spread upon completion. It is this Trade Contractors responsibility to remove debris, branches rocks etc. from the topsoil. See Landscape Drawings and Landscape General Notes for additional topsoil requirements.

- b. **Building Pad Preparation:** Fill will be placed in intervals/multiple mobilizations to coordinate with the under-slab utility, and interior footing placement. Adjustments to quantities removed and replaced will be verified through the testing agency.
2. **Foundation Excavation:** It is This Trade Contractors responsibility to excavate for foundations including removal of all excavation spoils. Prior to forming and or placement of foundations, this Trade Contractor will coordinate with the Owners Testing Service for footing trench inspection.
Provide (2) areas where the foundation work/footings will be backfilled in to allow machinery to cross. This fill will need to be removed at a later date in order to complete the concrete foundation work. This may include multiple mobilizations.
3. **General Excavation Work:** Include in the base bid cutting, removal, and disposal of all suitable excavation spoils (grading, foundations, detention etc.). This material shall be delivered and stockpiled to the Joliet Junior College Romeoville Campus (1125 135th Street, Romeoville IL.) for use by the Excavation Contractor (02B) at that site. Provide proper grading and maintenance of grades around the buildings so that the site will be drained at all times. Perform all excavating, grading and backfill work.
- a. Furnish, place, and compact all required subgrade stone, granular fill, etc. as shown, as specified. Review specifications in detail for maximum lifts or other specific placement or compaction requirements. Coordinate with the concrete contractor as required. Fine grading of the SOG stone or other subgrade stone will be performed by the BP 03A concrete contractor.
 - b. Coordinate the installation and protect the foundation insulation from damage during the back fill operation.
 - c. This Trade Contractor will certify that all sub-grades are to within 1/10th of a foot. Provide as-built survey of building pad area for record.
 - d. This Trade Contractor understands that Electrical Contractor is to lay conduit on clay or sub base material prior to placement of stone for slab-on-grade. Provisions must be made by this Trade Contractor to install stone without damaging the underground conduit. Additionally, the Plumbing Contractor will backfill for underground plumbing piping. This Trade Contractor to restore final grades prior to placement of stone for slab-on-grade.
 - e. When unsuitable soils are encountered, this Trade Contractor will provide over-excavation and backfill as directed by the Soils Engineer on a reimbursable basis. Refer to Bid Unit Prices (Line 4) and Allowances.
 - f. Include all proof-rolling. All sidewalks, concrete paving, slab-on-grade, roads, must be proof-rolled.
 - g. Provide all site subgrade preparation in accordance with the drawings and specifications.
 - h. Perform dewatering as required for the scope of this Trade Contractors work. This Trade Contractor will dewater and remove unsuitable soils prior to backfilling around the footings. Slope footing excavations slightly to a sump to allow for dewatering.
 - i. Perform all Mass Excavation & Site Demolition Work in accordance with the contract documents and within OSHA requirements (which ever is stricter). Furnish, install, and remove any required temporary shoring or earth retention means necessary to perform the work.
 - j. Assume requirements for weather conditions in the base bid based upon the project schedule.
 - k. Perform daily removal of debris and spoils from the project site. Provide protection of existing areas to remain during demolition and debris removal, and restore any existing finishes or items damaged during demolition. Exterior spaces affected are to be maintained daily in a broom swept condition inclusive of all travel routes to and from the site/areas of work.

- l. Provide all required backfill and placement/compaction of subgrade stone for the transformer pads, generator pads, all site concrete, sidewalks, etc. The parking lot and curb work is part of a separate contract.
 - m. Backfill all building foundations and walls as specified, as required.
 - n. Provide all required general project site demolition and legal disposal as shown, as required including but not limited to existing sidewalks, fencing, gates, trees, bushes, mulch, timbers, etc.
 - o. Provide all layout and required survey for all excavation work performed as part of this contract. Baseline control will be provided by others prior to start of work.
 - p. Provide all sawcutting as required for the work of this contract.
- 4. Site Demolition Work:** Perform complete all site demolition work, including but not limited to the removal and disposal of existing asphalt pavement, granular base / sub-base, concrete pavement, concrete walkways, curbs, including concrete base/foundations, tree and stump removal, etc. as required to complete the scope of this project. Demolition is to include removal and disposal. Include all saw cutting where items to be removed transition to existing finish surfaces.
- 5. Perform complete all "Exterior Concrete Work"** and related work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work defined in the following specification sections, except for those noted exclusions or clarifications listed below. Furnish and install all exterior concrete work, framing and shoring of concrete structures, reinforcing steel, curing, and ancillary work, including but not limited to the following:
- a. All required reinforcing steel
 - b. Provide concrete control, expansion joints and sealant/joint filler as indicated on the Contract Documents
 - c. Site pipe bollards and provide concrete fill at pipe bollards, including pipe bollard foundations. Pipe bollards will be provided by others.
 - d. All concrete isolation and construction joints.
 - e. Comply with all 'Specifications, Special Provisions & General Notes' and 'Structural General Notes' as listed on the drawings.
- 6. Perform complete "Site Utilities Work"** and related work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work defined in the following specification sections, except for those noted exclusions or clarifications listed below.

In general, the following clarifies the scope of work to be included. It is intended for clarification and convenience only and is not intended to limit any portion of the scope of this bid package.

- a. Trade Contractor shall provide a complete storm sewer, sanitary sewer, underground system including, piping, clean outs, manholes, culverts, drain tiles, catch basins, inlets, frames grates and covers, restrictors, etc., as required outside the building pad. Provide utilities beginning 5' outside of building foundation. Refer to plumbing drawings for complete coordination. Temporarily cap pipe for future connections by Building Plumbing Contractor.
- b. Trade Contractor shall provide excavation and fill for all new underground utilities. Include all spoil removal on a daily basis. Disposal of spoils shall be offsite at an

approved dumpsite.

Trade Contractor shall connect new storm, and sanitary, to existing structures as shown on Contract Documents. Cutting and capping of existing storm, and sanitary, and switchover to new services must be coordinated with JJC Construction Manager as not to impact school operations.

- c. Contractor is required to understand and fully comply with all local AHJ requirements regarding inspections, materials, installation, etc.
- d. Contractor is responsible for all traffic control related work for all utility work performed as part of this contract including all necessary traffic control barricades, flashers, flagmen, etc.
- e. Include all cost to return to the site upon request for any rim elevation adjustments necessary when follow-up work is completed at a later date from initial mobilization – i.e. curb & gutter installation, final grading, etc.
- f. Comply with all specification requirements listed on the applicable civil drawings.
- g. Provide all layout and required survey for all excavation work performed as part of this contract. Baseline control will be provided by others prior to start of work.
- h. Trade Contractor is responsible for disposal of all waste generated as part of this contract scope of work. Provide your own dumpsters and daily clean-up of all debris as required.
- i. Installation of site utilities near the new buildings must be coordinated with the anticipated masonry and other building construction activities to ensure that any newly installed underground pipe is not at risk at any time of being run over and crushed by heavy equipment operations.
- j. Provide all necessary ductile iron piping or other means (sleeving, etc.) required to meet all state plumbing code requirements for all sanitary crossings regardless of what may be indicated on the drawings.
- k. Include cost for any temporary piping that may be necessary to manage water flow away from the construction site or public roadways during testing or flushing.
- l. All backfill shall be brought up to elevation as required on the Contract Documents. Trade Contractor understands that all existing parking lots and asphalt drives will be in use, and provisions must be made to backfill with stone and asphalt patch in a timely manner if required.
- m. Provide hand excavation, hand back filling and hand compaction as required.
- n. Provide pumping and dewatering of all rain and ground water seepage as required to maintain Trade Contractor's progress and provide safe working conditions. Trade Contractor shall take every reasonable precaution to maintain existing storm and sewer drainage through the use of shoring and dig boxes.
- o. Exploratory excavation for existing utilities and notification to utility companies is included. JULIE must be notified 72 hours before work starts.
- p. This Trade Contractor shall provide Mandrill testing, cleaning, flushing and chlorinating of utility systems including coordination and scheduling with governing authorities.

Provide soil erosion control measures at all storm sewer structures and manholes as indicated on the Contract Documents and as required for this Trade Contractor's work.

7. **Erosion Control:** Soil erosion means including, but not limited to, silt fence, silt settlement basins, straw bales, etc. shall be furnished, installed, and maintained by this Trade Contractor. Silt fence shall be recessed into the existing grade a minimum of 6 inches. Silt

fence shall be maintained (weekly) by this Trade in accordance with all state, IEPA regulations and requirements; any required patching and or replacement shall be furnished and installed by this Trade Contractor. The silt fence will be left in place, until permanent ground cover is established, removal and is included in the Contract. Furnish and install silt screening in all manholes and catch basins; provide straw bales as required to prevent silts from entering manholes, catch basins, inlets, etc. Provide all soil erosion control measures as shown, as required by local jurisdiction. Obtain all necessary IL-EPA, SWPPP, NPDES, etc. required permits. Include all cost for a weekly inspection and to maintain these measures for the duration of the project. Comply with all specifications, general notes, and details. The silt fence and inlet protection for the existing sewers will need to be installed immediately upon mobilization. The inlet protection for the new utility work will follow the new site utility installation. A gap between these two activities should be anticipated. Include all silt fence and protection measures shown on the Contract Documents, including silt fence shown on the site logistics plan. It is mandatory that all required inspections and maintenance be completed by this Trade Contractor. Failure to maintain, repair, place and install storm water protection measures which results in action by the IEPA or other governing authority will be the responsibility of this Trade Contractor including all remediation, penalties, and signing of all required documents.

- 8. Haul Roads and Staging Areas:** Furnish, install, maintain and remove temporary roads and lay down areas consisting of the following cross section, placed on compacted subgrade. (cross section: geotechnical woven fabric Mirafi 500x or Exxon GTF, 6" depth of 3 inch stone, sealed with 2" of CA-6 aggregate): Installed along the new building as shown on the Site Logistics plan, when and where directed by the JJC Construction Manager. Include the following: The laydown/staging areas will be 6" of CA-6 and removed off site and disposed of at a legal landfill at the end of the job. The staging and laydown area will be restored to grass and seeded. Portions of the haul road/lay down areas which will be under walks or paved areas may remain provided that the haul road/lay down area is installed at a depth below proposed sub-grade, and that the subgrade meets and passes compaction test. All other areas of haul road/lay down area will be removed off site and disposed of at a legal landfill at the end of the job.

Apply for and secure approval for all required regulatory building permits, however, the Owner will pay the building permit fees directly. The Trade Contractor is to identify to the JJC Construction Manager the amount of the permit fee, and the regulatory agencies contact information for fee payment. The Owner will be responsible for the general building permit. In addition, this Trade Contractor shall obtain and pay directly for all other required fees and licensures. All required regulatory inspections shall be the responsibility of this Trade Contractor to schedule and complete, but will be scheduled through the JJC Construction Manager only; provide the JJC Construction Manager with copies of all permit related paper work.

9. General Provisions

- a. Investigate and mark all underground utilities and building utilities including, but not limited to, having the site marked by J-U-L-I-E. J-U-L-I-E will mark public utilities only. This site has private utilities as well, which J-U-L-I-E will not mark. Proceed with work in such fashion so as not to disrupt or damage existing utilities to remain. This Trade Contractor shall perform its work in the least disturbing fashion given that the location is on an operating campus. Noise and vibrations shall be kept to a minimum. Provide dust mitigation means to prevent the creation and travel of airborne

dust particles. The travel of dust, dirt and debris into occupied spaces is not acceptable. Clean up will be performed by this Trade on a daily basis. All roads traveled by the operations of this Trade shall be cleaned of dust, dirt, debris and mud (mechanically broom swept) continuously and at a minimum on a daily basis. Joliet Junior College employs its own site utility location employees. Consult with the JJC Construction Manager for this service.

- b. Provide a construction trailer for a period of 2 months beginning August 13th, 2015 for the use of the JJC Construction Staff. The trailer is to be approximately 8' x 30' with (2) stairs.
- c. Flagman and barricades for safety protection is the sole responsibility of this Trade Contractor. Safety fencing around excavations is the responsibility of this Trade Contractor.
- d. Notify the JJC Construction Manager 24 hours in advance of any work that will require special inspection services (i.e.: construction testing), (excavating, proof rolling, back fill, etc.).
- e. All layout is the responsibility of this Trade Contractor to provide for the work of this bid package. All survey work must be performed by an Illinois Licensed Surveyor.
- f. Trade Contractor is responsible for all existing tree protection requirements.
- g. Trade Contractor is required provide a total of 2800 lf of 6 ft. high chain link construction fence with (2) 20'-0" gates on wheels. General location as shown on the site logistics plan. Exact location to be directed by JJC Construction Manager. Include (1) pedestrian gate with latching hardware. This fence is to remain in place for the duration of the project. Provide and install on the construction fence (55) plastic signs "Danger- Construction area DO NOT ENTER" or equivalent.

B. GENERAL REQUIREMENTS

1. This trade contractor shall protect all adjacent areas of work. Remove protection after completion of work of this bid package and repair all damaged areas as necessary and required.
2. Due to the ongoing school activities this Trade Contractor shall make arrangements with the JJC Construction Manager for any storage provisions prior to mobilization. Onsite storage must be coordinated with JJC Construction Manager. All areas disturbed by the action of the Trade Contractor shall be returned to their original condition at no additional expense to the owner.
3. Provide temporary toilet service. (1) Toilet with a minimum of (1) service weekly for 10 weeks.
4. Should the Plans or Specifications disagree in themselves or with each other, the Trade Contractor shall provide the better quality or greater quantity of work and/or materials unless otherwise directed by written addendum to the contract.
5. Each Trade Contractor is required to provide, maintain and hand over covers for any openings/penetrations resulting from their scope of work until permanent installation is complete. This will be coordinated with the JJC Construction Manager prior to demobilization.
6. This Trade Contractor is cautioned that its work will control the schedule of some of the work of other Trade Contractors. The schedule for this package is not an independent activity that can be completed

early without concurrence from other effected Trade Contractors. This provision shall be considered as a part of the cost of this Bid Package.

7. Each Trade Contractor shall field verify all existing conditions as required prior to commencing of work and shall make whatever modifications necessary to facilitate the installation of new work. Trade Contractors shall immediately notify the JJC Construction Manager in writing of his findings, especially upon finding unsatisfactory conditions that may affect his work and the quality of the work of others.
8. This Trade Contractor shall be responsible to maintain an accurate record of deviation and changes in the work and reasons thereof. The JJC Construction Manager will and the Architect may elect to review the status of these documents on a monthly basis. Failure on the part of the Trade Contractor to maintain the As-Built Documents will be cause to reject the Trade Contractor's monthly payment request in part or in total until the condition is corrected and the record documents are updated to reflect site conditions.
9. Where the General Requirements or the Technical Specifications indicate that the Trade Contractor will be "directed by" or "as indicated or designated by" the Architect all such directions, indications and/or designations etc., shall be through the JJC Construction Manager. All work performed by a Trade Contractor as directed by or as indicated or designated by the Owner, its consultants or the Architect which has not been communicated to the Trade Contractor through the JJC Construction Manager shall not be an added cost to the Trade Contractor's contract and may be subject to rework at the expense of the offending Trade Contractor or Trade Contractors.
10. All debris and materials demolished by this Trade Contractor shall be removed from the project site daily. Stockpiling of debris on the site will not be permitted.
11. There will be limited storage and field office areas available on site. These areas may be available for short periods of time and office/storage locations will need to be relocated to accommodate construction activities. This Trade Contractor shall make arrangements with the JJC Construction Manager for any office or storage provisions prior to mobilization. All site areas disturbed by the action of this Trade Contractor shall be returned to its original condition at no additional expense to the Owner. Trade Contractor shall coordinate all staging and storage with the JJC Construction Manager inclusive of but not limited to, trailers, tool sheds, storage areas, etc.
12. Securely cover and tie down all materials nightly or when high winds are forecast to prevent damage and wind-blown debris.
13. Coordinate with the JJC Construction Manager the delivery, storage, crane pick points, and laydown areas for the material consistent with the Site Utilization Plans. All erection shall be from outside the building. No erection equipment such as cranes, derricks, etc. will be permitted within the building lines. Any access, erection, cribbing, pads, mats, ramps, etc. required for cranes, hoists, etc. shall be provided, maintained and removed by this Trade Contractor. This requirement will include all mats which may be required for equipment movement on-site under wet conditions or foul weather.
14. This Trade Contractor shall submit complete shop drawings for the JJC Construction Manager and Architect's review prior to any fabrication.
15. All abatement of hazardous materials (if and where applicable) will be conducted by the owner. The Trade Contractor must notify the JJC Construction Manager immediately about any suspect material.
16. The Owner has employed a testing agency for this project. This Trade Contractor shall conform to all testing requirements as identified within the Contract Documents. The Trade Contractor shall provide 48 hour notice to the JJC Construction Manager prior to date testing agency needs to be on site to perform tests.
17. In addition to the requirements for safety defined in the Conditions of Contract and the Safety Plan, the Trade Contractor shall submit within two weeks of Notice to Proceed a detailed safety plan defining its intentions and procedures to be used on the project to comply with all requirements of OSHA and

Project Safety Program, including work rules, fall protection, hoisting procedures, protection of other trades and finished materials, etc.

18. This Trade Contractor must include all costs necessary to address the requirements of the Safety Plan.
19. This Trade Contractor is required to fill out a JJC Construction Manager daily report and turn in to JJC Construction Superintendent by 9:00AM the following work day.
20. This Trade Contractor shall be responsible for their cleanup and debris removal on a daily basis.
21. This Trade Contractor shall coordinate with the JJC Construction Manager the delivery, storage, handling and storage areas for all materials consistent with the Site Logistics Plan. This requirement shall include all mats which may be required for equipment movement on-site under wet conditions, foul weather or poor soil conditions.

The above listed items are not intended to be an all-inclusive listing of the specified Contract Scope of Work, but are merely to highlight the major items of work.

C. SPECIFIC ITEMS TO BE EXCLUDED

The following specific item(s) of work contained in the above referenced documents are EXCLUDED from the work of this Bid Package (Contract):

- 1) Site Electrical Work.
- 2) Asphalt Paving and curbs.

D. UNIT PRICES

Unit Prices shall be used, where applicable, to make adjustments to the cost of the Work due to changes. ALL Unit Prices submitted shall be complete in-place prices and include all costs for overhead, profit, bond costs, labor, materials, equipment, engineering, shop drawings and any other incidentals related to the completion of the Work, and shall remain firm for the period of the contract.

	Unit Prices (furnished and installed unless noted otherwise): <u>Description</u>	<u>Cost</u>
1	Storm Piping	\$ / LF
2	Sanitary piping	\$ / LF
3	Silt Fence (installation and Removal) per LF based on 100 LF	\$ / LF
4	Excavation & Haul off / CY – non-contaminated based on 100 CY	\$ / CY
5	Concrete saw cut & demolition Remove Off Site– 6” depth / SY	\$ / SY
6	Additional Compacted Clean Fill (Brown Clay) – in place based on 100 CY Import From Off Site	\$ / CY
7	Additional Topsoil/Black dirt in place (rough graded) based on 100 CY Import From Off Site	\$ / CY
8	Additional Compacted CA1 / CY fill – in place based on	\$ / CY

	100CY		
9	Additional Compacted CA6 / CY fill – in place based on 100 CY	\$	/ CY
10	Additional Compacted CA7 / CY fill – in place based on 100 CY	\$	/ CY
11	Additional orange snow fence installed: per linear foot.	\$	/ LF
12	Additional Haul Road consisting of the following cross section, placed on compacted subgrade. (cross section: geotechnical woven fabric Mirafi 500x or Exxon GTF, 6” depth of 3 inch stone, sealed with 2” of CA-6 aggregate):	\$	/ SY
13	Provide 4-hour period of machine street cleaning including all necessary labor: per Hour	\$	/ HR
14	Hydroseeding Provide and Install	\$	/SY
15	Rock Excavation- Remove and haul away	\$	/CY

E. ALTERNATE PRICES

An Alternate Price shall include all costs associated with the changes, omissions, additions or other adjustments to the Work of this Bid Package (Contract), which are described in the Alternate, or are reasonably inferable there from. Claims for extras resulting from changes caused by the acceptance or rejection of any Alternates will not be allowed. Alternate prices shall also include all costs of overhead, profit and bond costs associated with the work of the Alternate, whether additive or deductive. Alternate prices shall be held until October 15th, 2015

The Drawings, Specifications and other Contract Documents shall be considered appropriately modified by either the acceptance or rejection of the various Alternates. The Owner and the JJC Construction Manager expressly reserve the right to accept or reject any, or all, Alternate Prices, and in any sequence. If any combination of alternates is accepted, the work identified must be completed within the time periods provided.

Alternates:

No.	Description	Costs	(Adj)
A1	Additional Small Storage Room (29’-9 5/8” long) See sheet A1.14 detail 1	\$ _____	Add
A2	Additional Turf Storage Room (81’9 5/8” long) See sheet A1.14 detail 2	\$ _____	Add
A3	Both alternate storage rooms See sheet A1.14 detail 3	\$ _____	Add

F. COST ALLOWANCES

The Bidder includes the following Cost Allowances in the total Lump Sum Amount of the Base Bid for this Bid Package. See General Conditions for definition of Allowances.

The Trade Contractor must include the cost of the allowances in the Base Bid. The Base Bid cost of this package should include the appropriate mark-up on the allowances. All work completed under the allowance will be paid at cost since the mark-up is incorporated in the base bid. Trade Contractors are not entitled to any unspent balance.

Cost Allowances:

1	General Allowance:	\$80,000.00
---	--------------------	--------------------

G. COST AND QUANTITY BREAKDOWN

In order to properly evaluate the Proposal, provide the following information. The Scope of Work to be awarded will not be influenced by the cost and quantity information requested here. Do NOT include the cost of any alternates in base bid or in the following information. Cost and quantity breakdown shall include all related work to the subject category.

Cost Breakdown

Erosion and Sed. Control Measures	\$
Excavation of foundations – Fieldhouse	\$
Excavations of foundations – Remaining areas	\$
SOG excavation and fill- Fieldhouse	\$
SOG excavation and fill – All other areas	\$
Temporary fence	\$
General Conditions	\$
Cleanup of Own Debris	\$
Allowances described above	\$80,000.00
Total Performance & Payment Bond cost	\$
Mobilization	\$
Shop Drawings & Submittals	\$
Miscellaneous not included above (define below)	\$
Site Demolition & Removal	\$
Mass Excavation General Site and Top Soil	\$
Mass Excavation Fill Removal	\$
Mass Excavation Engineered Fill	\$
Sanitary Sewer Work	\$
Storm Sewer Work	\$
Site Concrete Work	\$
Total Bid (Total of all items above including the Allowances)	\$
Estimated total of On-Site Man-hours (required)	(Man-hours)

H. MILESTONE SCHEDULE

Milestone Schedule Dates		
Multipurpose Building		For bid release
	Start	Finish
Bid Release 1 - Bid Period	6/1/2015	6/30/2015
Bids due - Release 1	6/30/2015	6/30/2015
Board approval, contracting, insurance, bonds, etc.	7/1/2015	8/21/2015
Mobilize	8/25/2015	8/25/2015
Excavation and Foundations	8/25/2015	10/23/2015
Bid Release 2 - Bid period	7/14/2015	8/4/2015
Bids due - Release 2	8/4/2015	8/4/2015
Board approval, contracting, insurance, bonds, etc.	8/5/2015	9/18/2015
Mobilize	9/22/2015	9/22/2015
Site Work	9/24/2015	10/16/2016
Precast Concrete	3/14/2016	5/29/2015
Structural Steel	11/9/2015	10/16/2016
Masonry	11/17/2015	10/15/2016
Concrete Slabs	10/19/2015	6/20/2016
Building Enclosed	7/12/2016	7/12/2016
Roofing	4/18/2016	7/17/2016
Interior Buildout	6/20/2016	3/10/2017
Substantial Completion	4/13/2017	4/13/2017
Closeout and Commissioning	4/13/2017	7/17/2017
Final Completion	7/17/2017	7/17/2017
The dates reflected in this milestone schedule reference dates that require approval of shop drawings and submittals in advance.		

I. Specifications

Specification Sections		
Number	Title	Date
015713	Temporary Erosion and Sediment Control	6-1-15
024100	Demolition	6-1-15
311000	Site Clearing	6-1-15
311413	Topsoil Excavation	6-1-15
312000	Earth Moving	6-1-15
312313	Subgrade Preparation	6-1-15
312319	Dewatering	6-1-15
321123	Aggregate Base Course	6-1-15
321313	Concrete Paving	6-1-15
321623	Concrete Walks	6-1-15
321613.13	Cast-In-Place Concrete Curbs	6-1-15
323113	Chain Link Fences and Gates	6-1-15
329200	Turfs and Grasses	6-1-15
330513	Manhole and Structures	6-1-15
333100	Sanitary Utility Sewage Piping	6-1-15
334100	Storm Utility Drainage Piping	6-1-15
334913	Storm Drainage Manholes, Frames and Covers	6-1-15
		6-1-15
012300	Alternates	6-1-15
012500	Substitution Procedures	6-1-15
012600	Contract Modification Procedures	6-1-15
013300	Submittal Procedures	6-1-15
014200	References	6-1-15
016000	Product Requirements	6-1-15
017300	Execution	6-1-15
017419	Construction Waste Management	6-1-15
017700	Closeout Procedures	6-1-15
017823	Operation and Maintenance Data	6-1-15
017839	Project Record Documents	6-1-15
017900	Demonstration and Training	6-1-15
18113.13	Sustainable Design Requirements LEED NC	6-1-15
		6-1-15
002110	Geotechnical Engineering Report	6-1-15
031000	Concrete Formwork	6-1-15
032000	Concrete Reinforcement	6-1-15
033000	Cast in place Concrete	6-1-15
		6-1-15
311000	Site Clearing	6-1-15
311412	Topsoil Excavation and Placement	6-1-15

31200	Earth Moving	6-1-15
312300	Foundation Excavating and Backfilling	6-1-15
312313	Subgrade Preparation	6-1-15
312319	Dewatering	6-1-15
321123	Aggregate Base Course	6-1-15
321313	Concrete Paving	6-1-15
321314	Concrete Walks	6-1-15
321615	Cast-In-Place Concrete Curbs	6-1-15
330513	Manhole/Inlet Grade Adjustment	6-1-15
333100	Sanitary Utility Drainage Piping	6-1-15
334100	Storm Utility Drainage Piping	6-1-15
334913	Storm Drainage Manholes, Frames and Covers	6-1-15

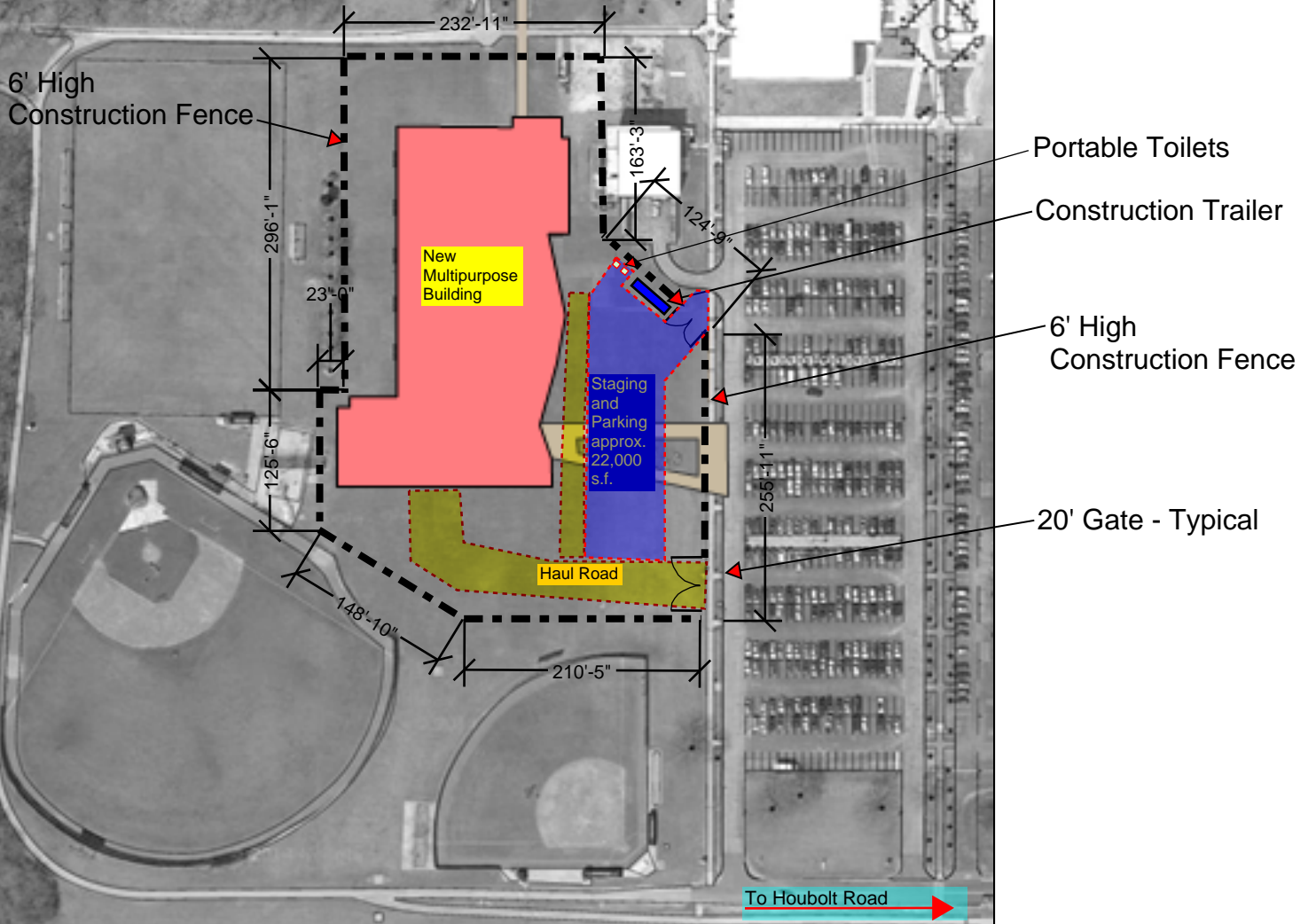
J. CONTRACT DRAWINGS

G1.00	Sheet Index, Abbreviations, Symbols and Notes	6-1-15
C1.1	EXISTING CONDITIONS (1 OF 3)	6-1-15
C1.2	EXISTING CONDITIONS (2 OF 3)	6-1-15
C1.3	EXISTING CONDITIONS (3 OF 3)	6-1-15
C2.1	DEMOLITION PLAN (1 OF 2)	6-1-15
C2.2	DEMOLITION PLAN (2 OF 2)	6-1-15
C3.1	PROPOSED SITE IMPROVEMENT PLAN (1 OF 2)	6-1-15
C3.2	PROPOSED SITE IMPROVEMENT PLAN (2 OF 2)	6-1-15
C4.1	PROPOSED STORMWATER MANAGEMENT AREA	6-1-15
C5.1	PROPOSED GEOMETRY PLAN	6-1-15
C6.1	EROSION CONTROL PLAN (1 OF 2)	6-1-15
C6.2	EROSION CONTROL PLAN (2 OF 2)	6-1-15
C7.1	GENERAL NOTES AND CONSTRUCTION DETAILS	6-1-15
AS1.00	SITE PAVING GEOMETRY PLAN	6-1-15
A1.10	Level 1 Overall Plan	6-1-15
A1.20	Level 2 Overall Plan	6-1-15
A4.01	Exterior Elevations	6-1-15
A4.02	Exterior Elevations	6-1-15
A4.10	PRECAST PANEL PLAN, MASSING AND DETAILS	6-1-15
A4.11	PRECAST PANEL EXTERIOR ELEVATIONS	6-1-15
A4.12	PRECAST PANEL EXTERIOR ELEVATIONS	6-1-15
A4.13	PRECAST PANEL EXTERIOR ELEVATIONS	6-1-15
A4.14	PRECAST PANEL EXTERIOR ELEVATIONS	6-1-15

A4.15	PRECAST PANEL INTERIOR ELEVATIONS	6-1-15
A4.16	PRECAST PANEL INTERIOR ELEVATIONS	6-1-15
A4.17	PRECAST PANEL INTERIOR ELEVATIONS	6-1-15
A4.18	PRECAST PANEL INTERIOR ELEVATIONS	6-1-15
A5.01	Building Sections	6-1-15
A5.02	Building Sections	6-1-15
A6.01	Wall Sections	6-1-15
A6.02	Wall Sections	6-1-15
S0.00	GENERAL NOTES	6-1-15
S1.11	Level 1 Plan – Area 1 - Structural	6-1-15
S1.12	Level 1 Plan – Area 2 - Structural	6-1-15
S1.13	Level 1 Plan – Area 3 - Structural	6-1-15
S1.21	Level 2 Plan – Area 1 - Structural	6-1-15
S1.22	Level 2 Plan – Area 2 - Structural	6-1-15
S1.23	Level 2 Plan – Area 3 - Structural	6-1-15
S1.31	Roof Plan – Area 1 - Structural	6-1-15
S1.32	Roof Plan – Area 2 - Structural	6-1-15
S1.33	Roof Plan – Area 3 - Structural	6-1-15
S3.00	FOUNDATION DETAILS	6-1-15
S3.01	FOUNDATION DETAILS	6-1-15
S4.00	PRECAST AND MASONRY DETAILS	6-1-15
S5.00	STEEL DETAILS	6-1-15
S5.01	STEEL DETAILS	6-1-15
S5.02	JOIST DIAGRAMS	6-1-15
P1.01	Under Floor Plan – Area 1 – Plumbing	6-1-15
P1.02	Under Floor Plan – Area 2 – Plumbing	6-1-15
P1.03	Under Floor Plan – Area 3 - Plumbing	6-1-15
P1.40	ALTERNATE 1 PLANS - PLUMBING	6-1-15
P1.41	ALTERNATE 2 PLANS - PLUMBING	6-1-15
P1.42	ALTERNATE 3 PLANS - PLUMBING	6-1-15

Joliet Junior College
1215 Houbolt Road
Joliet IL. 60431

**Multipurpose Building
Site Logistics Plan**





**REPORT OF SUBSURFACE EXPLORATION AND
GEOTECHNICAL ENGINEERING SERVICES**

**JOLIET JUNIOR COLLEGE MAIN CAMPUS IMPROVEMENTS AND ADDITIONS
1215 HOUBOLT ROAD
JOLIET, ILLINOIS**

ECS PROJECT NO. 16:10466

FOR

**JOLIET JUNIOR COLLEGE
JOLIET, ILLINOIS**

JANUARY 29, 2015



January 29, 2015

Mr. Phil Thiele
Project Manager
Joliet Junior College
1215 Houbolt Road
Joliet, Illinois 60431
Email: philip.thiele@jjc.edu

ECS Project No. 16:10466

Reference: Report of Subsurface Exploration and Geotechnical Engineering Services,
Joliet Junior College Main Campus Improvements and Additions, 1215
Houbolt Road, Joliet, Illinois

Dear Mr. Thiele:

As authorized by your acceptance of our Proposal No. 16:13397-GP dated December 15, 2014, ECS Midwest, LLC (ECS) has completed the subsurface exploration and geotechnical engineering analysis for the proposed campus improvements and additions to be constructed at 1215 Houbolt Road in Joliet, Illinois.

A report, including the results of the subsurface exploration, boring data, ReMi testing, laboratory testing, recommendations regarding the geotechnical engineering design and construction aspects of the project and a Boring Location Plan are enclosed herein. The recommendations presented are intended for use by your office and for use by other professionals involved in the design and construction stages of the project described herein.

We appreciate this opportunity to be of service to Joliet Junior College during the design phase of this project. If you have questions with regard to the information and recommendations contained in this report, or if we may be of further service to you during the planning and/or construction phase of this project, please do not hesitate to contact the undersigned.

Respectfully,

ECS MIDWEST, LLC

Michael T. Bronson, P.E.
Geotechnical Group Leader
Renews 11/30/2015



Stephen J. Geiger, P.E.
Senior Principal Engineer

I:\Geotechnical\Reports\Job 10000-10499\10466 - Joliet College Additions\10466 Joliet Junior College Main Campus.doc

REPORT

PROJECT

Subsurface Exploration and
Geotechnical Engineering Services
Joliet Junior College Main Campus Improvements and Additions
1215 Houbolt Road
Joliet, Illinois

CLIENT

Mr. Phil Thiele
Project Manager
Joliet Junior College
1215 Houbolt Road
Joliet, Illinois 60431

SUBMITTED BY

ECS Midwest, LLC
1575 Barclay Boulevard
Buffalo Grove, Illinois 60089

Illinois Professional Design Firm
No. 184-004247

PROJECT NO. 16:10466

DATE January 29, 2015

TABLE OF CONTENTS

EXECUTIVE SUMMARY

	<u>Page</u>
PROJECT OVERVIEW	1
Introduction	1
Purposes of Exploration and Scope of Services	1
EXPLORATION PROCEDURES	3
Subsurface Exploration Procedures	3
Laboratory Testing Program	4
EXPLORATION RESULTS	5
Soil Conditions	5
Groundwater Observations	6
ANALYSIS AND RECOMMENDATIONS	7
Overview	7
Subgrade Preparation and Earthwork Operations	7
Fill Placement and Compaction	9
Foundation Recommendations	11
Floor Slab Design	12
Underslab Sub-Drainage Design	13
Pavement Design	13
Pavement Maintenance	15
Stormwater Detention Pond	15
PROJECT CONSTRUCTION RECOMMENDATIONS	16
General Construction Considerations	16
Foundation Subgrades	16
Construction Dewatering	17
Closing	17
APPENDIX	19

EXECUTIVE SUMMARY

The subsurface conditions encountered during our exploration and ECS Midwest, LLC.'s conclusions and recommendations are summarized below. This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Details of our conclusions and recommendations are discussed in the following sections and in the Appendix.

The project site is on the campus of Joliet Junior College at the address of 1215 Houbolt Road in Joliet, Illinois. The project site is currently developed by the existing Main Campus of Joliet Junior College. The proposed construction at the project site will consist of a two-story slab-on-grade addition, parking lots and on-site stormwater detention. To better understand the subsurface conditions at the project site twenty (20) soil borings were performed. The subsurface conditions encountered at the borings performed at the site can be summarized as follows.

The surficial materials were observed to consist of about 7 to 30 inches of topsoil (typically 10 to 12 inches) or 4 to 5 inches of rubber material (i.e, running track surface) underlain by 3 to 7 inches of gravel. The surficial materials were typically observed to be underlain by Silty Clay FILL to depths ranging from about 2½ to 5½ feet below existing site grades. The FILL was observed to be underlain by natural Silty CLAY, Clayey SILT or Silty SAND with Gravel to depths ranging from about 4 feet to 6 feet below existing site grades. The natural soils were typically observed to be underlain by Weathered Limestone which extended to the refusal depth of the soil borings on apparent competent bedrock (i.e., approximately 5 to 8½ feet below existing site grades).

The Silty Clay FILL soils exhibited unconfined compressive strength values ranging from 2¼ tsf to 4 tsf (very stiff to stiff) and moisture contents ranging from about 16 percent to 28 percent. The natural Silty CLAY soil encountered exhibited unconfined compressive strength values ranging from 2½ tsf to greater than 4½ tsf (very stiff to hard) and had moisture contents ranging from about 12 to 19 percent. The Silty SAND exhibited SPT N-values ranging from 3 to 49 blows per foot (bpf) which is indicative of a very loose to dense relative density for granular soils, but was typically observed to be loose. The Silty SAND exhibited SPT N-values ranging from 3 to 49 blows per foot (bpf) which is indicative of a very loose to dense relative density for granular soils, but was typically observed to be loose. The Clayey SILT exhibited SPT N-values ranging from 7 bpf to over 50 blows to advance the spoon a few inches which is indicative of a loose to very dense relative density for granular soils. The Weathered Limestone exhibited SPT N-values ranging from 28 bpf to over 80 blows to advance the spoon several inches which is indicative of a medium dense to very dense relative density.

A Reflection Microtremor (ReMi) survey was performed on the site to evaluate the seismic site class. Based on the results of the ReMi survey, the average shear wave velocity at the project site is estimated to be 3,366 ft/s. The average shear wave velocity profile along the performed array is contained on the ReMi Test Results that are included in the Appendix. Based on the average shear wave velocity data obtained to a depth of 100 feet below the existing ground surface from the refraction microtremor surveys, the soil profile type for the site falls into seismic site Class B in accordance with section 1613.5.2 of the 2009 International Building Code (IBC). According to the IBC, a Site Class B can only be utilized for design if there is less than 10 feet of soil between the bottom of the spread footing or mat foundation and the rock surface.

The proposed addition can be supported on a shallow foundation system (i.e., wall and spread footings) bearing in competent natural soils or new engineered fill/lean concrete overlying competent natural soils. Consequently, the foundations will need to be extended through existing fill or the existing fill will need to be removed in its entirety. A shallow foundation system bearing in the competent natural soils or new engineered fill/lean concrete overlying competent natural soils can be designed for a maximum net allowable soil bearing pressure of 4,000 psf. Competent soils can be identified on the boring log as natural Silty CLAY or Clayey SILT/Silty SAND exhibiting an unconfined compressive strength estimate of at least 1½ tsf or SPT N-values of at least 8 bpf, respectively.

For the design and construction of the slabs-on-grade for the building addition, the recommendations provided in the section entitled **Subgrade Preparation and Earthwork Operations** should be followed. The building floor slab thickness can be determined utilizing an assumed modulus of subgrade reaction of 100 pounds per cubic inch (pci) after passing a proofroll. We recommend the floor slab be designed with a minimum thickness of 5 inches.

More detailed recommendations with regard to foundations, subgrade preparation and earthwork operations, fill placement, slab and pavement design, underslab drainage and construction dewatering are included herein and must be fully reviewed and understood so that the intent of the recommendations are properly utilized during design and construction of the proposed development. We recommend that ECS be retained during construction of the proposed development to monitor all earthwork/subgrade preparation to verify that the exposed subgrade materials and the soil bearing pressures will be suitable for the proposed structure.

Report Prepared By:

Michael T. Bronson, P.E.
Project Engineer

Report Reviewed By:

Stephen J. Geiger, P.E.
Senior Principal Engineer

PROJECT OVERVIEW

Introduction

This report presents the results of our subsurface exploration and geotechnical engineering recommendations for the proposed campus improvements and additions to be constructed at the Main Campus of Joliet Junior College at the physical address of 1215 Houbolt Road in Joliet, Illinois. A General Location Map included in the Appendix of this report shows the approximate location of the project site.

This study was conducted in general accordance with ECS Proposal No. 16:13397-GP dated December 15, 2014 and authorized by you. In preparing this report, we have utilized information from our current subsurface exploration as well as information from nearby sites.

Existing Site Conditions

Joliet Junior College's main campus is located at 1215 Houbolt Road in Joliet, Illinois. The site is bound to the north by undeveloped fields, to the west by a stream/river and to the south by several industrial developments. Of specific interest to the scope outlined herein is the athletic field located on the southwest corner of the campus. Based on our review of online resources (i.e., Google Earth®), existing site grades will range from EL. +565 to EL. + 570 feet.

Proposed Construction

Based on our discussions with you we understand the proposed construction at the project site will consist of one two-story, slab-on-grade stand-alone addition to the existing main campus. The development will also include new parking areas and possibly some on-site stormwater detention. The proposed column loads are expected to range from 150 to 250 kips and the exterior wall loads are expected to be approximately 1½ to 3 kips per linear feet (klf).

ECS requests that the actual design loads are made available to us as the project moves forward. If our understanding of the proposed construction is inaccurate, or if the design changes, please notify ECS immediately so that we can review the proposed scope of work to verify it is applicable for the proposed construction.

Purposes of Exploration and Scope of Services

The purposes of this exploration were to explore the soil and groundwater conditions at the project site and to develop engineering recommendations to help guide in the design and construction of the geotechnical aspects of the project. We accomplished these purposes by performing the following scope of services:

1. Reviewing the geotechnical reports prepared for nearby sites by ECS;

2. Drilling twenty (20) SPT (standard penetration tests) soil borings at the project site using an auger drill rig.
3. Perform one (1) ReMi test at the project site to determine the seismic Site Classification.
4. Performing laboratory tests on selected representative samples from the borings to estimate pertinent engineering properties;
5. Analyzing the field and laboratory data to develop appropriate engineering recommendations; and,
6. Preparing this geotechnical report of our findings and recommendations.

The conclusions and recommendations contained in this report are based on twenty (20) soil borings. Four (4) soil borings (MC-1 through MC-4) were drilled in the footprint of the proposed stormwater pond to depths ranging from approximately 8 to 8½ feet below existing site grades. Three (3) soil borings (MC-5 through MC-7) were drilled in the footprint of the proposed parking expansion to a depths ranging from approximately 7½ to 8½ feet below existing site grades. The remaining thirteen (13) soil borings (MC-8 through MC-20) were drilled in the footprint of the proposed structure to a depths ranging from approximately 5 to 8½ feet below existing site grades. The borings were scheduled to be drilled to a depth of approximately 20 feet below existing site grades but were terminated due to auger refusal on apparent competent bedrock.

The subsurface exploration (for the soil borings) included split-spoon soil sampling, standard penetration tests (SPT) and groundwater level observations in the boreholes. The results of the completed soil borings, ReMi testing and a Boring Location Plan are included in the Appendix of this report.

The boring locations were selected by you based on the proposed construction. The borings were located in the field by an ECS representative. The approximate locations of the borings are shown on the Boring Location Plan. According to the available online resources (i.e., Google Earth®), existing site grades are anticipated to range from approximately EL. +565 to EL. + 570 feet +/- . The approximate boring elevations are shown on the Boring Logs attached in the Appendix of the report.

EXPLORATION PROCEDURES

Subsurface Exploration Procedures

The borings were located in the field by an ECS representative. The soils boring locations were selected by you based on the proposed layout of the proposed construction. An ECS subcontracted driller contacted the State of Illinois Utility One-Call Center, JULIE, to clear and mark underground utilities in the vicinity of the project site prior to drilling operations.

The soil borings were performed with a truck-mounted rotary-type auger drill rig which utilized hollow stem augers to advance the boreholes. Representative soil samples were obtained by means of conventional split-barrel sampling procedures. Samples were typically obtained at 2½-foot intervals in the upper 10 feet and at 5-foot intervals thereafter. In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler through a 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) or N-value and is indicated for each sample on the boring logs. The SPT value can be used as a qualitative indication of the in-place relative density of cohesionless soils. In a less reliable way, it also indicates the consistency of cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies.

The drill rig utilized an automatic trip hammer to drive the sampler. Consideration of the effect of the automatic hammer's efficiency was included in the interpretation of subsurface information for the analyses prepared for this report.

A field log of the soils encountered in the borings was maintained by the drill crew. After recovery, each geotechnical soil sample was removed from the sampler and visually classified. Representative portions of each soil sample were then sealed in jars. The soil samples were then delivered to our laboratory in Buffalo Grove, Illinois for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with auger cuttings to the existing ground surface.

Shear Wave Velocity Testing

A Reflection Microtremor (ReMi) survey was performed on the site. The data was processed using SeisOpt[®] ReMi[™] software to reveal a one-dimensional average shear-wave (S-wave) velocity image for the line (array). In addition, the survey also provides the average shear wave velocity to a depth of 100 feet that was used to determine the seismic Site Class. The results of ReMi survey are included in the Appendix of this report.

The data gathering process in the field used standard refraction seismic equipment to measure site characteristics using ambient vibrations (micro tremors) as a seismic source. The equipment used for the survey included a SiesOpt ReMi recording unit capable of storing record lengths up to about 100 seconds and 12 10-Hz vertical P-wave geophones. The analysis presented here was developed from the 12 receivers (10 Hz. Geophones) set along relatively straight-line arrays with evenly spaced intervals between the receivers. Twelve unfiltered 30-

second records were recorded along each line. The vibration records collected above were processed using proprietary software and the refraction micro tremor method as explained in Louie, J, N, 2001, "Faster, Better: Shear-wave velocity to 100 meters depth from refraction micrometer arrays", Bulletin of the Seismological Society of America, v. 91, p.347-364.

Laboratory Testing Program

Representative soil samples were selected and tested in our laboratory to check field classifications and to help estimate engineering properties. The laboratory testing program included visual classifications, calibrated hand penetrometer unconfined compressive strength testing and moisture content determinations of cohesive soil samples.

Each soil sample was classified on the basis of texture and plasticity in accordance with the Unified Soil Classification System. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. A brief explanation of the Unified System is included with this report. The various soil types were grouped into the major zones noted on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs and profiles are approximate; in situ, the transitions may be gradual.

The unconfined compressive strength (Qp) of relatively cohesive clay soil samples was estimated with the use of a calibrated hand penetrometer. In the hand penetrometer test, the unconfined compressive strength of a soil sample is estimated, to a maximum of 4½ tons per square foot (tsf) by measuring the resistance of a soil sample to penetration of a small, calibrated spring-loaded cylinder.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposal.

EXPLORATION RESULTS

Soil Conditions

To understand the subsurface conditions at the project site, twenty (20) soil borings were performed. Four (4) soil borings (MC-1 through MC-4) were drilled in the footprint of the proposed pond to depths ranging from approximately 8 to 8½ feet below existing site grades. Three (3) soil borings (MC-5 through MC-7) were drilled in the footprint of the proposed parking expansion to a depths ranging from approximately 7½ to 8½ feet below existing site grades. The remaining thirteen (13) soil borings (MC-8 through MC-20) were drilled in the footprint of the proposed structure to a depths ranging from approximately 5 to 8½ feet below existing site grades. The borings were scheduled to be drilled to a depth of approximately 20 feet below existing site grades but were terminated due to auger refusal on apparent competent bedrock. No rock coring beyond the depth of auger refusal was performed. The subsurface conditions encountered at the borings performed at the site can be summarized as follows. The specific soil types observed at the boring locations are noted on the boring logs in the Appendix.

The surficial materials were observed to consist of about 7 to 30 inches of topsoil (typically 10 to 12 inches) or 4 to 5 inches of rubber material (i.e, running track surface) underlain by 3 to 7 inches of gravel. The surficial soils were typically observed to be underlain by Silty Clay FILL to depths ranging from about 2½ to 5½ feet below existing site grades. The existing FILL must be considered undocumented as ECS has not been provided with in-place density test results. The FILL was observed to be underlain by natural Silty CLAY, Clayey SILT or Silty SAND with Gravel to depths ranging from about 4 feet to 6 feet below existing site grades. The natural soils were typically observed to be underlain by Weathered Limestone which extended to the refusal depth of the soil borings on apparent competent bedrock (i.e., approximately 5 to 8½ feet below existing site grades).

The Silty Clay FILL soils exhibited unconfined compressive strength values ranging from 2¼ tsf to 4 tsf (very stiff to stiff) and moisture contents ranging from about 16 percent to 28 percent. The natural Silty CLAY soil encountered exhibited unconfined compressive strength values ranging from 2½ tsf to greater than 4½ tsf (very stiff to hard) and had moisture contents ranging from about 12 to 19 percent. The Silty SAND exhibited SPT N-values ranging from 3 to 49 blows per foot (bpf) which is indicative of a very loose to dense relative density for granular soils, but was typically observed to be loose. The Silty SAND exhibited SPT N-values ranging from 3 to 49 blows per foot (bpf) which is indicative of a very loose to dense relative density for granular soils, but was typically observed to be loose. The Clayey SILT exhibited SPT N-values ranging from 7 bpf to over 50 blows to advance the spoon a few inches which is indicative of a loose to very dense relative density for granular soils. The Weathered Limestone exhibited SPT N-values ranging from 28 bpf to over 80 blows to advance the spoon several inches which is indicative of a medium dense to very dense relative density.

It should be noted that bid quantity estimation by “averaging” depths and strata changes from boring logs may not be representative of the actual depths and strata changes during earthwork construction. Too many variations exist for such “averaging” to be valid, particularly in the pavement and base course thicknesses, soil types and condition, depth, and groundwater conditions. Additional scope of professional services may be required to obtain subsurface information needed for earthwork bid preparation. This additional scope could include test pit exploration to better understand the extent (vertical and horizontal) of the materials/soils of concern. Even with this additional information, contingencies should always be carried in

construction budgets or land purchase agreements to cover variations in subsurface conditions. Soil borings cannot present the same full-scale view that is obtained during complete site grading, excavation or other aspects of earthwork construction.

Groundwater Observations

Observations for groundwater were made during sampling and upon completion of the drilling operations at the boring locations. In auger drilling operations, water is not introduced into the boreholes, and the groundwater position can often be obtained by observing water flowing into or out of the boreholes. Furthermore, visual observation of the soil samples retrieved during the auger drilling exploration can often be used in evaluating the groundwater conditions.

Groundwater was encountered at a depth of about 7 feet during drilling to 7½ feet after auger removal at boring location MC-10. The balance of the borings were observed to be dry at the time of our exploration. Glacial till soils in the Midwest frequently oxidize from gray to brown above the level at which the soil remains saturated. The long-term groundwater level is often interpreted to be near this zone of color change. Based on the results of this exploration and soil color change of the natural soils encountered, the static long-term groundwater level at the project site is estimated to be located deeper than the extent of our exploration.

The highest groundwater observations are normally encountered in late winter and early spring and our current groundwater observations are not expected to be at the seasonal maximum water table. It should be noted that the groundwater level can vary based on precipitation, evaporation, surface run-off and other factors not immediately apparent at the time of this exploration. Surface water runoff will be a factor during general construction, and steps should be taken during construction to control surface water runoff and to remove water that may accumulate in the proposed excavations as well as floor slab.

Seismic Site Class

A Reflection Microtremor (ReMi) survey was performed on the site to evaluate the seismic Site Class. Based on the results of the ReMi survey, the average shear wave velocity at the project site is estimated to be 3,366 ft/s. The average shear wave velocity profile along the performed array is contained on the ReMi Test Results that are included in the Appendix. Based on the average shear wave velocity data obtained to a depth of 100 feet below the existing ground surface from the refraction microtremor surveys, the soil profile type for the site falls into seismic Site Class B in accordance with section 1613.5.2 of the 2009 International Building Code (IBC). According to the IBC, a Site Class B can only be utilized for design if there is less than 10 feet of soil between the bottom of the spread footing or mat foundation and the rock surface.

ANALYSIS AND RECOMMENDATIONS

Overview

The conclusions and recommendations presented in this report should be incorporated in the design and construction of the project to help reduce possible soil and/or foundation related problems. The following recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered at the project site. If there are any changes to the project characteristics or if different subsurface conditions are encountered during construction, ECS Midwest, LLC should be consulted so that the recommendations of this report can be reviewed and modified, if necessary.

The presence of undocumented FILL, to depths as great as about 5½ feet in some portions of the site, will influence the design, construction and performance of the proposed construction. New construction supported on or over the undocumented FILL will likely experience some geotechnical related distress. Consequently, the undocumented FILL should be completely removed and replaced with new engineered fill to eliminate the risk associated with these materials. Otherwise, the client must accept some risk of geotechnical related distress in the new construction if some lesser amount of remedial work is performed.

The following sections present specific recommendations with regard to the design of the proposed Campus Improvements and Additions. These include recommendations with regard to subgrade preparation and earthwork, fill placement, building foundations, floor slab design, pavement design and construction dewatering. Discussion of the factors affecting the building foundations for the proposed construction, as well as additional recommendations regarding design and construction at the project site are included below. We recommend that ECS review the final design and specifications to check that the earthwork and foundation recommendations presented in this report have been properly interpreted and implemented in the design and specifications.

Subgrade Preparation and Earthwork Operations

Considerations for Existing Fill

As previously discussed, the only way to eliminate the risk associated with the undocumented fill is to completely remove the fill and replace it with new engineered fill. However, within areas of proposed slabs-on-grade and/or pavements, other remedial strategies may be considered if the client is willing to accept some risk for premature subgrade related distress of slabs and pavements. The decision to leave existing fill in-place beneath new construction is a decision only the client can make based upon their level of risk tolerance.

The first alternative would involve removing a select depth of existing fill and replacing it with new engineered fill. For planning purposes, we suggest that the partial depth undercutting be no less than 2 feet below the planned final subgrade elevation. The undercut excavation should also extend at least 5 feet beyond the perimeter of the planned structure and/or pavements. The exposed subgrade should then be evaluated as described later in this section. The resulting excavation should then be backfilled as described in the Fill Placement and Compaction of this report. This approach will not eliminate the possibility for premature

subgrade related distress of new grade supported construction and considered to be of low to moderate risk. However, it may delay the need and severity of future repairs.

The second alternative would be to evaluate existing fill present at the final subgrade elevations or prior to the placement of new engineered fill to achieve the design grades. With this option, the exposed subgrades should be proofrolled with heavy rubber tired equipment and unstable or yielding areas removed and replaced with new engineered fill on an a case by case basis. An ECS geotechnical engineer should observe the proofrolling and provide specific recommendations based on the conditions observed. This alternative is expected to carry moderate risk for pavement and lightly loaded floor slabs. The client should understand that this approach will likely result in the need for heightened maintenance and repair of new grade supported construction.

The following paragraphs discuss general site preparation and earthwork operations regardless of the client's approach to the existing fill.

General Earthwork Considerations

The subgrade preparation should generally consist of stripping/removal of all existing vegetation, topsoil, rubber track materials, subbase and any other soft or unsuitable material from the project areas. We recommend the earthwork clearing be extended a minimum of 10 feet beyond the limits of new structure and 5 feet beyond the limits of the proposed parking lot, where possible. ECS does not recommend the floor slab/pavement subgrades remain exposed to the elements or construction traffic for a prolonged period of time as the subgrade may be disturbed and/or softened. If the floor slab is not planned to be constructed within a few days after exposing the final design subgrade, consideration should be given to leaving the subgrade approximately 1 foot above the final design subgrade to help prevent softening of the design subgrade soils (if feasible).

Once the subgrade has been exposed, the subgrade should be proofrolled using a loaded dump truck having an axle weight of at least 10 tons. The intent of the proofroll is to aid in identifying localized soft or unsuitable material which may be required to be removed. In cut areas, if soft or yielding soils are observed during the proofroll of the subgrade, the soft or yielding soils should be undercut up to a maximum of 2 feet and replaced with compacted and engineered fill to the design subgrade in accordance with the **Fill Placement** section of this report. In fill areas, if soft or yielding soils are observed during the proofroll of the subgrade, the soft or yielding soils should be further evaluated by the Geotechnical Engineer of Record to determine what remedial action is required. Proofrolling of the subgrade should be performed under the observation of the Geotechnical Engineer of Record or his authorized representative.

To help limit the volume of soil removed as a result unstable conditions revealed by the proofrolling observations, we recommend that soft or yielding soils be evaluated in approximately 6-inch intervals. That is to say, if soft or yielding soils are identified, the contractor should remove 6 inches of material in the subject area and then proofroll/evaluate the undercut subgrade. This process can help reduce the potential for performing more undercutting than may otherwise be necessary.

Steps should be taken by the contractor to control surface water runoff and to remove water from precipitation that may accumulate in the subgrade areas, especially during the wet season. When wet and subjected to construction traffic, softening and disturbance of the exposed clayey subgrade may occur. Construction traffic should be especially limited when the subgrade is wet. During final preparation of the subgrade, a smooth drum roller is often used to provide a flat surface and provide for better drainage to reduce the negative impact of rain events. Due to the relative sensitivity of the lean clay soils, we recommend that these materials be static rolled (no vibrations) with a sheepfoot roller to reduce the potential for subgrade soil disturbance. We also recommend sealing, crowning and sloping the subgrade to provide positive drainage off the subgrades.

Exposure to the environment may weaken the subgrade soils if the excavations remain open for too long a period. If the subgrade soils are softened by surface water intrusion or exposure, the softened soils must be removed from the subgrade excavation bottom immediately prior to placement of concrete and/or engineered fill.

Excavations should comply with the requirements of OSHA 29CFR, Part 1926, Subpart P, "Excavations" and its appendices, as well as other applicable codes. This document states that the contractor is solely responsible for the design and construction of stable, temporary excavations. The excavations should not only be in accordance with current OSHA excavation and trench safety standards but also with applicable Local, State and Federal regulations. The contractor should shore, slope or bench the excavation sides when appropriate.

If problems are encountered during the earthwork operations, or if site conditions deviate from those encountered during our subsurface exploration, ECS should be notified immediately. We recommend that the project geotechnical engineer or his representative be on site to monitor stripping and site preparation operations and observe that unsuitable soils have been satisfactorily removed and observe the proofrolling of the subgrades.

Fill Placement and Compaction

All fills should consist of an approved material, free of organic matter and debris, particles greater than 3-inches and have a Liquid Limit and Plasticity Index less than 40 and 15, respectively. Unacceptable fill materials include topsoil and organic materials (OH, OL), high plasticity silts and clays (CH, MH), fat clays and low-plasticity silts (ML). Under no circumstances should high plasticity soils be used as fill material in proposed structural areas or close to site slopes.

The Silty Clay can be utilized as engineered fill. However, the project team/contractor should be prepared to implement discing or other drying techniques (termed manipulation) prior to their (silty clay) use as compacted fill, and recognize and account for increased costs associated with manipulation of the on-site clay. The Clayey SILT and Silty SAND can be used as engineered fill but should not be utilized within 3½ feet of exterior site grades as these materials are frost susceptible. The use of the Clayey SILT and Silty SAND as fill at depths shallower than 3½ feet requires the client/owner to accept the risks of premature distress of pavements, sidewalks, etc. On-site and off-site soils to be considered for engineered fill at the project site should be further evaluated and approved by the project geotechnical engineer prior to placement at the time of construction. We do not recommend the use of pea gravel as

engineered fill. Pea gravel has round/smooth characteristics, no fines and does not interlock when compacted which make more susceptible to future movement and instability resulting in excessive and variable settlement.

Fill materials should be placed in lifts not exceeding 8-inches in loose thickness and moisture conditioned to within ± 2 percentage points of the optimum moisture content. Soil bridging lifts should not be used, since intolerable settlement of overlying structures will likely occur. Controlled fill soils should be compacted to a minimum of 95 percent of the maximum dry density obtained in accordance with ASTM D 1557, modified Proctor method. The zone of the engineered fill placed below the foundations should extend 1 foot beyond the outside edges of the footings and from that point, outward laterally 1 foot for every 2 feet of fill thickness below the footing.

The expanded footprint of the proposed building pad and fill areas should be well defined, including the limits of the fill zones at the time of fill placement. Grade control should be maintained throughout the fill placement operations. All fill operations should be observed on a full-time basis by a qualified soil technician to determine that the specified compaction requirements are being met. A minimum of one compaction test per 2,500 square foot area should be tested in each lift placed. Within trench or other localized excavations, one test for each 50 linear feet of each lift of fill shall be performed. The elevation and location of the tests should be clearly identified at the time of fill placement.

Compaction equipment suitable to the soil type used as fill should be used to compact the fill material. Theoretically, any equipment type can be used as long as the required density is achieved; however, the standard of practice typically dictates that a vibratory roller be utilized for compaction of granular soils and a sheepsfoot roller be utilized for compaction of cohesive soils. In addition, a steel drum roller is typically most efficient for compacting and sealing the surface soils. All areas receiving fill should be graded to facilitate positive drainage away from the building pad and pavement areas. Natural clayey silt soils are difficult to work with and compact and easily become disturbed, especially when wet. Construction traffic should be limited on clayey silt subgrade soils. Care should be taken with vibrating equipment near existing structures.

It should be noted that prior to the commencement of fill operations and/or utilization of off-site borrow materials, the Geotechnical Engineer of Record should be provided with representative samples to determine the material's suitability for use in a controlled compacted fill and to develop moisture-density relationships. In order to expedite the earthwork operations, if off-site borrow materials are required, it is recommended they consist of suitable fill materials in accordance with the recommendations previously outlined in this section.

Fill materials should not be placed on frozen soils or frost-heaved soils and/or soils that have been recently subjected to precipitation. All frozen soils should be removed prior to continuation of fill operations. Borrow fill materials, if required, should not contain frozen materials at the time of placement. All frost-heaved soils should be removed prior to placement of controlled, compacted fill, granular subbase materials, foundation or slab concrete, and asphalt pavement materials.

Foundation Recommendations

The proposed addition can be supported on a shallow foundation system (i.e., wall and spread footings) bearing in competent natural soils or new engineered fill/lean concrete overlying competent natural soils. If the existing fill is not completely removed from the expanded building footprint area and replaced with new engineered fill, the foundations must be extended through the fill to bear in competent natural soil. A shallow foundation system bearing in the competent natural soils or new engineered fill/lean concrete overlying competent natural soils can be designed for a maximum net allowable soil bearing pressure of 4,000 psf. The net allowable soil bearing pressure refers to that pressure which may be transmitted to the foundation bearing soils in excess of the final minimum surrounding overburden pressure. Competent soils can be identified on the boring log as natural Silty CLAY or Clayey SILT/Silty SAND exhibiting an unconfined compressive strength estimate of at least 1½ tsf or SPT N-values of at least 8 bpf, respectively.

If unsuitable/loose/soft soils or soils with elevated moisture contents (i.e., greater than 25 percent) are encountered at the proposed bearing elevation, consideration should be given to extending the footings until suitable bearing soils are encountered or the unsuitable soils should be removed beneath the base of the footing and replaced with compacted engineered fill or lean concrete. ECS recommends hand auger probes be performed to a depth of at least 3 feet below the footing bearing elevation supplemented with in-situ DCP testing to evaluate the bearing soils during construction and confirm the soils are suitable.

If engineered fill is utilized, the engineered fill should be compacted to a minimum of 95 percent of the maximum dry density in accordance with modified Proctor method, ASTM D 1557. The zone of the engineered fill placed below the foundations should extend 1 foot beyond the outside edges of the footings and from that point, outward laterally 1 foot for every 2 feet of fill thickness below the footing. If lean concrete is utilized to replace weaker/low bearing soils or unsuitable soils, no lateral over-excavation will be necessary, but the excavation should be 1 foot wider than the footing (6 inches on each side), and the lean concrete should be allowed to sufficiently harden prior to placement of the foundation concrete. We recommend that the excavation/backfill of foundations be monitored full-time by an ECS Geotechnical Engineer or his representative to verify that the available soil bearing pressure is consistent with the boring log information obtained during the geotechnical exploration and our design recommendations.

To help reduce the potential for foundation bearing failure and excessive settlement due to local shear or "punching" action, we recommend that continuous footings have a minimum width of 18 inches and that isolated column footings have a minimum lateral dimension of 30 inches. In addition, footings should be placed at a depth to provide adequate frost cover protection. For this region, we recommend the exterior footings and footings beneath unheated areas be placed at a minimum depth of 3½ feet below finished grade. Interior footings in heated areas can be placed at a minimum of 2 feet below grade provided that suitable soils are encountered and that the foundations will not be subjected to freezing weather either during or after construction.

Settlement of individual footings, designed in accordance with our recommendations presented in this report, is expected to be small and within tolerable limits for the proposed building. For footings placed on competent natural soils or properly compacted engineered fill overlying competent natural soils, maximum total and differential settlements are expected to be in the

range of 1 inch or less and ½ inch, respectively. These settlement values are based on our engineering experience and the anticipated structural loading, and are to help guide the structural engineer with his design.

Floor Slab Design

For the design and construction of the slabs-on-grade for the building addition, the recommendations provided in the section entitled **Subgrade Preparation and Earthwork Operations** should be followed. Provided the recommendations of this report are strictly followed, the building floor slab thickness can be determined utilizing an assumed modulus of subgrade reaction of 100 pounds per cubic inch (pci). The final slab subgrade should be firm and unyielding during a final proofroll. We recommend the slab be designed with a minimum thickness of 5 inches.

We recommend consideration be given to the floor slab being underlain by a minimum of 6 inches of granular material having a maximum aggregate size of 1½ inches and no more than 2 percent soil passing the No. 200 sieve. This granular layer will facilitate the fine grading of the subgrade and help prevent the rise of water through the floor slab. Prior to placing the granular material, the floor subgrade should be free of standing water, mud, and frozen soil. Before the placement of concrete, a vapor barrier may be placed on top of the granular material to provide additional moisture protection. Welded-wire mesh reinforcement should be placed in the upper half of the floor slab and attention should be given to the surface curing of the slab to minimize uneven drying of the slab and associated cracking and/or slab curling. The use of a blotter or cushion layer above the vapor retarder can also be considered for project specific reasons. Please refer to ACI 302.1R04 *Guide for Concrete Floor and Slab Construction* and ASTM E 1643 *Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs* for additional guidance on this issue.

We recommend that the floor slab be isolated from the foundations so differential settlement of the structure will not induce shear stresses on the floor slab. For maximum effectiveness, temperature and shrinkage reinforcements in slabs on ground should be positioned in the upper third of the slab thickness. The Wire Reinforcement Institute recommends the mesh reinforcement be placed 2 inches below the slab surface or upper one-third of slab thickness, whichever is closer to the surface. Adequate construction joints, contraction joints and isolation joints should also be provided in the slab to reduce the impacts of cracking and shrinkage. Please refer to ACI 302.1R04 *Guide for Concrete Floor and Slab Construction* for additional information regarding concrete slab joint design.

If problems are encountered during the slab subgrade preparation, or if site conditions deviate from those encountered during our subsurface exploration, ECS should be notified immediately. We recommend that the project geotechnical engineer or his representative should be on site to monitor subgrade preparation and observe that unsuitable soils have been satisfactorily removed and the subgrade soils are suitable to support the slab.

Underslab Sub-Drainage Design

Based on the groundwater levels observed during the subsurface exploration, we do not anticipate a significant volume of water will persist at the slab subgrade elevation. It should be noted; however, that surface runoff and limited groundwater seepage may accumulate at the slab subgrade. As such, we recommend that positive drainage be implemented around the perimeter of the proposed structure to reduce the potential for water accumulation under the floor slab and foundation elements, which could potentially weaken the bearing soils.

Pavement Design

We recommend that the pavement subgrade be prepared in accordance with the **Subgrade Preparation and Earthwork Operations** section of this report. Once the subgrade has been properly prepared, we recommend the following minimum pavement sections for the proposed development. The minimum pavement sections were developed based on assumed traffic loads and a CBR of 3 for the subgrade soils.

Table 1: Pavement Section Recommendations

Pavement Material	Compacted Material Thicknesses (Inches)			
	Flexible Pavement (Light Duty)	Flexible Pavement (Heavy Duty)	Rigid Pavement (Light Duty)	Rigid Pavement (Heavy Duty)
Portland Cement Concrete	--	--	5	6
Bituminous Surface Course	1½	1½	--	--
Bituminous Base Course	2	3	--	--
Crushed Granular Subbase	8	12	6	6
Total Pavement Section Thickness	11½	16½	11	12

All pavement materials and construction should be in accordance with the Guidelines for AASHTO Pavement Design and IDOT Standards for Road and Bridge Construction.

The pavement sections specified in the table above are general pavement recommendations based on the anticipated usage at the project site and were not developed based on specific traffic patterns/loading and resiliency factors, as those parameters were not provided by the design team. We recommend the project team provide ECS with actual design traffic loads so that we can verify the recommendations detailed herein are appropriate for the anticipated traffic loads. The table above provides “Standard” and “Heavy Duty” flexible and rigid pavement recommendations. The light-duty pavement section assumes that typical traffic loading will be limited to standard automobiles and does not account for more heavily loaded vehicles (i.e., multiple axle trucks and buses) and should be used for parking lanes. The “Heavy-Duty” pavement section is recommended for pavements to be subjected with frequent traffic such as drive lanes, delivery areas, bus lanes and entrance/exit drive areas.

It should also be noted that the pavement sections specified in the table above were developed for the anticipated in-service traffic conditions only and do not provide an allowance for construction traffic conditions or traffic conditions in excess of typical residential/collector street traffic. Therefore, if pavements will be constructed early during site development to accommodate construction traffic, consideration should be given to the construction of designated haul roads, where thickened pavement sections can be provided to accommodate the construction traffic, as well as the future in-service traffic. ECS can provide additional design assistance with pavement sections for haul roads upon request. If the organic/peat soils are allowed to remain below the pavement, shortened service life and increase maintenance costs should be anticipated.

We recommend the crushed granular base course should be compacted to at least 95 percent of the maximum dry density obtained in accordance with ASTM D1557, Modified Proctor Method. During asphalt pavement construction, the wearing and leveling course should be compacted to a minimum of 93 percent of the theoretical density value. Prior to placing the granular material, the pavement subgrade soil should be properly compacted, observed to be stable during a final proofroll and free of standing water, mud, and frozen soil.

Adequate construction joints, contraction joints and isolation joints should be provided in the areas of rigid pavement to reduce the impacts of cracking and shrinkage. Please refer to ACI 330R-92 *Guide for Design of Concrete Parking Lots*. The Guide recommends an appropriate spacing strategy for the anticipated loads and pavement thickness. It has been our experience that joint spacing closer to the minimum values results in a pavement with less cracking and better long term performance.

The pavements should be designed and constructed with adequate surface and subsurface drainage. Where standing water develops, either on the pavement surface or within the base course layer, softening of the subgrade and other problems related to the premature deterioration of the pavement can be expected. Furthermore, good drainage should minimize the possibility of the subgrade materials beneath the pavement becoming saturated over a long period of time. Infiltration and subterranean water are the two sources of water that should be considered in the pavement design for the project. Infiltration is surface water that enters the pavement through the joints, pores, cracks in the pavement and through shoulders and adjacent areas pavements as a result of precipitation. Subterranean water is a source of water from a high water table on the site. The long term groundwater level on the site is estimated to be located deeper than the extent of our subsurface exploration. Therefore, infiltration is the most important source of water to be considered for this project.

Large, front loading trash dumpsters frequently impose concentrated front-wheel loads on pavements during loading. This type of loading typically results in rutting of the pavement and ultimately pavement failures. Therefore, we recommend that the pavement in trash pickup areas consist of the heavy duty rigid pavement section in Table 1. It should be noted that the pavement should be comprised of air-entrained Portland cement concrete with a minimum compressive strength of 4,000 psi and a minimum flexural strength of 650 psi.

Pavement Maintenance

Regular maintenance and occasional repairs should be implemented to keep pavements in a serviceable condition. In addition, to help minimize water infiltration to the pavement section and within the base course layer resulting in softening of the subgrade and deterioration of the pavement, we recommend the timely sealing of joints and cracks using elastomeric caulk or other compatible material. We recommend exterior pavements should be reviewed for distress/cracks twice a year, once in the spring and once in the fall. In areas where deep deposits of undocumented and variable fill soils are considered to be left in place, the Owner should anticipate increased in long term pavement maintenance due to compression of deep fill/organic peat over time.

Sound maintenance programs should help maintain and enhance the performance of pavements and attain the design service life. A preventative maintenance program should be implemented early in the pavement life to be effective. The “standard in the industry” supported by research indicates that preventative maintenance should typically begin within 2 to 5 years of the placement of pavement. Failure to perform preventative maintenance will reduce the service life of the pavement and increase the costs for both corrective maintenance and full pavement rehabilitation.

Stormwater Detention Pond

Based on our observations at the project site, we anticipate the soils in the vicinity of the proposed detention pond will likely consist of Silty CLAY or Clayey SILT (depending on final grading). Based on the subsurface soil in the vicinity of the detention pond, we are providing general recommendations for construction and design of the detention pond.

The natural Silty CLAY is considered suitable for the retention of water. If granular soils, such as SILT or Sand are encountered at the bottom or sides of the pond, an impermeable clay liner will be required. We recommend ECS and the project team evaluate the soils in the vicinity of the detention pond be evaluated at the time of construction. The exposed cut surfaces at the pond excavation sides and bottom may tend to become disturbed during the excavation process. We recommend a minimum 12 inches below the finish grade be scarified and recompact to a minimum of 90 percent of modified Proctor maximum dry density value. If a clay liner is required, ECS recommends a 1 foot thick layer of Silty CLAY be placed at the pond bottom and sides to retain the stormwater runoff.

To help reduce erosion of the sides of the basin excavation and embankments, erosion protection should be provided. The placement of a granular rip-rap and/or establishment of uniform vegetation can be considered for erosion control within the pond and surrounding areas. A slope of 3:1 (Horizontal:Vertical) or flatter should be used to reduce the potential for slope stability related problems within side slopes of the pond. If side slope inclinations steeper than 3:1 will be utilized, a formal slope stability analysis should be performed.

PROJECT CONSTRUCTION RECOMMENDATIONS

General Construction Considerations

We recommend that the subgrade preparation, installation of the foundations, and construction of slabs-on-grade be monitored by an ECS geotechnical engineer or his representative. Methods of verification and identification such as proofrolling, hand auger probes with in-situ DCP testing will be necessary to further evaluate the subgrade soils and identify unsuitable soils. The contractor should be prepared to over-excavate slab-on-grade subgrades at isolated locations (as necessary). We recommend that excavations of new foundations be monitored on a full-time basis by an ECS geotechnical engineer or his representative to verify that the soil bearing pressure and the subgrade materials will be suitable for the proposed structure and are consistent with the boring log information obtained during this geotechnical exploration. We would be pleased to provide these services.

All unsuitable materials should be removed and legally disposed off site and replaced with environmentally clean, inorganic fill and free of debris or harmful matter. Unsuitable materials removed from the project site should be disposed of in accordance with all applicable Federal, State, and Local regulations.

The contractor should avoid stockpiling excavated materials immediately adjacent to excavation walls. We recommend that stockpile materials be kept back from the excavation a minimum distance equal to the excavation depth to avoid surcharging the excavation walls. If this is impractical due to space constraints, the excavation walls should be retained with bracing/shoring designed for the anticipated surcharge loading.

Excavations should comply with the requirements of OSHA 29CFR, Part 1926, Subpart P, "Excavations" and its appendices, as well as other applicable codes. This document states that the contractor is solely responsible for the design and construction of stable, temporary excavations. The excavations should not only be in accordance with current OSHA excavation and trench safety standards but also with applicable Local, State and Federal regulations. The contractor should shore, slope or bench the excavation sides when appropriate. Site safety is the sole responsibility of the contractor, who shall also be responsible for the means, methods and sequencing of construction operations.

Foundation Subgrades

If unsuitable/loose/soft soils or soils with elevated moisture contents (i.e., greater than 25 percent) are encountered at the proposed bearing elevation, consideration should be given to extending the footings until suitable bearing soils are encountered or the unsuitable soils should be removed beneath the base of the footing and replaced with compacted engineered fill or lean concrete. ECS recommends hand auger probes be performed to at least 3 feet below footing bearing elevation supplemented with in-situ DCP testing to evaluate the bearing soils during construction and confirm the soils are suitable. These evaluations are essential if the client does not elect to completely remove and replace the existing undocumented fill with new engineered fill. Foundations bearing on undocumented fill

If engineered fill is utilized, the engineered fill should be compacted to a minimum of 95 percent of the maximum dry density in accordance with modified Proctor method, ASTM D 1557. The zone of the engineered fill placed below the foundations should extend 1 foot beyond the outside edges of the footings and from that point, outward laterally 1 foot for every 2 feet of fill thickness below the footing. If lean concrete is utilized to replace weaker/low bearing soils or unsuitable soils, no lateral over-excavation will be necessary, but the excavation should be 1 foot wider than the footing (6 inches on each side), and the lean concrete should be allowed to sufficiently harden prior to placement of the foundation concrete. We recommend that the excavation/backfill of foundations be monitored full-time by an ECS Geotechnical Engineer or his representative to verify that the soil bearing pressure is consistent with the boring log information obtained during the geotechnical exploration.

Construction Dewatering

Based on the subsurface information obtained from the borings and our understanding of the proposed construction, dewatering efforts during construction should be minimal unless rainfall or perched water becomes an issue. We believe the use of sump pumps should be adequate to maintain a dry excavation during excavation and construction. The sump pits should be located around the perimeter of the excavations.

Exposure to the environment may weaken the soils within excavations if the excavations remain open for too long a period. If the subgrade soils are softened by surface water intrusion or exposure, the softened soils must be removed from the excavation bottom immediately prior to placement of concrete or engineered fill.

Closing

This report has been prepared to aid in the evaluation of this property and to assist the architect and/or engineer in the design of this project. The scope is limited to the specific project and locations described herein and our description of the project represents our understanding of the significant aspects relative to soil and foundation characteristics. In the event that any change in the nature or location of the proposed construction outlined in this report are planned, we should be informed so that the changes can be reviewed and the conclusions of this report modified or approved in writing by the geotechnical engineer. It is recommended that all construction operations dealing with earthwork and foundations be reviewed by an experienced geotechnical engineer to provide information on which to base a decision as to whether the design requirements are fulfilled in the actual construction. If you wish, we would welcome the opportunity to provide field construction services for you during construction.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings and tests performed at the locations as indicated on the Boring Location Plan and other information referenced in this report. This report does not reflect variations, which may occur between the borings. In the performance of the subsurface exploration, specific information is obtained at specific locations at specific times. However, it is a well known fact that variations in soil conditions exist on most sites between boring locations and also such situations as groundwater levels vary from time to time. The nature and extent of variations may not become evident until the course of construction. If variations then appear

evident, after performing on-site observations during the construction period and noting characteristics and variations, a reevaluation of the recommendations for this report will be necessary.

In addition to geotechnical engineering services, ECS Midwest, LLC has the in-house capability to perform multiple additional services as this project moves forward. These services include the following:

- Environmental Consulting;
- Project Drawing and Specification Review; and,
- Construction Material Testing / Special Inspections

We would be pleased to provide these services for you. If you have questions with regard to this information or need further assistance during the design and construction of the project please feel free to contact us.

APPENDIX

General Location Plan

Boring Location Plan

Boring Logs

ReMi Testing Results

Unified Soil Classification System

Reference Notes For Boring Logs

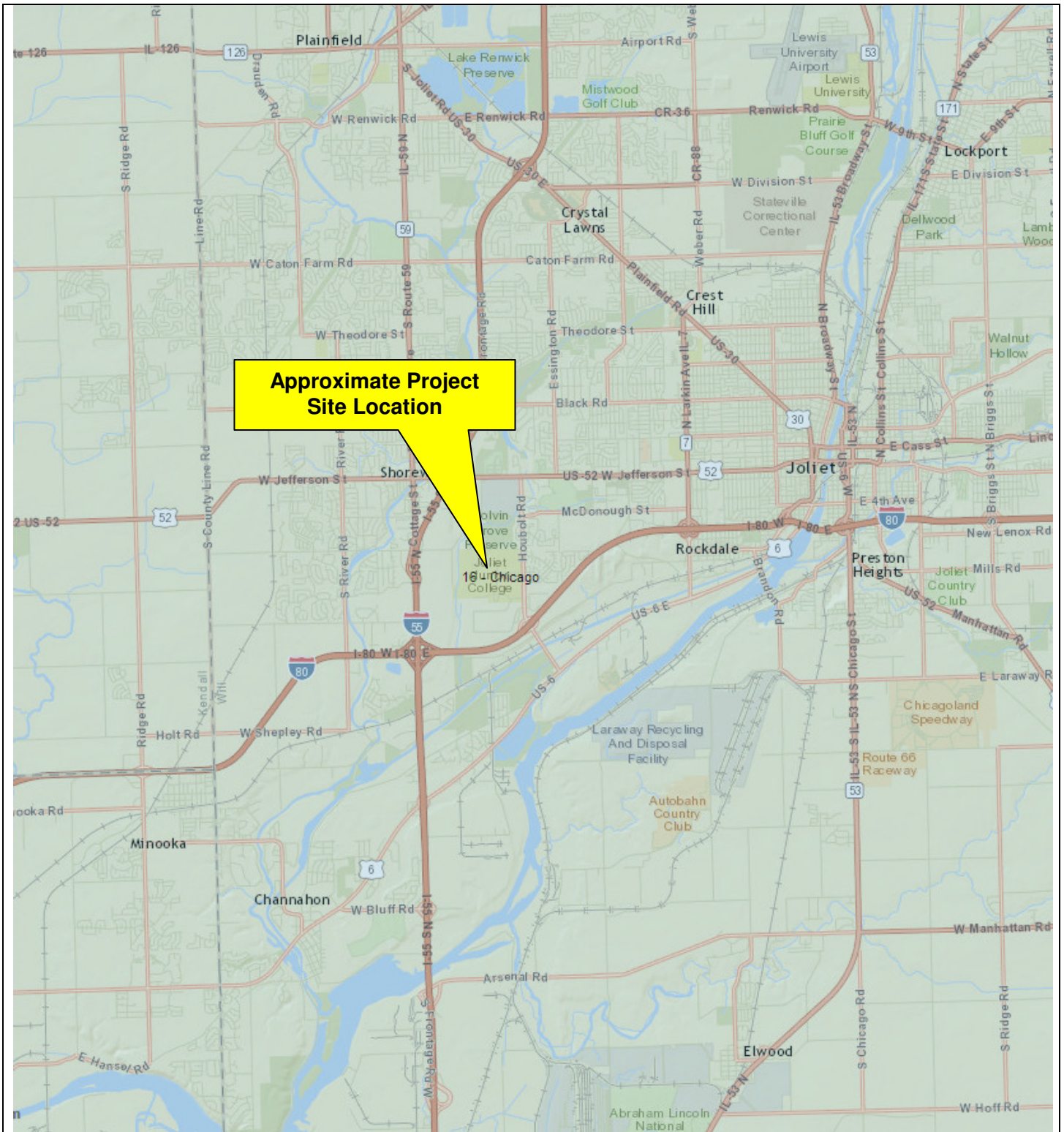
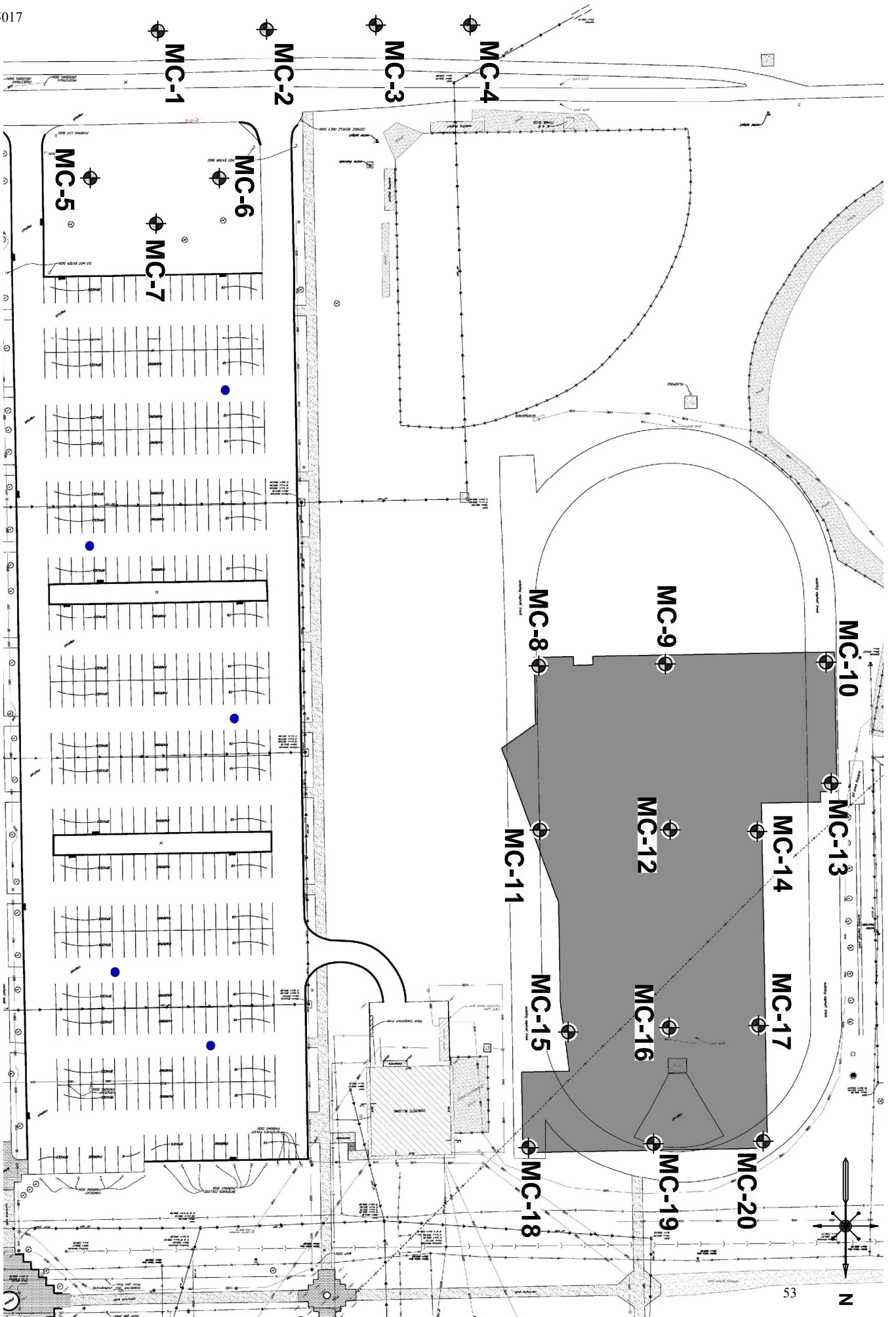


Figure 1
GENERAL LOCATION PLAN



ECS Project No. 16:10466
Joliet Junior College
Romeoville Campus
Improvements and Additions
1215 Houbolt Road
Joliet, Illinois

APPROXIMATE SOIL BORING LOCATION






BORING LOCATION PLAN

Joliet Junior College

Multipurpose Building

ENGINEER	SCALE
MTB	Approx. 1"=100'
DRAFTING	PROTECTING
LGM	10466
REVISIONS	SHEET
	DATE
	FIGURE 2
	01/28/15

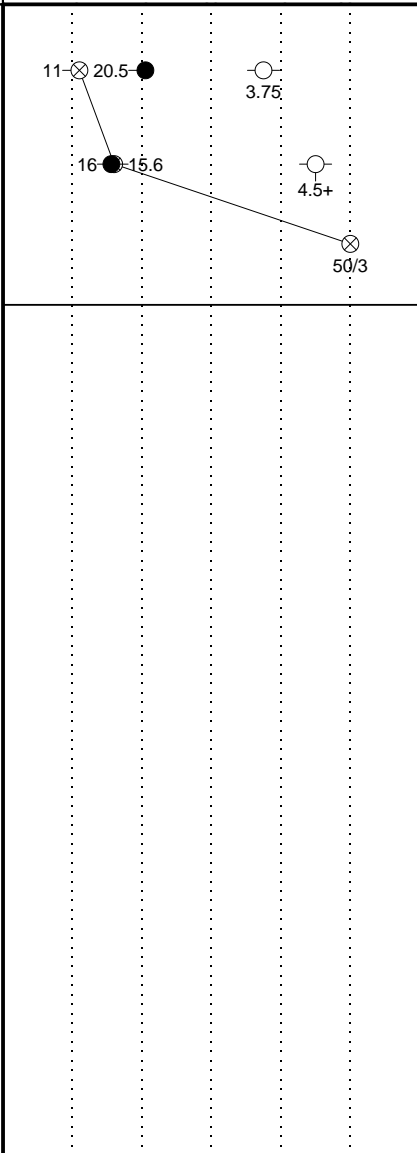
CLIENT Joliet Junior College			JOB # 10466	BORING # MC-1	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING 	LOSS OF CIRCULATION 
SURFACE ELEVATION 570					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [7"]	570
	S-1	SS	18	12	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Brown and Black, Moist, Very Stiff	5
						5
						6
	S-2	SS	18	14	(CL/ML) SILTY CLAY, Trace Sand, Trace Gravel, Yellowish Brown, Moist, Hard	6
						9
5						7
	S-3	SS	9	6	(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS FINE SAND WITH GRAVEL, Brown, Moist, Very Dense	8
						50/3
					AUGER REFUSAL @ 8'	
10						560
15						555
20						550
25						545
30						540

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - - REC% - - - -




PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>	BORING STARTED	01/14/15	
WL(BCR) <input type="checkbox"/> WL(ACR) <input type="checkbox"/>	BORING COMPLETED	01/14/15	CAVE IN DEPTH
WL <input type="checkbox"/>	RIG	CME-45	FOREMAN S. Euker
			DRILLING METHOD CFA

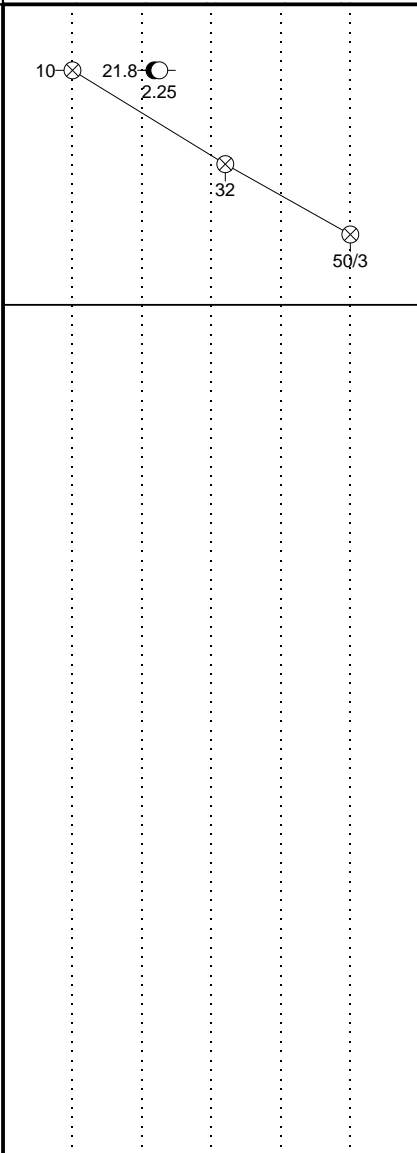
CLIENT Joliet Junior College			JOB # 10466	BORING # MC-2	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING 	LOSS OF CIRCULATION 
SURFACE ELEVATION 568					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [10"]	
3	S-1	SS	18	14	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Brown, Moist, Very Stiff	3
4						4
6						6
565					(ML/CL) CLAYEY SILT, Orangish Brown, Moist, Dense	9
9	S-2	SS	18	14		10
10						22
5					(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS FINE SAND WITH GRAVEL, Orangish Brown, Moist, Very Dense	50/3
5	S-3	SS	3	2		
560					AUGER REFUSAL @ 8'	
10						
15						
20						
25						
30						

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -


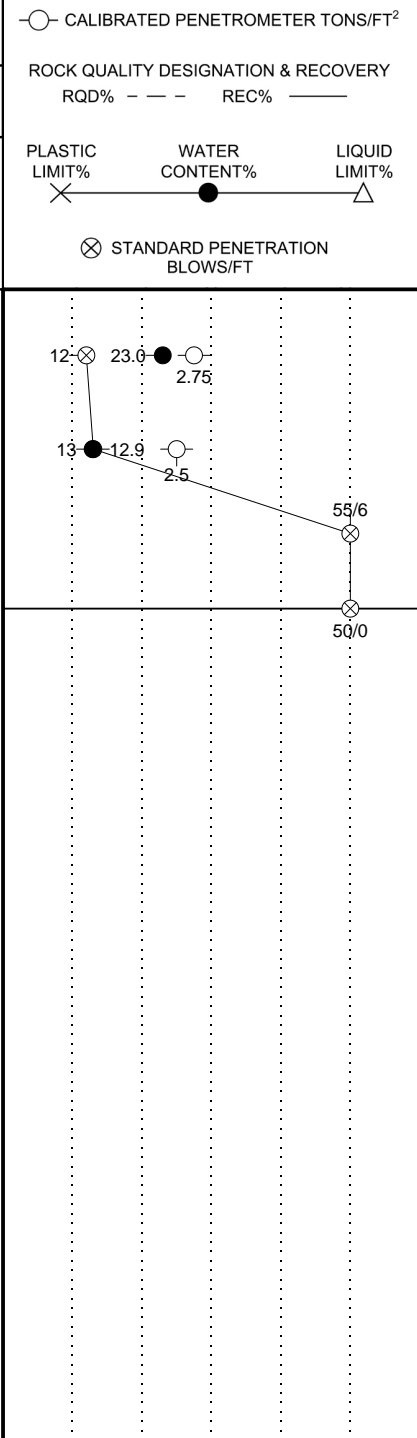
PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%




⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL <input type="checkbox"/>	WS <input type="checkbox"/>	WD <input type="checkbox"/>	BORING STARTED	01/14/15	
WL(BCR) <input type="checkbox"/>	WL(ACR) <input type="checkbox"/>		BORING COMPLETED	01/14/15	CAVE IN DEPTH
WL <input type="checkbox"/>			RIG	CME-45	FOREMAN S. Euker
					DRILLING METHOD CFA

CLIENT Joliet Junior College				JOB # 10466	BORING # MC-3	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College				ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois							
NORTHING				EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL		ENGLISH UNITS
					BOTTOM OF CASING LOSS OF CIRCULATION		
					SURFACE ELEVATION 567		
					WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Topsoil Depth [12"]		
5	S-1	SS	18	8	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Brown, Moist, Very Stiff		5 5 7
5	S-2	SS	18	14			(CL/ML) SANDY SILTY CLAY, Trace Gravel, Brown and Gray, Moist, Very Stiff
10	S-3	SS	12	12	(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS FINE SAND WITH GRAVEL, Yellowish Brown, Moist, Very Dense AUGER REFUSAL @ 8½'		20 55/6
10	S-4	SS	0	0			
15							555
20							550
25							545
30							540
							
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.							
WL WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED		01/14/15			
WL(BCR) WL(ACR)		BORING COMPLETED		01/14/15		CAVE IN DEPTH	
WL		RIG CME-45		FOREMAN S. Euker		DRILLING METHOD CFA	

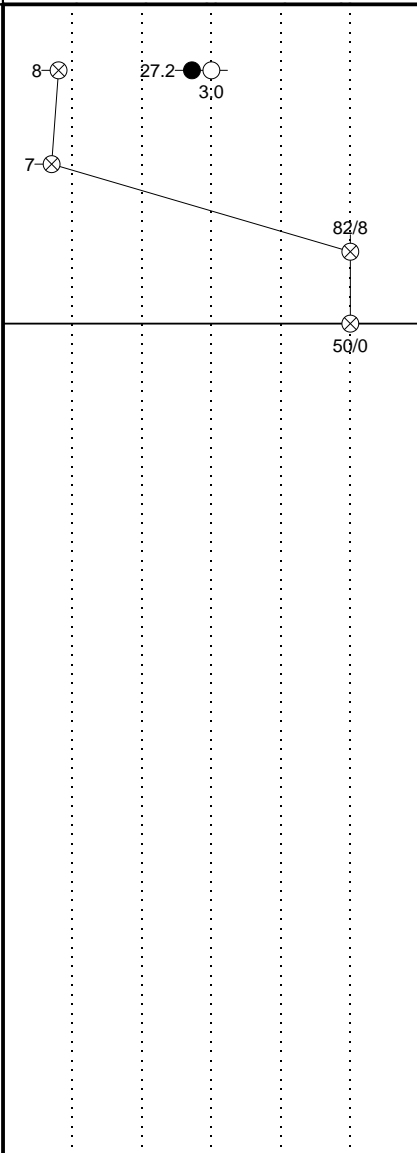
CLIENT Joliet Junior College			JOB # 10466	BORING # MC-4	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING 	LOSS OF CIRCULATION 
SURFACE ELEVATION 566					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [12"]	565
3	S-1	SS	18	10	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Yellowish Brown and Black, Moist, Very Stiff	3
5	S-2	SS	18	14	(SC/SM) CLAYEY/SILTY SAND WITH GRAVEL, Yellowish Brown, Moist, Loose	5
15	S-3	SS	14	14	(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS FINE SAND WITH GRAVEL, Brown, Moist, Very Dense	15
50/2	S-4	SS	0	0	AUGER REFUSAL @ 8½'	50/2
50/0						50/0
10						555
15						550
20						545
25						540
30						

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL	WS <input type="checkbox"/>	WD <input type="checkbox"/>	BORING STARTED	01/14/15	
WL(BCR)	WL(ACR) <input type="checkbox"/>		BORING COMPLETED	01/14/15	CAVE IN DEPTH
WL			RIG	CME-45	FOREMAN S. Euker
					DRILLING METHOD CFA

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-5	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING	LOSS OF CIRCULATION
SURFACE ELEVATION 571					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [12"]	570
1	S-1	SS	18	8	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Black and Dark Brown, Moist, Very Stiff	11 13 10
5	S-2	SS	18	16		6 7 9
10	S-3	SS	18	16	(ML/CL) CLAYEY SILT, Greenish Gray, Moist, Medium Dense to Very Dense	11 15 13
15	S-4	SS	0	0	AUGER REFUSAL @ 8½'	50/0
20						560
25						555
30						550
						545

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - - REC% - - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL <input type="checkbox"/>	WS <input type="checkbox"/>	WD <input type="checkbox"/>	BORING STARTED	01/14/15	
WL(BCR) <input type="checkbox"/>	WL(ACR) <input type="checkbox"/>		BORING COMPLETED	01/14/15	CAVE IN DEPTH
WL <input type="checkbox"/>			RIG	CME-45	FOREMAN S. Euker
					DRILLING METHOD CFA

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-6	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING	LOSS OF CIRCULATION
SURFACE ELEVATION 570					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
Topsoil Depth [14"]					570	
(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Black and Dark Brown, Moist, Very Stiff					3	
					5	
(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense					3	
					5	
AUGER REFUSAL @ 7½'					18	
					50/2	
					560	
					555	
					550	
					545	
					540	

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - - REC% - - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

Depth (ft)	CPT (Tons/ft²)	Water Content (%)	Liquid Limit (%)	SPT (Blows/ft)
3.0	20.0	3.0		11
5.0	19.2	3.75		11
18.0				50/2

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input type="checkbox"/> WL WS <input type="checkbox"/> WD <input type="checkbox"/>	BORING STARTED 01/14/15	
<input type="checkbox"/> WL(BCR) <input type="checkbox"/> WL(ACR)	BORING COMPLETED 01/14/15	CAVE IN DEPTH
<input type="checkbox"/> WL	RIG CME-45 FOREMAN S. Euker	DRILLING METHOD CFA

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-7	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING LOSS OF CIRCULATION	
SURFACE ELEVATION 570					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [12"]	570
6	S-1	SS	18	6	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Brown, Moist, Very Stiff	6
8						8
9						9
5	S-2	SS	18	10		5
8					(ML/CL) CLAYEY SILT, Yellowish Brown, Moist, Very Dense	8
10						10
22	S-3	SS	9	9		22
50/3					AUGER REFUSAL @ 8'	50/3
10						560
15						555
20						550
25						545
30						540

○ CALIBRATED PENETROMETER TONS/FT²





ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - - REC% - - - -




PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

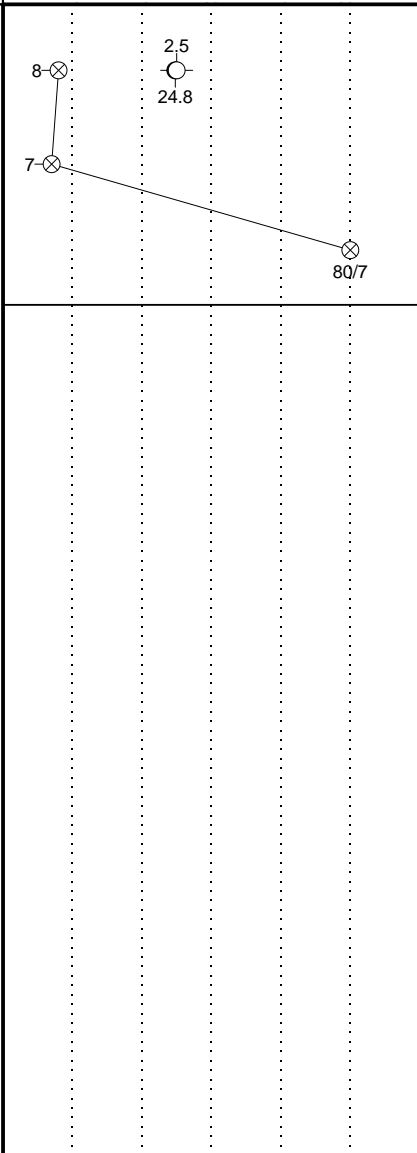
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>	BORING STARTED 01/14/15	
WL(BCR) <input type="checkbox"/> WL(ACR) <input type="checkbox"/>	BORING COMPLETED 01/14/15	CAVE IN DEPTH
WL <input type="checkbox"/>	RIG CME-45 FOREMAN S. Euker	DRILLING METHOD CFA




CLIENT Joliet Junior College			JOB # 10466	BORING # MC-8	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING 	LOSS OF CIRCULATION 
SURFACE ELEVATION 567					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
					○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - - REC% - - - - PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% ✕ ————— ● ————— ▲ ⊗ STANDARD PENETRATION BLOWS/FT	
0					Topsoil Depth [16"]	
	S-1	SS	18	10	(SM) SILTY SAND WITH GRAVEL, Brown, Moist, Loose to Very Loose	3 3 3 565
	S-2	SS	18	6		4 3 2 560
5	S-3	SS	18	10		1 1 2 560
	S-4	SS	0	0	AUGER REFUSAL @ 8½'	50/0
10						
15						
20						
25						
30						
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.						
∇ WL WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED		01/15/15		
∇ WL(BCR) ∇ WL(ACR)		BORING COMPLETED		01/15/15		
∇ WL		RIG CME-45		FOREMAN S. Euker		DRILLING METHOD CFA

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-9	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING 	LOSS OF CIRCULATION 
SURFACE ELEVATION 567					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [12"]	
4	S-1	SS	18	10	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Brown and Black, Moist, Very Stiff	8 4 4
5	S-2	SS	18	6	(SM) SILTY FINE SAND WITH GRAVEL, Yellowish Brown, Moist, Loose	4 3 4
13	S-3	SS	13	8	(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS FINE SAND WITH GRAVEL, Brown, Moist, Very Dense	15 30 50/1
10	AUGER REFUSAL @ 8'					
15						
20						
25						
30						
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.						
WL <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED		01/15/15		
WL(BCR) <input type="checkbox"/> WL(ACR) <input type="checkbox"/>		BORING COMPLETED		01/15/15		
WL <input type="checkbox"/>		RIG CME-45		FOREMAN S. Euker		DRILLING METHOD CFA

CALIBRATED PENETROMETER TONS/FT²
 ROCK QUALITY DESIGNATION & RECOVERY
 RQD% - - - - REC% - - - -
 PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%
 STANDARD PENETRATION BLOWS/FT



CLIENT Joliet Junior College			JOB # 10466	BORING # MC-10	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING LOSS OF CIRCULATION	
SURFACE ELEVATION 566					WATER LEVELS	ELEVATION (FT)
Rubber Track Depth [5"], Gravel Depth [6"] (SM) SILTY SAND WITH GRAVEL, Trace Clay, Yellowish Brown, Moist to Wet, Medium Dense to Very Loose					38 9 5 3 2 2 1 1 3	
					565 560 555 550 545 540	
AUGER REFUSAL @ 8'					BLOWS/6" 14 4 4	
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.						
WL 7 <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED		01/15/15		
WL(BCR) <input type="checkbox"/> WL(ACR) 7½ <input type="checkbox"/>		BORING COMPLETED		01/15/15		
WL <input type="checkbox"/>		RIG		CME-45		FOREMAN S. Euker
				DRILLING METHOD		CFA

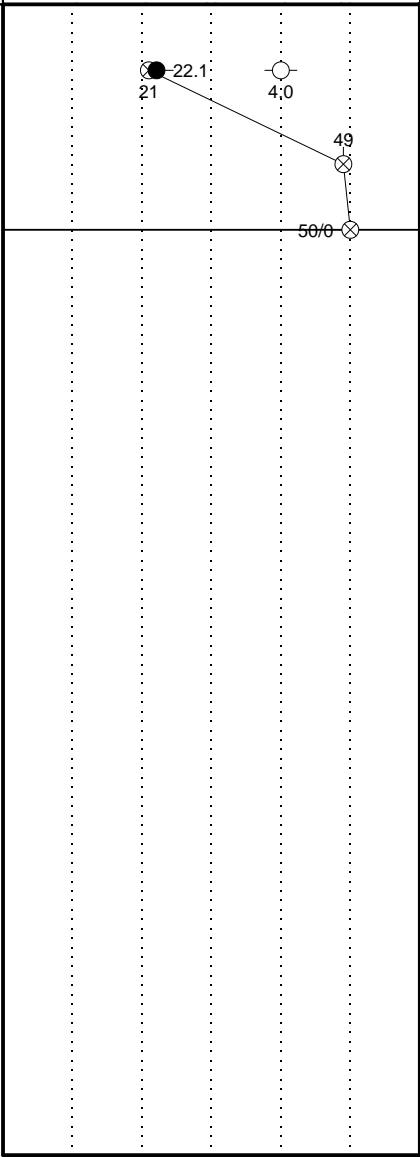
CLIENT Joliet Junior College			JOB # 10466	BORING # MC-11	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING  LOSS OF CIRCULATION 	
SURFACE ELEVATION 567					WATER LEVELS	ELEVATION (FT)
						BLOWS/6'
0					Topsoil Depth [18"]	
4	S-1	SS	18	12	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Brown, Moist, Hard	4 11 10
5	S-2	SS	18	14	(SP-SM) SAND WITH SILT AND GRAVEL, Brown, Moist, Dense	5 11 38
5	S-3	SS	0	0	(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS FINE SAND WITH GRAVEL, Brown, Moist, Very Dense AUGER REFUSAL @ 6'	50/0
10						
15						
20						
25						
30						

○ CALIBRATED PENETROMETER TONS/FT²





ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -




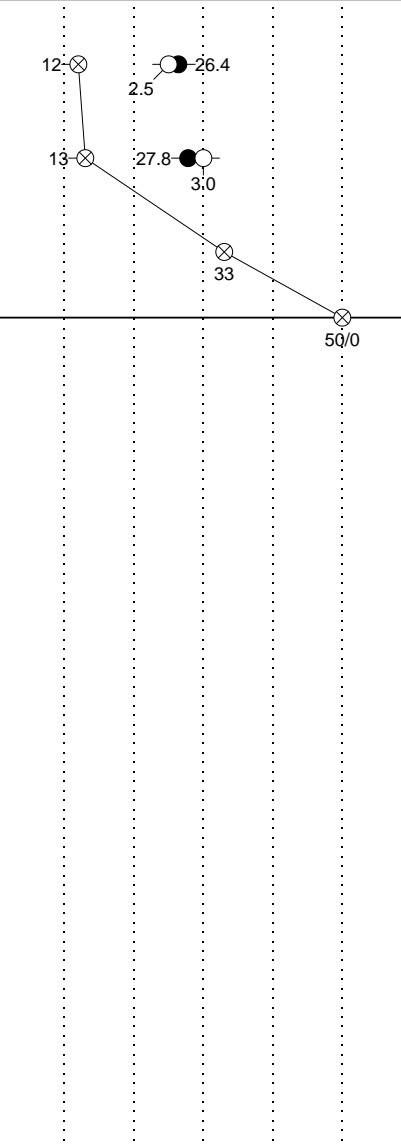
PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%


⊗ STANDARD PENETRATION BLOWS/FT















THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

 WL	WS <input type="checkbox"/>	WD <input type="checkbox"/>	BORING STARTED	01/14/15	
 WL(BCR)	 WL(ACR)		BORING COMPLETED	01/14/15	CAVE IN DEPTH
 WL			RIG	CME-45	FOREMAN S. Euker
					DRILLING METHOD CFA

CLIENT Joliet Junior College				JOB # 10466	BORING # MC-12	SHEET 1 OF 1		
PROJECT NAME Joliet Junior College				ARCHITECT-ENGINEER				
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois								
NORTHING				EASTING		STATION		
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 568			
					Topsoil Depth [24"]			
					(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Black and Brown, Moist, Very Stiff			
					(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense			
					AUGER REFUSAL @ 8½'			
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>○ CALIBRATED PENETROMETER TONS/FT²</p> <p>ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% - - -</p> <p>PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%</p> <p>⊗ STANDARD PENETRATION BLOWS/FT</p> </div> <div style="width: 45%; text-align: center;">  <p>Plot showing Standard Penetration Test (SPT) blows per foot (⊗) and Calibrated Penetrometer (CP) values (○) versus depth. SPT values: 12, 13, 33, 50/0. CP values: 2.5, 26.4, 27.8, 3.0.</p> </div> </div>								
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.								
WL <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED 01/14/15						
WL(BCR) <input type="checkbox"/> WL(ACR) <input type="checkbox"/>		BORING COMPLETED 01/14/15			CAVE IN DEPTH			
WL <input type="checkbox"/>		RIG CME-45		FOREMAN S. Euker		DRILLING METHOD CFA		

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-13	SHEET 1 OF 1			
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER					
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% --- REC% --- PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ● △ ⊗ STANDARD PENETRATION BLOWS/FT		
NORTHING	EASTING	STATION						
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
0					Rubber Track Depth [5"], Gravel Depth [7"]			
	S-1	SS	18	16	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Brown, Moist, Very Stiff		565	22.6 18
					(ML/CL) CLAYEY SILT, Brown, Moist, Dense		565	2.5
5	S-2	SS	18	16			565	39
					(SP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS SAND WITH GRAVEL, Yellowish Brown, Moist, Very Dense		560	50/5
	S-3	SS	11	0	AUGER REFUSAL @ 7'		560	
10							560	
15							555	
20							550	
25							545	
30							540	
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.								
∇ WL WS <input type="checkbox"/> WD <input type="checkbox"/>			BORING STARTED 01/14/15					
∇ WL(BCR) ∇ WL(ACR)			BORING COMPLETED 01/14/15			CAVE IN DEPTH		
∇ WL			RIG CME-45 FOREMAN S. Euker			DRILLING METHOD CFA		

CLIENT Joliet Junior College				JOB # 10466	BORING # MC-15	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College				ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois							
NORTHING				EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)
					BOTTOM OF CASING	LOSS OF CIRCULATION	
					SURFACE ELEVATION 567		
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>Topsoil Depth [18"]</p> <p>(ML/CL) CLAYEY SILT, Trace Gravel, Trace Sand, Yellowish Brown, Moist, Medium Dense</p> <p>(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense AUGER REFUSAL @ 7'</p> </div> <div style="width: 35%; text-align: right;"> <p>3 6 7</p> <p>6 8 12</p> <p>21 28 50/0</p> <p>565</p> <p>560</p> <p>555</p> <p>550</p> <p>545</p> <p>540</p> </div> </div>							
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"></div> <div style="width: 35%; text-align: right;"> <p>13</p> <p>20</p> <p>78/6</p> </div> </div>							
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.							
<input checked="" type="checkbox"/> WL WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED		01/14/15			
<input checked="" type="checkbox"/> WL(BCR) <input checked="" type="checkbox"/> WL(ACR)		BORING COMPLETED		01/14/15		CAVE IN DEPTH	
<input checked="" type="checkbox"/> WL		RIG CME-45		FOREMAN S. Euker		DRILLING METHOD CFA	

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-16	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING 	LOSS OF CIRCULATION 
SURFACE ELEVATION 568					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
					 CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - - REC% - - - - PLASTIC LIMIT%  WATER CONTENT%  LIQUID LIMIT%   STANDARD PENETRATION BLOWS/FT	
0					Topsoil Depth [24"]	5
5	S-1	SS	18	10	(CL/ML) SILTY CLAY, Trace Sand, Trace Gravel, Brown, Moist, Hard	7
10	S-2	SS	18	16		4
15	S-3	SS	9	8	(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense	26
20					AUGER REFUSAL @ 7½'	50/3
25						
30						
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.						
 WL WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED 01/14/15				
 WL(BCR)  WL(ACR)		BORING COMPLETED 01/14/15		CAVE IN DEPTH		
 WL		RIG CME-45 FOREMAN S. Euker		DRILLING METHOD CFA		

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-17	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING	LOSS OF CIRCULATION
SURFACE ELEVATION 568					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
					CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - - REC% - - - - PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% STANDARD PENETRATION BLOWS/FT	
0					Topsoil Depth [30"]	7
1	S-1	SS	18	14	(CL/ML) SILTY CLAY, Trace Sand, Trace Gravel, Yellowish Brown, Moist, Very Stiff to Hard	6
2						565
3	S-2	SS	18	12	(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense	5
4						560
5	S-3	SS	11	6	AUGER REFUSAL @ 8'	26 50/5
6						7
7						6
8						7
9						5
10						6
11						7
12						26 50/5
13						50/5
14						13
15						18.3
16						3.5
17						13
18						23.6
19						4.5
20						50/5
21						50/5
22						50/5
23						50/5
24						50/5
25						50/5
26						50/5
27						50/5
28						50/5
29						50/5
30						50/5
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.						
WL WS <input type="checkbox"/> WD <input type="checkbox"/>		BORING STARTED 01/14/15				
WL(BCR) WL(ACR)		BORING COMPLETED 01/14/15		CAVE IN DEPTH		
WL		RIG CME-45 FOREMAN S. Euker		DRILLING METHOD CFA		

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-18	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING	LOSS OF CIRCULATION
SURFACE ELEVATION 567					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Topsoil Depth [12"]	
5	S-1	SS	18	14	(CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Black and Yellowish Brown, Moist, Very Stiff	565
5	S-2	SS	18	14	(CL/ML) SILTY CLAY, Trace Sand, Trace Gravel, Yellowish Brown and Gray, Moist, Very Stiff	560
10	S-3	SS	4	4	(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense AUGER REFUSAL @ 7 1/2'	560
15						555
20						550
25						545
30						540

○ CALIBRATED PENETROMETER TONS/FT²





ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - - REC% - - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL	WS <input type="checkbox"/>	WD <input type="checkbox"/>	BORING STARTED	01/14/15	
WL(BCR)	WL(ACR) <input type="checkbox"/>		BORING COMPLETED	01/14/15	CAVE IN DEPTH
WL			RIG	CME-45 FOREMAN S. Euker	DRILLING METHOD CFA

CLIENT Joliet Junior College			JOB # 10466	BORING # MC-19	SHEET 1 OF 1		
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER				
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois							
NORTHING			EASTING		STATION		
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	
					BOTTOM OF CASING 	LOSS OF CIRCULATION 	
SURFACE ELEVATION 568					WATER LEVELS	ELEVATION (FT)	
Rubber Track Depth [4"], Gravel Depth [2"] (CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Brown, Moist, Very Stiff							BLOWS/6" 11 10 13 8 30 50/1 50/5
END OF BORING @ 6½'					560		
					555		
					550		
					545		
					540		
					535		
					530		
					525		
					520		
					515		
					510		
					505		
					500		
					495		
					490		
					485		
					480		
					475		
					470		
					465		
					460		
					455		
					450		
					445		
					440		
					435		
					430		
					425		
					420		
					415		
					410		
					405		
					400		
					395		
					390		
					385		
					380		
					375		
					370		
					365		
					360		
					355		
					350		
					345		
					340		
					335		
					330		
					325		
					320		
					315		
					310		
					305		
					300		
					295		
					290		
					285		
					280		
					275		
					270		
					265		
					260		
					255		
					250		
					245		
					240		
					235		
					230		
					225		
					220		
					215		
					210		
					205		
					200		
					195		
					190		
					185		
					180		
					175		
					170		
					165		
					160		
					155		
					150		
					145		
					140		
					135		
					130		
					125		
					120		
					115		
					110		
					105		
					100		
					95		
					90		
					85		
					80		
					75		
					70		
					65		
					60		
					55		
					50		
					45		
					40		
					35		
					30		
					25		
					20		
					15		
					10		
					5		
					0		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>	BORING STARTED 01/14/15	
WL(BCR) <input type="checkbox"/> WL(ACR) <input type="checkbox"/>	BORING COMPLETED 01/14/15	CAVE IN DEPTH
WL <input type="checkbox"/>	RIG CME-45 FOREMAN S. Euker	DRILLING METHOD CFA

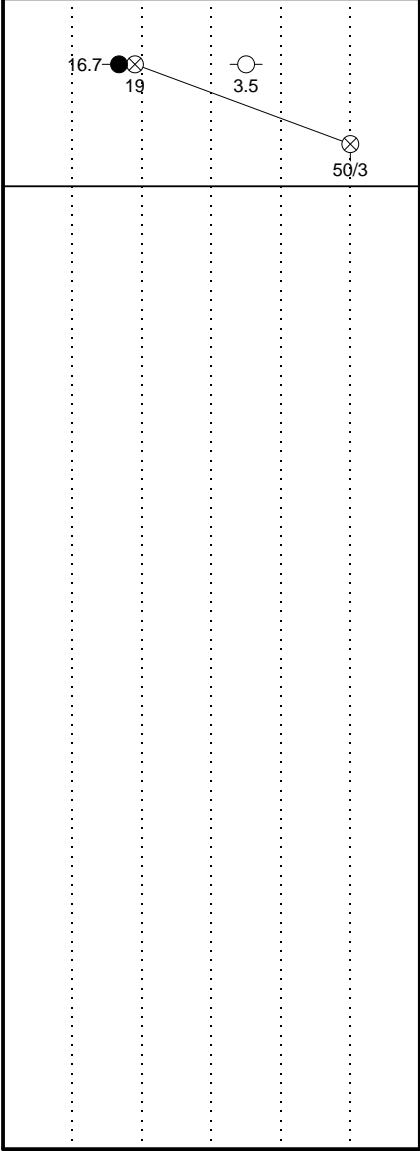
CLIENT Joliet Junior College			JOB # 10466	BORING # MC-20	SHEET 1 OF 1	
PROJECT NAME Joliet Junior College			ARCHITECT-ENGINEER			
SITE LOCATION 1215 Houbolt Road, Joliet, Illinois						
NORTHING			EASTING		STATION	
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS
					BOTTOM OF CASING LOSS OF CIRCULATION	
SURFACE ELEVATION 568					WATER LEVELS	ELEVATION (FT)
						BLOWS/6"
0					Rubber Track Depth [4"], Gravel Depth [3"] (CL/ML FILL) SILTY CLAY, Trace Sand, Trace Gravel, Dark Gray and Dark Brown, Moist, Very Stiff	8 10 9
	S-1	SS	18	18		
					(GP) PARTIALLY WEATHERED LIMESTONE SAMPLED AS GRAVEL WITH SAND, Yellowish Brown, Moist, Very Dense	15 50/3
5	S-2	SS	9	6	AUGER REFUSAL @ 5'	
10						
15						
20						
25						
30						

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - - REC% - - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

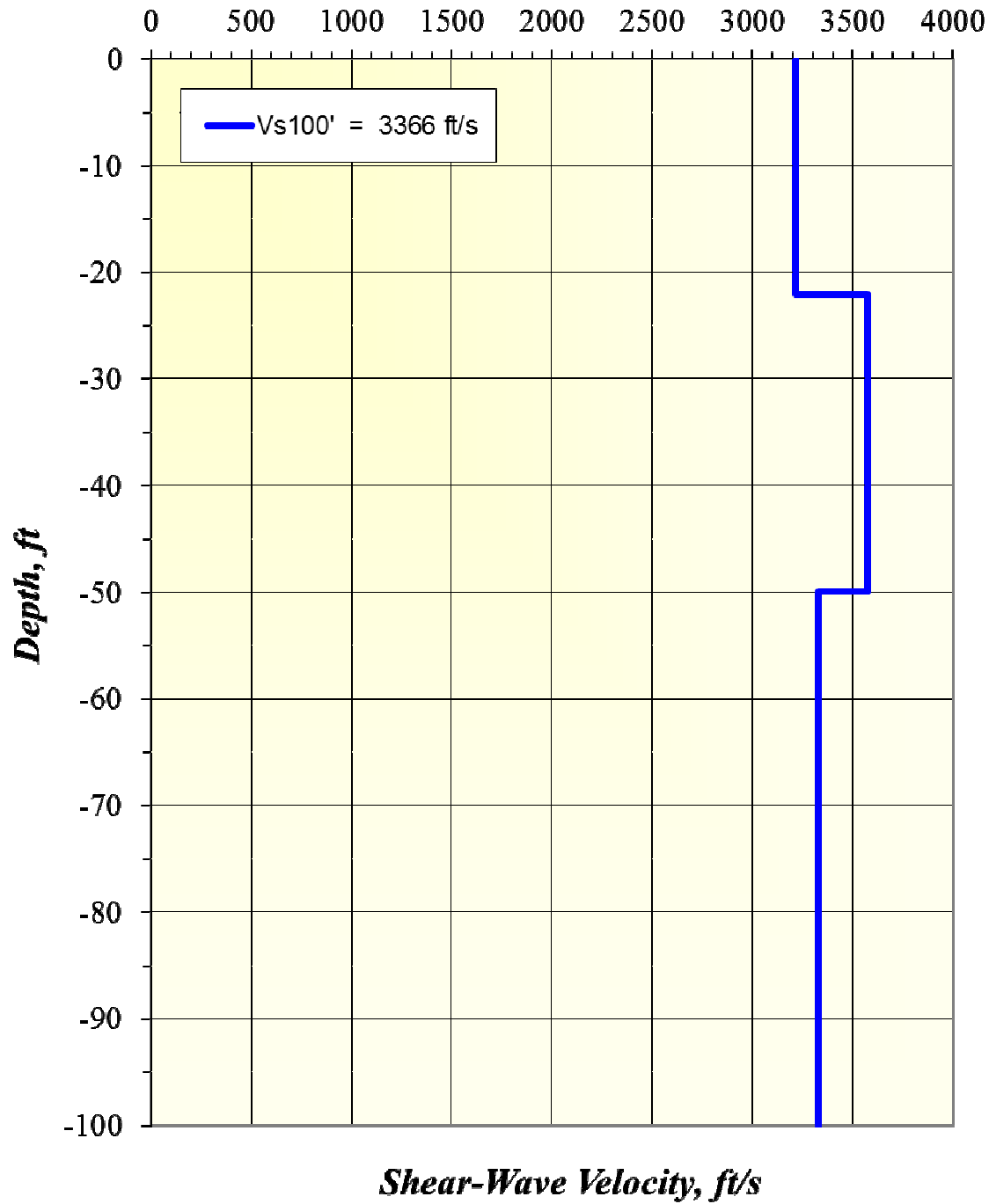
⊗ STANDARD PENETRATION BLOWS/FT




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL <input type="checkbox"/> WS <input type="checkbox"/> WD <input type="checkbox"/>	BORING STARTED	01/14/15	
WL(BCR) <input type="checkbox"/> WL(ACR) <input type="checkbox"/>	BORING COMPLETED	01/14/15	CAVE IN DEPTH
WL <input type="checkbox"/>	RIG	CME-45	FOREMAN S. Euker DRILLING METHOD CFA

Joliet Junior College Main Campus: Vs Model

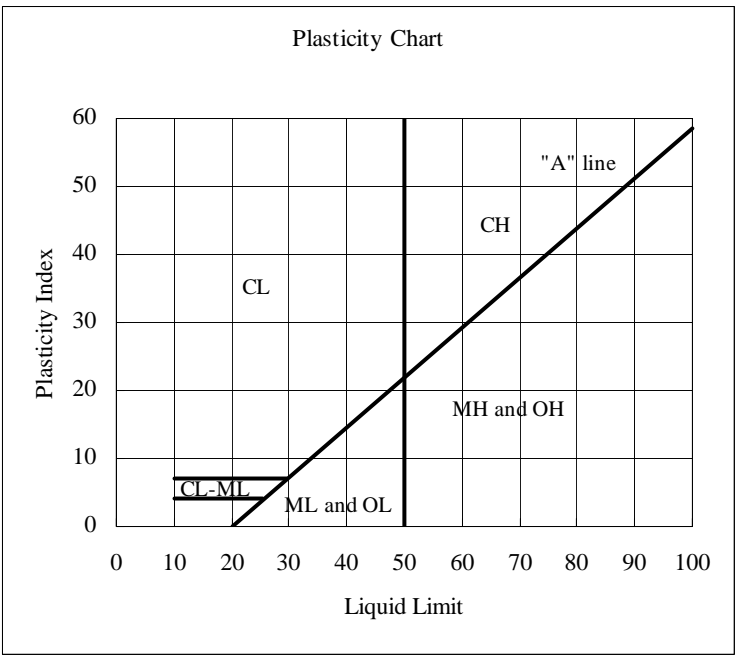


<p>ARRAY 1 GEOPHONE SPACING = 25 Feet</p>		<p>FIGURE 1</p> <p>SHEAR WAVE VELOCITY PROFILE Joliet Junior College Main Campus Joliet, Illinois</p> <p>ECS Project 16:10466</p>
--	---	---

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

Major Divisions		Group Symbols	Typical Names	Laboratory Classification Criteria				
Coarse-grained soils (More than half of material is larger than No. 200 Sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = D_{60}/D_{10}$ greater than 4 $C_c = (D_{30})^2/(D_{10} \times D_{60})$ between 1 and 3			
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW		
		Gravels with fines (Appreciable amount of fines)	GM ^a	d		Silty gravels, gravel-sand mixtures	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
				u				
	GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits below "A" line or P.I. less than 7					
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ greater than 6 $C_c = (D_{30})^2/(D_{10} \times D_{60})$ between 1 and 3			
			SP	Poorly graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW		
		Sands with fines (Appreciable amount of fines)	SM ^a	d		Silty sands, sand-silt mixtures	Atterberg limits above "A" line or P.I. less than 4	Limits plotting in CL-ML zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
				u				
		SC	Clayey sands, sand-clay mixtures	Atterberg limits above "A" line with P.I. greater than 7				
Fine-grained soils (More than half material is smaller than No. 200 Sieve)		Silts and clays (Liquid limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		<div style="text-align: center;"> <p style="text-align: center;">Plasticity Chart</p> <p style="text-align: center;">Plasticity Index</p> <p style="text-align: center;">Liquid Limit</p> </div>		
	CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays					
	OL		Organic silts and organic silty clays of low plasticity					
	Silts and clays (Liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts					
		CH	Inorganic clays of high plasticity, fat clays					
		OH	Organic clays of medium to high plasticity, organic silts					
	Pt	Peat and other highly organic soils						

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
 Less than 5 percent GW, GP, SW, SP
 More than 12 percent GM, GC, SM, SC
 5 to 12 percent Borderline cases requiring dual symbols^b



^a Division of GM and SM groups into subdivisions of d and u are for roads and airfields only. Subdivision is based on Atterberg limits; suffix d used when L.L. is 28 or less and the P.I. is 6 or less; the suffix u used when L.L. is greater than 28.

^b Borderline classifications, used for soils possessing characteristics of two groups, are designated by combinations of group symbols. For example: GW-GC, well-graded gravel-sand mixture with clay binder. (From Table 2.16 - Winterkorn and Fang, 1975)



REFERENCE NOTES FOR BORING LOGS

MATERIALS	
	ASPHALT
	CONCRETE
	SUBBASE STONE / GRAVEL
	TOPSOIL
	FILL Man-placed or disturbed soils
	GW WELL-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GP POORLY-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GM SILTY GRAVEL gravel-sand-silt mixtures
	GC CLAYEY GRAVEL gravel-sand-clay mixtures
	SW WELL-GRADED SAND gravelly sand, little or no fines
	SP POORLY-GRADED SAND gravelly sand, little or no fines
	SM SILTY SAND sand-silt mixtures
	SC CLAYEY SAND sand-clay mixtures
	ML SILT non-plastic to medium plasticity
	MH ELASTIC SILT high plasticity
	CL LEAN CLAY low to medium plasticity
	CH FAT CLAY high plasticity
	OL ORGANIC SILT or CLAY non-plastic to low plasticity
	OH ORGANIC SILT or CLAY high plasticity
	PT PEAT highly organic soils
	WEATHERED ROCK
	IGNEOUS ROCK
	METAMORPHIC ROCK
	SEDIMENTARY ROCK

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS		
SS	Split Spoon Sampler	PM Pressuremeter Test
ST	Shelby Tube Sampler	RD Rock Bit Drilling
WS	Wash Sample	RC Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC Rock Sample Recovery %
PA	Power Auger (no sample)	RQD Rock Quality Designation
HSA	Hollow Stem Auger	

PARTICLE SIZE IDENTIFICATION		
DESIGNATION	PARTICLE SIZES	
Boulders	12-inches (300-mm) or larger	
Cobbles	3-inches to 12- inches (75-mm to 300-mm)	
Gravel:	Coarse	¾-inch to 3-inches (19-mm to 75-mm)
	Fine	4.75-mm to 19-mm (No. 4 sieve to ¾-inch)
Sand:	Coarse	2.00-mm to 4.75-mm (No. 10 to No. 4 sieve)
	Medium	0.425-mm to 2.00-mm (No. 40 to No. 10 sieve)
	Fine	0.074-mm to 0.425-mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")	<0.074-mm (smaller than a No. 200 sieve)	

WATER LEVELS ¹		
	WL	Water Level (WS)(WD) (WS) While Sampling (WD) While Drilling
	BCR	Before Casing Removal
	ACR	After Casing Removal
	WL	Water Level as stated
	DCI	Dry Cave-In
	WCI	Wet Cave-In

RELATIVE PROPORTIONS	
Trace	<5%
Little	5% - <15%
With	15% - <30%
Adjective	30% - <50%
<i>(ex: "Silty")</i>	

COHESIVE SILTS & CLAYS		
UNCONFINED COMP. STRENGTH, Q _p ² (TSF)	SPT ³ (BPF)	CONSISTENCY (COHESIVE ONLY)
<0.25	≤2	Very Soft
0.25 - 0.49	3 - 4	Soft
0.50 - 0.99	5 - 8	Medium Stiff
1.00 - 1.99	9 - 15	Stiff
2.00 - 3.99	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT ³ (BPF)	DENSITY
≤4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
51 - 99	Very Dense
≥100	Partially Weathered Rock to Intact Rock

¹The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally taken.

²Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

³Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2-inch OD split-spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf).

GENERAL REQUIREMENTS OF THE CONTRACT

Bid Release 1

Date: June 1, 2015

A. Preconstruction Item Checklist:

Date:

Time:

Project Title / Location:

Project Number:

FOR
(Contractor's name)

1. **Introductions:** All project members are to introduce themselves including their name, organization, title, and role on the project.

A. Joliet Junior College Personnel:

1. Construction Manager:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

2. Alternate Contact:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

B. Contractor Personnel

- Project Manager:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email

- Construction Superintendent:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

B. Communications:

- 1) Communications related to the project between Joliet Junior College and the Contractor shall be conducted through the Joliet Junior College Construction Manager (CM) only, unless directed otherwise.
- 2) In the event of an emergency the Contractor is to contact Campus Police at 815-280-2234, or may pick-up any campus phone and dial 2911.
- 3) RFI's: Requests for Information (RFI's): All Requests for Information shall be in written form to JJC's CM with a copy to the A/E when required. All responses will come from JJC or the A/E in writing addressed to the Contractor's Project Manager
- 4) Correspondence: All correspondence shall be directed to the Construction Manager

Joliet Junior College
Facilities Services Department
ATTN: _____
1215 Houbolt Road
Joliet, IL 60431

Include Project Title, Project Number, Purchase Order Number on ALL correspondence.

C. Performance:

Commencement, Prosecution & Completion of Work

1. Purchase order/notice to proceed received: _____
2. Contract Amount: _____
3. Total Amount of Alternates Accepted: _____
4. Proposed start/mobilization date : _____
5. Preconstruction Submittals Received: Check one Y _____ N _____
6. Bonding & Insurance Requirements Received: Check one Y _____ N _____
7. Completion date: _____
8. Delays and time extensions: The Contractor is responsible for the completion of project work within the time designated above and in the construction schedule. Justified change orders may qualify a delay and require a time extension which must be discussed and approved by the JJC CM. Failure to complete the project on time will result in a negative evaluation of Contractor performance on the JJC project close-out documents.

9. When the shutdown of utilities is required, the Contractor shall coordinate with the JJC CM to schedule the shutdown process. Allow a minimum of 5 days' notice to allow for a shut down. Unless otherwise stated during the bidding process, a utility shut down will be required between the hours of 10:00 p.m. to 6:00 a.m.
10. The contractor is to consider any loud construction noise that may be disruptive to classes, faculty, students and staff (including but not limited to loud demolition, hammer drilling, concrete cutting/drilling, rock breaking, shooting of metal stud track into floors and ceilings, etc.). Such work shall be performed during the maintenance hours of 10:00 p.m. to 6:00 a.m.
11. Contractor Evaluation:
At the completion of the project, the JJC CM will complete a contractor evaluation. This evaluation is kept on file and is taken into consideration when considering the Contractor for future projects

D. Mobilization: Prior to the Contractor mobilizing on site, the following requirements must be met and reviewed. Contractor check-in with Facility Services. The Contractor's employees are required to obtain vehicle tags and I.D. badges. Any ticketing by Campus Police as a result of no vehicle tag will be the responsibility of the Contractor.

E. Conduct and Behavior:

The Contractor's employees must take into consideration the environment around them when holding conversations with fellow employees as well as JJC staff as to not interrupt classes that may be in session, or students in concourses that may be studying. Profanity/foul language, derogatory remarks or harassment of students will not be tolerated and will be an immediate means for the employee dismissal from the project.

F. Progress Payments/Invoicing and Change Orders:

- 1) A "pencil" copy of progress invoicing shall be submitted to the JJC CM by the 15th of every month for review and approval. Final invoicing shall be in by the second week of the month for processing and board approval. No invoice will be processed without lien waiver(s) and certified payroll.
- 2) Any extra work done by the Contractor will be considered performed at no extra cost to JJC unless a written JJC change order form has been fully executed and signed by the Director of Business and Auxiliary Services. A contractor shall not be entitled to any compensation for extra work/material based on verbal conversations or email exchanges

(the contractor is considered proceeding with extra work at their own risk without a fully executed JJC change order form). It is the contractor's responsibility to obtain a fully executed change order form from JJC. A change order, or a combination of multiple change orders may not exceed 10% of the original contract without JJC seeking approval from the Board of Trustees.

G. Miscellaneous:

- 1) Soliciting or canvassing and posting or distributing printed material (except as permitted by law) is prohibited.
- 2) Smoking is restricted to designated signed areas outside. The use of any tobacco products (including chewing) indoors is prohibited, and must be done in the designated outdoor smoking areas during break time.
- 3) Drinking, using, possessing or being under the influence of alcohol or controlled substances are prohibited, and a cause for immediate dismissal.
- 4) No radios, CD Players or MP3 players shall be used during normal working hours.
- 5) The Contractor shall perform his/her work in accordance to no less than the minimum requirements as established by the Occupational Safety and Health Association. Personal Protection equipment shall be provided by the Contractor and worn at all times.
- 6) The Contractor will be responsible for securing materials and tools and shall be solely responsible for any such theft or damage.

By signing below, the Contractor certifies that he, his employees, subcontractors, or assigns will abide to this Preconstruction Conference Checklist during the course of the project.

Contractor: _____
Print name: _____
Sign name: _____
Title: _____
Date signed: _____

JJC CM: _____
Sign name: _____
Date signed: _____

1.0 CONTROL LINES AND LAYOUT

Site survey coordinates, selected baselines on each floor (after foundations and floors are placed), and benchmarks only will be provided by the Construction Manager. Trade Contractors shall perform their own layout from these coordinates or baselines and shall be responsible for the accuracy of all lines, elevations and measurements, grading, utilities, and other work executed under the trade contracts. The Trade Contractor shall exercise proper precautions to verify figures shown on the drawings or indicated in approved shop drawings before laying out the work. Contractors shall report any perceived inconsistency or error in drawings or layout to the Construction Manager for verification.

2.0 CONSTRUCTION SCHEDULES

The Trade Contractor's work is to be accomplished in accordance with the contract schedule. If the schedule requires out of sequence work or phasing of work including temporary work, such work is to be performed at no additional cost by the Trade Contractor to achieve the necessary job progress and accommodate the Owner's and Construction Manager's needs.

Within fourteen days of award of the Trade Contract, the Trade Contractor shall submit to the Construction Manager a draft of the Trade Contractor's schedule. This schedule shall be in the format of a standard horizontal bar chart and shall identify separately activities for each class of work, each work activity by area of the project, and each major long-lead item. Activities shall also indicate interfaces between the work of the Trade Contractor and other contractors. Dates for shop drawings, approval, and fabrication shall also be included and shall identify the projected submittal date, fabrication duration, and expected delivery date. Contractors shall allow at least 25 days for each review and return of submittals after receipt by the Construction Manager. After the Construction Manager reviews and accepts the Trade Contractor's schedule it shall be used by the Trade Contractor to monitor progress on the project. The Trade Contractor shall submit monthly updates of its schedule with the Application for Payment.

3.0 PROJECT MEETINGS

- 3.1. The Construction Manager will schedule, pre-construction meetings, weekly progress meetings, progress/payment meetings, safety meetings and any special meetings as required throughout the progress of the Work. Representatives of the Trade Contractors, subcontractors and suppliers appropriate to the agenda of the meeting shall attend these meetings. The representative shall be qualified and authorized to act on behalf of the entity each represents.
- 3.2. Each Trade Contractor shall be responsible for the scheduling and administration of weekly safety "Tool Box" meetings required throughout the progress of the work. The Trade Contractor shall prepare the agenda for the meetings, record and distribute both the minutes and attendance to the Construction Manager. The minutes shall include all complaints and suggestions relating to safety. Each Trade Contractor shall ensure the attendance of all employees, including subcontractors and suppliers affected under his contract. The Construction Manager may, at his option, attend these meetings and the attendance of the Construction Manager shall not be limited.

4.0 PHOTOGRAPHS OF THE SITE

The Trade Contractor shall not take, or shall not cause any photographs to be taken of the school

job site without express written approval of the Owner.

The Trade Contractor shall not issue any press releases or disseminate any information concerning this project to the news media without the prior approval of the Owner.

5.0 RECORD DOCUMENTS

The Trade Contractor shall maintain a set of record documents. Each document shall be labeled in neat large printed letters "PROJECT RECORD". Record information concurrently with construction progress and do not conceal any work until the required information is recorded.

Record drawings shall be legibly marked to record actual construction; depths of various elements of foundation in relations to finish floor datum; horizontal vertical locations of underground utilities and appurtenances referenced to permanent surface improvements; location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure; field changes of dimension and detail; changes made by Field Order or by Change Order; details not on original Contract Drawings.

The Trade Contractor shall make available all "Record Documents" to the Construction Manager for periodic review of compliance. The frequency of review shall be at the Construction Manager's discretion and maintenance of these "Record Documents" may be tied to monthly invoices if they are not being maintained properly at the project.

At Substantial Completion, the Trade Contractor shall deliver a reproducible sepia and two prints of the Record Documents to the Construction Manager accompanied by a transmittal letter, in duplicate, containing the Project title and number, the Trade Contractors name and address, title and number of each record documents, certification that each document is complete and accurate and the signature of the Trade Contractor or his authorized representative.

Record specifications and addenda shall be legibly marked in each section to record: the manufacturer, trade name, catalogue number, and supplier of each product and item of equipment actually installed; changes made by field order or by change order.

6.0 ELECTRONIC DATA AND DOCUMENTATION SUBMITTAL SPECIFICATIONS

a) Definitions

Project participants - Contractor(s), sub-contractors, tier-Trade Contractors, vendors, testing and balancing firms, and any Commissioning Agents.

OEM - Original Equipment Manufacturer

Maintained assets - Items on drawings or specification documents that require the submittal of electronic data. Such asset data include but are not limited to doors, escalators, elevators, plumbing fixtures, air handling units, fans, pumps, heat exchangers, boilers, chillers, compressors, exhaust hoods, kitchen equipment, sub-stations, switchgear, transformers, panels, motor control centers, emergency generators, fire alarm systems, fire pumps, biomedical equipment, laboratory equipment, hospital gas systems, roofing system, security systems, cameras, badge readers, computers, and vehicles. Bulk and general construction items such as concrete, structural steel, siding, casework, and wall,

floor or ceiling materials will not be included with the exception of roofing or any other element requiring routine or scheduled periodic maintenance in accordance with the manufacturer's written recommendations.

Electronic Documentation – Software based originals of hard copy documents resident in formats such as word processing, spreadsheet, graphic, or read-only applications.

Electronic Data – Information elements of measurable, extractable, and/or sortable value. This information will typically be delivered in spreadsheets, database tables, or, in less typical cases, tables within word processing documents.

b) **General Requirements**

Trade Contractors shall provide construction documentation in electronic documentation format as specified below. The intent is to support the Owner's computerized asset, maintenance, or space management systems. Each Trade Contractor is responsible to pursue, obtain and furnish to JJC Construction Manager the complete asset data required from project participants that are under their Subcontract Work.

The submittal of all specified data in electronic format is to occur concurrently with the progress of the work. Timely and accurate submittals of requisite data will be a condition precedent for issuance of monthly payments. All submittals shall be completed a minimum of 30 days prior to substantial completion or Owner Occupancy, whichever occurs first. Any performance related data should be submitted no later than 30 days after its measurement and recording in the field. Any deviations identified by JJC Construction Manager are to be promptly corrected by the submitting project participant(s) and resubmitted.

c) **Equipment Tagging**

The Trade Contractor shall ensure that manufacturer's equipment tags are fixed to all maintainable equipment items and easily accessible after equipment installation. These permanent tags include, but are not limited to, equipment model number and serial number.

d) **Updated As-Built Drawings**

Any revisions or updated as-built drawings shall be provided in AutoCAD format on CD 30 days prior to Owner occupancy of the facility.

e) **Submittal of Construction Documents**

All documents provided in paper format shall be provided to JJC Construction Manager in an electronic format (electronic documentation such as MS Word, MS Excel, or Adobe PDF) on CD or USB flash drive. Documents that need to be provided in electronic format include:

- Drawings (e.g. as-builts, shop drawings, floor plans)
- Submittals
- Operations and Maintenance manuals
- Testing and Balancing reports
- Commissioning report

f) **Asset Data Collection**

The following need to be delivered to JJC Construction Manager in electronic data format

1. **Maintained Assets** - The following criteria can be used to identify maintained assets. Any questions can be referred to the JJC Construction Manager Representative for clarification (only one of the criteria need apply):
 - a. The asset requires some form of periodic maintenance and/or inspections. The unit, assembly or building feature is the subject of a separate and distinct warranty provision.
 - b. The item needs to be tracked per regulatory requirements, including, but not limited to, fire extinguishers and emergency lighting.
 - c. Unit or assembly cost greater than \$2,000 or group purchases in excess of \$25,000.
 - d. The item is clearly distinct from other items surrounding it and therefore not a part of a larger assembly.
 - e. The item, although part of a major system, could be disconnected from the system without disabling the systems operation.

Some equipment items consist of large assemblies. If the manufacturer provides separate operation and maintenance manuals, with separate and distinct planned maintenance schedules for the equipment elements comprising that large assembly, then each equipment element should be separately identified by equipment tags, and electronic data should be provided for each. An example would be cooling towers and the associated pumps. Conversely, if all components of a large assembly are covered by a single O&M manual, which includes all appropriate planned maintenance schedules, then this could be considered one maintainable asset.

2. **Vendors.** Identify the contractor, Trade Contractor, supplier, distributor and manufacturer – responsible for the installation, service and warranty of each maintainable asset. Data shall include the firm's name, address, contact person, phone number, e-mail address, web site address, date of acceptance, warranty provider, warranty term and any other pertinent information necessary for the owner to obtain service.
3. **Preventive Maintenance.** The project participants shall identify all original equipment manufacturer (OEM) recommended preventive maintenance (PM) tasks and steps associated with each maintainable asset. The PM tasks shall be structured as annual, semi-annual, quarterly, monthly, weekly, daily or as otherwise recommended by the OEM. Each PM task, the annual PM for example, shall contain all the individual steps necessary to complete that task without referencing other tasks or documents. Each PM task shall also list any required or recommended consumable materials and replacement or spare parts that may be used during the performance of the task. Typical data elements would include a description, manufacturer, manufacturer's part number, order quantity and

expected cost. Additionally any pertinent information regarding environmental, health and safety precautions, including MSDS sheets, special tools, or special training requirements shall be provided. In the event that multiple identical assets are provided it will only be necessary to provide the PM task or other repetitive information for one asset and identify the other assets the information applies to.

4. **Spare Parts.** In addition to the spare parts specified by the OEM and identified in the preventive maintenance procedures, the project participants shall identify any attic stock materials required under contract such as lamps, filters and other such items.

a) **Typical Maintainable Assets**

A representative list of Maintainable Assets is shown below. This list is not inclusive of all types of maintainable assets required for electronic data submittal. It is provided to give the project participants an understanding of the types of assets and data to be provided in electronic data formats. JJC Construction Manager will work with the project participants to identify the final data requirements and format of the electronic data worksheets.

Typical Maintainable Assets	Base Asset Data	Motor specific data	PM data	Spare Parts data	Company Contact data
<i>Doors and Windows</i>					
Roll-up or coiling doors	X	X	X	X	X
Handicap access doors	X	X	X	X	X
Electrically operated doors or windows	X	X	X	X	X
Revolving doors	X	X	X	X	X
Hardware, locks and keys	X				X
<i>Specialties</i>					
Display systems	X		X		X
Large internal / external signage	X		X		X
Pedestrian control devices (e.g. turnstiles, metal detectors)	X		X		X
Fire protection, local (e.g. extinguishers, cabinets)	X		X		X
Operable partitions	X		X		X
Security and emergency equipment (e.g. cameras, alarms)	X		X		X
Miscellaneous equipment					
Kitchens / food-prep / cafeterias	X		X		X
Barber / beauty shops	X		X		X
Laundry equipment	X		X		X
Vending machines (food, beverage, ATM's)	X		X		X
Audio / visual equipment	X		X		X
Vehicles	X		X		X
Parking gates	X		X		X
Ticket / key and card control units	X		X		X

Loading dock equipment	X		X		X
Solid waste handling equipment	X		X		X
Water supply and treatment equipment	X		X		X
Fluid waste treatment and disposal	X		X		X
Dark room equipment	X		X		X
Athletic, recreational and therapeutic equipment	X		X		X
Office equipment	X		X		X
Medical equipment	X		X		X
Conveying Systems					
Elevators	X	X	X	X	X
Escalators	X	X	X	X	X
Hoists and cranes	X	X	X	X	X
Mechanical					
Fire protection					
Pumps	X		X	X	X
Water towers	X	X	X	X	X
Plumbing (potable water)					
Circulation pumps	X	X	X	X	X
Backflow Preventers	X		X		X
Water heaters	X		X		X
Sewage pumps	X	X	X	X	X
Drinking fountains (self-contained refrigeration)	X		X		X
Fixtures (count and type)	X				X
Heating, Ventilation and Air Conditioning					
Pumps	X		X	X	X
Expansion Tanks	X		X		X
Chemical Water Treatment	X		X		X
Heat Exchangers	X		X		X
Boilers	X	X	X	X	X
Furnaces	X	X	X	X	X
Water Chillers	X	X	X	X	X
Refrigeration Systems	X	X	X	X	X
Energy Storage Devices	X		X	X	X
Air Compressors	X	X	X	X	X
Cooling Towers	X	X	X	X	X
Heat Pumps	X	X	X	X	X
Split Systems	X	X	X	X	X
Packaged Air Conditioning Units	X	X	X	X	X
Humidifiers / Dehumidifiers	X	X	X	X	X
Air Handling Units	X	X	X	X	X
Make-up Air Units	X	X	X	X	X
Air Terminal Units – (e.g. VAV's, FCU's)	X	X	X	X	X
Unit Heaters	X	X	X	X	X
Fans – (e.g. supply, return, exhaust)	X	X	X	X	X
Vacuum Systems	X	X	X	X	X
Electrical					

Substations	X		X		X
Switchgear	X		X		X
Transformers	X		X		X
Panels	X		X		X
Motor Control Centers	X		X		X
Emergency lighting	X		X		X
Uninterrupted Power Supplies	X		X		X
Emergency Generators	X		X		X
Automatic Transfer Switches	X		X		X
Battery Power Systems	X		X		X
Communication – telephone systems	X		X		X
Public Address	X		X		X
Lighting fixtures (count and type)	X		X		X
Controls					
Lighting	X		X		X
Environmental Systems	X		X		X
Building Management Systems	X		X		X
Energy Management Systems	X		X		X

b) **e.DOC Data Formats (Spreadsheet Headers)**

These are the MS Excel column headers representing the desired data elements for the electronic data to be provided by the Trade Contractors or vendors that supply or install any maintainable assets during the construction project. Any fields not easily defined (as agreed to by Trade Contractor and JJC Construction Manager), or is not applicable can be left blank.

Base Asset Data

The Trade Contractor will provide the basic asset data in MS Excel format for all maintainable assets they provide during the construction project.

Spec or Dwg ID	Drawing Reference		Equipment ID (Asset Tag)		Description			Manufacturer		
	Model Number	Serial Number		Classification	Year Built	Vendor	Original Cost	Condition		
		Bldg	Floor	Room	Parent Asset	Building System	Warranty Provider	Warranty Start	Warranty Period (Yrs)	

Motor specific data

The Trade Contractor will provide the basic motor data in MS Excel format for any motors greater than 5Hp.

Equipment ID	Motor Mfg	Frame	Model	Motor Serial Number	Horsepower	Volts/Phase	Amps	Motor RPM
--------------	-----------	-------	-------	---------------------	------------	-------------	------	-----------

PM data

The Trade Contractor or vendor will provide the operations and maintenance manuals for each maintainable equipment asset in electronic format. Only one electronic copy and two hard copies of each O&M manual are required. The data that will be extracted from the O&M manuals include.

Equipment ID	PM Name	PM Description or Document #	Frequency	Shop	Task #	Task Description
	Est. Hrs.	Parts Required	Tools Required	Hazmat Warnings	Comments	

Spare Parts data

The Trade Contractor or vendor will provide the spare parts listing for each maintainable equipment asset in electronic format. The data that will be extracted from the spare parts lists will include:

Equipment ID	Part Number	Part Description	Qty	Vendor Name	Unit of Measure	Unit Cost	MSDS Reference	Comments
--------------	-------------	------------------	-----	-------------	-----------------	-----------	----------------	----------

Company Contact data

The Trade Contractor will provide the basic vendor or manufacturer contact information in MS Excel format for all maintainable assets they provide during the construction project.

Equipment ID	Company Name	Contact Name	Address	City	State	Zip	Phone	Fax	Email Address	Website
--------------	--------------	--------------	---------	------	-------	-----	-------	-----	---------------	---------

the Construction Manager accompanied by a transmittal letter, in duplicate, containing the Project title and number, the Trade Contractors name and address, title and number of each record documents, certification that each document is complete and accurate and the signature of the Trade Contractor or his authorized representative.

Record specifications and addenda shall be legibly marked in each section to record: the manufacturer, trade name, catalogue number, and supplier of each product and item of equipment actually installed; changes made by field order or by change order.

8.0 WARRANTIES AND BONDS

Each Trade Contractor shall assemble and submit to the Construction Manager all warranties, bonds, and service and maintenance contracts as specified in the respective sections of the Specifications before Substantial Completion will be granted. The table of contents for this submittal shall include the product or work items; the firm, with the name of the principal, address and telephone number; scope, date of beginning of the warranty, bond or service and maintenance contract; duration; information for the Owner's personnel providing the proper procedure in case of failure and instances which might affect the validity of the warranty or bond.

9.0 WORKING HOURS

Normal work hours for contractors in the college are 7:00 a.m. to 3:30 p.m. Monday through Friday. If necessary, work may be performed outside of these hours or on weekends if scheduled in advance with the Construction Manager. Contractors are responsible for any overtime costs or shift differentials required to complete work outside normal working hours.

Certain activities of work that may be disruptive to school activities such as demolition, occupancy of classrooms or offices, or work involving harsh chemicals or objectionable odors (example: epoxy or drywall paints, roofing kettles, etc.) shall be performed on school holidays, off hours, or weekends to eliminate or minimize the effect on school operations. Any additional costs to accommodate this are incidental to the contract sum.

All work and deliveries are to be sequenced and scheduled so as to not interfere with the normal operation of the School. No deliveries are to be made to the JJC receiving dock.

Where possible, utility shutdowns and work within occupied areas of the school are to be performed on school holidays, off hours, or on weekends to avoid interference with the school. Any additional costs to accommodate this are incidental to the contract sum.

10.0 PROJECT REPORTS

Without limiting the reports required, the following reports shall be submitted to the Construction Manager:

1. Daily Force and Activity Reports shall be prepared and submitted by each Trade Contractor including similar data for each Trade Subcontractor. Daily reports will be on a form approved by the Construction Manager and will indicate Supervisors, Journeymen, Laborers, Helpers, and Apprentices and, by crew, the activities related to the Trade Contractor's schedule that are being performed. Daily reports shall also include information on material deliveries, test performed, accidents, and other significant events. Daily reports shall be submitted to the Construction Manager no later than 9:00 a.m. the next succeeding business day. Failure to submit timely daily reports will result in the monthly payment requisition being reduced by 10% for each violation.
2. Weekly Toolbox Safety Meeting Minutes including an attendance list of those personnel present and the topic discussed.
3. Time and Material Tickets for documentation of extra work being performed by the Trade Contractor shall be submitted to the Construction Manager for verification by 9:00 the next succeeding business day after the work was performed. Failure to submit Time and Material Tickets the next day may result in rejection of any costs for work performed.
4. Cost Breakdown Reports for record and tax purposes shall be submitted if and as required by the Owner for investment, tax credit, financing, and other purposes.
5. Accident Reports. The First Report of Accident shall be submitted to the Construction Manager within 24 hours of any accident or safety incident. Additional information, including doctors' reports and witness' statements shall be submitted as soon as possible or as requested by the Construction Manager.

12.0 INSTRUCTION OF OWNER'S PERSONNEL

Prior to final inspection and Substantial Completion, The Trade Contractor must coordinate with the Construction Manager and fully instruct the Owner's designated operating and maintenance personnel of all products, equipment and systems. The instruction time will be sufficient to

instruct all shifts of the Owner's operation and maintenance personnel.

- 13.2** In the event of serious or lost time accidents, representatives of the Trade Contractor and Trade Subcontractor, as applicable, shall attend an accident review meeting with the Construction Manager. The Trade Contractor shall be represented by its Project Manager and Project Superintendent or such other representative as required by the Construction Manager. Wherever possible, employees that are involved in an accident shall return to work or shall be placed on light duty at the Trade Contractor's expense. All employees that have received direction from a medical doctor of restricted work or light duty shall be placed on light duty.

14.0 PUNCHLISTS AND COMPLETION

- A. Trade Contractors are required to perform their own inspections and punchlists prior to requesting an inspection by the Construction Manager or Architect/Engineer. Reasonable evidence of failure to do so shall make the Trade Contractor responsible for all costs incurred by the Construction Manager and Architect/Engineer during inspection.
- B. Trade Contractors shall submit copies of its punchlist upon request of the Construction Manager. It is strongly advised that inspections and punchlists be performed on an ongoing basis.
- C. Contractors shall diligently prosecute and complete all work on their punchlist. Contractors shall make every effort to ensure punchlist work is completed within thirty (30) calendar days of the date the punchlist was issued. Substantial progress and completion of punchlist work shall be achieved before retainage is reduced below 5%.

15.0 DAMAGE TO THE WORK OF OTHERS

Trade Contractors are responsible for any damage they cause deliberately or accidentally, to the work of other contractors. Contractors shall promptly repair damaged work with or without knowledge of the party that damaged the work. The Construction Manager or Owner is not responsible for damage to installed work caused by other contractors.

16.0 UNDERGROUND UTILITIES

The following procedure shall be followed when any excavation or utility work is to be performed:

- a. At least seven (7) days prior to the start of excavation or utility work, notify the Construction Manager of the nature and the schedule of work to be performed.
- b. Trade Contractors shall contact JULIE (if required) for utility locating and provide the Construction Manager with the DIG number for the utility locate. The Trade Contractor shall also request at least seven (7) days prior to start of excavation work that the Owner locate any underground utilities in the vicinity of the proposed excavation. The Trade Contractor shall remain responsible for any damage to utilities if either of these two notifications are not made.

Trade Contractors are responsible to utilize safe excavating techniques while working around existing utilities and remain responsible for any damage or disruption of existing utilities.

18.0 MISCELLANEOUS PROVISIONS

1. Contractors are permitted to park in designated parking areas only.
2. Contractors shall verify existing conditions and work constructed by others (including tolerances permitted by the governing standards of the work performed by others) and shall build to and accommodate same.
3. Contractors shall take all necessary precautions to protect its finished work as well as the work of adjoining trades.
4. Unless indicated otherwise in the Contract Documents, the electrical trade contractor will make all electrical connections to equipment provided by other contractors. Other Trade Contractors shall cooperate with the electrical contractor by providing all specific electrical requirements to the electrical contractor for each piece of equipment. Should the electrical requirement for a piece of equipment provided by other contractors differ from the electrical services indicated in the electrical drawings, the Trade Contractor providing the equipment shall make arrangements and pay all costs to assure the Trade Contractor's furnished equipment matches the electrical services indicated on the drawings and installed by the electrical contractor.
5. All trade contractors requiring access doors or access panels through masonry, drywall partitions, drywall ceilings, or other non-accessible partition or wall shall furnish the appropriate access door or panel to the masonry trade contractor, drywall contractor, or ceiling contractor, etc. for installation by that contractor in the normal flow of its work. Locations of access panels shall be identified by the Trade Contractor prior to construction of the wall or ceiling. Failure to do locate or furnish the appropriate access panel will cause it to be installed by others at the offending party's expense. Access panels shall be of the proper type and size for the application.
6. Contractors using any chemicals, paints, or other products with objectionable, noxious or poisonous fumes (dryfall paint, epoxies, etc.) shall work off hours or weekends if possible. Contractors shall also provide all means of containing dust resulting from their operations by means of temporary dust partitions. If this is not possible or practical, contractors shall supply means of exhausting the fumes or dust and providing for a fresh flow of outside air into the space chemicals are being used. Work activities that permit the transmission of fumes, dust, or vapor will be stopped until corrective measures are taken or work will be rescheduled for off hours/weekends. Any additional costs necessary to comply with this requirement are incidental to the contract sum.
7. There will be no hoist provided on the Project. Further, the permanent elevator will not be made available for use by the Trade Contractors. Each Trade Contractor will be responsible for his own hoisting and material handling.
8. Available areas for stored material on the project site are limited. Trade Contractors shall not store material on site that will not be installed within two weeks without the specific approval of the Construction Manager. Under no circumstances are access roadways or sidewalks to be used for storage of materials. Trade Contractors shall immediately relocate

any materials as required to permit other trades to perform their work, any materials not stored in appropriate areas, or any material that interferes with any contractor's work.

9. Trade Contractor shall bear all costs for standby trades should the Trade Contractor work prior to or later than normal hours, Saturdays, Sundays or Holidays.
10. The Trade contractor is required to provide all required fire safeing materials for its respective work.

EXHIBIT "A"

Your firm was recently awarded a Contract for the above referenced project. In order to expedite the payments and to avoid any misunderstanding as to the proper billing procedures we request that the following instruction be diligently adhered to:

1. **The following are the items that the subcontractor must comply with immediately following the contract award for issuance of payment.**

A. Submit for approval a listing of all Trade Contractors and major Suppliers to be listed each month on the Contractor's Sworn Statement.

B. **Schedule of Values**

Submit for approval a detailed Schedule of Values of your contract amount on the JJC form within 15 days of contract award. This breakdown shall be divided into both labor and material line items for each major area of work in your contract specifications. Amendments to your contract must be listed separately by amendment and change request number (the change request number is indicated on the amendment), leaving a subtotal for original contract amounts. Once this schedule is approved by JJC Construction Manager, it is to be used on all progress billings indicating percentage of completion applicable to each item.

C. Return to our Purchasing Department your signed contract, performance bond, drug certification letter, and certificate of insurance. These items must be received prior to commencement of any jobsite activity or processing of payment applications.

D. **Material Status Reports**

Submit initial report in format corresponding to Schedule of Values within 15 days of Contract Award.

2. **Billing Instructions:**

Applications for payment are to be submitted to the JJC Construction Manager Project site office located at the following address:

- TBD

A. JJC Construction Manager uses a pencil copy procedure to determine your work in place percentages on each monthly progress billing. The procedures are as follows:

1. The pencil copy (draft) of your Schedule of Values must be submitted to the JJC Construction Manager project staff by the 1st of the month. Your work in place percentages should be projected through the end of the current billing period. (Typically the 15th of the month). The percentages indicated on your pencil copy will be verified by our project staff and you will be notified of any necessary changes or revisions.
2. Once your pencil copy is approved, you should submit your formal billing to the project office by the dates indicated on the attached schedule.

NOTE: In order to meet the Owner's payment schedule, incomplete or late applications will be held for the next billing period.

B. Contractor's application for payment will consist of the following in triplicate:

1. Cover Sheet– Application and Certificate for Payment.
2. Invoice Voucher.
3. Contractors Affidavit and Sworn Statement.
4. Contractor's Waiver of Lien. On the affidavit section of this form you will list your Subcontractors and Suppliers.
 - a. Contractor's Waivers are to be totaled cumulatively, i.e. total net amount of payments received by your firm to date.
 - b. Sub-sub and Supplier's Waivers confirmation will be submitted as verification of payments noted on the previous month's sworn statements.
 - c. Waivers of Lien are not required for your initial payments requests, but are **MANDATORY** as part of all future payments requests. Subsequent progress payments will not be released until these documents for prior payments are received. Also include sub-sub and suppliers waivers.
 - d. Certified Payrolls must be current with monthly utilization report for previous month. (Submit weekly payroll reports).
5. Updated monthly Material Status Report.

3. **Extra Work**

- A. Daily Time and Material Slips will be processed only **if they are signed on a daily basis by the JJC Construction Manager/Project Manager or his designee**. Original invoices for material and equipment, certified payrolls and a labor rate breakdown will be required as back up to any authorized time and material work.

4. **Off-Site Stored Materials**

In order to invoice for materials stored off-site, the following documents must be submitted. JJC Construction Manager will provide a Stored Material Request package, which consists of the following for your execution.

- A. Stored Materials Request – Request should be submitted 25 days prior to the established billing date.
- B. A fully executed Bill of Sale naming the Owner as purchaser and a guarantee of delivery to the project site. Schedule "A" to the Bill of Sale will list the material to be sold and the total dollar value.
- C. Any material stored off-site must carry additional insurance (All Risk Ryder) for the full invoiced value of the items. The certificate holder should be JJC, The insured party, the payee in case of loss, will be the Owner.
 1. There will be no deductible attached and the policy will provide a minimum of thirty (30) days notice of cancellation to the certificate holder.

2. All certificates must list the Owner as “Additional Insureds”
 3. Provide photographs of the material clearly show identification labels.
- D. Provide arrangements for a designated JJC Construction Manager employee to inspect the material at its stored location.
- E. **Retention on off-site stored materials is 25%**

5. Contract Close-Out

- A. When your contract has reached substantial completion, request for contract closeout should be made in writing to the Project Manager. The final billing should include:
- a. General Release and Waiver of Lien
 - b. General Guarantee
 - c. Contractor’s Affidavit / Final Waiver
 - d. Subs/Supplier’s Final Waivers
 - e. Final Consent of Surety (provided by the Bonding Company)

If you have any questions as to the proper execution or use of these forms or any questions concerning these instructions, do not hesitate to call the jobsite or myself.

By earnestly following these instructions a significant contribution will be made to the success of the project to the benefit of all concerned.

END OF GENERAL REQUIREMENTS OF THE CONTRACT

Project Safety Plan Guideline

FOR



Safety Plan

Table of Contents

Definitions	4
Project Introduction.....	4
Administration.....	4
Management Policy Statement.....	4
Management Statement - Statement of Final Authority.....	5
Responsibilities – Joliet Junior College Safety Coordinator	5
Responsibilities – Safety Coordinator Project Superintendent	6
Responsibilities – Contractors	6
Responsibilities - Employees.....	8
General Requirements	9
Accident Investigation.....	9
Accident Reporting Procedures	10
Concrete (Cast-in-place)	10
Confined Space Entry.....	10
Crane Safety and Rigging.....	10
Demobilization.....	15
Demolition	15
Discipline - Enforcement.....	14
Discipline – Fines	15
Substance Abuse Policy – Minimum.....	15
Electric - Temporary	19
Elevated Work (Other than Fall Protection)	21
Elevated Work - Fall Protection	22
Elevator safety.....	23
Emergency Procedures - Medical – Blood-borne Pathogens.....	23
Emergency Procedures - Medical Services	26
Emergency Procedures - Alarms, Fire, Bomb, Weather, Environmental, Public Demonstration	27
Environmental - Asbestos.....	32
Environmental – Lead.....	33
Environmental - On-site Hazards.....	34
Environmental - Silica.....	34
Environmental - Powered Equipment inside enclosed structures.....	35
Excavation.....	35
Eye and Face Protection	35
Fire Protection	36
Hand Protection.....	36

Hazard Communication program	37
Hazard Analysis	38
Housekeeping	39
Incentives and Awards	39
Infection Control	40
Inspection and Auditing	41
Interim Life Safety Matters for Occupied Facilities	42
Line Break	44
Lockout/Tagout Procedures.....	44
Meeting - Pre-construction.....	47
Meetings.....	47
Masonry	47
Motor Vehicles and Equipment.....	49
OSHA Required Training	49
OSHA - Inspection.....	50
Precast/Prestressed Concrete	50
Project - Code of Safe Practices.....	52
Project - Safety Rules.....	53
Protection of the Public.....	53
Pressure Testing Safety Requirements.....	60
Sanitation	56
Signs, Signals, Barricades and Lights (Motor Vehicle Exposure).....	57
Scaffold	57
Stair Scaffolds	58
Steel Erection	58
Stretch and Flex Program.....	60
Third Party Inspections.....	61
Temporary Heat	61
Tool Box Training	62
Welding, Cutting and Burning – Hot-work	63
Work Permit Procedures.....	64
Owner Requirements.....	65
Appendix A Table of Fines.....	66
Appendix B.....	68
HAND PROTECTION REFERENCE	68

DEFINITIONS

Contract: A written agreement between the Owner and Trade Contractor, between Trade Contractor and a Subcontractor, between the Owner and Other Contractor(s), or between Other Contractor(s) and its (their) Subcontractor(s).

Employer: Any contractor, supplier, or vendor performing work under Contract at the project site.

Project: The premises owned by the Owner as described in the contract between the Owner and Trade Contractor and/or areas and ways contiguous thereto, including any work sites set up by the **Owner** for use by a contractor exclusively for the storage of material or equipment, or for on-site fabrication of materials to be used on the job site, including temporary locations.

Owner: An entity that has a contract between themselves and Trade Contractors or, between themselves and the Contractor.

Contractor: Any company performing work under Contract at the project site.

PROJECT INTRODUCTION

Included in the project is site work.

ADMINISTRATION

MANAGEMENT POLICY STATEMENT

The **Safety Plan** embodies the policies and procedures for prevention of injury, property damage, fire damage and occupational illness. **No single feature of our work is of greater importance.** There is never an acceptable reason for compromising safety. This document, the contractor selection process, and site field activities are all designed to support and reinforce this goal.

It is a policy to provide a safe place to work at all times and to conduct all operations in a manner as to provide protection for all individuals who might come into contact with these operations. The Owner's employees, Contractor and Subcontractor employees, and all others employed on this site, as well as anyone who comes on the site for any reason during construction, are expected to conduct their work in a safe manner and are required to comply with established safety programs. By contract, every Contractor on this site is obligated to perform all work in a safe manner. By contract, every Contractor on this site is obligated to conform to the requirements of the Federal Occupational Safety and Health Act of 1970 (OSHA) and all additions and revisions thereto, OSHA Global Harmonization law, IDOL, as well as other applicable Federal, State and Local requirements and the Project Safety Plan.

All supervisory employees must accept their responsibility for the prevention of accidents and for conducting all operations under their direction in a safe and efficient manner. The results of our safety efforts will affect our overall success in constructing the Project. **Our goal is accident-free work** with the traditional defect-free quality. We know this is the most efficient method and that all individuals working on this Project will subscribe to the Project Safety Plan.

With the cooperation, dedication and assistance of everyone, this will be a successful and safe project.

MANAGEMENT STATEMENT - STATEMENT OF FINAL AUTHORITY

All persons who come into the work area, for any reason during construction, will be required to comply with the established safety regulations that govern the project.

Contractors are committed by contract to observe and comply with all applicable safety regulations and procedures. Each Contractor will participate in the Project Safety Program, hereafter referred to as the "Program".

If the Safety Coordinator finds Contractor areas of work or individuals being, or acting in noncompliance with the Occupational Safety and Health Act of 1970 (OSHA), as amended, or any other applicable regulations, the Safety Coordinator shall have the authority to order immediate correction and cessation of the non-compliant occurrence. **Non-compliance with Project Safety Regulations will be grounds for Contractor dismissal and/or employee(s) being forbidden entry onto the project.** All costs of correction shall be borne by the Contractor deemed responsible. Nothing contained herein, however, shall serve to relieve the Contractor of his liabilities and/or obligations under the "Occupational Safety and Health Act of 1970" and all additions and revisions thereto, OSHA Global Harmonization law, IDOL, as well as all other applicable Federal, State and Local requirements.

RESPONSIBILITIES- General Trades Safety Coordinator

- Audit activities of the Trade Contractor's safety program so that it conforms to the Safety Program.
- Provide weekly, written site inspections of the job site, notify the Trade Contractors of any unsafe practices and conditions for which they are responsible and will counsel them on the appropriate corrective actions when necessary. Site inspections shall be reviewed and discussed with the construction team.
- Identify the location where SDS sheets provided from the Trade Contractors/ subcontractors can be found for the project.
- Maintain required records and accident prevention materials at the job site so that an adequate history is maintained for the project.
- Review injury and first aid records during the project to identify injury trends to take positive action to reduce or eliminate such injuries from continuing to occur on the project.
- The General Trades Safety Coordinator will examine and familiarize himself/herself with the job site and adjacent areas from the standpoint of access and facilities regarding safety. The job site should be explored with regard to installing and operating the construction plan, and evaluating any difficulties that might be encountered in complete execution of the work safely. Make frequent inspections of the job site so as to initiate corrective measures to eliminate unsafe practices and conditions.
- The General Trades Safety Coordinator shall immediately investigate all accidents or near miss accidents and take corrective actions to help prevent reoccurrence.

See specific Responsibilities in the following sections

RESPONSIBILITIES – GENERAL TRADES SAFETY COORDINATOR

- The Safety Coordinator directs and administers the Safety Program on this Project. All reports, surveys, accident reports and other information relating to safety are to be submitted to the Safety Coordinator.
 - The Safety Coordinator establishes a safety organization to assure the involvement of all personnel in the safety effort and to provide for their participation. The Safety
-
-

Coordinator evaluates individual subcontractor's safety performance for compliance with all applicable Federal, State, local laws and the Owner's safety requirements.

RESPONSIBILITIES –GENERAL TRADES PROJECT SUPERINTENDENT/COORDINATOR

Responsible For:

- The active control of the Project Safety Plan.
- Planning and requiring all work to be done in compliance with the Project Safety Plan.
- Weekly inspections relating to safety shall be made and documented.

RESPONSIBILITIES – CONTRACTORS

- Contractors with a staff and crew of 20 or more on site shall appoint a full time safety representative. Contractors with a staff and crew on site of less than 20 shall anticipate that the safety aspects of this position will encompass 20 hours or more of the work week and may occasionally require full time attention. For this reason, serious consideration shall be given to the ability of a superintendent or foreman to simultaneously meet the responsibilities of both positions.
- Each safety coordinator will meet the following criteria:
 - A minimum of an OSHA 30-hour construction hazard recognition certification; be certified as a competent person in the type of work being performed; First Aid and CPR certified; experienced in the construction industry in the type of work being performed.
 - Each Safety coordinator has the right and authority to stop any and all hazardous work being performed by their employer whenever imminent danger to life and health exists.
 - Conduct regular and frequent inspections for their Contractors work areas
 - Take immediate action to eliminate unsafe acts and/or conditions.
 - Ensure that prior to the start of any work activity, every foreman has reviewed each task assignment with every affected employee to assure a comprehensive understanding of the safety requirements and precautions to be taken while performing this work.
 - Ensure that appropriate personal protective equipment is provided and its use enforced.
 - Each safety coordinator shall participate in accident and incident investigation involving their work and employees and those of their subcontractors.
 - Each safety coordinator shall attend safety meetings as scheduled by Safety Coordinator.
- Contractor shall instruct each employee on project site in the recognition and avoidance of unsafe acts and/or conditions applicable to its work environment to control or eliminate injury or illness.
- Contractor is responsible for providing and requiring the use of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions. All records shall be maintained at a location accessible to Safety Coordinator.

-
-
- Contractor is responsible for notifying Safety Coordinator of any hazardous chemicals or substances that are brought or cause to have been brought on project site. Contractor shall provide Safety Coordinator with a copy of Contractor's Hazardous Communication Program, Chemical information list, and Safety Data Sheet(s) (SDS) for the chemical(s) or substance(s) intended for use on the site. The Safety Coordinator will provide a centrally located place for this information. Contractor is responsible for maintaining a copy of Contractor's Hazard Communication Program, Chemical Information List, and Safety Data Sheet(s) on site for Contractor's own reference and employee training. The proper storage, use and disposal of wastes of any hazardous chemicals or substances are the responsibility of Contractor.
 - Contractor is responsible for conforming to OSHA and NFPA standards of fire protection and prevention practices. Contractor shall also comply with all fire and safety rules and regulations established on the project.
 - If Contractor fails to correct safety violations, the Safety Coordinator will issue the Contractor written notification, outlining safety violations. Failure of the contractor to abate may result in the removal of the Contractor from the project site or other appropriate measures.
 - Compliance with Federal, State, Local Laws and regulations is the contractual obligation of Contractors working on this project. Conflicts between current laws or contractual requirements shall be resolved by adhering to the more stringent requirement. Any project site safety regulations, which exceeds the minimum standards established by OSHA, shall be incorporated in Contractor's safety program.
 - The Contractor shall ensure that its supervisors are aware of their responsibilities, which include:
 - Become familiar with the requirements of all accident prevention standards and safety rules pertaining to their job.
 - Be responsible for carrying out the procedures required by the project safety plan.
 - Ensure that each employee under their supervision has received the initial project safety orientation provided by the Safety Coordinator.
 - Explain to all employees applicable safe practice rules and regulations under their direct supervision.
 - Supervise the instruction and training of new employees either personally or through delegated experienced persons until the new employee satisfactorily demonstrates their ability to perform the work in a safe and efficient manner.
 - Be responsible for continuous housekeeping in their area and for the use and maintenance of all personal protective devices, equipment, and safeguards.
 - Notify their direct supervisor and/or the contractor's safety representative concerning work areas where they believe protective devices are required.
 - NOTE: Such safety devices will include, but not limited to, the following: machine guards, operational shields, exhaust vent hoods and systems, welding shields, approved personal protective equipment, automatic stops and controls, barricades, railings, etc.
 - Report to their own direct supervisor all cases of employees who, in their opinion, are not qualified for the work to which they have been assigned or who engages in unsafe practices.
 - Attend and participate in all supervisors' safety meetings.
 - Conduct or arrange for weekly "toolbox" safety meetings for all employees under their supervision as required. Minutes of Tool Box Talks are to be maintained and a copy of
-
-

each Talk is to be given to the Safety Coordinator before end-of -shift the day given.

- Each Contractor shall complete a Safety Task Assignment Process form each day for all work crews, discuss with each work crew on a daily basis or when non-routine tasks occur and provide a copy to the Safety Coordinator at the end of the work day with their daily report.
- Report immediately, all accidents in which personal injury, property damage or a near-hit occurs.
- Should an accident occur involving a Contractor's employee, the Principal/Owner of the Contractor shall attend a "Principals" meeting at the project location to review the incident. The Safety Coordinator and JJC Project Manager will conduct this meeting.
- Assist in accident investigation and submit a report promptly on required forms. Lessons learned from such investigations shall be incorporated into all future daily activities and plans of the contractor.
- In the event a contractor utilizes employees whose primary language is not English, the contractor shall provide for appropriate interpretation to assure complete comprehension.
- Periodically analyze work methods in detail for the purpose of job simplification and for the establishment of safe work methods.
- Site safety inspections are to be an ongoing process and documented at least weekly. Contractors should document inspections on the Site Audit Checklist or approved Contractor's form and submit to The Safety Coordinator.
- Ensure that all hazards created in an area as a result of work activities are addressed before the crew leaves the area, including breaks or lunch.
- **In an effort to create an incident and injury free culture on the project, the JJC Project Manager may hold periodic Principals Meetings to discuss project safety with contractor principals. Project walkthroughs and worker feedback interviews will be part of these meetings. Contractor principal / owner attendance at these meetings is mandatory.**

RESPONSIBILITIES - EMPLOYEES

- No employee shall be required or knowingly permitted to work in an unsafe environment except for the purpose of making safety corrections and then only after proper precautions have been taken for their protection.
 - Each employee is responsible for learning and abiding by those rules and regulations which are applicable to the assigned tasks and for reporting observed or anticipated hazards to their immediate Supervisor. If the hazard is not immediately corrected, the affected employee will report the hazard to Safety Coordinator
 - **All employees shall observe the following rules of conduct:**
 - **Courtesy:** Employees shall observe standards of behavior and conduct their work in a manner to avoid offending any Owner employees or visitors. **Each individual on this Project must be given the courtesy that would be extended to one's family or best friend.**
 - **Personal Protective Equipment:** all persons on the site will wear hard hats, eye protection, gloves and work boots with substantial soles. All other personal protective equipment, including respirators or eye protection, as appropriate to assigned tasks, shall be utilized in the proper manner at all times while there is exposure to the hazards.
-
-

-
-
- **Clothing:** Clothing suitable for the weather and your work shall be worn. Torn or loose clothing, cuffs or neckwear, which may be a hazard, are not allowed. Shirts must be worn and have short sleeves. Pants must have legs (no shorts allowed). Clothing shall be maintained in a clean, neat and repaired fashion
 - **Vehicles:** Employees shall park their vehicles in designated areas. Operation of vehicles on the project site shall conform to all local traffic laws. The maximum speed limit on the project site is 10 miles per hour.
 - **Smoking: Smoking is permitted only in designated areas**
 - **Intoxicants:** Consumption of alcoholic beverages or controlled substances is not allowed on the project. All workers who are taking physician-prescribed or over-the-counter medication must be fit for work. **All employees are specifically directed to the "Drug Policy" which is a part of this Project Safety Plan.**
 - **Accidents:** All employees must immediately advise their Supervisor of any injury on the project or any non-injury accident, which involves damage to property or equipment.
 - **Personal Conduct:** Practical jokes, horseplay, scuffling, wrestling or fighting is prohibited.
 - **Good Housekeeping:** Good housekeeping on the project is mandatory and every employee must do their part daily to minimize dust and to clean up their work area to keep the project clean for safety and efficiency. **Controls shall be observed which keep dirt from being tracked into areas outside the workspace.** Clean up methods shall follow prescribed techniques to minimize the distribution of dust into the air.
 - **Authorized Access:** Employees shall confine their activities to the areas designated as the work site. **The employee's Supervisor shall obtain permission from the appropriate Owner representative prior to entry into any areas outside the work site.**
 - **Fire Protection:** Employees shall adhere to all fire protection regulations, and shall conduct their work in a manner to preserve the fire safety integrity of the building.
 - **Music.** No televisions, radios, CD players or cassette tape players are allowed.
-
-

GENERAL REQUIREMENTS

ACCIDENT INVESTIGATION

- For all injuries or near-hits, the JJC Project Manager and the Safety Coordinator are to be notified immediately. Copies of ALL accident reports must be filed with the JJC Project Manager and the Safety Coordinator immediately.
 - It will be each Contractor's responsibility to complete the First Report of Injury for his employees and to transmit copies of these reports immediately to JJC Project Manager and the Safety Coordinator. Any accident or incident resulting in a lost-time injury, fatality, damage to property or equipment exceeding U.S. \$1,000, a serious "near-hit" or the recognition of a potential hazard to health and environment is to be investigated by a committee comprised of the following, as appointed by the Safety Coordinator: the JJC Project Superintendent, the JJC Project Manager, the Project Safety Coordinator and Contractors Supervisor or anyone familiar with the practices involved in the incident who can contribute to its analysis and make recommendations for action to prevent a reoccurrence. The investigation shall begin promptly after the incident. Results of the investigation and recommendations for preventive action shall be documented within five (5) workdays of the incident. If the Owner agrees, a brief news release shall be posted, for the information of workers, covering fatalities and serious occurrences. The
-
-

occurrences are also to be discussed at the regular or special safety meetings. This investigation and report shall be made immediately, but release may await any similar investigation and reports required by governmental regulations. Safety Coordinator shall also review first aid injuries to establish trends and practices that deviate from work standards and shall report and take corrective actions.

- The Safety Coordinator shall provide for the Owner, in the Monthly Progress Report, a safety report covering safety activities for the preceding month. The report shall include:
 - The accident experience, recordable, lost time, first-aid and near-hit incidents for the month.
 - The relationship of the accident experience to the number of people employed using a recognized national standard for recordable injuries and lost time injuries.
 - A review and summary of the safety activities, problem areas, and contemplated action, including fire hazards and environmental hazards.
-

ACCIDENT REPORTING PROCEDURES

For all fatalities, cases requiring hospitalization, OSHA Recordable events or possible lost-time injuries, JJC Project Manager and the Safety Coordinator are to be notified immediately. The Trade Contractor will immediately notify the Insurance Carrier's Claim Representative of all accidents and will immediately forward Employer's First Report of Injury Forms, General Liability Loss Notice Forms, subsequent inquiries or correspondence received relative to the matter, including Court Summons or other legal documents, to the Claim Representative with copies to the JJC Project Manager and the Safety Coordinator. Copies of ALL accident reports must be filed with the Safety Coordinator immediately.

CONCRETE (CAST-IN-PLACE)

All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements as prescribed in ANSI-A10.9-most recent version, "Safety Requirements for Concrete Construction and Masonry Work."

CONFINED SPACE ENTRY

- Contractor shall develop an entry procedure to be used when Contractor's employees are required to enter confined areas or spaces. Confined Space entry procedures will conform to OSHA 1910.146 and the owner's requirements.
 - A confined space entry permit must be completed and posted at the entrance to the confined area.
 - Documentation of appropriate formal training for all involved in the confined space activity (entrants, attendants, supervisor, and rescue personnel) shall be submitted to Safety Coordinator for approval prior to any entry.
-

CRANE SAFETY AND RIGGING

The Contractor shall conform to the more stringent of Federal, State, local, or client safety policy.

Contractors whose activities require the use of cranes shall be responsible for their proper set up and operation and shall advise the Safety Coordinator prior to the arrival on-site.

The contractor shall supply the Safety Coordinator with documented evidence of their competent person's training, and of their 'qualified persons', as required by 1926.1404, 1926.27, 1926.1428, and where specified in 1926.1400, including the Operators, Riggers, Signal Persons, and 'Assembly/Disassembly Director.

The Assembly/Disassembly Director shall be responsible to ensure that all provisions of safety

as specified in 1926.1404 are met including but not limited to: adequate site and ground bearing conditions, proper blocking and cribbing, knowing load weights and center of gravity, equipment capacity, support of booms and counterweights, rigging of boom and suspension systems, determination of safe wind speeds, etc.

Inspection

Inspections are required pre and post assembly in the configuration that the crane will be used, as well as in severe service and after adjustment or repair, for each piece of equipment.

Contractors shall provide the Safety Coordinator evidence of annual inspection by a third-party inspection agency not under the control or ownership of the crane owner and approved by the Safety Coordinator. All repairs and adjustments noted on the inspection shall be corrected prior to next use. 'Temporary alternative measures' as specified within OSHA regulations will not be accepted.

This applies to power-operated equipment used in construction that can hoist, lower and horizontally move a suspended load, as specified in 1926.1400. Such equipment includes, but is not limited to: articulating cranes (such as knuckle-boom cranes); crawler cranes; floating cranes; cranes on barges; locomotive cranes; mobile cranes (such as wheel-mounted, rough-terrain, all-terrain, commercial truck-mounted, and boom truck cranes); multi-purpose machines when configured to hoist and lower (by means of a winch or hook) and horizontally move a suspended load; industrial cranes (such as carry-deck cranes); dedicated pile drivers; service/mechanic trucks with a hoisting device; a crane on a monorail; tower cranes (such as fixed jib ("hammerhead boom"), luffing boom and self-erecting); pedestal cranes; portal cranes; overhead and gantry cranes; straddle cranes; side-boom tractors; derricks; and variations of such equipment.

Inspections shall be performed by a qualified person designated by the contractor in accordance with 1926.1412, 1926.1413 and the manufacturer's recommendation and ANSI B30 Standard for the type of crane being inspected and the most current version. This inspection shall be completed prior to each shift starting work, as well as when equipment is modified, repaired or adjusted, post assembly, monthly, annually and in conditions of severe service.

Operation.

This certification will be for each crane and lifting device and associated rigging equipment brought onto the site. At least every 12 months, or if the crane or its associated rigging has sustained any incident which may have resulted in damage, in cases of severe service, or after if any repair or modification the crane and its associated rigging shall be fully re-inspected by a qualified person in accordance with OSHA regulations, with proof of inspection provided to the Safety Coordinator.

No work shall proceed without evidence of a current annual inspection meeting Safety Coordinator requirements. No claims will be accepted for losses sustained by the contractor for delays caused by failure to comply with these requirements. Temporary alternative measures for safety devices or operational aids will not be accepted.

Safety devices, including but not limited to: crane level indicator, boom and jib stops, foot pedal locks, check valves on hydraulic outrigger and stabilizer jacks, and horns, must be in proper working order before equipment operations can begin- temporary alternative measures are not permitted to be used.

Operational Aids, including but not limited to: boom hoist limiting device, boom angle indicator, load radius indicator, luffing jib limiting device, anti two-blocking device, load weighing device (such as a load moment indicator), and outrigger stabilizer position monitor must be in proper working order- temporary alternative measures are not permitted to be used.

Special Procedures

- A lift procedure shall be developed by the Contractor's qualified person, and overseen by the Contractor's qualified and competent Assembly/disassembly director for the following and submitted to the Safety Coordinator prior to the lift taking place:
- Critical Lift (defined as when lifting a load where the weights are at or over 75% of the rated capacity of the crane and rigging as determined by the manufacturer);
- Multi-Crane Lift;
- 100 Tons or greater Lift;
- Any application that deviates from the manufacturer's recommendations;
- When special or unique hazards are under or adjacent to the load at any time during the lift;
- When Safety Coordinator determines such a procedure is necessary.
- The Lift Procedure will include a Hazard Analysis developed by the Contractor and submitted to the Safety Coordinator along with Pre-Lift meetings, which shall be held at 30 days prior to the lift, the day prior to the lift and immediately prior to the lift with the actual workforce doing the lift. All concerned parties must be present for the meetings with minutes of the meeting recorded by the Safety Coordinator.
- The Lift Procedure will include documentation of calculations which incorporates weight deductions of all rigging equipment, a load chart for the crane(s) that will be used, a site plan and layout sheet which will include the path of travel of the load, swing radius protection and any other necessary factors.
- The Contractor's Crane Lift Plan Form, Crane Critical Lift checklist or equivalent, shall be used.

Record Keeping

- All records pertaining to crane inspections shall be kept with the crane or in the trade contractor's site field office in accordance with applicable OSHA regulations.
- If during any safety inspection, the operator or supervisor cannot produce the required crane inspection sheets, the crane shall be shut down as soon as possible and shall be inspected.
- Where crane operators are required to be licensed by the State where the project is being built they shall have a current license and provide a copy to the Safety Coordinator when requested. Duplicates of Certification records shall be maintained on project site by Contractor and made available to the Safety Coordinator upon request. The contractor shall provide evidence of competency of the operator to the Safety Coordinator.

Rigging

- Only qualified riggers shall perform rigging operations.
 - A Competent Person appointed by the Contractor shall inspect all rigging equipment. Inspection shall be done and documented prior to each shift starting work, monthly and annually in accordance with 1926.1413. If there are any deficiencies in equipment, it
-
-

shall be removed from service and corrected or replaced per manufacturer's criteria.

- All rigging equipment that is defective or damaged shall be immediately removed for the project site.
- Chain slings are not permitted to be used for any lifting operation unless specifically designed for a unique application.
- Wire rope slings shall bear a legible manufacturer's capacity tag.
- Tag lines shall be used on all loads.
- All hooks used for overhead lifting shall be equipped with safety latches or alternate lifting methods such as clamps will be used. Shake-out/sorting hooks may only be used for unloading materials from trucks and will not be used for overhead lifting.

Signals

- The contractor shall appoint a qualified and trained signal person that meets the definition of 1926.1428 c and 1926.1430
- When hand signals are used, only the standard method for signals shall be used 1926.1400 App A.
- Operator and signal person shall meet prior to hoisting lifts to confirm understanding of signals.

Operator Qualifications

- The crane operator(s) shall be proficient in the operation of the crane(s) and licensed in the State/City where the operation is being performed, or certified by an accredited crane operator testing organization, such as the National Commission for the Certification of Crane Operators (NCCO), or by an audited employer program developed by an accredited crane operator testing organization and audited by a third party qualified auditor.

Power line Safety

- Crane and rigging operations are not permitted within 20 ft. of power lines unless the power lines are de-energized and confirmed by a qualified utility company representative.
- Where encroachment is required within 20 ft. from power lines in accordance with 1926.1408, Table A
 - A planning meeting shall be conducted with the assembly/Disassembly director, operator, crew and other workers in the area to review steps to prevent encroachment
 - Tag lines must be non-conductive
 - Dedicated spotters shall be used
 - Proximity alarms or range control warning device shall be used

Tower Cranes- please refer to Appendix C for Tower Crane erection and Dismantling procedures

DEMobilIZATION

The Project Superintendent and each contractor shall organize and schedule the orderly removal of their project site offices and trailer facilities, the termination of temporary utility services, the transfer of telephone services to their offices, and the forwarding of mail. The site

shall be left in the conditions specified by the contract documents. The Project Superintendent shall inspect the site with the Owner to verify that all permanent security and safety devices are in place and performing their intended function.

DEMOLITION

Structural Demolition

- An engineering survey shall be completed before the start of demolition.
 - All structural shoring shall have stamped drawing and calculations by a registered Professional Engineer.
 - Areas being demolished must be secured by means of barricades to prevent unauthorized personnel from entering the area.
 - Subcontractors must submit, prior to the start of construction, a detailed demolition plan to include, means and methods, related drawings, and other relevant safety plans.
-
-

DISCIPLINE - ENFORCEMENT

- All contractors and suppliers shall participate in the project safety plan. Should an Imminent dangerous condition be discovered, all work in the area of danger will be stopped until corrections are effected.
 - Should the Safety Coordinator find contractor areas of work or individuals being or acting in non-compliance with OSHA or the Project Safety Plan, the Safety Coordinator shall have the authority to order immediate correction of the non-compliant occurrence.
 - All costs of correction shall be borne by the Trade contractor deemed responsible.
 - If more than one contractor is deemed responsible, the Safety Coordinator's division of responsibility shall be final.
 - Nothing contained herein, however, shall serve to relieve the contractor of their liabilities and/or obligations under OSHA as well as other applicable Federal, State and local requirements as well as the Project Safety Plan.
 - Repeated violations or lack of cooperation with regard to the Project Safety Plan by employees of a contractor will indicate non-compliance with provisions included in the contract and may be reason for the employee being barred from the project site and/or for termination of the contractor's contract.
 - At orientation, new employees are given their first warning: These are the rules; if you fail to follow them you will receive a citation.
 - **1st Citation:** Notice is sent to employer. Employee must come in and see the Safety Coordinator to review violation so we can be sure the employee knows how serious this citation is and what corrective action must be taken. A fine for the Contractor will be imposed.
 - **2nd Citation:** The individual will be removed from the property. A fine on the Contractor will be imposed.
 - This constitutes three (3) warnings. At this point, this person will be banned from further access to the site.
 - **"Immediate removal from the property" Citations** will result when:
 - Any employee, supervisor or manager exposes themselves or other employees to
-
-

imminent loss of life.

- Any employee, supervisor or manager openly exhibits disregard, defiance or disrespect for the safety plan.
- Any employee, supervisor or manager knowingly falsifies any investigative document or testimony involved in an investigation.
- Violent physical encounters (fighting) occur. All individuals involved in the incident are subject to removal.
- Threats are made against any safety personnel performing their duties.
- Theft or destruction of property occurs.
- Any employee, supervisor or manager consumes, possesses, distributes or is under the influence of alcohol/drugs.
- Other Citations: Violations of safety, traffic, housekeeping or material storage rules

Dispute Resolution

The Safety Coordinator whose decision is final and not subject to arbitration shall resolve all disputes involving the Project Safety Plan.

DISCIPLINE – FINES

Fines (Refer to Appendix A Table of Fines)

- The fines are not to be collected from the individual violator.
 - Safety Coordinator will collect them from the principal of the respective company at the monthly Safety Meeting. This will be by separate check.
 - These funds will be used to fund a reward/incentive program for those who work and are safe individuals or groups. Any money remaining at the completion of the project will be donated on behalf of all workers and companies employed on the project to a local charity.
-

SUBSTANCE ABUSE POLICY – MINIMUM

Purpose

The owner and the Safety Coordinator have a commitment to protect people and property and to provide a safe working environment. The purpose of this policy is to establish a drug-free work environment for each worker.

Policy

The owner and the Safety Coordinator prohibit the use, possession, distribution, or sale on the project premises, facilities, or work places of any of the following: alcoholic beverages, intoxicants drugs and related drug paraphernalia.

Workers must not report for duty or perform work while under the influence of any drug, alcoholic beverage, or intoxicant. Workers on the project premises will be subject to search as provided herein. Applicants and workers will be required to consent to drug testing as provided herein.

This policy will apply where state law or regulation and/ or collective bargaining agreements allow.

Definitions

When used herein, the following terms will have the meanings given below:

Alcohol - Ethyl (Ethanol). References to use or possession of alcohol include the use of any beverage, mixture, or preparation containing alcohol.

Drug - Any substance (other than alcohol) including prescription drugs which may impair mental or motor function; including, but not limited to, any psychoactive substance, controlled substance, marijuana, or designer or simulated drugs. This definition does not apply to prescription drugs, which have been disclosed to the Company and the Controlling Employer by the worker and are approved for use within prescription limits.

Employee - Any individual, salaried or hourly, who actually performs work for a Controlling Employer on the project premises.

Controlling Employer - Any individual or firm that provides workers to perform work on the project premises and is responsible for their hiring, advancement, payment, discipline, and termination, including the Owner, the Architect, all contractors, all sub-tier contractors, all vendors, all suppliers, all material dealers, any Other Contractors, and any others coming on the project premises.

Applicant - Any individual who is referred or makes application for employment on the project premises.

Project Premises - All parts of any office, work site, or other work location, including parking lots under the control of the owner.

Testing Facilities - A laboratory where a specimen can be tested for drugs and alcohol within threshold limits according to standards established by the U. S. Department of Transportation and is certified by the U. S. Department of Health and Human Services (HHS) under the National Laboratory Certification Program (NLCP) or in the case of a foreign laboratory is approved for participation by the U.S. department of Transportation with respect to Part 40.

Contraband - Considered including but not limited to the following: drugs, alcohol, and drug paraphernalia.

Drug Paraphernalia - Any article for the use, storage, or sale of drugs.

Accident - Any event resulting in injury to a person or property to which the Company believes a worker contributed as a direct or indirect cause.

Incident - Any event, which the Company determines, has all the attributes of an accident, except that no harm was caused to personnel or property.

Tobacco Products - Any article containing tobacco, including but not limited to cigars, cigarettes, pipe tobacco, snuff, and chewing tobacco.

Worker(s) – Any individual, salaried or hourly, of any employer who will be performing work on the project premises.

Drug Detection Thresholds will be in accordance with U.S. D.O.T.

All confirmatory drug testing shall be done in NLCP-certified facility

Prescription Drugs

Any worker using a prescription drug, which may impair mental or motor function, shall, as soon as possible, notify their employer who is to notify the Safety Coordinator and/or the Controlling Employer. For the safety of all workers, the Company may direct the Controlling Employer to not permit the worker on the project premises until released as fit for duty by the prescribing physician. The Company reserves the right to obtain a confirming medical opinion before allowing the worker to return to duty.

Worker Pre-Assignment Testing (per applicable State laws and Project Labor Agreements (PLA's))

All workers, salaried or hourly, who are hired, transferred or temporarily assigned to the project premises shall be required to consent to drug testing in accordance with applicable State laws prior to assuming project responsibilities. Controlling Employers shall certify to Safety Coordinator in writing on company letterhead signed by an Officer of the company that their current workers have passed a drug test **immediately prior** to assignment to working on the project premises.

Post Accident Testing (per applicable State laws and PLA's)

After an accident or incident, the Company will ask the Controlling Employer to test all those involved.

Reasonable Suspicion Testing (per applicable State laws and PLA's)

The Company will also ask the Controlling Employer to test workers when a reasonable suspicion exists that the worker has been using drugs or alcohol. The maximum level of alcohol blood content shall not exceed 0.08 g/100 ml blood or equivalent.

Random Testing (per applicable State laws and PLA's)

Urine and/or blood drug screening analysis of workers and others on the project premises may be conducted on a random basis at periodic, unannounced intervals during the construction of the project, in accordance with State laws and applicable PLA's. A minimum of 12% of active employees on site will be selected, at random, for drug screening, or as required per Regional Substance Abuse Program Consortium or PLA's. Controlling Employers must certify negative test results to the Company; otherwise worker shall not be permitted to return to the project premises.

Discipline and Rehabilitation

Unless a Project specific Substance Abuse Policy by the Company or Owner is in effect, each Controlling Employer shall certify that they have a Substance Abuse Policy which incorporates as a minimum the following requirements:

- A) When an applicant submits to pre-assignment testing and passes the required test, s/he will be eligible for further employment consideration.
- B) If the applicant fails the required test, s/he may reapply for employment consideration after a period of no less than sixty (60) calendar days have elapsed. The Company may waive this sixty-day waiting period if the applicant completes an acceptable drug/alcohol rehabilitation program and presents acceptable proof of completion of the program to the Company Project management personnel. An applicant who fails the second test will not be considered for employment at the project premises for a period of no less than one year.
- C) All workers who refuse to submit to a drug and alcohol test, or who fail to pass a drug and alcohol test will be removed from the project premises by the Controlling Employer and will be referred to their personnel management for disciplinary action.
- D) A worker on the project premises, facility, or work place in possession of contraband is subject to disciplinary action, up to and including barring from the site by the Company and immediate termination by the Controlling Employer. Contractors and/or workers who are in possession of contraband are subject to removal and denial of future access to the project premises.

Financial Obligation of the Controlling Employer

The Controlling Employer will bear the cost of time, transportation, and testing for workers who

are being given drug and alcohol tests.

Confidentiality

The Company will take steps to maintain the confidentiality of information generated by the implementation and enforcement of this policy and these procedures. Disclosure will be made only in appropriate circumstances. The Controlling Employer shall be responsible for maintaining the confidentiality of all information generated by the implementation and enforcement of this policy and these procedures for their own workers. The Company shall have the right to audit compliance with this policy and these procedures by the Controlling Employer, which shall include access to this confidential information.

Training

Supervisors and management personnel will be trained to recognize appropriate symptoms and to administer the policy in a consistent, confidential, and intelligent manner.

Contractors and Suppliers

The Company and all Controlling employers will include the provisions of this policy and these procedures, in their contracts with contractors, suppliers, consultants, agents, and others involved in providing goods or services on the project premises, and will require that they do the same with respect to their lower-tier contractors, suppliers, etc.

Posting and Distribution

Significant sections of this policy and these procedures will be given to each applicant and worker upon request.

A warning notice will be posted in a conspicuous location on the project premises. This Substance Abuse Policy will be included in each pre-bid and pre-construction meeting as well as an integral part of the project Safety plan and contract documents.

The Company may revise and amend this policy and these procedures as required.

Procedures for Examination Post-Accident Screening When Required By Safety Coordinator

A Controlling contractor supervisor is to accompany injured employee or those employees involved in the accident or incident involving a Controlling contractor worker to the clinic or medical facility. Controlling Employers shall certify any worker(s) involved in an accident or incident tested negative for drugs and alcohol prior to allowing them to return to the project premises.

If the injured worker refuses to give a specimen of body fluid, the Controlling contractor supervisor is to notify the Company. The worker is to be advised, again, that the refusal to submit to drug screening is a violation of the Project Safety Plan's drug, alcohol and other prohibited articles safety policy and that refusal will result in removal from the site.

Results of all drug screenings and analyses must remain strictly confidential.

Workers must report all injuries immediately to their supervisor, whether the injury requires medical treatment or first aid only. Late reporting may result in denial of a claim.

Random Testing Policy

Drug screening analysis of workers and others on the project premises may be conducted on a random basis at periodic, unannounced intervals during the construction of the project, in accordance with State laws and applicable PLA's. Controlling employers shall advise their employee immediately prior to selection for Random testing and shall ensure workers submit to drug screening as soon as possible, and no longer than 1 hour from being notified. Controlling Employers must certify negative test results to the Company; otherwise worker shall not be

permitted to return to the project premises

ELECTRIC - TEMPORARY

- **General:**
 - All electrical work, installation and wire capacities shall be in accordance with the pertinent provisions of the National Electrical Code (most current version), ANSI and OSHA Standards.
 - **GFCI and AEGP:**
 - All 120 volt, single phase, 15 & 20 amp temporary power circuits (with the exception of temporary lighting) shall have ground fault circuit interrupters installed. In addition all tools, cords and power sets shall have an assured equipment inspection program maintained on quarterly basis.
 - The color codes used for identifying inspected & tested equipment on this project are:

▪ January, February, March	▪ White
▪ April, May, June	▪ Green
▪ July, August, September	▪ Red
▪ October, November December	▪ Orange
 - (NOTE: The cycle of colors is repeated for the next year)
 - Portable tools will have the appropriate color code affixed to the male (plug) end following inspection. Extension cords, including portable GFCI pigtail sets, will have the appropriate color code affixed to both ends (plug & receptacle). The previous quarter's color code will be removed to avoid confusion.
 - When using permanent power, once established in new construction or in renovation work, Ground Fault Circuit Interrupters must be used in conjunction with the AEGC inspections.
 - **Extension Cords:**
 - Extension cords used with portable tools must be a minimum 12 gauge wire. Damaged electrical cords shall not be used.
 - All extension cords will be suspended seven feet (7') above finish floor or work platform. Extension cords will not be fastened with staples, hung from nails, or suspended by non-insulated wire.
 - Receptacles shall not be connected to the same ungrounded conductor of multiwire circuits which supply temporary lighting.
 - **Temporary Lighting:**
 - Temp lighting circuits must be a UL approved assembly.
-
-

-
-
- . Open wiring, is NOT acceptable for temporary lighting circuits. 'Open wiring' refers to the individual conductors being physically separated (as in the McGill "String-O-Lights.)
 - Lighting on barricades, fences, or sidewalk coverings shall be encased in metal raceway.
 - Bulbs for Temporary lighting must have guards to prevent accidental contact
 - Temporary lights must be suspended by the lamp fixture, and by nonconductive twine or cord or other material.
 - All wiring used for temporary lighting shall be run using SJTW cord type, minimum 14/2 Gauge conductor.
 - Splices in conductors, when required, shall have wire nuts and conductors protected by 5 tightly wrapped half lap wraps of 3M Scotch™ Super 33+ Vinyl Electric Tape or equal for a thickness of 35 mils. Otherwise, splices shall be made within a secured junction box.
 - Portable electric lighting used in moist or other hazardous locations such as drums, tanks, vessels, bins, bunkers, etc., shall be operated at a maximum of 12 volts (non-explosive).
 - All shop lighting and portable task lighting shall have a cover and guard installed when in use or available for use.
 - Wiring Ground:
 - All temporary wiring shall be effectively grounded in accordance with the National Electrical Code (Articles 305 and 310).
 - All non-current carrying parts of electrical equipment must be grounded or have an approved double-insulated setup. Grounded circuits must have enough capability to carry all currents likely to be imposed on it.
 - All electrical equipment and wiring in hazardous locations must conform to the National Electrical Code standards. The frames of all cutting, welding (arc, heli-arc, gas-plasma-arc) machines shall be grounded.
 - Protection of energized parts:
 - All temporary power panels shall have metal covers installed at all times, unless they are housed in a room where the door is closed and locked from unqualified persons. All open or exposed breaker spaces shall be adequately covered, and labeled.
 - Fish tapes or lines made of metal or any other conductive medium are prohibited. Nonconductive tapes and lines will be used in their place.
 - Defective Electrical Tools and Equipment
 - All electrical tools and extension cords found to be defective (Examples: missing or broken ground pins, exposed internal conductors) will immediately be rendered in-operative by cutting off the plug end or by immediately removing from the project.
 - Energized Electric Work/LOTO:
 - Electrical work (e.g. tie-ins, panel maintenance) shall be conducted only on de-energized (locked out and tagged out) systems. All circuit disconnects must be locked in the open position or otherwise appropriately identified with affixed tags stating "DANGER - DO NOT ENERGIZE" or other equivalent wording prior to working on the system or equipment. Employees are not permitted to work on
-
-

any energized circuits unless conditions mandate and written approval is obtained from the Project Safety Coordinator. The pre-task planning for all work on energized systems must be submitted for review. Additionally, work practices must conform to all applicable owner, state and federal requirements including the NEC and the most recent version of NFPA 70E.

ELEVATED WORK (OTHER THAN FALL PROTECTION)

Ladders

- Manufactured ladders on the project shall comply with the regulations of ANSI-A14.1-1968 (or most recent version), Safety Code for Portable Wood Ladders or ANSI-A14.2-1972 (or most recent version), as required by OSHA. All ladders shall be used in the manner and for the purposes for which they were designed and constructed.
- The side rails or extension shall extend 36 inches above the landing. When this is not possible, grab rails shall be installed. All ladders in use shall be tied, blocked, stabilized by a second worker or otherwise secured to prevent accidental displacement.
- When working on/from a ladder at elevations greater than six (6') feet or more above the work surface, all ladders (including stepladders) must be tied, blocked, stabilized by a second worker or otherwise secured against accidental displacement. Where adequate anchorages are available, workers shall tie off using a Personal Fall Arrest System or utilize a different means of gaining access (i.e., scissor lift, scaffold, etc.).
- Portable metal ladders shall not be used.

Scaffolding

- All employees erecting, using and dismantling scaffolds shall be trained in the hazards present and the safe procedures to be followed to eliminate exposure to those hazards and shall be provided with fall protection when 6-feet or more above the next lower level.

Concrete and Masonry

- All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements as prescribed in ANSI-A10.9-1970 (or most recent version) "Safety Requirements for Concrete Construction and Masonry Work."

Stairways

- Upon delivery to the project site all office trailers and material storage trailers shall be provided with stairway access to all doorways and shall have landings with railings which allow for at least 20 inches of clearance in front of any door swing.
- Stairway placement shall follow placement of the upper floor deck, as soon as practical.

Hoists and Elevators

- Temporary personnel elevators and material hoists shall be constructed, installed and maintained in compliance with the manufacturer's instructions and the provisions of applicable statutes and regulations of governing authorities.
 - No elevators or hoists are to be used for the movement of materials and personnel until the devices have been certified and licensed by a third party inspector qualified to approve the equipment.
 - No person shall be allowed to ride on a material hoist except for the purposes of inspections and maintenance.
-
-

ELEVATED WORK - FALL PROTECTION

- A Fall Protection Plan must be developed by the contractor for all work with a fall exposure greater than 6-feet with a copy provided to Safety Coordinator prior to start of work.
- “Controlled Access Zones”, “Safety Monitoring”, and “warning Lines” are not permitted.
- Personal Fall Arrest systems shall be worn and used by all workers when working six (6') feet or more above the ground/floor or whenever working in a precarious position, unless other adequate fall protection such as guardrails or safety nets are provided.
- All lanyards are to be as short as possible, but in no event longer than six (6') feet. Shock absorbing lanyards must be used unless a Self-Retracting Lanyard is in use. Wire rope lanyards are prohibited unless approved by Safety Coordinator.
- Personal Fall Arrest System shall also be worn and attached to the manufacturer’s approved anchorage when working in aerial lifts and to vertical drop lines when working from suspended scaffolding.
- Only one individual shall use a vertical safety lines at a time.
- When wire rope is used as a guardrail providing fall protection, *please refer to pages 59-60* ‘Perimeter protection’ for design and installation details within this Safety plan.
- When wire rope is used a horizontal lifeline, it shall be designed by a registered Professional engineer and installed and maintained by a competent person. It shall be designed, installed and maintained to meet, at a minimum, the requirements of OSHA as contained in 29 CFR 1926.502.
- To eliminate the potential of a fall when working on a flat roof or deck, a warning barrier meeting the following requirements may be used 15 feet from the fall hazard. If a worker is between the warning barrier and the fall hazard, a positive means of fall protection must be used. Warning tape is not allowed as a warning barrier.
- Warning barriers shall consist of ropes, wires, or chains, and supporting stanchions erected as follows:
 - The rope, wire, or chain shall be flagged at not more than 6-foot (1.8 m) intervals with high-visibility material;
 - The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches (.9 m) from the walking/working surface and its highest point is no more than 39 inches (1.0 m) from the walking/working surface;
 - After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds (71 N) applied horizontally against the stanchion, 30 inches (.8 m) above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge;
 - The rope, wire, or chain shall have a minimum tensile strength of 500 pounds (2.22 kN), and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed in paragraph (f)(2)(iii) of this section; and
 - The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.

Steel Erection - Refer to Section entitled “Steel Erection”.

Precast/Prestressed Concrete - Refer to Section entitled “Precast/Prestressed Concrete.”

ELEVATOR SAFETY

Contractors shall comply with all applicable provisions of OSHA, ANSI, and Safety Coordinator Safety requirements, as well as the National Elevator Industry Inc., Field Employees Safety handbook

EMERGENCY PROCEDURES - MEDICAL – BLOOD-BORNE PATHOGENS

The Occupational Safety and Health Act (OSHA) 1910.1030, requires that each employee exposed to blood and other infectious materials be advised of the potential Blood-borne pathogen hazards and how to guard against those hazards. Each contractor, and each sub-contractor, whose employees are occupationally exposed to blood and other potentially infectious materials (including all body fluids in situations where it is difficult or impossible to differentiate between body fluids, etc.) must develop a list of all such tasks on the project; instruct the employees in the potential risks involved; develop a labeling system for all infectious materials; train all potentially exposed personnel in the hazards and the proper controls for all listed tasks; provide safety materials and equipment; and offer appropriate medical treatment and advice for any exposure. These steps are outlined in detail in the following material. Employee training for this requirement will be documented and acknowledged by signatures following each session using the documentation statement included in this Blood-borne Pathogen Safety Program.

Exposure Control Plan

- Every contractor will be responsible for development and maintenance of a list of tasks within the project operations, which involve occupational exposure to blood and other infectious materials. Each contractor will be further responsible for training their employees, obtaining medical services for their employees, and maintaining medical records for their employees assigned to all such hazardous tasks. One copy of the list identifying the hazardous tasks and of each employee assigned to perform those tasks will be forwarded to the Safety Coordinator.
- Employees will be allowed access to this Blood-borne Pathogen Safety Program and to information regarding those specific tasks in their work areas identified as involving exposure to blood and other infectious materials. All questions relating to the contractor's program should be directed to the contractor's superintendent or safety officer. All questions relating to the Project Safety Plan are to be directed to the Safety Coordinator.

Employee Information and Training

- All new and present employees will be given information regarding the requirements of this Blood-borne Pathogens Safety Program; the hazardous tasks present in their work place; and the potential health risks of these tasks. This requirement must be met through orientation sessions for all employees prior to assignment to the specifically identified hazardous tasks, and through annual refresher courses for all employees currently performing those tasks. The information and training shall include the following elements:
 - The risks and symptoms of exposure to Blood-borne pathogens shall be identified.
 - How to determine the presence of blood or other infectious materials in the work place.
 - Methods to be used to reduce or prevent the exposure to blood and other infectious materials, such as control procedures, work practices, or personal protective equipment.
-
-

-
-
- Procedures to follow in the event of an exposure to blood or other infectious materials.
 - Identification of the log maintained in the project office in which is listed all tasks involving occupational exposure to blood and other infectious materials on the site.
 - How to review tasks to minimize the potential hazards of infection.
 - When a task involves the handling of blood and other infectious materials, how those materials are to be contained, labeled and properly disposed.
 - The necessity for proper housekeeping and personal hygiene techniques including hand washing shall be emphasized.
 - Employees must have the opportunity to ask questions and obtain answers from the trainer who must be knowledgeable in the subject matter.

Container Labeling and Disposal

- The Contractor and the Safety Coordinator, will verify that all containers used to store or transport blood and other infectious materials generated at the site are clearly labeled with warning labels which include the orange or orange-red biohazard symbol, and indicate the contents, the hazards involved, and the name and address of the project.
- Red bags or containers may be used instead of labeling, but employees specifically trained in this program shall control the management of these receptacles.
- The Contractor and the Safety Coordinator will ensure that all secondary containers of the blood and other infectious materials have clear warning labels with the same information as the original container.
- Each contractor's superintendent, or safety representative if one is assigned, shall perform the above responsibilities for all their materials generated.
- All containers of blood and other infectious materials shall be controlled until delivered to an authorized disposal facility for incineration or decontamination by legally approved means.
- Arrangements may be made with a local hospital to receive and dispose of limited quantities of these regulated wastes in cases of first-aid treatment.
- Each contractor shall be responsible for proper disposal of all regulated wastes generated by their work.

Hazardous Non-Routine Tasks and Nearby Work

- In the event an employee is assigned to perform a non-routine task, or is assigned to work in an area where a hazardous task non-routine to their work, is being performed, the employee will be given the additional information and training related to the hazards, which may be encountered in the non-routine task.
- This information and training will be provided as described elsewhere in this program by the first-line foreman, contractor safety representative or a trainer who must be knowledgeable in this subject.
- The information will include the specific hazards of the task, the controls and protective measures required, the types of personal protective equipment required, how to use the equipment, the nature of other work being performed in or near the non-routine task, and what emergency procedures are involved with the task.

Universal Precautions

- To ensure that employees who work on tasks presenting an exposure to blood and other infectious materials are afforded the greatest protection available, the following policy has been established:
 - Prior to starting work on any task involving blood and other infectious materials, all
-
-

employees will review safety precautions, which should be taken. Universal precautions shall be observed which means treating all blood and other potentially infectious materials as if infectious. Particular attention shall be given to contaminated sharp objects which may penetrate the skin including, but not limited to, needles, broken glass, and exposed ends of wires. Work practices and engineering controls shall be followed diligently including the provision and use of the following:

- Gloves, latex.
- Masks and eye protection.
- Resuscitation bags and mouthpieces.
- Gowns, aprons or specialized clothing where required by established engineering practices.
- Hand-washing facilities, and other decontamination where required by established engineering practices.
- Trained personnel following approved procedures shall conduct decontamination of the above personal protective items.
- Disposable items shall be discarded into red bags or properly labeled containers and delivered for disposal as required elsewhere in this program.
- Items, which are reusable and any work areas, which were contaminated by blood and other infectious materials, shall be cleaned and disinfected with a solution containing a strong concentration of chlorine bleach.

Audit and Review

- It will be the responsibility of the Safety Coordinator to review the entire Blood-borne Pathogen Safety Program at least annually, and revise and update the material contained herein to reflect all changes in the management, disposal, storage, and handling of blood and other infectious materials generated at the project site.
- It will be the further responsibility of the Safety Coordinator, to periodically audit procedures in use on tasks identified as exposing employees to blood and other infectious materials in order that they meet the requirements as set forth in the OSHA 1910.1030 standards.
- Each contractor's superintendent or safety representative shall perform the above responsibilities for all of their tasks and procedures.

Hepatitis B Vaccination

- Hepatitis B vaccinations shall be made available to all employees who have occupational exposure to blood within ten (10) working days of assignment, at no cost, at a reasonable time and place, under the supervision of a licensed physician or health care professional and according to the latest recommendations of the U.S. Public Health Service (USPHS).
- Prescreening may not be required as a condition of receiving the vaccine. Employees must sign a declination form if they choose not to be vaccinated, but may later opt to receive the vaccine at no cost to the employee. Should booster doses later be recommended by the USPHS, employees must be offered them.

Post-Exposure Evaluation and Follow-Up

- OSHA standard 1910.OSHA standard 1910.1030 specifies detailed procedures to be made available to all employees who have had an exposure incident. An accredited laboratory at no cost to the employee must conduct these procedures and any laboratory tests. Follow-up procedures must include a confidential medical evaluation documenting
-
-

the circumstances of exposure, identifying and testing the source individual if feasible, testing the exposed employee's blood with the employee's consent, post-exposure prophylaxis, counseling and evaluation of reported illnesses.

- Health care professionals must be provided specific information to facilitate the evaluation and their written opinion on the need for hepatitis B vaccination following the exposure. Information such as the employee's ability to receive the hepatitis B vaccine must be supplied to the employer.
- All diagnoses must remain confidential.

Record keeping

- Medical records shall be maintained on each employee, with occupational exposure to blood and other infectious materials, for the duration of employment plus thirty (30) years. Medical records must be made available to the subject employee, anyone with written consent of the employee, OSHA and NIOSH. Medical records are not available to the employer. Disposal of medical records must be in accord with OSHA's standard covering access to records. These employee medical records must be confidential and must include the following information:
 - Employee's name and social security number.
 - Hepatitis B vaccination status, including dates.
 - Results of any examinations, medical testing and follow-up procedures.
 - Copy of the health care professional's written opinion.
 - Copy of the information provided to the health care professional.
- Training records shall be maintained for a period of three years and must include the dates, contents of the training program or summary, trainer's name and qualifications, names and job titles of all persons attending the sessions.

EMERGENCY PROCEDURES - MEDICAL SERVICES

Contractor's Responsibilities

- Prior to commencement of work, provisions must be made for prompt medical attention in case of serious injury. Each contractor shall have a minimum of one First Aid/CPR trained individual on the project and inform Safety Coordinator of their name.
 - Ensure that adequate first aid supplies shall be easily accessible when required.
 - Provide proper equipment for prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service.
 - Telephone numbers and addresses of the physicians, hospital and ambulance shall be conspicuously posted.
 - Contractor shall complete and provide to Safety Coordinator an "Employer's First Report of Injury" within 24 hours of any/all incidents involving work activities associated with the project. Contractors are advised to maintain their own OSHA 300 Log as an OSHA requirement.
 - Contractor shall ensure that each of its lower-tier contractors meet these medical requirements.
 - If the injured employee is released by the doctor for light or restricted work duty, the Contractor shall make available restricted duty work for the injured employee.
 - Each occupational illness or injury shall be reported immediately by Contractor's employee to Contractor's first aid attendant and the Safety Coordinator.
 - Contractor's first aid attendant or other competent person shall treat the injured
-
-

employee as often as necessary to ensure complete recovery, or until a decision is made to seek medical treatment.

- Contractor must provide for the prompt transportation of the injured person to a hospital or other emergency facility.
- A representative of the Contractor shall drive the injured employee to the medical facility and remain at the facility until the employee is ready to return. Contractor's representative shall carry necessary forms; i.e., authorization slips, return to work notices to the medical facility
- If it is necessary for the Contractor's first aid attendant to accompany the injured employee, provisions must be made by Contractor to have another employee, properly trained and certified in first aid, available to render same during the absence of the regular first aid attendant.
- If the employee is able to return to the project site the same day, he/she must return with a statement from the doctor stating same and containing such information as date, employee's name, and date of return to regular or restricted duty, date he/she is to return to doctor, diagnosis, signature and address of doctor. If the injured employee is unable to return to the project site the same day, the employee who transported him/her should bring this information back to the project site and report it to Safety Coordinator.
- If it is necessary to call the outside medical facility, this call should be made by Safety Coordinator while the injured employee is being transported.
- Medical cases requiring ambulance services would be such cases as severe head injuries, amputations, heart attacks, severe bleeding, stopped breathing, etc. Should ambulance service be necessary, the following procedures should be taken immediately:
- Contact Contractor first aid attendant or nearest employee properly trained and certified in first aid.
- While first aid is being administered, contact the Safety Coordinator immediately.

EMERGENCY PROCEDURES - ALARMS, FIRE, BOMB, WEATHER, ENVIRONMENTAL, PUBLIC DEMONSTRATION

- In order that necessary emergency services may be supplied promptly, each contractor and sub-contractor shall post in a conspicuous place a list of emergency telephone numbers along with the type of information to be transmitted for each emergency situation.
 - All accidents are to be handled by the ranking person present, with whoever is available to assist. The ranking person shall direct someone to notify first-aid personnel, and to call for emergency services as necessary. The Project Superintendent is to be notified as soon as this can be done without delaying assistance to the injured. He will then take appropriate action.
 - In accidents resulting in injury to personnel, individuals qualified to administer first-aid will assist the injured, will stabilize their condition, and will arrange for transportation to a hospital if further treatment is required.
 - Except when necessary to avoid further injury, or to prevent additional damage to the work, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Project Superintendent or the person designated to make the investigation and report. As soon as the Project Superintendent can release the area from this constraint, contractors concerned will clean up and make repairs to return to a normal situation.
-
-

-
-
- Where a specific procedure has not been established, reasonable judgment should be used in determining what course to follow.

Alarms

- The JJC Project Manager and the Safety Coordinator shall be notified of all emergencies and notify the appropriate emergency service of the incident and initiate appropriate action.
- Fire alarms within the area of new construction will consist of three short blasts on an air horn or other suitable alarm located at the means of egress, stairway, ladder, or building entry. Telephone notification of the fire department will be initiated immediately after sounding the air horn alarm. Telephones are available in the project site office. Radio contact with the project site office and the Safety Coordinator shall be used to inform all concerned regarding the fire.
- A continuous long blast on the air horn may be used to summon first aid assistance in the event of an accident.

Fire

The following procedures are established in the event of a fire. "RACE"

- R** **R**escue... anyone in immediate danger.
- A** **A**larm... activate pull station; go to phone and dial 911.
- C** **C**ontain... close doors and windows, isolate the fire.
- E** **E**xtinguish... use correct extinguisher.

Accident Involving Serious Injury or Death

- The following procedures are established in the event of an accident involving serious injury or death to employees or members of the general public.
 - Individuals qualified to administer first-aid will assist the injured, will stabilize their condition, and will arrange for transportation to the hospital emergency room if further treatment is required.
 - The JJC Project Manager and the Safety Coordinator is to be notified immediately. Immediate notification (within 8 hours) of the local OSHA office is required in the event of a fatality or serious injuries, which may lead to a fatality.
 - All non-essential personnel shall be removed and/or kept back from the area.
 - Rescue personnel shall be provided assistance as requested.
 - No comments shall be made. All inquiries shall be referred to the Safety Coordinator.
 - No on-site photographs are to be taken without the specific approval of the Safety Coordinator and the Project Superintendent.
 - The Safety Coordinator shall make a full investigation and file an Accident/Injury Report within twenty-four (24) hours of the occurrence.
 - Within the immediate area of the accident scene, nothing is to be disturbed nor removed after proper evacuation of the injured personnel. Except when necessary to avoid further injury, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Project Superintendent or other person designated to make the investigation and report.
 - As soon as the Safety Coordinator can release the area from the above constraint, contractors concerned will clean up and make repairs to return to a normal situation.
 - **Property Damage Accidents**
 - The following procedures are established in the event of accident involving property
-
-

damage.

- The Safety Coordinator is to be notified as soon as this can be done without delaying efforts to prevent further damage. He will then take appropriate action and direct other personnel to assist as necessary.
- Efforts shall be taken to protect against further damage where possible.
- All non-essential personnel shall be removed and/or kept back from the area.
- No comments shall be made. All inquiries shall be referred Safety Coordinator.
- No on-site photographs are to be taken without the specific approval of Safety Coordinator
- The Safety Coordinator shall make a full investigation and file an Accident/Injury Report within twenty-four (24) hours of the occurrence.
- Within the immediate area of the accident scene, nothing is to be disturbed nor removed after proper evacuation of the injured personnel. Except when necessary to avoid further injury, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Safety Coordinator.
- As soon as the Safety Coordinator can release the area from the above constraint, contractors concerned will clean up and make repairs to return to a normal situation.

Severe Weather

- The following procedures are intended to prepare the project site in the event of severe weather conditions. Since severe weather may be reasonably anticipated to occur during the duration of the project, yet without significant advance warning, all work activities and project site conditions must be planned with a concern for emergency preparations.
- Each contractor, at the time of mobilization, shall deliver to Safety Coordinator a complete list of the contractor's supervisors with the complete after hours telephone numbers. The list shall be kept current and shall be updated accordingly.
- Each contractor shall insure that his field trailers and his sub-tier contractors' field trailers are anchored in at least three locations.
- Upon notification of a Severe Weather Watch by the U. S. Weather Bureau, the following actions are to be initiated.
- Each contractor having on-site generators which are fuel-powered are requested to notify the Safety Coordinator of the numbers and wattage. Generators may be needed to provide temporary power for rescue or clean-up activities.
- All materials shall be secured to prevent them from becoming air borne during high winds. Particular attention needs to be given to picking up scrap materials and hauling or covering trash containers.
- Crawler and mobile cranes shall have booms lowered at the end of the shift. Cranes not capable of lowering booms shall be permitted to weathervane or free swing. Check to assure that swinging booms will not contact other objects such as power lines, structures, etc.
- Sufficient flashlights, batteries, and bulbs shall be provided to assigned emergency response personnel. A supply of fresh batteries shall be maintained at the project for use in an emergency response.

Other Major Catastrophe

Examples of other major catastrophes include:

-
-
- Major fire.
 - Collapse of large portions of structures or large sections of scaffolds.
 - Heavy damage by wind or floods.
 - The owner's security or local authorities will be provided with an emergency call list to summon the Safety Coordinator's and the contractor's personnel to the site in the event of a major catastrophe outside working hours, on Saturdays or Sundays, etc. The JJC Project Superintendent or his best-qualified alternate will cooperate fully with the directives of the hospital staff or local emergency authorities in the event of a major catastrophe. He will take any or all of the following actions as appropriate.
 - Initiate fire fighting, tie down building, etc.
 - Call for assistance from outside: fire trucks, ambulances, electricians, life flight helicopters, Civil Defense Support, police.
 - Stop work.
 - Call for site evacuation, to clear site access roads.
 - Issue instructions to supervisors and to others as necessary.
 - Set up security control at the disaster area.
 - Set up communications center in site trailers: radio/telephone.
 - Call in operators for heavy equipment such as front loaders, cranes, etc.
 - Other actions considered necessary in the particular situation.

Bomb Threat

- When a bomb threat is received or if a suspicious article is found, Safety Coordinator will take the following actions.
- Work shall be stopped immediately and the project and office shall be evacuated of all personnel. A count will be made to assure that all are present.
- Local police, fire or bomb disposal authorities shall be notified. A search of the premises will be made as directed by appropriate authorities.
- If a suspicious article is found, DO NOT TOUCH IT, notify the appropriate authorities.
- Do not allow anyone except authorized personnel to re-enter the area.
- If necessary to stop or detour traffic away from the affected area, local police or flagmen shall be utilized.
- No comments shall be made. All inquiries shall be referred to Safety Coordinator.
- No on-site photographs are to be taken without the specific approval of Safety Coordinator
- The Safety Coordinator shall make a full investigation and file a report within twenty-four (24) hours of the occurrence.
- If repeated threats occur within a short period of time, Safety Coordinator, will evaluate the situation and take appropriate action. This action may include shutting down the project site for that day.

Environmental Spill

- In the event of a spill of environmentally damaging materials, immediate response is required to prevent or minimize the impact this event will have upon the environment and the public welfare. All personnel shall continue to observe standard precautions for handling the materials as detailed in the manufacturer's product Safety Data Sheet (SDS), including the use of personal protective equipment. Where conditions warrant,
-
-

the contractor shall have emergency spill containment supplies available for immediate use. The following general procedures apply to the immediate response which must be initiated:

- Immediately, all personnel in the immediate area of the release shall be alerted to the hazardous material and the nature of the immediate danger to themselves and the environment. As soon as possible, the Safety Coordinator shall be notified and requested to initiate emergency containment and clean up procedures.
- The Local Fire Department shall be notified to mobilize their hazardous materials response units and shall be given the necessary information regarding the materials, which were released.
- If safe to do so, every effort shall be made to contain the materials within berms, by absorbent materials, or through other appropriate means, until proper handling and disposal personnel may be mobilized at the site. Particular attention needs to be taken to avoid contamination of surface water, storm sewers, sanitary sewers, ground, plants and animals.
- All non-essential personnel shall be removed and kept back from the area.
- No comments shall be made. All inquiries shall be referred to the Safety Coordinator.
- No on-site photographs are to be taken without the specific approval of the Safety Coordinator and the Project Superintendent.
- The Safety Coordinator shall make a full investigation and file an Accident/Injury Report within twenty-four (24) hours of the occurrence.
- Within the immediate area of the accident scene, nothing is to be disturbed nor removed after proper evacuation of the injured personnel. Except when necessary to avoid further injury, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Project Superintendent or other person designated to make the investigation and report.
- Purchasing shall be notified to initiate the response of available environmental remediation contractors who are under standby contract.
- As soon as the environmental remediation contractor has cleared the site, the Project Superintendent will release the area for contractors concerned to clean up and make necessary repairs to return to a normal situation.

Public Demonstrations

- When a public demonstration is expected or occurs, the Safety Coordinator will take the following actions.
 - Work on the project site shall continue where not encumbered by the public demonstration; however work in the immediate area shall be stopped and all project employees shall be evacuated. A count will be made to assure that all are present.
 - Local police shall be notified, and all employees shall cooperate fully with the law enforcement authorities.
 - Do not allow anyone except authorized personnel to enter the project site. All visitor passes are revoked and all visitors shall be escorted from the project site.
 - If necessary to stop or detour traffic away from the affected area, local police or flagmen shall be utilized.
 - No comments shall be made. All inquiries shall be referred to the Safety Coordinator.
 - No on-site photographs are to be taken without the specific approval of Safety Coordinator.
-
-

-
-
- The Safety Coordinator shall make a full investigation and file a report within twenty-four (24) hours of the occurrence.
 - If repeated public demonstrations occur within a short period of time, Safety Coordinator will evaluate the situation and take appropriate action. This action may include shutting down the project site for that day or obtaining a judicial restraining order.
-
-

ENVIRONMENTAL - ASBESTOS

Occupational Safety and Health Administration (OSHA) regulations have been promulgated to protect workers from exposure to airborne asbestos fibers. Under the Asbestos Control and Licensing Act, a contractor must be licensed by the Department of Labor and the State in which the work is being performed in order to remove asbestos.

Notification - Before starting asbestos removal work, the United States Environmental Protection Agency (USEPA) and the Local Department of Environmental Management must be notified in writing by the contractor and appropriate permits must be on file. Safety Coordinator and/or its agent will verify this information by way of contract requirements.

Training - Employees of the contractor must be appropriately trained and licensed prior to the removal of any asbestos contaminated material. Any contractor's employees who may be exposed to Asbestos must be trained in the recognition of hazards and appropriate controls.

Posting - The asbestos material removal area shall be cordoned-off to discourage entry. Appropriately worded caution signs must be posted at all approaches to the area at such interval to allow individuals to take any necessary protective steps before entering the removal area.

Asbestos Handling - The encapsulation, removal and/or disposal of ACM shall be performed by a Contractor licensed to do such work in which the work is being performed and in accordance with all applicable Federal, State and Local Regulations per approved abatement plans.

Work Practices - Asbestos containing materials shall be worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the permissible exposure limits. Work areas are to be adequately protected, through appropriate type enclosures, so as to ensure that no asbestos contaminated material will be permitted to leave the controlled area.

Personal Protective Equipment - In instances where re-usable clothing is used, the following precautions must be followed:

Contaminated clothes must be appropriately bagged and labeled. Notification and transportation to authorized laundries and haulers.

All employees working in asbestos removal areas shall wear appropriate personal protective equipment.

Cleanup - There shall be no dry sweeping of asbestos material. Use floor coverings to prevent debris from falling to lower floors and to speed up house-keeping.

Labeling and Waste Disposal - Appropriately worded labels must be affixed to all materials, waste, debris, etc., containing asbestos friable materials. Asbestos waste and/or asbestos contaminated material must be collected and discarded in sealed, labeled, impervious containers by contractor.

The following label content is acceptable to both the EPA and OSHA:

CAUTION

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

**BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM**

The Safety Coordinator shall be provided with copies of all air monitoring reports and certified disposal receipts prior to final payment.

ENVIRONMENTAL – LEAD**Lead Painted Components**

- Lead based paint can possibly be identified on numerous surfaces throughout these facilities. In keeping with the requirements of the Occupational Safety & Health Administration's (OSHA's) Lead Exposure in the Construction Industry Standard (29 CFR 1926.62), every painted surface shall be considered a potential lead hazard.
- A potential source of lead emission is the disturbing of painted surfaces of structures and components within these facilities. Typical activities that would significantly disturb a painted surface include the following:
 - Removal of all or part of the paint by hand or power tools
 - Removal of all or part of the paint by blast cleaning
 - Removal of all or part of the paint by other means such as the use of chemical strippers or a heat gun
 - Structural work to the surface such as welding, burning, cutting, or drilling
 - Manual demolition of buildings, portions of buildings, or the building components.
 - The primary consideration when specifying work methods shall be the requirement to protect workers from exposure to lead above the Permissible Exposure Limit (PEL). Further considerations when specifying work methods shall be the effort to reduce the release of lead into the air, water and soil, and to reduce to a minimum the generation of debris.
- At all times when activities which disturb paint are in process, the Site competent person for lead shall have unrestricted access to the work area for inspection, and shall have the authority to stop work when the control measures being utilized are not as specified in this section or the OSHA Standard, if the control measures are not adequately controlling exposures or if other hazards are identified which require work to be stopped.
- All air monitoring conducted by the Site competent person for lead or other qualified representative shall be performed in accordance with the OSHA Standard.
- Detailed and accurate records of all monitoring and other relevant data used in conducting employee exposure assessments shall be kept and maintained in accordance with the OSHA Standard.
- Signs shall be posted in each work area where work on painted surfaces disturbs the paint in such a way so as to expose personnel to lead contaminated dust, debris, or lead fumes. At minimum they shall read:

WARNING**LEAD WORK AREA****POISON****NO SMOKING OR EATING**

- All worker protection requirements will, at minimum, meet the current OSHA Standard. These requirements include but are not limited to:
 - Signage, Barriers & Access
-
-

-
-
- Exposure Monitoring
 - Respiratory Protection
 - Medical Surveillance & Records
 - Education & Training
 - Decontamination & Clearance
 - All work involving lead removal or re-coating shall be conducted in a manner that minimizes the release of lead and lead containing materials into the air, water, and soil.
 - All lead containing hazardous wastes that are generated shall be contained, collected, segregated, labeled and held at a location
 - Designated or approved by the Owner or Safety Coordinator Building Co. pending the appropriate disposition.
 - Contractor shall provide for proper disposal of waste, including EPA identification number, notification, certification, manifest, etc.
 - All waste containers must be leak proof and capable of being securely covered.
 - All waste containers shall be clearly labeled with weather resistant labels using indelible ink to identify the type of waste they contain.
-
-

ENVIRONMENTAL - ON-SITE HAZARDS

Material that is designated as a hazardous substance requires special attention by the Contractor and workers to minimize the exposure. A plan addressing the proper handling, storage and disposal of hazardous material must be developed. Safety Coordinator and the Owner, must be immediately notified of any hazardous material leak or spill. Any Contractor-caused oil spills must be reported immediately to the Safety Coordinator.

ENVIRONMENTAL - SILICA

- Contractors shall submit their silica protection program for review by Safety Coordinator prior to the pre-construction conference. As a minimum the contractor's silica protection program shall comply with OSHA regulations and shall address the following items:
 - Statement of the contractor's commitment to prevent silicosis and to comply with OSHA's standards.
 - Description of air monitoring to determine the silica levels generated by tasks to provide a basis for:
 - Selecting engineering controls,
 - Selecting respiratory protection,
 - Selecting work practices to reduce dust, and
 - Determining if a medical surveillance program is necessary.
 - Description of engineering controls which are proposed for the project to eliminate or reduce the amount of silica in the air and the build-up of dust on equipment and surfaces.
 - Description of less hazardous materials than crystalline silica which are proposed for abrasive blasting and automatic blast cleaning machines or tools to be utilized.
 - Description of high-efficiency particulate air filter vacuums to be used by employees and work practices to vacuum, hose down, or wet clean work areas and equipment.
 - Description of warning signs and other barriers proposed to identify work areas where respirable silica may be present and to limit access to only authorized employees.
-
-

-
-
- Description of personal protective equipment and clothing to be provided to employees and changing facilities if necessitated by the level of silica dust exposure.
 - Certification of training provided to employees about health effects of silica exposure, engineering controls and work practices that reduce dust, the importance of maintenance and good housekeeping, as well as the proper type and fitting of respirators; and include a statement that the employee is or is not enrolled in a medical surveillance program.
-
-

ENVIRONMENTAL - POWERED EQUIPMENT INSIDE ENCLOSED STRUCTURES

If internal combustion engines are used on powered equipment in enclosed areas, the contractor is responsible for monitoring the quality of breathing air for harmful contaminants and adequate oxygen and is responsible for providing adequate ventilation.

EXCAVATION

- The contractor must designate a competent person trained in soil classification and the recognition of trenching and excavation hazards. This person must be on-site when excavating or trenching is being done.
 - Appropriate documentation to meet the OSHA trenching and excavation standards is to be maintained on site.
 - Where protective systems as defined in 29 CFR 1926.650-652 are designed by a licensed Professional Engineer, who is not a regular Safety Coordinator employee, the resulting design documents must be reviewed by Safety Coordinator prior to the commencement of the work to assure that the documents set forth the accurate and complete assumptions (as set forth in the current, applicable contract specifications) upon which the design is based.
 - Prior to opening any excavation or trench an excavation permit from Safety Coordinator is required. Contractor shall notify necessary personnel to determine whether underground installations; i.e. sewer, telephone, fuel, electric lines, etc., may be encountered and where they are located. Excavation permits shall be required on a daily basis while the excavation is open.
 - Trenches 4 feet and over in depth or presenting a hazard to the worker shall be shored or walls cut back to protect employees from cave-in.
 - All trenches and excavations shall be properly barricaded to prevent persons from walking into them.
 - When an excavation will remain open longer than one work shift, a barrier sufficient to protect people from falling into the excavation or erected at a minimum of 6-feet from the excavation in order to warn of the fall hazard must be erected and maintained for the time duration that the excavation remains open.
 - Excavation contractors will provide a spill kit for use on site in the event of a hazardous material spill.
 - Drilled caissons will have fall protection provided both during and upon completion of the drilling by use of personal fall protection, guardrails or use of casing extending a minimum of 42 inches above the ground.
-
-

EYE AND FACE PROTECTION

- Appropriate eye protection meeting the requirements of ANSI Z87 (most recent version) with side shields are required to be worn in a manner to protect the eyes while in construction areas at all times.
-
-

-
-
- In addition, approved eye and face protection is required as follows:
 - Goggles, welding hoods and shields, or face shields will be required to be properly worn at all times when in the area of operations, such as when welding, burning, grinding, chipping, chemical handling, corrosive liquids or molten materials, drilling, sawing, driving nails, power actuated tools, concrete pouring, tampers and gasoline fueled hand operated equipment (i.e. chain saws). This section will also apply to those employees of Contractors who are assisting any worker as an apprentice or helper.
 - Prescription glasses must meet the requirements of ANSI Z87 (most recent version), or be covered with over-the-glass safety glasses or face shield.
-
-

FIRE PROTECTION

- Contractor shall be responsible for fire protection in its work and operational areas, including offices, tool rooms, and storage areas twenty four (24) hours per day, seven days per week through the duration of this Contract.
- The contractor, as required by OSHA and the local fire protection code, must provide appropriate fire suppression equipment.
- The contractor for all Hot Work Operations will provide a fire watch and at least one fire extinguisher of appropriate size & type.
- A minimum 20 pound multi-purpose ABC extinguishers are allowed on the project.
- Only safety containers approved by UL and the local Fire Marshall, and properly labeled as to their contents, are to be used for handling and/or storage of flammable liquids in quantities more than one gallon.
- All tarpaulins and plastic used for temporary covers shall be of fire resistant manufacture.

STANDPIPES

- Fire Protection Standpipes shall be installed in accordance with NFPA 241, International Fire code-1413, International Building Code-3311, and OSHA, including but limited to:
- At least one standpipe shall be installed in buildings four or more stories in height, and shall be installed where the progress of the building is not more than 40 ft. in height above the lowest level of fire department access.
- During construction, the standpipe installation shall be installed so that it is never more than one floor below the floor having secured decking or flooring.
- Standpipes shall be provided with fire department hose connections at accessible locations to usable stairs.
- Standpipes shall be installed and maintained so that they are always ready for use.
- For building under demolition, standpipes shall not be demolished more than one floor below the floor being demolished, and shall be maintained in an operable condition for use by the fire department.

HAND PROTECTION

General requirements. Employers shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

Selection. Employers shall base the selection of the appropriate hand protection on an

evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.

Refer to Appendix B Hand Protection Reference for additional information

HAZARD COMMUNICATION PROGRAM

- The Occupational Safety and Health Act (OSHA) requires that each employee potentially exposed to hazardous chemicals be advised of the potential hazards and how to guard against those hazards. Each contractor whose employees are potentially exposed to hazardous chemicals must develop a list of all such chemicals used on the project; gather Safety Data Sheets (SDSs) for those materials; develop a labeling system for all materials; and train all potentially exposed personnel in the hazards and their controls for all listed compounds.
- These steps are outlined in detail in the following material.
- Employee training for this requirement will be documented and acknowledged by signatures following each session.

Safety Data Sheets (SDSs)

- Every contractor will be responsible for development and maintenance of a list of hazardous chemicals utilized within the project operations and will be further responsible for obtaining and maintaining SDSs for all such hazardous chemicals.
- Employees will be allowed access to this information and the specific SDSs for chemicals utilized in their work areas.
- All questions relating to the program should be directed to the contractor's superintendent or safety representative.
- A copy of each SDS will be delivered to the Safety Coordinator prior to work starting involving that substance.

Employee Information and Training

- All new and present employees will be given information regarding the requirements of the Chemical Hazard Communication Program; the hazardous chemicals present in their work place; and the physical and health risks of these chemicals. This requirement may be met through orientation sessions for new employees, and refreshers for all during toolbox talks. The information and training will also include the following elements:
 - The symptoms of overexposure to the chemicals.
 - How to determine the hazardous presence or release of a chemical in the work place.
 - Methods to reduce or prevent the exposure to hazardous chemicals, such as control procedures, work practices, or personal protective equipment.
 - Procedures to follow in the event of an exposure to hazardous chemicals. The location of the log containing the SDSs, which apply to their work place and the location of the written Chemical Hazard Communication Program.
 - How to review SDSs to obtain the hazard information for the chemical, and how to read the labels, which are required on the chemical containers. When a new hazardous chemical is obtained for use, each employee who could be exposed will be given the information and training as described above, and a copy of the SDSs for the chemical will be obtained and distributed to those who actually use the chemical in the work place. The SDSs will be available to all employees during each work shift.
 - Proper disposal procedures of waste materials shall be enforced. Labeling of waste containers and disposal of all hazardous materials by a licensed disposal facility is
-
-

required.

Container Labeling

- All chemical containers at the site must be clearly labeled as to the contents, the hazards involved, and the name and address of the manufacturer. Adhere to the OSHA Global Harmonization law.
- All secondary containers of hazardous chemicals are to be clearly labeled with the same information as the original container.
- Each contractor's superintendent or safety representative shall perform the above responsibilities for all their materials.

Hazardous Non-Routine Tasks and Nearby Work

- In the event an employee is assigned to perform, or is assigned to work in an area where a hazardous task, non-routine to their work, the employee will be given the additional information and training related to the hazardous chemicals which may be encountered in the non-routine task.
- The first-line foreman, contractor superintendent, or contractor safety representative will provide this information and training. The information will include the specific chemical hazards of the task, the controls and protective measures required, the types of personal protective equipment required, how to use the equipment, the nature of other work being performed in or near the non-routine task, and what emergency procedures are involved with the task.

Demolition

To the best of the Owner's knowledge, there is no asbestos, lead, polychlorinated biphenyl (PCB), or hazardous materials anywhere in the designated work areas. AIA-A201

Subparagraph 10.1.2 applies: Contractor shall stop the Work if material reasonably believed to be asbestos, lead, polychlorinated biphenyl (PCB), or hazardous materials is encountered in the Work area.

Chemicals in Unlabeled Pipes, Vessels and Containers

- To ensure that employees who work on unlabeled pipes, vessels or containers have been informed as to the hazardous materials contained within, the following policy has been established: Prior to starting work on unlabeled pipes, vessels or containers, employees are to contact their foreman for the following information:
- Type of chemical in the pipe, vessel or container.
- Potential hazards.
- Safety precautions which should be taken.

Audit and Review

- It will be the responsibility of each contractor's superintendent and safety representative to review the entire Hazard Communication Program, and to revise and update the material contained herein to reflect all changes in the purchase, use, storage, and handling of hazardous chemicals at the project site.
- It will be the further responsibility of the superintendent and safety representative to periodically audit that procedures in the use of the hazardous chemicals meet the requirements as set forth in the SDS's.

HAZARD ANALYSIS

- Prior to beginning work, each contractor shall prepare a hazard analysis that defines the activities to be performed and identifies the sequence of the work, the specific hazards,
-
-

and the methods to be used to eliminate or minimize each hazard. The hazard analysis shall be submitted prior to, and will be reviewed during the pre-construction meeting by Safety Coordinator, and the contractor's supervisors and safety representative. The hazard analysis shall be written in a form acceptable to the Safety Coordinator.

- Hazard Analysis shall be done when the scope of the work or conditions change.
- Each Contractor Foreman will inform their work crew of the Hazard Analysis for their work activity each day prior to start of work or when conditions change.
- Each contractor shall submit for review by the Safety Coordinator a site specific safety program which addresses all the elements of this safety plan as they will be implemented by the contractor, its contractors, vendors and suppliers. The hazard analysis will be included as an appendix to the contractor's site-specific safety program.

HOUSEKEEPING

- On a daily basis, all debris and scrap material shall be removed from the work area.
- Debris and other loose materials shall not be allowed to accumulate in stairwells.
- Containers shall be provided for the collection and separation of waste, trash, oily and used rags and other refuse. Metal (dumpster type) containers must be used and emptied promptly.
- Garbage and other waste shall be disposed of at frequent or more regular intervals in a manner approved by the Safety Coordinator.
- Contractor shall notify the Safety Coordinator of any hazardous waste it will generate during performance of the Work. Contractor has the direct responsibility of maintaining proper storage of these wastes while on site and will verify to the Safety Coordinator in writing that the wastes have been disposed of in a legal manner. A copy of the haulers manifest must be provided to the Safety Coordinator.
- Contractor shall not pour, bury, burn, nor in any way dispose of a chemical on the work project site.
- Contractor shall clear all combustible debris to a solid waste disposal project site properly licensed under the laws of the State having jurisdiction. **NO OPEN BURNING OF DEBRIS, OR RUBBISH WILL BE PERMITTED ANYWHERE ON THE PROJECT SITE.**
- Materials and supplies shall be stored in locations, which will not block access-ways, and arranged to permit easy cleaning of the area. In areas where equipment might drip oil or cause other damage to the floor surface, a protective cover of heavy gauge, flame resistant, oil proof sheeting shall be provided between the equipment and the floor surface sheeting so that no oil or grease contacts the concrete. This requirement is applicable to both finished and unfinished floors.
- All hoses, cables, extension cords, and similar materials shall be located, arranged and grouped so that they will not block any access-way and will permit easy cleaning and maintenance.

INCENTIVES AND AWARDS

Safety awareness and recognition campaigns during construction will include the posting of banners, posters and signs emphasizing safety awareness, the proper use of safety equipment and safe work practices.

INFECTION CONTROL

INFECTION CONTROL MEASURES FOR USE DURING MAINTENANCE, CONSTRUCTION, AND RENOVATION AT (Insert Project Name)

GENERAL INFORMATION

- The level of risk in any given area is determined by the Owner in conjunction with Industrial Hygiene professionals, and may be modified with changes in patient population. The Owner will complete an Infection Control Risk Assessment (ICRA) before work begins.
- All contractors will be required to comply with infection control measures.
- The infection control measures to be taken for any given project will be determined on the basis of the guidelines of the ICRA.
- Prior to the start of work the Owner will confirm to Safety Coordinator that areas under construction are free of any hazardous materials or medical wastes.

The Safety Coordinator Responsibilities

- The Safety Coordinator and responsible contractors will review blueprints and be involved in pre-construction planning meetings for patient care areas at hospital and outpatient facilities. This involvement is to provide input into project planning to identify infection control issues in the planned space and, to help implement and monitor measures to control infection risk generated by construction.
- the Safety Coordinator will assist the Owner and Architect in pre-construction planning
- Safety Coordinator will monitor the implementation of infection control measures and document any nonconforming conditions.
- The Safety Coordinator will implement a work permit system whereby the Safety Coordinator will walk the site with contractor personnel to determine that all appropriate controls are in place according to the ICRA.
- The Safety Coordinator will coordinate with the Owner, to identify conditions that may change, which may alter the Infection Control Risk Assessment.
- The Safety Coordinator will monitor the project's infection control measures, including the infection control measures of the contractors.
- The Safety Coordinator will Contact the Owner's Infection Control Representative upon completion of each phase of the project for final assessment, before occupancy.
- The Safety Coordinator will notify the Owner of any known breaches of the infection control requirements and implement corrective actions with the Trade Contractors.
- The Safety Coordinator will report all sewage spills to the Owner and coordinate the clean-up.

Contractor Responsibilities

- All project employees will comply with the infection control measures, including blood borne pathogen training.
 - All project employees will be required to attend a project orientation, which includes
-
-

infection control requirements, prior to start of work.

- All workers exposed to sewage or bodily fluids must report the exposure immediately to their supervisor. Their employer should offer any workers, who may have been exposed to sewage as a part of their job, vaccination. Employers must offer vaccine at no additional cost to the worker.
- Construction workers with communicable infections or exposure to communicable infections, such as chickenpox or tuberculosis, must have the permission of their occupational health provider to work.
- Each Contractor will identify a person responsible for monitoring their employees' compliance with the ICRA. The person must be present onsite during all working hours of their personnel.

Guidelines for Orientation to Infection Control

- Review of color coded floor plan of areas to be worked showing moderate and high risk areas as developed by the Owner's ICRA.
- Review Project-specific ICRA including Classes of Work and associated precautions.
- Facility access restrictions and security measures.
- Worker circulation routes.
- Working around the building exterior
- General work practices on controlling dust, odor, vibration and noise.
- Required use of Personal Protective Equipment (provided by employer) – only in containment and patient areas.
- Cautions relating to existing MEP equipment.
- Access into enclosed spaces (above ceilings, into chases, behind walls and as otherwise determined by Safety Coordinator.
- Barrier requirements and monitoring.
- Exiting a containment area, both in emergency and routine cases.
- Reporting an emergency.
- Removal of equipment, tools or trash/debris from a containment area.
- Cleaning requirements, techniques and frequency.

Attendance is to be documented with a dated, signed sheet showing the attendees employer and the full name of the attendee both printed and with signature. This is to be stored with the Safety Coordinator safety file.

INSPECTION AND AUDITING

Purpose and Scope

To establish a basic inspection/audit program for the elimination of unsafe practices by employees and to establish a hazard free work environment for all employees on the project.

Objectives

To reaffirm the Trade Contractor's basic responsibility for the actions of the employees as originally assigned under the General Provision of the Occupational Safety and Health Act of 1970 (revised). The exercise of these responsibilities by all project trade contractors will be the

effective deterrent to accidents arising from unsafe practices and physical conditions, that will materially enhance the construction efficiency of this project.

Procedures

Control will be achieved only when each trade contractor fulfills their contractual and statutory responsibilities and applies all practical steps to maintain safe and healthful work practices and conditions.

Project Controls

Continued monitoring/audit of the performance of the Contractor and their supervision under this section will be made by Safety Coordinator. Contractors will be notified of any unsafe practices observed. The Contractor's safety supervisor, the Project Safety representative and the General Trades Safety Coordinator's field staff shall utilize the "Construction Safety Survey".

Supervisory Control

Contractor

Each Contractor will be responsible for conducting continuous daily surveys of their operations to insure they are aware of the probable sources of potential injury or loss due to unsafe acts of procedures.

Planning

Contractors must extensively plan the procedures to be followed for each operation using Hazard Analysis procedures and submit such plans to the Project Safety Coordinator.

Personnel chosen to perform any such planned operation shall be thoroughly briefed in all aspects of the procedure, including emergency actions to be taken in the event of a mishap.

Inspections

In addition to inspections conducted by the Project Safety Coordinator, Insurance Representatives, and each Contractor, construction activities are subject to periodic inspection by OSHA Compliance Officers.

Each Contractor is required to notify the Safety Coordinator in writing prior to starting work if they, by their Company policy, they will require a warrant for OSHA to inspect their work. the Safety Coordinator does not require a warrant.

Contractors shall forward copies of any and all inspection reports and/or citations received by the Contractor from OSHA to the Safety Coordinator. All information will remain confidential.

In the event a OSHA Compliance Officer visits the site, he/she will be directed to the Safety Coordinator office. The appropriate Contractors will then be notified so that an Opening Conference may be conducted. The Safety Coordinator will organize an inspection party, consisting of both employer and employee representatives.

Notification of Hazards

Each Contractor shall notify the Safety Coordinator verbally or in writing of the existence of any hazardous conditions, property, or equipment at the work site, which are not under the Contractor's control. However, it is the Contractor's responsibility to take all necessary precautions against injury until corrected by the responsible party.

Equipment and Facilities

All Contractors operating equipment and facilities used shall be, inspected, and maintained as directed by this manual; as dictated by the applicable Federal and State safety and health regulations. In the event of conflict, the more stringent requirement will take precedence.

INTERIM LIFE SAFETY MATTERS FOR OCCUPIED FACILITIES

Specific Measures

-
-
- Whenever construction affects the facility's ability to accommodate occupants (either because of disruption of services, interruption of normal operations, or when hazards are present), it will become necessary to implement interim life safety measures, as follows:
 - Ensure that all exits are clear. This includes areas directly affected as well as all other exits.
 - Ensure that there is free access to emergency services, that vehicles, material, etc. are not blocking the access route.
 - Disabling of fire protection systems. A small disaster could escalate if the fire protection system is not functional. Care should be given to provide an alternate system while the primary system is off-line. This includes scheduled maintenance, upgrade, repairs, or adding of coverage resulting in disabling system, and disabling system to allow maintenance or repairs to be completed on other systems (e.g. hot work).
 - Fire alarm, detection, and suppression systems must not be impaired. A temporary (but equivalent) system shall be used if the system is impaired. These temporary systems must be tested monthly.
 - Temporary construction partitions shall be smoke tight and noncombustible. Adequate signage shall discourage casual observers from opening or entering the partitions.
 - Additional (double) fire-fighting equipment must be provided, as well as personnel trained in its use.
 - Smoking is prohibited on campus, in and adjacent to all construction areas. Strict enforcement must occur.
 - Construction site shall be kept clean and orderly. This includes material piles, debris, platforms, and break areas.
 - Hazard surveillance of sites shall be increased and documented. Attention is to be given to evacuation routes, construction areas, storage, office/lunch areas, and fuel storage.
 - Whenever the safeties of adjacent areas are compromised because of construction, staff shall be informed. Alternate exit routes shall be identified.
 - Facility-wide education programs are conducted explaining interim life safety matters and current life safety deficiencies.
 - The construction site must be restricted from all but authorized staff. Adequate signage shall be provided.
 - Alternate access must be provided for public and emergency traffic whenever disruption occurs.
 - Policy and procedures must ensure that roads and pathways are clear of mud, debris, materials, etc.
 - Proper notification must be made to local authorities (fire, police, other) whenever life safety is diminished.
 - Governing body shall be kept apprised of status of life safety during project.
 - Construction workers must be made aware of egress routes.
 - Construction workers' egress routes must be inspected daily to ensure no obstacles.
 - Effective storage, housekeeping, and debris-removal policies and procedures must be in place to reduce collection of combustibles in construction areas.
 - Whenever fire zones are altered, the owner's staff will be informed in regard to new or different life safety measures regarding their changed compartmentation and fire safety.
-
-

LINE BREAK

- Policy - Any entry into an operating Process System under installation, testing, or operating conditions is subject to the procedures for “line breaking”.
- All employees are to be informed of the inherent dangers of working on operating process systems.
- Entries can be made only with approval of the Owner and the Safety Coordinator.
- Added hazard potential exists when cooling occurs, vacuums, which may be holding liquids in pockets often break without warning and liquid is released to run to the lowest point. Plugs (particularly solidified process materials) can move and release materials after the first connection has been broken.
- The Owner and the Safety Coordinator must agree on the location of first breaks
- All systems must be considered as having the potential to discharge contained energy/material from open ends of lines or broken flanges at any time even after the line has been drained and vented.
- Cautions
- No Contractor may enter an operating piping system or equipment until the requirements of this procedure are met. Systems activated for testing purposes fall under this procedure.
- Under no circumstances will any line/system be violated other than via the lock and tag procedure.

LOCKOUT/TAGOUT PROCEDURES

- The contractor must adhere and strictly follow either the Project Lockout and Tagout requirements, the owner’s requirements or the contractors own requirements, whichever is the most stringent.
- Electrical work (e.g. tie-ins, panel maintenance) shall be conducted only on de-energized (locked out and tagged out) systems. All circuit disconnects must be locked in the open position or otherwise appropriately identified with affixed tags stating "DANGER - DO NOT ENERGIZE" or other equivalent wording prior to working on the system or equipment. Employees are not permitted to work on any energized circuits unless conditions mandate and written approval is obtained from the Project Safety Coordinator. The pre-task planning for all work on energized systems must be submitted for review. Additionally, work practices must conform to all applicable owner, state and federal requirements including the NEC and the most recent version of NFPA 70E.

Lockout Devices

- Only individually keyed padlocks shall be used. Padlocks are to be painted per the craft color code for easier detection and craft identification.
- A lockout device of the standard scissor type that will allow the placing of more than one padlock is required, when more than one individual is working on a circuit or mechanical process.
- A piece of chain or cable may be necessary to complete a lockout on some valves or controls and shall be used wherever needed.

Danger Tags

'Danger Tags' are not 'Danger Signs', and shall not be used where a sign is needed.

Two standardized Danger Tags shall be used on this project. They are described as follows:

"DANGER - DO NOT USE": This tag must be attached to each padlock on a lockout.

"UNSAFE - DO NOT USE": This tag does not require an attachment to a padlock, but may be used if needed. This tag shall be used to identify tools, equipment, vehicles, etc.

Procedure

If device, valve, switch, or piece of equipment is locked out, a "Danger Tag" shall be attached.

No device, valve, switch or piece of equipment shall be operated with a "Danger Tag" and/or lockout attached regardless of circumstances! ! !

- Systems consisting of electrical components will be checked, locked and tagged first by electrical craft employee working on the circuit. The electrical craft will be the first lock on, and the last lock off.
- Where placing of lock is not feasible, the circuit conductor will be disconnected from the breaker and tagged out.
- The panel cover must be of the type that will cover all breakers when closed and must be equipped with a hasp in order to secure a lock to prevent the panel door from being opened.
- If panel cover is of a type that cannot be locked closed, a cover must be secured over the panel cover and be locked closed and tagged while any work is being performed on any of those circuits.
- If the above cannot be accomplished, each circuit will be tagged out as prescribed and an electrician will stand by the panel board to prevent breakers from being tampered with. This physical presence will continue daily until the work is complete.
- All "Danger Tags" must be dated and signed. Also on tag, must be the intended work and equipment for which tag has been placed.
- If employees of more than one craft or crew are to work on a system, circuit, machinery, or component, the supervisor from that craft shall place his individual lock and tag; and verify that the system, circuit, machinery or component being tagged, is indeed the system that is to be worked on.
- Only the person that placed the lock and tag shall remove it without special authorization from the Safety Coordinator, General Trades Safety Coordinator or Craft Superintendent.
- Padlocks, Lockout Devices and "Danger Tags" shall be made available as specified above.
- Padlocks shall be color coded for craft identification and shall only be used by that craft for lockout purposes, i.e. valves, switches, electrical components, etc.
- Padlocks shall be issued from the contractor responsible where a sign in/out log will be maintained. Locks and tags shall be issued to the foremen or supervisor responsible for the craft performing the work. The contractor of each craft discipline will be responsible for assuring all padlocks are personally identified, that will be used for lock and tag purposes. The Contractor Superintendent(s) will be responsible for ordering their own craft's padlock. A master key will also be provided.
- Any employee(s) or person(s) found to have removed another's lock and/or tag will be subject to disciplinary action up to and including dismissal from the project.

Special Situations

- When due to the nature of work, a supervisor who has employees assigned to work on systems that are between construction and client turnover that is to be locked and
-
-

tagged out in order to perform work, the below shall be applied:

- Prior to the electrical foreman de-energizing the system, the foreman will ascertain whether system or device has been turned over and accepted by the client; If system is signed off, the client shall assume responsibility for de-energizing system and becoming the tagging authority.
- Contractor Electrical foreman/craft journeyman places lock and tag and tries to engage the equipment.
- The electrical journeyman or lead man will meter the tagged equipment to verify that it is de-energized.

Operating Facilities and Equipment

All systems covered under this section whether electrical, mechanical or others are considered those systems where no future construction activity is warranted.

Electrically Operated Systems

- Client representative or designee de-energizes system demonstrating accuracy to construction electrical supervisor, then locks and tags.
- Construction electrical foreman/journeyman ascertains that fuses, breakers or throws have been removed, when applicable; tags, locks and tries system.
- Electrical foreman/journeyman, meters the side of the system to be worked on to verify it is de-energized and safe.
- Upon completion of work, the journeyman removes their lock/tag and advises the construction electrical supervisor.
- Client representative or designee clears system, removes lock and tag and re-energizes if necessary.

Other Systems

- Plant engineer or designee de-energizes system and makes system safe.
 - Client mechanics or designee(s) makes first break in flanges, places blanks, blinds or valves, and demonstrates that the system is empty and decontaminated.
 - Construction (Client) Coordinator or designee verifies that the system is de-energized and tagged.
 - Construction Craft supervisor locks, tags and tries system, surrenders the key to the journeyman who will then perform the assigned task.
 - Upon completion of work, the journeyman will return the key to the assigned supervisor and tag and lock are removed.
 - Construction (Client) Coordinator or designee assures that system is clear, and then removes lock and tag.
 - Client mechanics or designee(s) re-energize system.
 - **Construction**
 - All systems under this section whether electrical, mechanical or others, are considered those systems that are still in the construction phase.
 - Equipment or circuits that are de-energized shall be maintained inoperative at their main power source and shall have locks and tags attached to prevent accidental turn on.
 - A staff member shall be designated from the electrical department (Superintendent or General Foreman), to assume the responsibility, for the removal of locks and tags, and activation of power from the main switchgear through end line component.
-
-

MEETING - PRE-CONSTRUCTION

- The Contractor, before starting work at the project site, shall attend a pre-construction “award” meeting to understand the project conditions and safety requirements.
 - A project site tour shall be made to confirm the Contractor's awareness of potential safety hazards.
 - The contractor to assure a safe work place shall provide appropriate methods, equipment, devices and material.
 - The Contractor shall provide or develop his own project specific safety program and submit it to the Safety Coordinator for review prior to starting work at the project site.
 - Such review shall not relieve the Contractor of responsibility for safety, nor shall such reviews be construed as limiting in any manner.
 - It is the Contractor's obligation to undertake any action, which may be required to establish and maintain safe working conditions at the project site.
-
-

MEETINGS

- A project start safety conference will be held with the superintendent(s), safety coordinator and Foremen of each new Contractor prior to coming on the site.
 - The Safety Coordinator will issue the project start package information and he will issue special instructions to the Contractors in support of the Project Safety Plan when needed.
 - The Safety Coordinator will conduct regularly scheduled meetings with the Supervisors of new Contractors coming on the site and explain safety goals, contents of this manual and otherwise provide site orientation, safety activities and information. All Supervisors will be required to attend this orientation after coming on the site.
 - Contractor meetings will be held as necessary and as directed by the Project Safety Coordinator. All Contractors actually working on the Project will have a representative at the safety meeting to maintain all safety requirements for their trade.
 - The Safety Coordinator will conduct safety Meetings on a regularly scheduled basis. Minutes of the meeting will be a topic of all scheduling and progress meetings.
 - All Contractors are required to hold weekly 10-15 minutes "**Tool Box**" **safety meetings** for all employees. Topics related to work assigned, and current safety problems will be discussed. Monthly meetings for supervisory and clerical employees will be held. The Safety Coordinator will monitor these "Tool Box" meetings through personal attendance or by reviewing a copy of the meeting report.
 - Prior to starting any major operation, which would involve locking/tagging procedures, a meeting must be set up involving the Safety Coordinator, and every Contractor Superintendent and every Contractor Safety representative affected by the work.
 - Specific procedures must be adopted and reviewed by all concerned with the operation prior to commencement of the work.
-
-

MASONRY

In addition to the requirements contained in OSHA 29 CFR 1926. 706, the following is required:

- A person, appointed by the Masonry Contractor, who meets the OSHA definition of Qualified Person, will prepare a Hazard Analysis. The Hazard analysis will be reviewed with the Safety Coordinator and the JJC Project Superintendent prior to start of work.
-
-

-
-
- The Mason's qualified person shall approve all changes in the Hazard Analysis.
 - A copy of the Hazard Analysis shall be maintained at the project site showing all approved changes with a copy provided to the Safety Coordinator.
 - The implementation of the Hazard Analysis shall be by a person appointed by the Masonry contractor who meets the OSHA definition of Competent.
 - The Hazard Analysis shall be reviewed with each person working on the masonry wall each day prior to starting work.
 - A safe means of access to the level being worked shall be maintained.
 - There shall be protection provided to prevent tools and material from striking any person below the work/storage level.
 - A tag line shall be used to control all loads.
 - When loads are being hoisted, all personnel are to be prevented from walking under the load.
 - No one shall be permitted to ride a load under any circumstances.
 - A measuring device to accurately determine wind speed shall be provided by the masonry contractor with observations made available to the Safety Coordinator upon request.

Masonry Wall Bracing

- The masonry contractor shall provide to the Safety Coordinator a design, prepared by a Professional Engineer, meeting the requirements of OSHA 29 CFR 1926.706 (b) and the Standard Practice for Bracing Masonry Walls under Construction as developed by the Council for Masonry Wall Bracing.
- No one shall be permitted within the limited access zone of an unbraced or braced wall subjected to winds of more than 35 mph (20 mph if during the initial period of construction).
- A DANGER sign shall be placed on every unsupported masonry wall that is more than 6 feet in height, braced or unbraced, and 50 feet or less in length. The sign shall be placed at each end of the wall and at intervals of not more than 100 feet along each side of the wall. The sign shall contain the words *DANGER* and *THIS UNSUPPORTED WALL IS UNSTABLE IN WINDY CONDITIONS*.

Fall Protection (See Elevated Work - Fall Protection)

- All employees engaged in masonry work, including overhand laying or any other activity that exposes them to a fall of 6 feet or greater shall be provided with and use fall protection. This protection shall be either a personal fall arrest system consisting of a full-body harness, double, shock-absorbing lanyard, and anchorage or a safety net or a guardrail. "Controlled Access Zones" are not permitted.
- Fall protection requirements shall be rigorously enforced with any observed violation cause for removal from the project.
- Body belts are not permitted as part of a fall restraint system. Only full body harnesses will be used as part of a personal fall arrest system.

Perimeter Protection

A guardrail system will be constructed in accordance with OSHA 29 CFR 1926.500. Or alternative fall protection consisting of safety nets or personal fall arrest equipment provided.

MOTOR VEHICLES AND EQUIPMENT

- All equipment must be inspected daily before use by Contractor's operator. Contractor must also make documented and complete inspections at 30-day intervals with proper documentation maintained at the project site by Contractor and copies shall be made available to the Safety Coordinator upon request.
- Defective equipment shall be repaired or removed from service immediately.
- All Contractors' operators of construction equipment should be properly licensed and certified by a competent person. Copies of the certifications shall be maintained on project site by Contractor and made available to the Project Safety Coordinator upon request.
- Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried and all passengers shall be properly seated with seat belt used. Standing/kneeling on the back of moving vehicles is prohibited.
- Locations for storage of all fuels, lubricants, starting fluids, etc., shall be reviewed by the Safety Coordinator prior to use by Contractor for storage and shall conform to the requirements of the NFPA as well as the local Fire Marshal.
- Where required, contractors shall provide equipment diapers to protect from environmental spills.
- Drivers of motor vehicles shall have a valid state drivers license (CDL when applicable) and be instructed to exercise judgment as well as observe posted speed limits.
- All contractors' means of ingress and egress shall be adequately marked and kept clear of stored material, debris and equipment.
- Pedestrians always have right-of-way over motorized traffic.
- Horns shall be sounded at blind corners, when passing, and/or for warning.
- Established hand signals or turn signals are to be used.
- Reckless driving or other non-observance of these instructions will be cause for withdrawal of driving privileges on the project.
- Any ATV's used on the project shall be "four"- wheeled, not three-wheeled.
- All vehicles permitted access to the site must display an appropriate vehicle identification badge from the rear view mirror or other conspicuous location at all times while on the project.
- Seat belts shall be worn by all employees operating motor vehicles and any equipment with rollover protection structures during performance of work.
- Properly trained and equipped flag persons shall be used whenever construction traffic accesses or exits from public highways as well as when construction traffic and deliveries interfere with the planned flow of traffic on public highways.

OSHA REQUIRED TRAINING

- Instruction and training of employees is a requirement of OSHA and will be enforced on this project.
 - Training of contractor personnel is the responsibility of the contractor.
 - All contractor personnel must attend the Safety Coordinator New Employee Orientation
-
-

prior to their starting work on their first day on the project.

OSHA - INSPECTION

- It is the Safety Coordinator's policy to allow OSHA to conduct an inspection of the project. If a contractor wishes to assert their rights under the U.S. Constitution regarding inspection by OSHA, then the contractor must so notify OSHA prior to the start of an inspection.
 - The Safety Coordinator will accompany the OSHA inspection party at all times and will make arrangements for the necessary meetings between OSHA, contractors and organized labor representatives (if any). The Safety Coordinator does not assume liability or responsibility for the presence of any alleged hazards or their correction.
 - Contractors will inform the Safety Coordinator of the issuance of any OSHA citations and provide a copy when requested.
-
-

POWDER ACTUATED TOOLS

Powder-actuated tools (also driving tools), when used by the Contractor, shall use *lead-free* Powder loads. Safety Data Sheets shall be submitted to Safety Coordinator for verification. Requests for variances to the *Lead-Free* requirement must be submitted in writing to Safety Coordinator and include a copy of all lead dust provisions and controls that will be implemented in accordance with 29 CFR 1926.62 including but not limited to negative exposure assessments, respiratory protection, dust controls, housekeeping and training. "

▪

PRECAST/PRESTRESSED CONCRETE

Fall Protection for all employees engaged in work with a fall exposure of 6 feet or greater above a lower level shall be either a guardrail system, a safety net system or personal fall arrest system. The use of "Safety Monitoring" and "Warning Line System" and "Controlled Access Zones" are not permitted. Refer to the Section "Elevated Work Fall Protection" for additional requirements.

A pre-construction meeting between the Safety Coordinator, The JJC Project Superintendent, the Fabricator and the Erector must be held to discuss the following topics:

- Sequence of erection;
- Schedule of delivery by load list;
- Crane capacities;
- Crane lift plan with calculations based on load and crane location;
- Anchor bolt certification;
- Review of the structural plans and details;
- Stabilization plans for the structure during all phases of erection;
- Temporary bracing and guying procedures and equipment for deck members, columns and wall panels.

The Erector is to provide the Safety Coordinator the following:

- Written erection plan prepared by a Company Officer or Professional Engineer indicating complete details of all phases of erection that shall include at least the
-
-

following:

- Crane lift plans with load calculation based on the cranes to be used and various setup locations,
 - Written stabilization plans for all phases including the use of temporary guying and bracing for columns and wall panels,
 - Written documentation of temporary connection details for use until permanent connections are completed including capabilities of workers doing the installation, types of welds or adequacy of bolted connections.
 - Listing of competent persons for fall protection, crane operation and erection along with phone numbers for emergency contact.
 - Fall protection plan in accordance with the Safety Plan including Leading Edge protection both during installation and after. Sequencing breaks and end of workday protective measures will also be detailed. Interior floor hole protection must be provided per OSHA Subpart M greater than 2 inches in the least dimension.
 - Custody of Guardrail cables following completion of precast erection. Erector to present a plan detailing how the cables will be safely removed utilizing Personal Fall Arrest Systems; or safety nets.
 - Silica protection of workers during cutting of concrete.
 - Hazard Analysis of all operations, presented to all workers prior to each shift on hazards specific to the day's operation.
 - Proof of training for all erection crewmembers.
 - Delivery locations for trailers including adequate ground preparation and plan for unloading.
 - Wind loading considerations including when operations will be suspended due to high winds.
 - Any proposed field modifications to the approved Erection Plan shall be approved by a Company Officer or the Professional Engineer of Record, added to the plan, which shall be available at the jobsite. A copy must be submitted to the Safety Coordinator prior to any change.
 - Lifting inserts, which are embedded or otherwise attached to precast concrete members, shall be capable of supporting at least four times the maximum intended load applied or transmitted to them, and shall be used in accordance with the manufacturer's recommendations.
 - Lifting hardware shall be capable of supporting at least five times the maximum intended load applied or transmitted to the lifting hardware.
 - Adjustment of precast members, after initial placement, which requires the lifting of the members in any manner, shall not be made unless wire rope safety tiebacks are used or the members are attached to the crane load line.
 - Chains are not permitted to be used as slings. Chain "come-along" are permitted with proof of required inspections and certification.
-
-

PROJECT - CODE OF SAFE PRACTICES

Each individual working on this project will be required to attend a safety orientation meeting at the start of their assignment. At the conclusion of the meeting, each will be required to sign a Code of Safe Practices as follows, indicating their agreement to follow that Code while on the Project. This does not relieve the trade contractor of any responsibility to properly orient and train their employees for the specifics of their work.

Project Name:

Employee Name: _____

Company: _____

I agree to abide by the following Code of Safe Practices while on this project:

1. To assist the project in being incident and injury free, I have granted permission to the General Trades Safety Coordinator to discuss all aspects of working safely with me. Likewise, I have the right to discuss safety issues with the General Trades Safety Coordinator, other trades (regardless of trade jurisdiction or craft) and to stop work at any time I feel there is an unsafe condition to myself or to others.
2. I understand there are Above OSHA Requirements in the Project Safety Plan, and I will abide by those requirements.
3. I will work in a safe manner, protecting others, and myself and will report observed hazards to my supervisor. If not addressed, I will further report these hazards to the General Trades Safety Coordinator Superintendent.
4. I will dress appropriately for the project, wearing a long or short-sleeved shirt, long pants, and work boots with ankle protection, and substantial soles.
5. I will use personal protective equipment as required by my trade, and will wear my hard hat and safety glasses at all times.
6. I will abide by the six-foot fall protection rules, including the use of a harness where required.
7. I will park only in designated areas & observe a ten mile per hour speed limit on site.
8. I will only smoke or use tobacco products in designated areas.
9. I will eat only in designated areas and dispose of trash in proper containers.
10. I will not use any intoxicants or other controlled substances on the project.
11. I will report all injuries and accidents involving persons or property.
12. I will not bring any weapons, including knives with blades over 4 inches, onto the site.
13. I will conduct myself in a professional manner and not engage in any violence, horseplay, practical jokes, or other behavior obnoxious to the general public. I will not harass anyone else on site or any member of the public, sexually or otherwise. I will not bring, write or draw any sexually explicit materials on site.
14. I will not use headset-type radios, music players, personal televisions, or other personal entertainment devices on site.
15. I will not use my cell phone in work areas, around heavy equipment, or while engaged in work activities. If I must use a cell phone, I will do so in safe areas, and only to conduct jobsite business, or for a personal emergency.
16. I will comply with the security procedures established throughout the project, for entrance to the site.

Signed _____

PROJECT - SAFETY RULES

- All personnel on this project, including the employees of Contractor, will be required to comply with these rules. Contractor shall ensure and indicate that all its employees have read these rules and understood its contents. The employee must sign a declaration, which shall then be retained by Contractor with the employee's personnel file. In addition, Contractor shall comply with the following:
- Long or short sleeve shirts shall be worn at all times. All shirts shall be tucked in trousers at all times. All shirts shall be hemmed at neck, sleeve and tail. "Muscle Shirts" are prohibited.
- Long pants are required. "Shorts" are prohibited.
- A well-constructed boot/shoe that provides ankle protection with a substantial, flexible sole shall be worn. Exposure to hazard dictates whether or not a protective toe guard will be required. Sandals, tennis shoes, or any other street type shoes (even if equipped with ANSI toe protection), will not be permitted.
- Loose fitting clothes or dangling jewelry shall not be worn around moving machinery, grinding operations, welding, or other hazardous operations.
- Hair, which could come in contact with, or be caught in machinery, shall be protected by a hardhat or hair net, as appropriate.
- Approved hard hats meeting specifications contained in the most current addition of the American National Standards Institute (ANSI), Z89.1 and/or Z89.2 are required. "Cowboy-type" hard hats are not allowed. Baseball caps and other soft headwear is not allowed under the Hard Hat suspension.
- All contractors' means of ingress and egress shall be adequately marked and kept clear of stored material, debris and equipment.
- No firearms are allowed on the project site.
- Practical jokes, horseplay, scuffling, wrestling and/or fighting are prohibited and may be grounds for immediate dismissal.
- Reflective vests or clothing shall be worn by all personnel exposed to equipment during the site work and excavation phases of the project or when deemed necessary by Safety Coordinator.
- Stilts may only be used where allowed by local regulation and then only where the floor is clean and free of debris and obstructions, there are no uncovered floor holes, where there are no pipe- stub-ups and all guardrails are raised to provide adequate fall protection.
- Drinking and/or possession of intoxicants on The Owner's property are forbidden. The use of narcotics, unless authorized by a physician, and the Safety Coordinator/Superintendent notified, is forbidden. Violation(s) of the above will result in immediate dismissal.

PROTECTION OF THE PUBLIC

Access to the Site

-
-
- No work shall be performed in any area occupied by the public unless specifically reviewed and permitted by the Safety Coordinator. In that the project interfaces with the public, precautions to be taken include, but are not limited to:
 - Each Contractor shall take such necessary action as is needed to protect and maintain public use of sidewalks, entrances to buildings, lobbies, corridors, aisles, doors, exits and vehicular roadways. The Contractor shall protect the public with appropriate sidewalk sheds, canopies, catch platforms, fences, guardrails, barricades, shields, and adequate visibility as required by laws and regulations of governing authorities. Such protection shall guard against flying materials, falling or moving materials and equipment, hot or poisonous materials, flammable or toxic liquids and gases, open flames, energized electric circuits or other harmful exposures. Guardrails shall be made of rigid materials complying with the requirements for standard guardrails as defined by OSHA and the Project Safety Plan. Temporary sidewalks, ramps or stairs shall be provided with guardrails on both sides whenever permanent sidewalks, ramps or stairs are obstructed by the work. The Safety Coordinator may authorize barricades, secured against accidental displacement, meeting the requirements of local authorities, where fences, sheds, walkways and/or guardrails are impractical. During the period when any barricade, fence, shed, walkway, or guardrail is removed for the purpose of work, a watchman shall be placed at all openings.
 - Appropriate warnings, signs and instructional safety signs shall be conspicuously posted where necessary. In addition, a signalman shall control the moving of motorized equipment in areas where the public might be endangered. Warning lights, including lantern, torches, flares and electric lights, meeting the requirements of governing authorities shall be provided and maintained from dusk to sunrise along guardrails, barricades, temporary sidewalks and at every obstruction to the public. These warning signs and lights shall be placed at both ends of such protection or obstruction and not over 20 feet apart alongside of such protection or obstructions.
 - With respect to operations being performed on public roadways, all DOT and/or municipality requirements towards public safety will be strictly observed.
 - Access to the site is limited to the entrance designated for construction traffic as indicated on the site plans issued with the construction documents. At no time is Contractor personnel or vehicles to obstruct traffic on public streets or Owner entry driveways. All material deliveries shall be scheduled in advance with the Project Superintendent and shall be completed within the time segment allocated for the specific delivery.
 - A temporary six-foot high fence, in compliance with laws and regulations of governing authorities, shall be provided and maintained around the perimeter of operations on the project site to control access to the work by employees, to protect the public, and to restrict access by unauthorized individuals.
 - The above shall be implemented only where allowed by the governing authority. Where the owner of the property specifically prohibits such protective devices, rules and regulations of the governing authority shall apply.

Authorized Visitors

All visitors to the site are required to register with the Safety Coordinator upon arrival. Each Contractor will be expected to regulate their visitors accordingly. All visitor passes expire upon departure from the site and are to be surrendered to the gate security guard.

Fire hydrants and all designated fire lanes shall remain clear at all times for the use of emergency vehicles.

Employee Identification

Where required, all project site employees will be issued an identification badge and hardhat sticker upon completion of their initial safety orientation and after having passed their alcohol and drug test. All persons without a hardhat identification sticker shall report to the Safety Coordinator's office for verification of employment status, attendance at an orientation session, or issuance of a single day visitor pass. This identification badge will remain the property of the Owner. The identification badge shall be maintained in good condition and on the person to whom it is issued. The identification badge shall be returned to the Safety Coordinator or the Owner when employment on the Project is terminated or when requested by the Safety Coordinator, or other authorized and designated person. All lost or stolen identification cards shall be immediately reported to the Safety Coordinator or the Owner.

Tours

It is of the utmost importance that a high degree of protection be afforded all persons touring the project site.

The following guidelines shall be complied with by personnel who are responsible for the organization, direction and safe conduct of the tours:

All group tours will be cleared through the Owner's representative and the Safety Coordinator, allowing for maximum notice.

All tours will be coordinated by the Safety Coordinator to accommodate the Project schedule, to make necessary preparations, and to assure safety precautions are observed.

The Safety Coordinator will review the following items with the person requesting the tour:

Number of visitors.

Individual tour groups in non-hazardous areas should be limited to no more than 10 persons per tour guide (i.e. a tour group of 20 will require at least two tour guides).

Clothing

Tour groups will be required to wear appropriate clothing (i.e. slack and low-heeled shoes).

Children

Children under the age of 12 will not be permitted to accompany tours. An adult must accompany each child age 12 to 15. Only those 18 years of age and older are permitted to work on the project.

Protective equipment

Hard hats, boots, raincoats, eye protection, etc., will be supplied as required.

Release and Hold Harmless Agreement

Each visitor will be required to sign this form prior to the start of the tour. In the case of children, an adult must sign for them, preferably a parent.

Immediately prior to entering the project site, all visitors shall be briefed about the need for careful and orderly conduct, including mention of any special hazards, which may be encountered.

Technical and official visitor tours will be conducted in accordance with the above safety precautions. Since technical tours are often conducted through areas of more hazardous work, it is recommended that the number of people on such tours be proportionate to the degree of hazard involved.

Pressure Testing Safety Requirements

Pressure testing involves hazards, such as the release of hazardous energy, being struck by loose fittings or burst pipe. In addition, if an inert gas, such as nitrogen is used, it can displace oxygen and can create an oxygen-deficient atmosphere, which can be harmful or fatal. If flammable gas is used, it can cause an explosion if there is an ignition source.

The following procedure shall set forth the minimum requirements to ensure that pressure testing is performed safely. Contractors shall also develop a site/task specific Job hazard Analysis (JHA), as well as their own procedures for safely pressure testing pipe, and review with the Safety Coordinator prior to starting this activity.

- Contractor performing pressure testing shall barricade area off and place signage restricting access to only authorized personnel.
- Authorized personnel shall wear appropriate PPE consistent with the contractors JHA. (Examples should include: hard hat, safety glasses, face shield, gloves, etc. in accordance with the SDS for testing medium).
- All mechanical devices, such as valves and blinds used to isolate the system shall have a lock and tag affixed by the contractor to prevent accident pressure release.
- Contractor and authorized personnel shall walk down the system and check the integrity of all connections, caps, seals and fittings within the system to be tested to ensure they are secure.
- Contractor shall install additional supports on piping necessary for increased pressure or weight of testing medium.
- Test equipment and gauges shall be inspected by the contractor and confirmed to be in proper working order before testing is begun.
- Maximum test pressure and duration of the test shall be communicated to the contractor's authorized testing personnel and Safety Coordinator.
- Contractor to develop a Venting procedure for dissipating inert gas safely.
- Contractor shall develop a Drain procedure to drain water or other fluids safely, without polluting drains or creating slippery conditions.
- Contractor shall review the JHA with all authorized personnel prior to the test.
- Testing shall be performed under the supervision of the contractor supervisor.
- Testing shall be conducted in accordance with pipe and testing equipment manufacturer's precautions and specifications.
- Test pressure shall not exceed the maximum allowable test pressure for any vessel, pumps, valves, or other components in the system.
- All repairs or adjustments to the system being tested shall be done only after the system pressure is safely and completely relieved and the test gauges indicate 0 psig pressure.
- Only mechanical devices, such as gate or ball valves shall be used for incremental release of flow in depressurizing systems. The opening or 'breaking' of flanges shall never be used as a means of depressurizing a tested system.
- Upon acceptance of the pressure test, pressure in the system shall be completely relieved so that the test gauges indicate 0 psig, and verified by contractor's supervisor.
- Contractor shall conduct all testing in accordance with applicable laws, codes, and ASME B31, B16 and related standards.

SANITATION

Housekeeping

-
-
- The site, work areas, and all premises occupied by contractor's personnel will be maintained in a clean, healthy and sanitary condition.
 - Work areas, passageways and stairs, in and around buildings and structures, shall be kept clear of debris. Construction materials shall be stored in an orderly manner. Storage areas and walkways on the site shall be maintained free of dangerous depressions, obstructions, and debris. Construction equipment shall be stored or placed in an orderly manner.
 - Good housekeeping on the project is mandatory and every employee must do his part daily to minimize dust and to clean up his work area to keep the project clean for safety and efficiency. Controls shall be observed which keep dirt from being tracked into areas outside the workspace. Immediate cleanup is required when dust, dirt or debris may affect the owner's operations.
 - Eating within the construction project shall be confined to areas designated by the Safety Coordinator for such purposes. Employees shall properly dispose of all lunch refuse and drink containers in trash receptacles
 - Failure to maintain adequate housekeeping and to perform daily clean-up will result in the following actions:
 - Written Notice: Upon receipt, the contractor shall take immediate action to perform housekeeping and clean up.
 - If having been given sufficient notice, the contractor fails to clean up; the work will be performed by others, and the errant contractor backcharged for all related costs.
 - Daily and final clean up must be performed in accordance with contract documents.

Facilities

The locations of lunch areas and employee toilet facilities will be designated by Safety Coordinator and approved by the Owner.

Refuse and Garbage

Each contractor will provide an adequate number of covered garbage containers. The site will be cleaned and garbage and refuse will be collected at least daily and removed from the building.

Potable Water

Each contractor shall provide potable water at the work site and test it at least weekly if delivery is from other than municipal supplies.

Sanitary facilities shall be provided for personal hygiene.

SIGNS, SIGNALS, BARRICADES AND LIGHTS (MOTOR VEHICLE EXPOSURE)

Signs, signals and barricades shall be visible at all times where a hazard exists and will be in compliance with ANSI D6.1 (most recent version), Uniform Manual of Traffic Control or regulations promulgated by the local authority.

SCAFFOLD

- The Contractor's designated Competent Person shall inspect all scaffolds prior to each work shift with written documentation provided to Safety Coordinator on a daily basis. All scaffolds shall bear a tag, signed and dated by the contractor's competent person, denoting that the scaffold has been inspected and is safe to use prior to any employee utilizing that scaffold that day.
 - Any contractor using scaffolding shall provide to Safety Coordinator the name of their
-
-

Competent Person along with the content of the Competent Person's training program and proof of Scaffold User Training for all employees who may work on scaffolding.

- Ladder Jack scaffold are not permitted.
- Scaffolds with a width less than 60 inches must have guardrails (top, mid and toe) installed when the work platform is in excess of 48 inches above the floor or lower work area.
- Scaffold cross bracing is not permitted to be used as a substitute for guardrails. Swing gates will be provided at all ladder or stair access points. Where material is being landed on a scaffold, the outrigger extension will not be used to support the material unless it is deemed adequate by the manufacturer and a factor of safety of 4 is provided.
- All non-mobile scaffold frames shall have base plates installed.
- All mobile scaffolds will have wheels locked when in use and stationary.
- Nominal grade lumber is not allowed as scaffold planking.
- All individuals who are in scissor lifts shall wear a full body harness and be tied off by a lanyard to a manufacturer's approved anchorage point within the scissor lift. Standing on guardrails is not allowed. Only approved anchorages shall be used for fall arrest anchorage points.
- A mast climbing elevating work platform that may be adjustable by manual or powered means must meet the requirements of ANSI Standard ANSI/SIA A92.9-1993, American National Standard for Mast- Climbing Work Platforms.

STAIR SCAFFOLDS

- 'System' scaffold stairs shall be erected as early as possible during the building construction to facilitate safe access to all working levels, once the steel erector has released the floor/level to other contractors use. Scaffold stairs shall remain in place until the permanent stairs are constructed and made available for use.
- Stair scaffolds shall be constructed in accordance with manufacturer's instructions by trained and qualified workers under the direction of a competent person.
- Stair scaffolds shall be inspected daily by a competent person, authorized by the Safety Coordinator, at the beginning of each shift. The competent person shall date and initial a Scaffold tag, and place the tag at the entrance to the stair scaffold.
- Stairs used during winter months shall be enclosed to prevent ice and snow from creating slippery conditions. Temporary lighting in accordance with OSHA requirements shall be installed on all enclosed stair scaffolds.

STEEL ERECTION

Erection Plan

- An erection plan will be prepared by the Steel Erector's Qualified Person and reviewed with the Project Safety Coordinator and/or JJC Project Superintendent prior to start of work. Refer to OSHA 1926, Subpart R, Appendix A.
 - The erection contractor's qualified person shall approve all changes in the safety erection plan.
 - A copy of the erection plan shall be maintained at the project site showing all approved changes with a copy provided to the Project Safety Coordinator.
 - The implementation of the erection plan shall be under the supervision of a competent
-
-

person.

- A safe means of access to the level being worked shall be maintained. Climbing and sliding on columns or diagonals, is not allowed.
- Containers, such as buckets or bags, shall be provided for storing or carrying bolts or rivets. When bolts, driftpins, or rivet heads are being removed, a means shall be provided to prevent accidental displacement. Tools shall be secured in such a manner to prevent their falling.
- Fall protection provisions, such as lifeline attachments, dynamic fall restraints and other such devices shall be considered during shop drawing preparation, shall be incorporated in fabricated pieces, and shall have safety lines or devices attached prior to erection wherever possible.
- A tag line shall be used to control all loads.
- For the protection of other crafts on the project, signs shall be posted in the erection area by the erection contractor reading, "*Danger Men Working Overhead*" and only ironworkers allowed in this area. This will include shakeout areas, erection areas and the load travel path from the storage area to the erection area.
- When loads are being hoisted, all personnel are to be prevented from walking under the load.
- No one shall be permitted to ride a load under any circumstances.
- Crane personnel platforms will not be used for any purpose without the written approval of Safety Coordinator.
- Material shall not be hoisted to a structure unless it is ready to be put into place and secured.
- Bundles of metal decking or small material shall be so secured as to prevent their falling out from the rigging.

Fall Protection (See Elevated Work - Fall Protection)

- All workers engaged in steel erection activities including connecting, bolting-up, decking, welding or any other activity that exposes them to a fall of 6 feet or greater shall be provided with and use fall protection. This fall protection shall be either a personal fall arrest system consisting of a full-body harness, double, shock-absorbing lanyard, and anchorage or a safety net or a guardrail. Nether "Controlled Decking Zones" nor "Safety-monitor systems" are permitted. Metal deck is not considered a form of fall protection.
- Fall protection requirements shall be rigorously enforced during steel erection with any observed violation cause for removal from the project.
- Body belts are not permitted as part of a fall restraint system. Only full body harnesses will be used as part of a personal fall protection system.

Perimeter Protection

- A guardrail system of a minimum of two (2) 3/8-inch diameter 7 x 19 galvanized new aircraft cable. Top rail of the wire rope cables shall be erected at 43 ½ inches from the finished floor and the midrail of the wire rope cable shall be installed approximately halfway between the finished floor and the top guardrail- approx. 22 inches.
 - Wire rope guardrails shall be tensioned to 2,400 pounds of force, initially, and maintained to comply with OSHA fall protection requirements. Wire rope guardrails shall
-
-

be installed immediately following the erection of beams and columns. The length of cable shall not exceed 120 feet without being terminated. Cables shall be terminated at all 90 degree turns and shall be 'looped' connections with 3 wire rope clips used at all connections (line splicing is not permitted). All sequence breaks will require a two (2)-cable assembly.

- Steel angle stanchions shall be installed and spacing on perimeter bays shall be as follows:
 - In bays with column spacing greater than 30 feet, at least two intermediate stanchions
 - In bays with column spacing less than 30 feet, at least one intermediate stanchion.
- Steel stanchions used at corners shall have diagonal supports installed to at least 80% of the height of the stanchion.
- Turnbuckles shall be installed on top and midrail wire rope cables at each perimeter side, and at intervals not to exceed 120 feet, or as directed by Safety Coordinator. Loading bays shall have separate guardrail and turnbuckle assemblies installed.

Interior Protection

- Installation of guardrails at interior floor openings, i.e. stair or mechanical shafts, shall conform to one, or a combination of the following:

Option 1

- Install 3/8" galvanized air craft cable through stanchions at 43 ½ inches above finished floor. Terminate cables at 90 degree turns.

Option 2

- Bolt 2 ½" x 2 ½"x ¼" steel angles onto stanchions. A mid-stanchion / post is required for spans greater than 8 feet.

Option 3

- Secure 2"x 4" construction grade lumber to steel stanchions. A mid-stanchion / post is required every 8'
 - Guardrails shall not be used as a horizontal lifeline as part of a personal fall arrest system unless designed by a Registered Professional Engineer and installed under the supervision of the steel erector's competent person.
 - Top and Midrail cables, as outlined above, shall also be used at all sequence breaks.

Stretch and Flex Program

Purpose

Soft tissue injuries are a major source of disabling injuries to our workforce, and result in significant costs and lost productivity to our industry. Warm up stretches before work begins can reduce the incidence and severity of soft tissue injuries. Therefore, all contractors of every tier shall ensure that all employees participate in stretching exercises at the beginning of each workday.

Program Requirements

All contractors and tradesmen are required to design and implement a Stretch and Flex Program for their employees. The purpose of the program is to gently condition the muscles

and tendons of the workers before they engage in their duties in order to avoid injury.

A Stretch and Flex Program shall be developed by each Contractor and submitted to the Project Safety Coordinator prior to commencing activities on site.

Stretch and Flex activities shall be performed every day work activities are scheduled and they shall be performed before the work activities begin. Everyone is required to participate.

Recommendations

Consult with a licensed Physician/Physical Trainer/Stretching Instructor/Yoga Instructor for the most suitable stretches for your work crew.

Incorporate incentives for active participants.

See Appendix E for an example of a Stretch and Flex Program.

Check with your Company's insurance carrier. They may provide services, suggestions and guidance for your company's program.

THIRD PARTY INSPECTIONS

In addition to visits and safety inspections by its own corporate or insurance representatives, Contractor is advised that authorized third parties may inspect the Project from time to time. Among others so authorized are representatives of the Owner and/or its agent, insurance companies and OSHA. Upon their proper identification and clearance through security, they are entitled to access and courteous consideration. Safety Coordinator must be made aware of their presence upon arrival, and in any case as soon as possible, of the purpose and results of such visits which relate to safety.

TEMPORARY HEAT

- No Kerosene, oil fueled, solid fuel burning, or convection heaters (a.k.a. 'Pot' heaters) are permitted.
 - Only gas fired (propane vapor or natural gas), hydronic, steam, electric or infrared heaters are permitted, based on the application and use.
 - Gas heaters must conform to the specifications
 - a. Direct Fired heaters shall conform to ANSI Z 83.7 or Z 83.4
 - b. Indirect Fired heaters shall conform to ANSI Z 83.8
 - c. Infrared heaters shall conform to ANSI Z 83.6
 - d. All flexible connectors must be UL approved and conform to specifications L -83.
 - All heaters shall conform to applicable OSHA, ANSI, UL, NFPA, NEC, and related standards for design, construction, installation, clearance and use, as well as to all local codes. All heaters shall be AGA certified
 - Temporary construction heaters proposed shall be approved for use by the AHJ, the Project Safety Coordinator, and shall conform to the approved Heating plan, and shall also conform to manufacturer installation requirements, applicable Codes and Standards, and local fire official's requirements.
 - Heater supplier and Contractor shall provide their construction heating plan to the x Safety Coordinator for review and approval. This Plan must include specifications for the heaters, and heater and fuel placement and storage, as well as heater maintenance, service and inspection schedule and competent persons to implement the Plan.
 - Whenever heaters are operating during non-working hours, the Contractor may be required by the client, local fire officials, or the Project Safety Coordinator to provide a qualified person to monitor and maintain the heaters. In such cases, the qualified
-

-
-
- person shall be trained by qualified person in the safe operation of the heaters.
- All heaters specified shall be an approved appliance meeting or exceeding safety features outlined in appropriate specifications (see above)
 - Installation of an appliance meeting the following specifications shall be made by a qualified technician according to safety measures as outlined in ANSI 10.10, NFPA – 58, NFPA – 54, U.L., the operators/manufacturers manual, and local codes
 - Installation must be a coordinated effort between the Project Safety Coordinator, the JJC Superintendent, the heating appliance supplier, the fuel supplier and local trades, referring to the heating plan, with instruction.
 - Flammable and combustible material shall be kept away from the heater a minimum of 10 feet or more, as indicated by heating unit manufacturer, local fire authority, owner, or unique conditions of the site.
 - Each heating appliance is to be inspected by a qualified person, at least at the beginning and end of each working day.
 - Contractor shall monitor Carbon monoxide levels when operating heaters indoors and shall ensure levels are below the ACGIH TLV(The American Conference of Governmental Industrial Hygienists Threshold Limit Value of 25 ppm (parts per million or 29 mg/m(3)) as a Time Weighted Average for a normal 8-hour workday and a 40-hour workweek
-
-

TOOL BOX TRAINING

- Instruction and training of employees is an OSHA requirement and, as such, will be required on this project. Examples of such required training to be provided by Contractor are:
 - Newly employed, promoted and/or transferred personnel shall be verbally instructed in the safety practices required by their work assignments.
 - All work assignments must include specific attention to safety. "Follow-up" monitoring is required in order to prevent accidents.
 - OSHA requires that employees performing specific non-routine tasks or operating specific equipment be trained in its usage.
 - Training of contractor personnel is the responsibility of the contractor.
 - Conduct Tool Box safety meetings for all employees at least once a week.
 - Maintain an attendance record by having employees sign the reverse side of the Toolbox Safety Meeting Report, or equivalent form.
 - Complete the Report and submit it to the Project Safety Coordinator's Office within 24 hours after each meeting.
 - File all toolbox meeting reports and summaries so that they are available for review at any time during project operations or for a period of five years following termination of the project.
 - It is the responsibility of Trade Contractor supervision to explain the hazards involved in an assignment to all employees, either individually or in a group before they actually begin an assigned task.
 - This task may only require a few words, but in many cases it will require the actual demonstration of how the project can be done safely and the pointing out of the hazards that may be or will be encountered in any task.

WELDING, CUTTING AND BURNING – HOT-WORK

Electric Arc Welding

- A suitable, approved fire extinguisher shall be ready for instant use in any location where welding is done. Screens, shields, or other safeguards should be provided for the protection of men or materials, below or otherwise exposed to sparks, slag, falling objects, or the direct rays of the arc.
- A dedicated fire watch shall be present at all welding operations and remain for at least 1 hour after the hot work has halted.
- The welder shall wear approved eye and head protection. Men assisting the welder shall also wear protective glasses, head protection and protective clothing. Adequate exhaust ventilation shall be maintained at all welding and cutting work areas.
- Electric welding equipment, including cables, shall meet the requirements of the National Electric Code.
- All arc welding and cutting cables shall be of the completely insulated flexible type capable of handling the maximum current requirements of the work.
- Cables in need of repair shall not be used.
- The frames of all arc welding and cutting machines shall be grounded either through a third wire in the cable connecting the circuit connector or through a separate wire which is grounded at the source of the current.
- All ground connections shall be inspected to insure that they are mechanically strong and electrically adequate for the required current.
- Welding practices shall comply with all applicable regulations.

Gas Welding or Cutting

- When gas cylinders are stored, moved, or transported, the valve protection cap shall be in place.
- When cylinders are hoisted, they shall be secured in an approved cage or basket. The valve cap shall never be used for hoisting.
- All cylinders shall be stored, transported, and used in an upright position. If the cylinder is not equipped with a valve wheel, a key shall be kept on the valve stem while in use.
- At the end of each work day or if work is suspended for a substantial period of time, compressed gas cylinder valves must be closed, regulators removed and properly stored.
- Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces.
- Cylinders containing oxygen or acetylene or other fuel gas shall be stored in designated areas outside the structure as approved by Safety Coordinator.
- No one shall use a cylinder's contents for purposes other than those intended by the supplier.
- All hose used for carrying acetylene, oxygen or other fuel gas shall be inspected at the beginning of each working shift. Defective hose shall be removed from service.
- Oxygen cylinders and fittings shall be kept away from oil and grease. Oxygen shall not be directed at oily surfaces, greasy clothes or hands.
- Regulators, gauges, backflow check valves, and torches shall be kept in proper working order.

- An approved fire extinguisher shall be readily available.
- Flash arrestors are required on the oxygen and acetylene hoses, at the regulators.
- Appropriate personal protective equipment, such as burning glasses, shields, and/or gloves shall be used. Adequate exhaust ventilation shall be maintained at all welding and cutting work areas.
- Work permits shall be obtained daily, prior to any burning or cutting operations on the site.

WORK PERMIT PROCEDURES

General Procedures

- A copy of this section of the Project Safety Plan will be issued to all Contractors, and will serve as notice by the Project Safety Coordinator that a work permit as specified by the Project Safety Coordinator is necessary before starting any hazardous work activity.
- The work permit shall be obtained from the Project Safety Coordinator before starting each day's work. The procedures for initiating a hazardous work permit are listed on the permit application appropriate to the type of work.
- Hazardous work Permits include, but are not limited to the following activities: Hot Work, Confined space entry, Guardrail removal, Line Breaks, after Hours work, Trenching and excavation, Crane use and Barricade installation.
- Additional job-specific hazardous work permits may be required, due to special project conditions, to be incorporated into the project safety plan. These will also be considered as a contract commitment.

Hot Work

- Hot work is defined as a process or procedure, which could result in a fire if not properly controlled. Common types of hot work are welding, burning, cutting, brazing, soldering.
- Hot work will usually be permitted only during normal working hours. Permits will be issued the day before work is to be accomplished, and the work area will be inspected to verify that adequate control has been established.
- A copy of the permit will be available at the point of work. An adequate number of fire extinguishers will be available within 50-feet of the point of work for which a permit is issued.
- The Contractor will take the necessary precautions when welding or burning above walls to assure that protection is maintained on both sides of the wall and that areas below are protected on multilevel buildings.

Confined Space

- When work in confined spaces is scheduled, such as a caisson, boiler, deep excavations, etc., consideration must be given to two major known and recognized hazards:
 - The possibility of fire or explosion, flammable gases, fumes, vehicle fumes, vapors, or dusts.
 - The possibility of injury to the worker (or loss of consciousness) as a result of inhalation or absorption through the skin of toxic materials or from oxygen deficiency.
 - For work in a confined space, the responsibility for recognition and advance notification is the Contractor's. The Project Superintendent and the Project Safety Coordinator will be notified and will evaluate the situation, issuing a work permit in those cases for which
-

he considers it necessary. The Contractor will be responsible for providing equipment and special instructions for the worker, such as ventilating units, respirators, safety belts and life lines, etc., and for conformance to all applicable OSHA standards.

- It is required that the "buddy system be used and that an observer will tend all workers in a confined space. Rescue procedures should be agreed upon beforehand.

Guard Rail Opening

The Project Superintendent and the Project Safety Coordinator may approve work, which requires the opening of guardrails or the removal of holes covers to be performed, in advance. Particular attention shall be given to the alternate means of fall protection, which will be required to safely perform the work and protect other workers in the vicinity of the fall exposure. Specific plans for providing alternate fall protection shall be described in the request for the work permit.

Off-Hours Work

The Project Superintendent and the Project Safety Coordinator shall approve work, which is required to be performed outside normal working hours established at the site, in advance. Any work occurring within the existing Owner facility shall be at the convenience of the Owner, and shall comply with all conditions imposed by the contract specifications and the work permit issued by the Project Safety Coordinator or other persons identified by the Owner.

OWNER REQUIREMENTS

Refer to the attached Owner Requirements for additional provisions, which must be followed.

APPENDIX A TABLE OF FINES

Violation	First Offense	Second Offense
Assured Grounding Program violation	\$200	\$400
Clothing not adequate	\$50	\$100
Confined Space violation	\$1000/ Removal	N/A
Electrical Cord defective	\$250	\$500
Electrical cords not protected on floor or not raised	\$250	\$500
Equipment violation	\$250	\$500
Eye Protection Missing	\$250	\$500
Failure to protect public	\$1000	\$2000
Fall Protection not present	\$1000/ Removal	N/A
Fire Extinguisher missing	\$500	\$1000
Fire Watch missing	\$500	\$1000
Footwear not adequate	\$100	\$200
Gas Cylinders stored incorrectly/not identified	\$200	\$400
General Duty Violation	\$500	\$1000
Guard Rail removal	\$1000/ Removal	N/A
Hard Hat Missing	\$250	\$500
Hearing Protection missing	\$250	\$500
Hot Work Permit missing	\$500	\$1000
Housekeeping poor	\$500	\$1000
Ladder defective	\$250	\$500
Ladder not secured	\$500	\$1000
Lockout violation	\$1000	\$2000
Material storage improper	\$500	\$1000
SDS missing	\$100	\$200

Open Hole	\$1000/ Removal	N/A
Orientation not attended	\$200	\$400
Power Tool defective	\$500	\$1000
Scaffold Violation	\$500	\$1000
Smoking in non-designated area	\$500	\$1000
Standing on top of Ladder	\$500	\$1000
Tool Box Meeting not held	\$100	\$200
Traffic citation	\$50	\$100
Trench/Excavation Permit missing	\$200	\$400
Trenching violations	\$2000/ Removal	N/A
Uncertified Lifting Device	\$500	\$1000
Urinating/Defecating in building	\$1000/ Removal	N/A
Written Haz Com Program missing	\$100	\$200
Hand protection violation	\$250	\$500
Radio and headsets	\$250	\$500
Infection Control violation	\$1000	\$2000

APPENDIX B

HAND PROTECTION REFERENCE

PURPOSE

To aid in the prevention of hand and finger injuries when performing construction operations.

OBJECTIVE

- ◆ To ensure hand protection is used in situations where there are known hazards present.
- ◆ Identify specific areas which historically have caused injuries.
- ◆ Establish mandatory guidelines for the use of hand protection.

SCOPE

This procedure identifies specific situations which require the use of hand protection, but is not meant to be all inclusive. Other situations not identified in this document should be identified/reviewed during pre-task planning. Gloves should be worn for hand protection in any situation where exposure to hazards exist.

Procedure

◆ **Mandatory Hand Protection While Working**

- **When metal materials with sharp edges are being handled such as:**

- ❖ Handling or working around sheet metal siding, roofing, etc.
- ❖ Metal unistrut materials and all thread rods
- ❖ Handling or working around tie-wire
- ❖ Handling metal floor grating
- ❖ Handling wire rope during rigging operations
- ❖ Handling or working around metal studs
- ❖ Handling of metal duct work

- **Cutting operations involving hand-held, non power-operated cutters:**

- ❖ Using hand-held tubing cutters for cutting metal and hard plastic-type piping
- ❖ Using hack saws for cutting metal
- ❖ Using cross-cut saws for wood cutting

- **Handling of wood materials:**

- ❖ Placing plywood sheeting on floors, scaffolds, etc.
- ❖ Unloading and loading wood of any type

- ❖ Moving and transfer of wood
 - **Concrete operations where hands are exposed:**
 - ❖ Power and hand troweling operations
 - ❖ During the cleaning of chutes used for delivery of concrete
 - ❖ During concrete removal operations
 - **During the use of utility knives or exacto knives:**
 - ❖ Cutting sheet rock
 - ❖ Trimming wire sheathing or other stripping operations
 - ❖ Cutting insulation
 - ❖ Trimming temporary plastic walls
 - ❖ Cutting/scoring paper, vinyl tiles, etc.
 - **Sharpening knives, saws and blades**
 - **While pulling wire in or around electrical panels**
 - **While performing Energized Electrical Work (EEW) operations**
 - **During use of impact-type tools:**
 - ❖ Using impact hammers to chip concrete
 - ❖ Using jackhammers on concrete and similar operations
 - ❖ Using fence post drivers for driving posts and/or stakes
 - ❖ Using power-actuated power tools
 - **During welding operations**
 - **While operating a grinder:**
 - ❖ The grinding helper shall also utilize gloves to prevent impalement by flying debris
 - **Working on or near materials affected by extreme temperatures:**
 - ❖ Mechanics working on or around hot parts
 - ❖ Workers performing operations around refrigerant or argon lines
 - **Handling hazardous materials which require the use of hand protection to avoid skin contact, as indicated on the Safety Data Sheet (SDS) for the material, to include but not limited to:**
 - ❖ Paints, solvents, adhesives, caustics or corrosives
 - ❖ Petroleum products such as gasoline, diesel, hydraulic fluids and used motor oil

- Working with glass materials where the edges are exposed and present a hazard
- Personnel involved in the removal and handling of trash
- Protective gloves may be worn for hand protection in the Clean Rooms when hands are exposed to hazards described by this procedure. Clean Room Protocol should be contacted to review glove selection for work performed within the Clean Room

Different exposures require the use of different types of gloves. Evaluate each situation to ensure which is the appropriate type of hand protection. (See chart below)

OPERATION	GLOVE TYPE
Energized Electrical Work (EEW)	Electrically insulated-rated rubber gloves with leather protectors
Welding operations	Gauntlet-type leather welding gloves
Grinding Operations	Tight-fitting leather gloves
Exposure to sharp edges & metal burrs (handling ductwork, metal studs)	Cut-resistant gloves (Kevlar® or tight-fitting leather)
Utility knives, hacksaws, & cross-cut saws	Cut-resistant gloves (Kevlar®)
Concrete work	Rubber or leather gloves
Exposure to petroleum products	Chemical-resistant gloves per the SDS requirements & manufacturers requirements (Neoprene, PVC, Nitrile or Rubber) *
Exposure to hazardous materials such as solvents, paints, adhesives, etc.	Chemical-resistant gloves per the SDS requirements & manufacturers requirements (Neoprene, PVC, Nitrile or Rubber) *
Working around machinery	Tight-fitting leather gloves should be utilized when hand protection is necessary around rotating equipment to prevent entanglement of gloves/hands in machinery Kevlar® heat resistant gloves and sleeves. Tight-fitting leather gloves.

OPERATION	GLOVE TYPE
Proximity & exposure to excessive heat, or hot piping and equipment.	Tight-fitting leather gloves.
Using saws – portaband, and reciprocating.	Cut-resistant gloves - Kevlar®
Handling wire rope/rigging.	Tight-fitting leather gloves
Handling glass	
Handling wood	

GLOVES *

Neoprene – Protects from acids, caustics, oils, greases and many solvents

PVA – protects from aromatics, ketones and chlorinated solvents (Xylene, Trichloroethylene)

Butyl – protects against common organic acids and caustics, alcohols, esters, acetone and ketones

PVC – protects against chemicals, oil and greases, acids and petroleum hydrocarbons

Nitrile – protects against greases, oils, acids and solvents

APPENDIX C **TOWER CRANE ERECTION AND DISMANTLING PROCEDURE**

Background:

Given the numerous and tragic tower crane accidents that have occurred around the country in recent months, Safety Coordinator Building Company has issued this Policy to control the risks associated with the erection, climbing/jumping and dismantling of cranes on our projects.

Applicability:

This Policy applies to all projects and must be included in all current and future Bid packages.

Tower Crane Safety Coordination Meeting

Prior to the planned erecting, dismantling or jumping of tower cranes, a 'Safety Coordination Meeting' shall be conducted with Safety Coordinator Building Company and the following stakeholders as applicable.

The stakeholders that must be present at the meeting shall be:

- a. General Contractor Superintendent / Designee
- b. Subcontractor providing, leasing or using the crane
- c. Independent Third party Crane Inspector
- d. Crane Operator and Oiler
- e. Lead Tower Rigger (and Rigging Crew, if available)
- f. Assembly/Disassembly Director
- g. Crane Site Safety Coordinator
- h. Site Safety Manager
- i. Flagmen/Communications Personnel
- j. All Other Personnel Taking Part in the Operation
- k. State or local regulatory agency representative, if applicable.

The following topics are to be covered during the Tower Crane Safety Coordination meeting:

Scope and sequence of work

Site and Logistics Plan

Crane mat engineered design drawings

Roles and responsibilities

Required Licenses and certifications

Rigging to be used (including softening material if nylon web slings used)

Inspection scope and frequency of all rigging equipment, materials and tools prior to erection, dismantling and raising/lowering

Rigging diagrams, capacities and specific sequence of rigging operations

Engineering specifications and inspection schedule of all equipment including but not limited to collars, ties, and bolts

Permit validity and qualifications and training of personnel

A Plan for tower cranes during inclement weather, including relevant weather warnings and compliance with manufacturer's manual (including maximum recommended wind speeds for erection/dismantling, and anemometer equipment/location)

All Loads weights of tower crane components and lifting components and capacities (a scale on site to verify the weights is preferred)

Communications systems

Self-rescue devices for the operator and tower riggers

All engineered drawings and certifications

Foundation designs and structural bracing design and installation

Crane Installation inspection (see note)*

Specifications of the assist/erection Crane and rescue crane.

*Inspection & Certification: A third party independent Tower Crane inspector shall inspect all tower crane components upon arrival to the project to ensure they were not damaged during transport. Once fully erected, the third party Tower Crane inspector for the crane must provide Safety Coordinator Building Company with a certified and signed report stating that he or she has inspected the crane installation. This certified report must verify that the crane is installed in accordance with plans filed with Safety Coordinator and the city or state where applicable, and that the third party Tower Crane inspector for the crane has reviewed the appropriate technical testing records, including torque, plumb, and magnetic particle reports for the crane. In addition, once every twelve (12) months, the crane shall be inspected by a qualified 3rd party, independent crane inspector.

The engineer of record for the crane must submit written plans and specifications to Safety Coordinator and the applicable state or federal agency that detail the erection, jumping and dismantling procedure for the crane that is to be erected, jumped or dismantled at the site. These plans must be prepared by the licensed engineer and in conjunction with the licensed rigger and must be received prior to the safety coordination meeting.

During the safety coordination meeting the Plan for the Erection, Dismantling, Raising & Lowering of the Tower Crane ('The Plan') shall be reviewed.

The Plan for Erection, Dismantling, Raising & Lowering of the Tower Crane shall include:

Crane set up procedures, including steps for on-site assembly of the Tower crane and assist crane.

A written job plan which describes the intended operation of the subject crane including specific uses of the crane and the nature and weight of anticipated loads.

A site specific Job Hazards Analysis describing the steps involved in tower crane erection, jumping, dismantling and operation, the related hazards, and the controls to be implemented to mitigate these hazards. (Note-the JHA shall also address protection from fall hazards to the erection crews, and fall rescue.).

The sequence of jumping operation

Climbing schedule, in advance.

Rigging materials to be used

Weights of all crane components

Site Logistics plans including:

Crane swing radius plans, including plans to ensure multiple tower cranes on site will not strike each other.

Site plans showing ground storage space for each component, including truck positioning and off-loading activities as well as assembly area.

A description of the relationship of the crane to the building under construction, including minimum clearances between the tower, counter-weights, jibs, and any other relevant moving parts of the crane to parts of the building, including thrust-outs, cornices, window bays, and any other fixed points.

A description of the maximum permissible radius and load ratings for the configuration and the site location of the tower crane, and the building component weights to be lifted.

Description of the proximity of high voltage overhead powerlines to the operating radius of the tower crane, and tower electrical grounding methods.

Communication plans for ground-men, riggers and other crane operators and others on site.

Identification of each lift with respect to weight, the necessary mobile crane reach and rigging accessories required (refer to Safety Coordinator Crane Lift Plan). A scale on site to verify the weights of each component is recommended.

Counter-weight specifications if they are prepared on site.

Safety, proximity and redundancy systems and limit switches to be installed

Size of banners to be applied as 'wind sails', (Note- banners, signs or flags cannot be affixed to any mast or jib section, per manufacturer's instructions.)

Location and type of wind measuring devices and manufacturers maximum recommended wind speeds for erection, climbing, dismantling, and operation.

Certifications, including:

Operators shall have current applicable state Hoisting license (or where no applicable state Hoisting license is issued) shall hold a current certification by NCCCO as a certified tower crane operator.

Riggers shall be qualified, and may be required to hold a current certification by NCCCO as a certified rigger.

Riggers who rig (connect) loads lifted by a tower crane shall be qualified to ANSI A10.42 , or hold a current certificate by NCCCO as a certified Rigger.

Signalpersons who provides hand or verbal signals to a tower crane operator shall be qualified and trained, or hold a current certificate by NCCCO as a certified Signalperson.

Written statement of each crane operator's experience and qualification to operate the type of tower crane utilized, shall be included with the copy of applicable state issued license or NCCCO certificate.

A certification issued by a state-licensed Crane Certifier and/or independent third party crane inspector for subject tower crane, current to within 1 year of the operation period of the crane on the project.

The manufacturer's erection sequence for counter-jib, jib, counter-weight machine deck, and tower spire and procedures for installation of jib and counter-jib support pendants.

The type and calibration of torque wrenches and/or belt-stretchers and the procedure to be used for all tower sections and slew-ring bolts, including re-torquing after final assembly.

A procedure for written verification of all slew-ring and tower section bolt torques to be maintained at the worksite or on the crane.

Documentation of compliance with FAA and other state and local permits as applicable.

A plan stamped by a Registered Professional Engineer detailing the tower crane supports, such as foundation, railway, floor support and tie-in collars, as well as soil stability and bearing capacity, reinforced steel design, foundation tower anchor placement and concrete specifications.

Verification by the crane employer that during the time periods of erection, climbing and dismantling of the tower crane, a third party independent Tower Crane inspector will be present on site to assure that such processes and operations are performed in accordance with the manufacturer's recommendations and any applicable state and federal safety regulations.

Verification that the erection, dismantling, raising and lowering of the tower crane will be conducted in compliance with the manufacturer's recommendation for the specific crane.

Verification that, before each climb, the following have been performed:

Inspection of the load bearing members of the climbing and support system

Balancing the crane per the manufacturer's instructions

Inspection of the crane to determine that there are no obstructions to the free movement of the mast (tower).

Verification that no employees, other than those engaged in the erection, climbing or dismantling of the crane, are to be permitted in the area below the crane during erection, climbing and dismantling work. This 'exclusion zone' below the crane shall be that open area below the current activity where employees are exposed to potential hazards within the maximum radius of the crane measured from its base.

In addition, erection, climbing/jumping or dismantling shall be conducted off hours, or weekends-when no other workers, other than those engaged in the erection, climbing and dismantling of the crane, are present.

Further, only those workers actually engaged in erection, climbing or dismantling of the crane shall be allowed on the crane during the erection, climbing or dismantling processes. No other work shall be performed on the crane while these processes are taking place.

Inspections and Testing (including):

An inspection conducted by a state-licensed independent Tower Crane inspector for subject tower crane prior to erection, upon erection and every 3 months, or bi monthly in adverse conditions, and after lighting strikes or significant environmental events, and after tower erection or jump.

Capacity testing of tower crane after erection and climbing. This shall be performed with a known weight to ensure proper calibration, per manufacturer's instructions.

Proof Load testing in accordance with manufacturer's requirements within 12 months preceding the cranes arrival and use on site.

Visual, and functional motion tests on all systems and components by the third party tower Crane inspector in accordance with manufacturer's requirements. In addition, the inspection shall include, but not limited to: non-destructive testing and x-ray welds, visual inspection of boom lattice, turntable, bolts, pins, load blocks, weight ball, slings, hoist lines, limit switches,

counterweights, walking surfaces, braces and collars, etc.

Non-destructive inspection of all welds and magnaflux testing on all suspect welds.

Inspection responsibilities of supervisors, inspection intervals and what is to be inspected, i.e., a written crane inspection program.

A written crane maintenance and preventive maintenance program.

A written testing schedule (in accordance with manufacturers requirements and ASME B30.3) for functional motions, limiting devices and brakes, including, but not limited to: load hoisting and lowering, boom hoisting, lowering and traversing the trolley, swing motion, brakes and clutches, and limit, locking and safety devices.

Safety meeting intervals, who will conduct meetings and what general and specific topics will be discussed.

Safety Log. The General Contractor, or his or her designee, shall keep a log on site and available at all times of all safety coordination meetings held, inspection logs, certifications, engineering plans, work orders, manufacturers specifications, etc.

General – all provisions of 1926.14000 and 1926.1435 shall be complied with, unless stricter requirements are specified herein.

LABOR MANAGEMENT PROJECT AGREEMENT

This Agreement is entered into this ____ day of ____, 20__ by and between Joliet Junior College, Illinois Community College District 525 of Will, Grundy, Kendall, LaSalle, Kankakee, Livingston, and Cook, Illinois, (hereinafter called the "Owner"); and _____ (hereinafter called the "Project Contractor"); and the _____ Building Trades Council (hereinafter called the "Union"), acting in their own behalf and on behalf of their respective affiliates and members; and the THREE RIVERS CONSTRUCTION ALLIANCE, acting on their own behalf and on the behalf of their respective affiliates and members, with respect to all construction projects at Joliet Junior College, which includes the Master Plan and Capital Improvement Plans thru August 2013, located in Will County, Illinois.

WITNESSETH:

WHEREAS, to accomplish the goals of quality, cost effectiveness and timelessness requires that all participants exhibit a positive attitude intent on success; and

WHEREAS, there must exist amongst all parties a willingness to cooperate fully in devoting themselves to the goals of the Project; and

WHEREAS, this program has no room for adverse relationships, but only a true spirit of cooperation and commitment; and

WHEREAS, it is essential that the work required to construct this Project be accomplished in an efficient and economical manner so as to provide productivity, the highest levels of quality and the total elimination of delays thereby fostering new plateaus in labor/management cooperation; and

WHEREAS, Joliet Junior College, Illinois Community College District 525 of Will, Grundy, Kendall, LaSalle, Kankakee, Livingston, and Cook, Illinois, (hereinafter referred to as

the "Owner"), its general Contractor(s), its subcontractor(s) of whatever tier, the local Building Trades Council, the THREE RIVERS CONSTRUCTION ALLIANCE dedicate themselves to the goal that together, in full cooperation, local labor, and management will produce a project of excellent quality, as economically as possible, in a safe environment, under favorable working conditions; and

WHEREAS, nothing contained herein shall prevent the Owner from considering bids for the Project so long as the General Contractor and its Subcontractors agree to abide by the terms and provisions of this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants above-contained and other good and valuable consideration, as hereinafter set forth, the parties do hereby agree as follows:

SECTION 1. Introduction

It is understood by the parties to this Agreement that other contractors awarded construction work directly or indirectly by the Owner will execute this Agreement and become signatory contractors for the purpose of this work.

The intent of the parties to this Agreement is to establish labor and management cooperation between the Owner, Project Contractor, all Contractors and Subcontractors performing construction work in this Project site, and the appropriate Unions signatory to this Agreement for the express purpose of producing a quality project on schedule, and, as economically as possible, in a safe environment under favorable working conditions.

SECTION 2. Scope of the Agreement.

A. This Project Agreement shall apply and is limited to the recognized and accepted historical definition of new construction work under the direction of and performed by the

Contractor(s), of whatever tier, which may include the Project Contractor, who have contracts awarded for such work on the Project. Such work shall include site preparation work and dedicated off-site work.

It is agreed that the Project Contractor shall require all Contractors of whatever tier who have been awarded contracts for work covered by this Agreement, to accept and be bound by the terms and conditions of this Agreement by executing the Letter of Assent (Attachment A) prior to commencing work. The Project Contractor shall assure compliance with this Agreement by the Contractors. It is further agreed that, where there is a conflict, the terms and conditions of this Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except for all work performed under the NTL Articles of Agreement, and the National Stack/Chimney Agreement, the National Cooling Tower Agreement. All instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Section 4, 5 and 6 of this Agreement, which shall apply to such work.

B. Nothing contained herein shall be construed to prohibit, restrict or interfere with the performance of any other operation, work, or function which may occur at the Project site or be associated with the development of the Project.

C. This Agreement shall only be binding on the signatory parties hereto and shall not apply to their parents, affiliates or subsidiaries.

D. The Owner and/or the Project Contractor have the absolute right to select any qualified bidder for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such bidder and any party to this Agreement;

provided, however, only that such bidder is willing, ready and able to become a party to and comply with this Agreement, should it be designated the successful bidder.

E. The provisions of this Agreement shall not apply to Owner, and nothing contained herein shall be construed to prohibit or restrict Owner or its employees from performing work not covered by this Agreement on the Project site. As areas and systems of the Project are inspected and construction tested by the Project Contractor or Contractors and accepted by the Owner, the Agreement will not have further force or effect on such items or areas, except when the Project Contractor or Contractors are directed by the Owner to engage in repairs, modifications, check-out, and warranty functions required by its contract with the Owner during the term of this Agreement.

F. It is understood that the Owner, at its sole option, may terminate, delay and/or suspend any or all portions of the Project at any time.

G. It is understood that the liability of any employer and the liability of the separate unions under this Agreement shall be several and not joint. The unions agree that this Agreement does not have the effect of creating any joint employer status between or among the Owner, Contractor(s) or any employer.

SECTION 3. Labor-Management Cooperation Committee

The parties to this Agreement hereby reaffirm the necessity for joint cooperation and participation by Labor and Management in interpreting and analyzing the effectiveness of management's application of this Agreement as well as Labor's response and any other matter affecting quality, safety, working conditions and productivity. Therefore, to secure this end, it is hereby agreed that a "Labor-Management Cooperation Committee" will be established composed of three representatives from Labor and three representatives from Management; one

representative from labor and one from Management shall be Co-Chairpersons of this Committee.

The Labor-Management Cooperation Committee shall meet a minimum of once each month, at the job site, and shall discuss the following; reports concerning any violation, dispute, questions or interpretation of the application of practices arising out of this Agreement; safety; working conditions; absenteeism; labor turnover; availability of qualified journeymen; need for training; and any other matter affecting productivity and efficiency on this project.

In the event a dispute is not resolved by the Labor-Management Cooperation Committee, such matter shall then be settled as outlined by the grievance procedure and/or arbitration provisions contained in Section 6 or 7 of this Agreement. The Labor-Management Cooperation Committee shall have no authority to render a decision involving a jurisdictional dispute.

SECTION 4. Contractor's Commitment

A Work assignments will be made in accordance with area practice, consistent with the efficient and economical performance of the work.

B. Before performing the work at the job site, the Contractor or Subcontractors of whatever tier actually performing the work will become signatory to the appropriate collective bargaining agreement.

C. The Contractors and Subcontractors shall exercise their management rights. These rights shall include planning, directing, hiring, dismissal, lay-off, transferring, appointing foremen and general foremen and otherwise directing the work force.

D. The Project Contractor agrees that neither it nor any of its contractors or subcontractors will subcontract any work to be done on the Project except to a person, firm or corporation who is or agrees to become party to this Agreement. Any contractor or subcontractor

working on the Project shall, as a condition to working on said Project, become signatory to and perform all work under the terms of this Agreement.

SECTION 5. Union (Craftsman) Commitment

A. Qualified and skilled craftsmen will be furnished as required by the Contractor in the fulfillment of its obligations of the Owner.

B. Craftsmen shall be at their place of work at the regular starting time and shall remain at their place of work until quitting time. There shall be no limit on production by Craftsmen nor restrictions on the use of tools or equipment other than that which may be required by safety practice.

C. Where stewards are appointed by respective unions, the steward shall be qualified craftsmen performing the work of his craft who shall exercise no supervisory functions. There shall be no non-working stewards.

SECTION 6. Disputes and Grievances

A. This Agreement is intended to provide close cooperation between management and labor. Each of the Unions will assign a representative to this Project for the purpose of completing the construction of the Project economically, efficiently, continuously, and without interruptions, delays, or work stoppages.

B. The Contractors, Unions, and the employees, collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of the work of the Project, and agree to resolve disputes in accordance with the grievance-arbitration provisions set forth in this Article.

C. Any question or dispute arising out of and during the term of this Project Agreement (other than grievances not covered by a local Collective Bargaining Agreement or trade

jurisdictional disputes) shall be considered a grievance and subject to resolution under the following procedures:

Step 1. (a) When any employee subject to the provisions of this Agreement feels he or she is aggrieved by a violation of this Agreement, he or she, through his or her local union business representative or job steward, shall, within five (5) working days after the occurrence of the violation, give notice to the work-site representative of the involved Contractor stating the provision(s) alleged to have been violated. The business representative of the local union or the job steward and the work-site representative of the involved Contractor and the Project Contractor shall meet and endeavor to adjust the matter within three (3) working days after timely notice has been given. The representative of the Contractor shall keep the meeting minutes and shall respond to the Union representative in writing (copying the Project Contractor) at the conclusion of the meeting but not later than twenty-four (24) hours thereafter. If they fail to resolve the matter within the prescribed period, the grieving party may, within forty-eight (48) hours thereafter, pursue Step 2 of the Grievance Procedure, provided the grievance is reduced to writing, setting forth the relevant information concerning the alleged grievance, including a short description thereof, the date on which the grievance occurred, and the provision(s) of the Agreement alleged to have been violated.

(b) Should the Local Union(s) or the Project Contractor or any Contractor have a dispute with the other party and, if after conferring, a settlement is not reached within three (3) working days, the dispute may be reduced to writing and proceed to Step 2 in the same manner as outlined herein for the adjustment of an employee complaint.

Step 2. The International Union Representative and the involved Contractor shall meet within seven (7) working days of the referral of a dispute to this second step to arrive at a

satisfactory settlement thereof. Meeting minutes shall be kept by the Contractor. If the parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days thereafter.

Step 3. (a) If the grievance has been submitted but not adjusted under Step 2, either party may request in writing, within seven (7) calendar days thereafter, that the grievance be submitted to an Arbitrator mutually agreed by them. The Contractor and the involved Union shall attempt mutually to select an arbitrator, but if they are unable to do so, they shall request the American Arbitration Association to provide them with a list of arbitrators from which the Arbitrator shall be selected. The rules of the American Arbitration Association shall govern the conduct of the arbitration hearing. The decision of the Arbitrator shall be final and binding on all parties. The fee and expenses of such Arbitration shall be borne equally by the Contractor and the involved Local Union(s).

(b) Failure of the grieving party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the parties involved at the particular step where the extension is agreed upon. The Arbitrator shall have the authority to make decisions only on issues presented to him or her, and he or she shall not have authority to change, amend, add to or detract from any of the provisions of this Agreement.

D. The Project Contractor and Owner shall be notified of all actions at Steps 2 and 3 and shall, upon their request, be permitted to participate in all proceedings at these steps.

SECTION 7. Jurisdictional Disputes

A. The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the

Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

B. All jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers, parties to this Agreement, shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Unions parties to this Agreement.

C. All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor's assignment shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

D. Each Contractor will conduct a pre-job conference with the appropriate Building and Construction Trades Council prior to commencing work. The Project Contractor and the Owner will be advised in advance of all such conferences and may participate if they wish.

SECTION 8. Joint Commitment (Contractor/Union)

A. Utilization of Union apprentices will be maximized consistent with the best interest of the job in compliance with Local Union Agreements. The high level of union apprenticeship training will be maintained to provide the Industry with productive and knowledgeable craftsmen for the long term.

B. Every reasonable and practicable measure, consistent with the protection of human-dignity, will be taken to assure a work place free of alcohol and drugs. The use of liquor, drugs or any other illegal activities at the Project site, including parking lots, is strictly prohibited.

C. Employees will take their breaks only in their immediate work areas.

D. Acknowledging the safety concerns of Owner and its risk management professionals, we assure the Owner that the parties are committed to safe working practices on the project. The parties, drawing upon the comprehensive safety programs and resources developed by the union construction community, will comply with federal, state and local safety regulations. Both contractors and union craftsmen are well trained in safety practices and commit themselves to applying such practices on this job.

E. The Contractors and Unions agree that there will be no lockouts or work stoppages.

(1) The Contractors and Subcontractors shall not cause, incite, encourage or participate in any lockout of employees on the project during the term of this Agreement.

(2) The Union and its members, agents, representatives, and employees shall not allow, incite, encourage, condone or participate in any strike, walkout, slowdown, picketing, sympathy strike or other work stoppage of any nature whatsoever, whether jurisdictional or otherwise, or observe any picket of any nature during the term of this Agreement. Any such action by the Union or its members, agents, representatives or employees shall be considered a violation of this Agreement.

(3) All employees shall continue to work and to perform all their obligations on the project despite the expiration of any local or other collective bargaining agreement. Any future wage or fringe benefit increase, decrease or modification legally negotiated and established by appropriate local collective bargaining agreement of the Local Unions which are signatories to this Agreement shall be paid retroactively to the expiration date of the preceding local Agreement.

(4) Should any unauthorized strike, slowdown, stoppage of work or interference with construction occur, the Union shall take all necessary steps to bring such activity to a prompt resolution.

SECTION 9. Helmets To Hardhats

A. The Contractors and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

B. The Unions and Contractors agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

SECTION 10. Term of Agreement.

A. This Agreement shall become effective on _____, 20____, and shall remain in full force and effect as long as signatory contractors are working on this project.

B. Any of the undersigned parties shall have the right to terminate this Agreement by notifying all other parties in writing, within at least thirty (30) calendar days from the proposed termination date.

SECTION 11. Notices

The address and telephone number of all of the undersigned shall be on file with Owner's Director of Facility Services at the Highland Building, 1215 Houbolt Road, Joliet, Illinois, 60431, Attention: Patrick VanDuyne. All notices, request and other communications under this Agreement shall be in writing and shall be personally served or sent by certified mail, postage prepaid, return receipt requested, facsimile, or by licensed overnight courier to the appropriate party at the address set forth below or as may otherwise be on file with the Director of Physical Plant as provided herein. Notice shall be deemed given at the time delivered, if personally delivered, at the time indicated on the duly completed postal service return receipt, if delivered, at the time indicated on the duly completed postal service return receipt, if delivered by certified mail, at the time the facsimile is transmitted, if delivered by facsimile, or on the next business day after such notice is sent, if delivered by overnight courier. If a person elects to change their address, they shall do so by notifying the Owner's Director of Facility Services in the manner as provided for herein for the delivery of a notice.

SECTION 12. Miscellaneous Provisions.

A. Assignment. No party may assign its rights hereunder without the prior written consent of the other parties.

B. Entire Agreement. This Agreement contains the entire agreement between the parties with respect to the subject matter hereof and may not be modified, except in writing signed by the parties hereto. Furthermore, the parties hereto specifically agree that all prior agreements, whether written or oral, relating to the subject matter hereof shall be of no further force or effect from and after the date hereof.

C. Non-Partnership. This Agreement shall not create a partnership, joint venture or other joint enterprises between the parties hereto.

D. Severability. If any phrase, clause or provision of this Agreement is declared invalid or unenforceable by a court of competent jurisdiction, such phrase, clause or provisions shall be deemed severed from this Agreement, but will not affect any other provision of this Agreement, which shall otherwise remain in full force and effect. If any restriction or limitation in this Agreement is deemed to be unreasonable, onerous and unduly restrictive by a court of competent jurisdiction, it shall not be stricken in its entirety and held totally void and unenforceable, but shall not be deemed rewritten and shall remain effective to the maximum extent permissible within reasonable bounds.

E. Prevailing Party. The prevailing party or parties in any litigation arising out of or from this Agreement shall be entitled to recover from the non-prevailing party or parties all costs and expenses reasonably incurred litigating such action, including without limitation, reasonable attorneys' and paralegals' fees and court cost.

F. Neutral Reading. It is the intent of the parties that this Agreement be deemed to have been prepared by all of the parties hereto.

G. Waiver. No waiver of any breach or default hereunder shall be considered valid unless in writing and signed by the party given such waiver and no such waiver shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

H. Headings. The section and subsection headings contained herein are for convenience of the parties only and are not intended to define or limit the context of said Sections and subsections.

I. Governing Law; Venue. The validity, construction and interpretation of this Agreement shall be governed by the State of Illinois. The parties hereto irrevocably agree that all actions or proceedings in any way, manner or respect arising out of or from or related to this Agreement shall be litigated only in the Circuit Court Twelfth Judicial Circuit, Will County, Illinois.

J. Counterparts. This Agreement may be executed in two or more counterparts, each of which may be deemed to be an original.

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first above written.

SIGNED FOR THE OWNER:

PK Day

Firm: Joliet Junior College

Title: Director of Facility Services

Date: 4-15-09

Address: 1215 Houbolt Road
Joliet, Illinois 60431

SIGNED FOR THE UNION:

Ronald C. Fisi

Will County Building Trades Council

Title: President

Date: 4-15-09

Address: 2082 Oakleaf St.
Joliet IL 60436

SIGNED FOR THE ALLIANCE:

Bob Boish

Firm: Three River's Construction Alliance

Title: Co-Chair TRCA

Date: 4/15/09

Address: 2134 Maxim Dr.
Rockdale IL 60436

SIGNED FOR BY THE CONTRACTOR:

Firm: _____

Title: _____

Date: _____

Address: _____



*Skilled Union Craftsmen
Professional Union Contractors*

BLUEPRINT FOR SUCCESS

A Labor-Management Project Agreement

I. Preamble

To accomplish the goals of quality, cost effectiveness and timeliness requires that all participants exhibit a positive attitude intent on success. There must exist amongst all parties a willingness to cooperate fully in devoting themselves to the goals of the project.

This program has no room for adverse relationships, but only a true spirit of cooperation and commitment. It is essential that the work required to construct this project be accomplished in an efficient and economical manner so as to provide productivity, the highest levels of quality, and the total elimination of delays. This commitment will establish new plateaus in labor/management cooperation.

Therefore, Joliet Junior College, Illinois Community College District 525, of Will, Grundy, Kendall, LaSalle, Kankakee, Livingston and Cook, Illinois, (hereinafter referred to as the "Owner"), its subcontractor(s) of whatever tier, the Will & Grundy Counties Building Trades Council, and the THREE RIVERS' CONSTRUCTION ALLIANCE dedicate themselves to the goal that together, in full cooperation, local labor and management will produce a project of excellent quality, as economically as possible, in a safe environment, under favorable working conditions.

II. Introduction

This Agreement is entered into this 15th day of April, 2009, by and between Joliet Junior College (hereinafter called the "Owner"); and Gilbane (hereinafter called and the "Project Contractor"; and the Will & Grundy Counties Building Trades Council (hereinafter called the "Union"), acting in their own behalf and on behalf of their respective affiliates and members; and the THREE RIVERS CONSTRUCTION ALLIANCE, acting on their own behalf and on behalf of their respective affiliates and members, with respect to all construction projects at Joliet Junior College, which includes the Master Plan and Capital Improvement Plan projects thru August 2013 located in Will County, Illinois.

It is understood by the parties to this Agreement that other contractors awarded construction work directly or indirectly by the "Owner" will execute this Agreement and become signatory contractors for the purpose of this work.

The intent of the parties to this Agreement is to establish labor and management cooperation between the Project Contractor, all Contractors and Subcontractors performing construction work on this project site, and the appropriate Unions signatory to this Agreement for the express purpose of producing a quality project on schedule and as economically as possible, in a safe environment under favorable working conditions.

III. Scope Of The Agreement

A. This Project Agreement shall apply and is limited to the recognized and accepted historical definition of new construction work under the direction of and performed by the Contractor(s), of whatever tier, which may include the Project Contractor, who have contracts awarded for such work on the Project. Such work shall include site preparation work and dedicated off-site work.

It is agreed that the Project Contractor shall require all Contractors of whatever tier who have been awarded contracts for work covered by this Agreement, to accept and be bound by the terms and conditions of this Project Agreement by executing the Letter of Assent (Attachment A) prior to commencing work. The Project Contractor shall assure compliance with this Agreement by the Contractors. It is further agreed that, where there is a conflict, the terms and conditions of this Project Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except for all work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article V, VI, and VII of this Project Agreement, which shall apply to such work.

B. Nothing contained herein shall be construed to prohibit, restrict or interfere with the performance of any other operation, work, or function which may occur at the Project site or be associated with the development of the Project.

C. This Agreement shall only be binding on the signatory parties hereto and shall not apply to their parents, affiliates or subsidiaries.

D. The Owner and/or the Project Contractor have the absolute right to select any qualified bidder for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such bidder and any party to this Agreement; provided, however, only that such bidder is willing, ready and able to become a party to and comply with this Project Agreement, should it be designated the successful bidder.

E. It is understood that the Owner, at its sole option, may terminate, delay and/or suspend any or all portions of the Project at any time.

F. It is understood that the liability of any employer and the liability of the separate unions under this Agreement shall be several and not joint. The unions agree that this Agreement does not have the effect of creating any joint employer status between or among the Owner, Contractor(s) or any employer.

IV. Labor-Management Cooperation Committee

The parties to this Agreement hereby reaffirm the necessity for joint cooperation and participation by Labor and Management in interpreting and analyzing the effectiveness of management's application of this Agreement as well as Labor's response and any other matter affecting quality, safety, working conditions and productivity. Therefore, to secure this end, it is hereby agreed that a "Labor-Management Cooperation Committee" will be established composed of three representatives from Labor and three representatives from Management; one representative from Labor and one from Management shall be Co-Chairmen of this Committee.

The Labor-Management Cooperation Committee shall meet a minimum of once each month, at the jobsite, and shall discuss the following: reports concerning any violation, dispute, questions or interpretation of the application of practices arising out of this Agreement; safety; working conditions; absenteeism; labor turnover; availability of qualified journeymen; need for training; and any other matter affecting productivity and efficiency on this project.

In the event a dispute is not resolved by the Labor-Management Cooperation Committee, such matter shall then be settled as outlined by the grievance procedure and/or arbitration provisions contained in Articles VII or VIII of this Agreement. The Labor-Management Cooperation Committee shall not have authority to render a decision involving a jurisdictional dispute.

V. Contractors' Commitment

A. Work assignments will be made in accordance with area practice, consistent with the efficient and economical performance of the work.

B. Before performing work at the job site, the Contractor or Subcontractors of whatever tier actually performing the work will become signatory to the appropriate collective bargaining agreement.

C. The Contractors and Subcontractors shall exercise their management rights. These rights shall include planning, directing, hiring, dismissal, lay-off, transferring, appointing foremen and general foremen and otherwise directing the work force.

D. The Project Contractor agrees that neither it nor any of its contractors or subcontractors will subcontract any work to be done on the Project except to a person, firm or corporation who is or agrees to become party to this Agreement. Any contractor or subcontractor working on the Project shall, as a condition to working on said Project, become signatory to and perform all work under the terms of this Agreement.

VI. Union (Craftsmen) Commitment

A. Qualified and skilled craftsmen will be furnished as required by the Contractor in the fulfillment of its obligations to the Owner.

B. Craftsmen shall be at their place of work at the regular starting time and shall remain at their place of work until quitting time. There shall be no limit on production by Craftsmen nor restrictions on the use of tools or equipment other than that which may be required by safety practice.

C. Where stewards are appointed by respective unions, the steward shall be a qualified craftsman performing the work of his craft who shall exercise no supervisory functions. There shall be no non-working stewards.

VII. Owner Commitment

A. The Owner agrees that during the life of this agreement he shall assign construction work on this project only to contractors who are signatory to this agreement and applicable local collective bargaining agreements.

VIII. Disputes & Grievances

A. This Agreement is intended to provide close cooperation between management and labor. Each of the Unions will assign a representative to this Project for the purpose of completing the construction of the Project economically, efficiently, continuously, and without interruptions, delays, or work stoppages.

B. The Contractors, Unions, and the employees, collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of the work of the Project, and agree to resolve disputes in accordance with the grievance-arbitration provisions set forth in this Article.

C. Any question or dispute arising out of and during the term of this Project Agreement (other than grievances not covered by a local Collective Bargaining Agreement or trade jurisdictional disputes) shall be considered a grievance and subject to resolution under the following procedures:

Step 1. (a) When any employee subject to the provisions of this Agreement feels he or she is aggrieved by a violation of this Agreement, he or she, through his or her local union business representative or job steward, shall, within five (5) working days after the occurrence of the violation, give notice to the work-site representative of the involved Contractor stating the provision(s) alleged to have been violated. The business representative of the local union or the job steward and the work-site representative of the involved Contractor and the Project Contractor shall meet and endeavor to adjust the matter within three (3) working days after timely notice has been given. The representative of the Contractor shall keep the meeting minutes and shall respond to the Union representative in writing (copying the Project Contractor) at the conclusion of the meeting but not later than twenty-four (24) hours thereafter. If they fail to resolve the matter within the prescribed period, the grieving party may, within forty-eight (48) hours thereafter, pursue Step 2 of the Grievance Procedure, provided the grievance is reduced to writing, setting forth the relevant information concerning the alleged grievance, including a short description thereof, the date on which the grievance occurred, and the provision(s) of the Agreement alleged to have been violated.

(b) Should the Local Union(s) or the Project Contractor or any Contractor have a dispute with the other party and, if after conferring, a settlement is not reached within three (3) working days, the dispute may be reduced to writing and proceed to Step 2 in the same manner as outlined herein for the adjustment of an employee complaint.

Step 2. The International Union Representative and the involved Contractor shall meet within seven (7) working days of the referral of a dispute to this second step to arrive at a satisfactory settlement thereof. Meeting minutes shall be kept by the Contractor. If the parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days thereafter.

Step 3. (a) If the grievance has been submitted but not adjusted under Step 2, either party may request in writing, within seven (7) calendar days thereafter, that the grievance be submitted to an Arbitrator mutually agreed upon by them. The Contractor and the involved Union shall attempt mutually to select an arbitrator, but if they are unable to do so, they shall request the American Arbitration Association to provide them with a list of arbitrators from which the Arbitrator shall be selected. The rules of the American Arbitration Association shall govern the conduct of the arbitration hearing. The decision of the Arbitrator shall be final and binding on all parties. The fee and expenses of such Arbitration shall be borne equally by the Contractor and the involved Local Union(s).

(b) Failure of the grieving party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the parties involved at the particular step where the extension is agreed upon. The Arbitrator shall have the authority to make decisions only on issues presented to him or her, and he or she shall not have authority to change, amend, add to or detract from any of the provisions of this Agreement.

D. The Project Contractor and Owner shall be notified of all actions at Steps 2 and 3 and shall, upon their request, be permitted to participate in all proceedings at these steps.

IX. Jurisdictional Disputes

A. The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

B. All jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers, parties to this Agreement, shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be

adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Unions parties to this Agreement.

C. All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor's assignment shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

D. Each Contractor will conduct a pre-job conference with the appropriate Building and Construction Trades Council prior to commencing work. The Project Contractor and the Owner will be advised in advance of all such conferences and may participate if they wish.

X. Joint Commitment (Contractor/Union)

A. Utilization of Union apprentices will be maximized consistent with the best interest of the job in compliance with Local Union Agreements. The high level of union apprenticeship training will be maintained to provide the Industry with productive and knowledgeable craftsmen for the long term.

B. Every reasonable and practicable measure, consistent with the protection of human dignity, will be taken to assure a work place free of alcohol and drugs. The use of liquor, drugs or any other illegal activities at the Project site, including parking lots, is strictly prohibited.

C. Employees will take their breaks only in their immediate work areas.

D. Acknowledging the safety concerns of today's construction Owner and its risk management professionals, we assure the Owner that the parties are committed to safe working practices on the project. The parties, drawing upon the comprehensive safety programs and resources developed by the Union construction community, will comply with federal, state, and local safety regulations. Both contractors and union craftsmen are well trained in safety practices and commit themselves to applying such practices on this job.

E. The Contractors and Unions agree that there will be no lockouts or work stoppages.

(1) The Contractors and Subcontractors shall not cause, incite, encourage or participate in any lockout of employees on the project during the term of this Agreement.

(2) The Union and its members, agents, representatives, and employees shall not allow, incite, encourage, condone or participate in any strike, walkout, slowdown, picketing, sympathy strike or other work stoppage of any nature whatsoever, whether jurisdictional or otherwise, or observe any picket of any nature during the term of this Agreement. Any such action by the Union or its members, agents, representatives or employees shall constitute a violation of this Agreement.

(3) All employees shall continue to work and to perform all their obligations on the project despite the expiration of any local or other collective bargaining agreement. Any future wage or fringe benefit increase, decrease or modification legally negotiated and established by appropriate local collective bargaining agreements of the Local Unions which are signatories to this Agreement shall be paid retroactively to the expiration of the preceding local Agreement.

(4) Should any unauthorized strike, slowdown, stoppage of work or interference with construction occur, the Union shall take all necessary steps to bring such activity to a prompt resolution.

XI. Helmets To Hardhats

A. The Employers and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Employers and Unions agree to utilize the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

B. The Unions and Employers agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

XII. Term of Agreement

A. This Agreement shall become effective on April 15, 2009, and shall remain in full force and effect as long as signatory contractors are working on this project.

B. Either party shall have the right to terminate this Agreement by notifying all other parties, in writing, within at least thirty (30) calendar days from the proposed termination date.

FOR THE OWNER:

Gene Pruehl
JOLIET JUNIOR COLLEGE
TITLE: *President*
DATE: *4-15-09*

FOR THE PROJECT CONTRACTOR:

Michael C. Brown
GILBANE
TITLE: *Vice President*
DATE: *4/15/09*

FOR THE ALLIANCE:

Bob Bush
THREE RIVERS CONSTRUCTION
TITLE: *Co-Chair TRCA*
DATE: *4/15/09*

FOR THE BUILDING TRADES:

Ronald C. Fier
WILL & GRUNDY BUILDING TRADES
TITLE: *Presid.*
DATE: *4-15-09*



*Skilled Union Craftsmen
Professional Union Contractors*

BLUEPRINT FOR SUCCESS

A Labor-Management Project Agreement

Addendum To TRCA/JJC Project Labor Agreement Dated 4-15-09

1. It is agreed to by all parties that while the College has completed their Master Plan projects, the parties to the Agreement wish to continue on with the 'Blueprint for Success, A Labor-Management Project Agreement' signed on April 15, 2009. The conditions of the existing Agreement shall remain in effect thru April 2018 until such time as both parties have the opportunity to evaluate current and future construction projects at the College as explained in Article XII of the Agreement.
2. The pre-job conferences called for in Article IX Section D will apply to all bids with a gross value in excess of \$25,000.00. Bids less that the stated \$25,000.00 will be exempt from the pre-job conference but the OWNER agrees to notify TRCA of any such bid lettings in a timely manner.
3. This Agreement covers all new construction and improvement projects but is not intended to nor will it interfere with the OWNER's right to perform general routine maintenance on their facilities.

FOR THE OWNER:

[Signature]
Joliet Junior College

Judy Mitchell, Esq.
Printed Name

TITLE: VP Administrative Svcs

DATE: 3-9-15

FOR THE BUILDING TRADES

[Signature]
Will & Grundy Counties Building Trades Council

Don Gregory
Printed Name

TITLE: President

DATE: 3-9-15

FOR THE ALLIANCE:

[Signature]
T.R.C.A.

Thomas A. White
Printed Name

TITLE: Executive Director

DATE: 3-9-15

Will County Prevailing Wage for June 2015

(See explanation of column headings at bottom of wages)

Trade Name Trng	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====
ASBESTOS ABT-GEN 0.500		ALL		38.200	38.700	1.5	1.5	2.0	13.78	10.12	0.000
ASBESTOS ABT-MEC 0.720		BLD		35.100	37.600	1.5	1.5	2.0	11.17	10.76	0.000
BOILERMAKER 0.400		BLD		45.650	49.760	2.0	2.0	2.0	6.970	17.81	0.000
BRICK MASON 1.030		BLD		42.580	46.840	1.5	1.5	2.0	9.850	13.60	0.000
CARPENTER 0.630		ALL		43.350	47.690	2.0	2.0	2.0	11.85	17.47	0.000
CEMENT MASON 0.500		ALL		41.000	43.000	2.0	1.5	2.0	9.900	18.34	0.000
CERAMIC TILE FNSHER 0.710		BLD		35.810	0.000	1.5	1.5	2.0	10.55	8.440	0.000
COMMUNICATION TECH 0.720		BLD		32.250	33.750	1.5	1.5	2.0	13.42	11.32	0.000
ELECTRIC PWR EQMT OP 0.460		ALL		46.100	51.100	1.5	1.5	2.0	10.76	14.87	0.000
ELECTRIC PWR GRNDMAN 0.360		ALL		35.960	51.100	1.5	1.5	2.0	8.390	11.60	0.000
ELECTRIC PWR LINEMAN 0.460		ALL		46.100	51.100	1.5	1.5	2.0	10.76	14.87	0.000
ELECTRICIAN 1.200		BLD		40.000	4.600	1.5	1.5	2.0	14.27	16.39	0.000
ELEVATOR CONSTRUCTOR 0.600		BLD		50.800	57.150	2.0	2.0	2.0	13.57	14.21	4.060
GLAZIER 0.940		BLD		40.000	41.500	1.5	2.0	2.0	12.49	15.99	0.000
HT/FROST INSULATOR 0.720		BLD		48.450	50.950	1.5	1.5	2.0	11.47	12.16	0.000
IRON WORKER 0.780		ALL		41.000	42.000	2.0	2.0	2.0	10.04	21.41	0.000
LABORER 0.500		ALL		38.000	38.750	1.5	1.5	2.0	13.78	10.12	0.000
LATHER 0.630		ALL		43.350	47.690	2.0	2.0	2.0	11.85	17.47	0.000
MACHINIST 0.000		BLD		44.350	46.850	1.5	1.5	2.0	6.760	8.950	1.850
MARBLE FINISHERS 0.600		ALL		31.400	32.970	1.5	1.5	2.0	9.850	13.10	0.000
MARBLE MASON 0.760		BLD		41.780	45.960	1.5	1.5	2.0	9.850	13.42	0.000
MATERIAL TESTER I 0.500		ALL		28.000	0.000	1.5	1.5	2.0	13.78	10.12	0.000
MATERIALS TESTER II 0.500		ALL		33.000	0.000	1.5	1.5	2.0	13.78	10.12	0.000

MILLWRIGHT 0.630	ALL	43.350	47.690	2.0	2.0	2.0	11.85	17.47	0.000
OPERATING ENGINEER 1.250	BLD 1	47.100	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	BLD 2	45.800	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	BLD 3	43.250	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	BLD 4	41.500	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	BLD 5	50.850	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	BLD 6	48.100	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	BLD 7	50.100	51.100	2.0	2.0	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	FLT 1	52.450	52.450	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	FLT 2	50.950	52.450	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	FLT 3	45.350	52.450	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	FLT 4	37.700	52.450	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	FLT 5	53.950	52.450	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	FLT 6	35.000	35.000	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	HWY 1	45.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	HWY 2	44.750	49.300	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	HWY 3	42.700	49.300	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	HWY 4	41.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	HWY 5	40.100	49.300	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	HWY 6	48.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	HWY 7	46.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900
PAINTER 0.770	ALL	40.750	45.500	1.5	1.5	1.5	10.75	11.10	0.000
PAINTER SIGNS 0.000	BLD	33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000
PILEDRIVER 0.630	ALL	43.350	47.690	2.0	2.0	2.0	11.85	17.47	0.000
PIPEFITTER 1.780	BLD	46.000	49.000	1.5	1.5	2.0	9.000	15.85	0.000
PLASTERER 0.650	BLD	42.250	44.790	1.5	1.5	2.0	11.40	12.19	0.000
PLUMBER 0.880	BLD	46.650	48.650	1.5	1.5	2.0	13.18	11.46	0.000

ROOFER 0.530	BLD	40.100	43.100	1.5	1.5	2.0	8.280	10.54	0.000
SHEETMETAL WORKER 0.820	BLD	44.000	46.000	1.5	1.5	2.0	10.65	13.06	0.000
SPRINKLER FITTER 0.550	BLD	49.200	51.200	1.5	1.5	2.0	11.75	9.650	0.000
STONE MASON 1.030	BLD	42.580	46.840	1.5	1.5	2.0	9.850	13.60	0.000
SURVEY WORKER — -> NOT IN EFFECT					ALL		37.000	37.750	1.5 1.5 2.0
12.97 9.930 0.000 0.500									
TERRAZZO FINISHER 0.620	BLD	37.040	0.000	1.5	1.5	2.0	10.55	10.32	0.000
TERRAZZO MASON 0.820	BLD	40.880	43.880	1.5	1.5	2.0	10.55	11.63	0.000
TILE MASON 0.920	BLD	42.840	46.840	1.5	1.5	2.0	10.55	10.42	0.000
TRAFFIC SAFETY WRKR 0.500	HWY	32.750	34.350	1.5	1.5	2.0	6.550	6.450	0.000
TRUCK DRIVER 0.250	ALL 1	35.650	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TRUCK DRIVER 0.250	ALL 2	35.800	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TRUCK DRIVER 0.250	ALL 3	36.000	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TRUCK DRIVER 0.250	ALL 4	36.200	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TUCKPOINTER 0.650	BLD	42.800	43.800	1.5	1.5	2.0	8.180	12.66	0.000

Legend: RG (Region)
 TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)
 C (Class)
 Base (Base Wage Rate)
 FRMAN (Foreman Rate)
 M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.)
 OSA (Overtime (OT) is required for every hour worked on Saturday)
 OSH (Overtime is required for every hour worked on Sunday and Holidays)
 H/W (Health & Welfare Insurance)
 Pensn (Pension)
 Vac (Vacation)
 Trng (Training)

Explanations

WILL COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please

check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice, sound and vision production and reproduction, telephone and telephone interconnect, facsimile, equipment and appliances used for domestic, commercial, educational and entertainment purposes, pulling of wire through conduit but not the installation of conduit.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder;

Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine;

Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing

endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

CERTIFICATION OF CONTRACT/BIDDER

The below signed contractor/bidder hereby certifies that it is not barred from bidding on this or any other contract due to any violation of either Section 33E-3 or 33E-4 of Article 33E, Public Contracts, of the Illinois Criminal Code of 1961, as amended. This certification is required by Public Act 85-1295. This Act relates to interference with public contracting, bid rigging and rotating, kickbacks and bribery.

SIGNATURE OF CONTRACTOR/BIDDER

TITLE

DATE

THIS FORM **MUST** BE RETURNED WITH YOUR BID TO:

Joliet Junior College District #525
Office of Facility Services
Main Campus L Building, L1005
1215 Houbolt Road
Joliet, IL 60431-8938

**CERTIFICATE OF COMPLIANCE WITH
ILLINOIS DRUG-FREE WORKPLACE ACT**

_____, does hereby certify pursuant to the *Illinois Drug-Free Workplace Act* (30 ILCS 580/) that [he, she, it] shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the *Illinois Drug-Free Workplace Act* and, further certifies, that [he, she, it] is not ineligible for award of this contract by reason of debarment for a violation of the *Illinois Drug-Free Workplace Act*.

By Authorized Agent

Date

SUBSCRIBED AND SWORN TO before me
This ____ day of _____, 20__.

NOTARY PUBLIC

EXECUTE AND ATTACH TO PROPOSAL FORM

EXECUTE AND ATTACH TO PROPOSAL FORM

JOLIET JUNIOR COLLEGE – REQUEST FOR BID

DRAWINGS ARE AVAILABLE ON THE FOLLOWING WEBSITE:

WWW.JJC.EDU/INFO/PURCHASING

BID FORM

To: Joliet Junior College
1215 Houbolt Road
Joliet, IL 60431-8938

Project: _____

Date: _____

Submitted by:

(Full Name)

(Address)

(City, State, Zip)

(Phone) (Fax) (Email)

PART 1 OFFER

Having examined the site and having familiarized itself with the conditions affecting the cost of the work associated with the _____, and with the bidding documents, Bidder hereby proposes to perform everything required and to furnish all labor, materials, necessary tools, expendable equipment and transportation services necessary to complete in a workmanlike manner the subdivision of work stated above in accordance with the bidding documents for the following costs:

Please include completed pricing charts from pages 19-21 of this bid document along with your bid form.

We have included herewith, the Security Deposit as required by the Instructions to Bidders.

PART 2 ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for thirty (30) days from the Bid closing date.

If the bid is accepted by the Owner within the time period stated above, we will:

- A. Execute the Agreement within ten (10) days of receipt of Notice of Award.
- B. Furnish the required bonds within ten (10) days of receipt of Notice of Award in the form described in the Instruction to Bidders.
- C. Furnish the required Certificate of Insurance within ten (10) days of receipt of Notice of Award in the form and amounts described in the Instruction to Bidders.
- D. Commence work as established by the written Notice to Proceed.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bonds(s), the Security Deposit shall be forfeited as damages to the Owner by reason of our failures.

In the event our Bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

PART 3 CONTRACT TIME

If the Bid is accepted, we will:

- A. Complete the work in manner consistent to meet the requirements of the schedule (_____) consecutive calendar days from the date established as the Date of Commencement in the Notice to Proceed.
- B. Contractor has examined the Schedule included in these documents and takes no exception, or records the following exceptions:

PART 4 CONTRACTOR'S FEES FOR CHANGES IN THE WORK

Lump Sum of Time and Materials Changes: We the undersigned bidder agree that

the following percentages for overhead and profit shall be added to job costs for the net amount of work added to or deleted from the contract by written lump sum or time and material change orders recommended by the Engineer and approved by the Owner:

Add to net extra for job costs for additional work performed by:

Our own forces 12%

Our subcontractor 5% (including assigned subcontractors)

Note: Insurance, bond, and taxes are considered as job cost items and are not included in the percentages listed above.

PART 5 ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs thereto are included in the Bid Sum.

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

PART 6 SUBCONTRACTORS

A. The following work will be performed (or provided) by the Subcontractors we have indicated below:

	<u>Name of Subcontractor</u>	<u>Work Performed</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____

B. We understand, and hereby agree, that we are obligated to use the indicated subcontractors, unless prior written permission to change has been obtained from the Owner.

PART 7 RELATED WORK EXPERIENCE

List a minimum of three jobs of similar type and scope performed in the last five years:

1. Client: _____
Building: _____
Phone: _____
Contact Name: _____
Dollar Amount: _____

2. Client: _____
Building: _____
Phone: _____
Contact Name: _____
Dollar Amount: _____

3. Client: _____
Building: _____
Phone: _____
Contact Name: _____
Dollar Amount: _____

PART 8 BID FORM ADDITION

Apprenticeship and Training Certification

In accordance with the Illinois Procurement Code, the Bidder certifies that the work to be performed by it and/or its subcontractors shall, at the time of such bid opening and at the time of the performance of work pursuant to the terms of this Contract, shall have participated in the approved apprenticeship and training programs as provided for above. The bidder shall list, in the space below, the official name of the program sponsor holding the certificate of registration or all types of work or crafts in which the bidder is a participant and that will be performed by the bidder and its sub-contractor's employees. Work that will be sub-contracted shall be indicated to be subcontracted work as provided for herein. **Failure to list required information may result in disqualification of bid.**

PART 9 CONTRACTOR EVALUATION

Upon completion of the project, a Construction Contractor Performance Evaluation form will be completed by the A/E and the JJC Project Coordinator. The contractor will be evaluated in the following categories:

- Professionally Administered and Supervised Work
- Business Practices
- Overall Performance
- Workmanship
- Timeliness
- Project Management

PART 10 BID FORM SIGNATURES(S)

The Corporate Seal of:

(Bidder – please print the full name of your Proprietorship, Partnership, or Corporation)

Was hereunto affixed in the presence of:

(Authorized signing officer) (Title)

(Seal)

(Authorized signing officer) (Title)

If the bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF SECTION