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GENERAL PROVISIONS

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions
B. Other Division 01 Specification Sections

1.2 SCOPE OF WORK

A. Project Description: New two-story community health care center adjacent to the BCHD campus in the City of Redondo Beach. Construction is Type V-B Modular with complete interior finishes. Spaces include reception, open hang-out space, offices and small meeting rooms, physical care rooms, café, restrooms, and associated support rooms.

1. The Site has an existing capped oil well that will remain. The building may have a below-slab vapor barrier to mitigate airborne pollutants from the contaminated soil. Refer to Owner's Soil Management Plan.

2. Sitework, utilities, walkways, curbs, gutters, signage, landscaping, irrigation, site
3. drainage, site lighting, surface parking, communications (security and telephone/data) to prepare for the new building.

4. The building will be equipped with a design-build automated fire alarm, fire sprinkler system (design-build) and a photovoltaic roof top system (design-build).

5. The project is designed to meet LEED Gold level of certification.

B. The Project will be conducted under a process of 'Progressive Design-Build' using a qualifications-based, or best value selection, followed by a process whereby the Owner the Design-Build Contract progresses' towards a contract price with the design team.

C. All work shall be in accordance with the California Building Code, 2022 edition or as indicated on the Contract Drawings, State approved accessibility codes, and applicable city ordinances.

D. Time is of the essence in this Contract, and work is to proceed as rapidly as possible, commensurate with good workmanship.

E. Contractor shall pay for any temporary utilities.

F. Contractor to lay out the work with exact locations and elevations as shown in the Drawings.

G. All of the Site facilities existing structures, and improvements shall be protected from damage by the Contractor. Any damage as a result of this work will be the Contractor's responsibility to restore to condition at the time of Notice to Proceed.

1.3 CODE COMPLIANCE

A. Codes: Project has been designed in accordance with applicable codes. Comply with code requirements as recognized and adopted by the local jurisdiction for construction. Inform Architect of Record on the Design-Build team of discrepancies observed or noted by others before commencement of the work.

1. 2022 California Building Code (CBC) including CalGreen (Title 24, Part 11)
2. 2022 California Fire Code (CFC)
3. 2022 California Plumbing Code (CPC)
4. 2022 California Mechanical Code (CMC)
5. 2022 California Electrical Code (CEC)
6. NFPA 13 Automatic Fire Protection

B. Codes and Standard compliance are the responsibility of Contractor. Costs of conformance with the Codes and standards shall be included in the Contract Sum and at no additional cost to Owner.

C. Standards and Codes shall govern over Drawings and Specifications when conflicts occur.

D. Contractor shall comply with the codes, standards and requirements of all local authorities having jurisdiction. Where local codes and requirements are more stringent, Contractor shall comply with no increase in the Contract Sum.

E. Representatives of local City Fire Departments, other City Departments of Building and Safety, and office of Safety and Health Administration (OSHA) have the right to inspect all work and workplace conditions.

F. If a conflict exists between referenced regulatory requirements or between referenced regulatory requirements and the Contract Documents, Design Builder shall notify Owner’s Project Manager and request that the conflict be resolved. The fact that the Contract Documents may establish higher or more costly requirements than the minimum code or other regulatory requirements referenced above, shall not constitute a "conflict." If there is an inconsistency in the Contract Documents, Design Builder shall comply with the stricter, more stringent standards and requirements at no additional cost.

1.4 REGULATORY REQUIREMENTS

A. The work shall be performed in accordance with Applicable Code Requirements and applicable requirements of all other regulatory agencies, including the following:

1. California Code of Regulations (CCR), Title 8, Industrial Safety.
2. CCR, Title 13, Hazardous Materials Transportation.
3. CCR, Title 19, Public Safety.
4. CCR, Title 20, Public Utilities and Energy.
5. CCR, Title 21, Public Works.
6. National Fire Protection Association (NFPA):

B. Representatives of local City Fire Departments, other City Departments of Building and Safety, and office of Safety and Health Administration (OSHA) have the right to inspect all work and workplace conditions.

C. Design Builder's Architect of Record shall contract governing authorities and review design requirements of local, state and federal agencies for applicability to Project.

D. Design Builder shall be responsible for contacting governing authorities directly for necessary information and decision bearing upon performance of Work.

E. It is the intent of these Contract Documents that the project, when completed, shall conform to regulations of the "California Building code, current edition (CBC)", California Administrative Code Title I9 Public Safety, California Administrative Code Title 24 Accessibility Standards and Energy Standards, Uniform Plumbing Code, National Electrical Code, NBFU, CAL/OSHA, and other applicable codes. All publications shall be of the latest edition in force at the time of building permit.

F. Anything in the Contract Documents notwithstanding, the Contractor accepts the responsibility of constructing a watertight, weathertight project.

G. Approved Applicators: Where specific instructions in these specifications require that a particular product or material(s) be installed or applied by an "approved applicator" of the manufacturer, it shall be the Contractor's responsibility to ensure that any subcontractors used for such work be approved applicator.

H. Reference Standards:

1. For Products specified by association or trade standards, comply with requirements of referenced standard, except when more rigid requirements are specified or are required by applicable codes.

2. Applicable date of each standard is that in effect as of Contract date, except when a specific date is specified.

I. If a conflict exists between referenced regulatory requirements or between referenced regulatory requirements and the Contract Documents, Design Builder shall notify Owner's Project Manager and request that the conflict be resolved. The fact that the Contract Documents may establish higher or more costly requirements than the minimum code or other regulatory requirements referenced above, shall not constitute a "conflict." If there is an inconsistency in the Contract Documents, Design Builder shall comply with the stricter, more stringent standards and requirements at no additional cost.

1.5 CONTRACT DOCUMENT ORGANIZATION

A. The Drawings illustrate locations, arrangements, dimensions, and details to determine the general character of the Work. Parts not detailed shall be subject to the Architect's approval.

B. Where reasonably inferable that a drawing illustrates only a part of a given work on a number of items, the remainder shall be deemed repetitious and so construed. Drawings of greater scale take precedence over drawings of lesser scale. Do not Scale documents.

C. Drawings indicate general arrangement and location of such items as piping, conduit, apparatus, and equipment. Drawings and Specifications are for guidance of the Contractor and exact locations, distances, and levels will be governed by building site and actual building conditions. The Contractor shall make minor changes, as directed, to arrangements or locations shown in order to meet Structural or Architectural conditions.

D. Specifications describe performances and qualities required of materials and of methods. Items listed under each Section of the Specifications are not necessarily all inclusive. The Contractor shall be responsible for the complete work.

E. For convenience, Specifications are separated into topical divisions of work, each of which is further related to topical divisions under which it occurs. Such separation shall not be construed as an attempt by the Architect to establish limits of any agreements between the Contractor and their subcontractor/s.

F. Portions of these Specifications are of abbreviated, simplified type and may include incomplete sentences.

1. Omissions of words or phrases such as ”the Contractor shall”, “in conformity with”, “shall be”, “as noted on the Drawings”, “in accordance with the details”, “a”, “the”, “all”, “any”, and “each” are intentional. Omitted words or phrases shall be supplied by inference.

2. Terms such as “approved”, “or approved equal”, “as directed”, as required”, “as provided”, “acceptable”, and “satisfactory” mean by or to the Architect or the District.

3. Furnish: the term furnish means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.

4. Install: The term install describes operations at the Project Site, including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

5. Provide: The term provide means to furnish and install, complete and ready for the intended use

1.6 SUSTAINABILITY REQUIREMENTS, GENERAL

A. Resource Efficiency

1. All products and materials used on the project are to be rapidly renewable and recyclable with the highest recycled content possible.

2. All wood products to be Forest Stewardship Council (FSC).

B. Energy Conservation

1. Shading, skylights and overhangs will be optimized to minimize solar gain and promote natural daylighting.

2. Night venting will be utilized throughout the building. An HVAC system will be included for supplemental heating and cooling.

3. Remote refrigeration of all coolers will provide lower operational costs, simplified maintenance, and reduced noise and heat within occupied spaces.

4. Variable speed kitchen hoods will reduce HVAC loads and provide optimal ventilation.

5. The building shall include infrastructure for future solar hot water and photovoltaic systems.

6. The photovoltaic system shall be installed in compliance with CalGreen and building code requirements.

C. Interior Air Quality

1. All interior components and finishes are to be free of formaldehyde and other harmful agents and have low- or no-VOC's.

2. Provide material safety data sheets (MSDS) to Owner for all products that may contain hazardous materials.

1.7 DESIGN DOCUMENTS, CRITERIA & SPECIFICATIONS

A. The Drawings and Specifications included in the Contract Documents are complementary. If Work is shown on one but not on the other, Contractor must perform the Work as though fully described on both, consistent with the 'Progressive Design-Build' documents and reasonably inferable from them as being necessary to produce the indicated result.

B. The Drawings and Specifications are deemed to include and require everything necessary and reasonably incidental to completion of the 'Progressive Design-Build' process, whether or not particularly mentioned or shown. Contractor must perform all Work and services and supply all things reasonably related to and inferable from the Contract Documents.

C. In the event of a conflict between the Drawings and Specifications, the Specifications will control. Detailed Drawings take precedence over general Drawings, and large-scale Drawings take precedence over smaller scale Drawings.

D. Any arrangement or division of the Drawings and Specifications into sections is for convenience and is not intended to limit the Work required by separate trades. A conclusion presented in the Drawings or Specifications is only a recommendation

E. Actual locations and depths must be determined by Contractor's field investigation. Contractor may request access to underlying or background information in District's possession that is necessary for Contractor to form its own conclusions.

F. Industry Standards:

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the

extent referenced. Such standards are made a part of the Contract Documents by reference.

2. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

3. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

G. Overlapping and Conflicting Requirements: Where compliance with 2 or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes 2 different or conflicting minimums or levels of quality, the most stringent requirement (which is generally recognized to be also the most costly is intended and will be enforced, unless specifically detailed language written into the contract documents (not by way of reference to an industry standard) clearly indicates that the less stringent requirement is to be fulfilled.

1. Refer apparently equal-but-different requirements, and uncertainties as to which of 2 levels of quality is the more stringent, to the Owner for a decision before proceeding.

2. Contractor's Option: Except for overlapping or conflicting requirements, where more than one set of requirements are specified for a particular unit of work, the option is intended to be the Contractors' regardless of whether specifically indicated as such in the text.

G. Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

H. Trades; Names: Except as otherwise indicated, the use of trade titles such as "carpentry" in specification text, implies neither that the work must be performed by an accredited or unionized tradesman or the corresponding generic name (such as a carpenter), nor that the specified requirements apply exclusively to work by tradesmen of that corresponding generic name.

I. Language used in the Specifications and other Contract Documents is abbreviated. Words that are implied, but not stated shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so

J. Imperative language is used generally. Requirements expressed in the imperative mood are to be performed by the Contractor. The indicative mood is employed on occasion when such sentence structure is necessary to convey the intended meaning in a more accurate or understandable format. (The imperative and indicative moods of sentence structure are defined in CSI's Manual of Practice.)

K. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.

L. Streamlining: Employs the colon as a symbol for the words "shall be", "shall have", "shall conform with", "shall meet the requirements of", or "shall comply with". A colon is also used to set off a paragraph title or heading from the text that follows. This is the case when a grammatically complete sentence follows a heading and a colon. It is also used as a punctuation mark in a sentence to direct attention to matter that follows. This is not streamlining.

M. Where one certain kind, type, brand or manufacturer of material is named in these Specifications, it shall be regarded as the required minimum standard of quality. Submit requested substitutions in accordance with SECTION 01 06 30 – Product Substitution Procedures

1.8 SUPERINTENDENT

A. The Design Builder's Superintendent on the project must have acceptable qualifications and show they can perform project requirements as specified in Article.

1.9 SURROUNDING SITE CONDITION SURVEY

A. Prior to commencing the Work, Design Builder and Owner's Project Manager shall tour the project site together to examine and record damage to existing adjacent site improvements. This record shall serve as a basis for determination of subsequent damage due to Design Builder's operations and shall be signed by all parties making the tour. Any cracks, or other damage to the adjacent site improvements not noted in the original survey, but subsequently discovered, shall be reported to Owner's Project Manager.

1.10 REPAIR OF EXISTING WORK

A. Whenever any cutting, removal, or alterations of existing site improvements is required to form connections with work or otherwise meet the requirements of the Contract documents, perform such work so as not to damage the work that will remain in place. Perform patching and repairs occasioned thereby using materials, construction details, and finishes matching those of the existing work as closely as possible and to the approval of Owner's Project Manager.

1.11 LAYING OUT THE WORK

A. Design Builder shall employ a California registered Civil Engineer or Land Surveyor to lay out the work and set grades, lines, levels, and positions throughout the project site. Before beginning the work, locate general reference points, establish monuments, and take action as is necessary to prevent their destruction: then lay out all lines, elevations, and measurements for buildings, grading, paving, utilities, and other parts of the work. Verify figures and dimensions shown on the drawings and accept responsibility for any error resulting from failure to so verify, including the cost of additional resurveying. Establish permanent monuments on curbs, manholes or pavements, or with embedded steel pipe with lead plug and brass nail, as approved.

1.12 EXISTING UTILITIES

A. At least two (2) working days before beginning of Work, the Design Builder shall request the utility owners identified in the Contract Documents to mark or otherwise indicate the approximate location of their subsurface facilities including, but not limited to, structures, main conduits and service connections. Many utilities and pipeline operators are members of a Dig Alert one-number call system, 811 or (800) 422-4133, whereby a single request to locate and mark will reach all members who maintain substructures in the work area described.

B. Each utility not a member of the one-number system must be notified individually.

C. Contractor shall return all interrupted services back to operation as soon as possible, including the employment of any overtime or other extended operations, at no additional cost to Owner.

D. Immediately restore to service and repair any damage caused by it to any existing utilities which are not scheduled for removal, discontinuance or abandonment, or which have not been released by Owner and jurisdictional agencies for removal, discontinuance or abandonment, even if so scheduled.

E. Remove, re-route, reinstall, modify as required and immediately restore to service any existing utilities as may be necessary to perform the Work.

F. Immediately restore to service and repair any damage caused by it to any existing utilities which are not scheduled for removal, discontinuance or abandonment, or which have not been released by Owner and jurisdictional agencies for removal, discontinuance or abandonment, even if so schedule

G. Create no open cuts or other obstacles on public roadways or public rights-of-way remaining in service without explicit prior approval of Owner and governmental agencies of jurisdiction. Authorized cuts must be bridged to permit traffic to continue without delay or hindrances.

H. Any work that must be performed which may result in delays to public traffic or the rerouting of traffic must be coordinated with and approved in writing by Owner. Contractor shall pay for and secure all required permits.

I. Contractor shall hand excavate, vacuum excavate, or carefully machine pothole to identify underground utilities prior to trench excavation in operationally sensitive areas.

J. The following page lists of names and telephone numbers for Utility Companies serving the City of Redondo Beach. This is intended for the convenience of the Design Builder and is not guaranteed to be complete or correct:

Electricity
Southern California Edison
Account Services
P.O. Box 6400, Rancho Cucamonga, CA 91729
(800) 655-4555

Gas
Southern California Gas Company
(800) 427-2200, TTD-TTY: (800) 252-0259
Payment Center:
South Bay Postal Center, 1719 Via Del Prado,
Redondo Beach, CA 90277

Water
California Water Service
2632 W. 237th Street, Torrance, CA 90505-5272
General Information: (310) 257-1400

Reclaimed Water
West Basin Municipal Water District
17140 Avalon Blvd.
Carson, CA 90746
Phone: 310-217-2411
Fax: 888-821-6552
Email: info@westbasin.org

Telephone
Verizon
(800) 483-4000

Cable
Time Warner Cable
1529 Valley Drive, Hermosa Beach, CA 90254
Customer Service (24 hours) 888-683-1000
Admin Office 310-406-1960

END OF SECTION

SECTION 01 01 12

REQUESTS FOR INFORMATION PROCEDURES (RFI)

PART 1 GENERAL

1.1 DESCRIPTION

A. This Section contains the procedures to be followed by Design Builder upon discovery of any apparent conflicts, omissions, or errors in the contract documents or upon having any question concerning interpretation.

1.2 PROCEDURES

A. Notification by Design Builder:

1. Submit all requests for clarification of additional information in writing to Owner's Project Manager .

2. Limit each RFI to one subject.

3. Submit an RFI if one of the following conditions occur:

   a. Design Builder discovers an unforeseen condition or circumstance that is not described in the Contract Documents.

   b. Design Builder discovers an apparent conflict or discrepancy between portions of the Contract Document that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.

   c. Design Builder discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.

4. Design Builder shall not:

   a. Submit an RFI as a request for substitution.
   b. Submit an RFI as a submittal.
   c. Submit an RFI under the pretense of a Contract Documents discrepancy or emission without thorough review of the Documents by Desing-Build Team.
   d. Submit an RFI in a manner that suggests that specific portions of the Contract Documents are assumed to be excluded by taking an isolated portion of the Contract Documents in part rather than whole.
   e. Submit an RFI in an untimely manner without proper coordination and scheduling of work of related trades.

5. Design Builder shall submit request for information or clarification immediately upon discovery. Design Builder shall submit RFI's within a

time frame so as not to delay the Contract Schedule while allowing the full response time described below.

1.3 RESPONSE TIME

A. The Owner or Owner's Project Manager, whose decision will be final and conclusive, shall resolve such questions and issue instructions to Design Builder within a reasonable time frame. In most cases, RFI's will receive a response within 7 calendar days. If in the opinion of the Owner's Project Manager more than 7 days is required to prepare a response to an RFI, Design Builder will be notified in writing.

B. Should Design Builder proceed with the work affected before receipt of a response from Owner of Owner's Project Manager within the response time described above, any portion of the work which is not done in accordance with the Owner's Project Manager's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and Design Builder shall be responsible for all resultant losses.

C. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements. Design Builder shall follow procedures set forth in General Conditions.

END OF SECTION

SECTION 01 01 14

DESIGN BUILDER'S USE OF THE PROJECT SITE

PART 1 GENERAL

1.1 STORAGE

A. Design Builder's use of the Project site for the work and storage is restricted to the areas designated or as approved by Owner's Project Manager. Refer also to Section 01600 MATERIAL & EQUIPMENT.

1.2 USE OF PUBLIC THOROUGHFARES AND ROADS

A. Design Builder shall make its own investigation of the condition of available public thoroughfares and City roads, and of the clearances, restrictions, bridge Load Limits, and other limitation's affecting transportation and ingress and egress at the Project site.

B. Where materials are transported in the prosecution of the work, do not load vehicles beyond the capacity recommended by manufacturer of the vehicles or prescribed by any applicable state or local law or regulation.

C. Provide protection against damage whenever it is necessary to cross existing sidewalks, curbs, and gutters in entering upon District or City roads.

D. Repair and make good at the expense of Design Builder all damages thereto, including damage to existing utilities and paving, arising from the operations under the Contract.

E. Construction deliveries shall be completed by 3:30 p.m. each day so as to minimize impacts during the periods of heaviest traffic congestion.

1.3 EARTHWORK / HAULING

A. During excavation, trucks waiting to haul earth materials on and off the site shall be queued at an off-site location. This location will be determined based on the haul route guidelines.

B. Construction trucks must access the site from Beryl Street haul trucks must include tarp/ cover when carrying fill dirt/exported soils to and from the site.

C. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads to wash off trucks and any equipment leaving the site each trip.

D. Truck staging is not allowed on any residential streets within the surrounding area.

E. Trucks shall be visually inspected before leaving the site, and any dirt adhering to the exterior surfaces shall be brushed off and collected on plastic sheeting.

F. The storage bins or beds of the trucks shall be inspected to ensure the loads are properly covered and secured.

1.4 TRAFFIC CONTROL

A. The Design Builder shall provide and maintain all construction area traffic controls in accordance with the City of Redondo Beach. If traffic lane or pedestrian closures are needed, the Design Builder shall perform public closures in accordance City of Redondo Beach guidelines. Per Local and State guidelines, no work shall be performed until said closures and traffic controls have been planned, approved and implemented. The Design Builder shall supply traffic control plans signed by a registered traffic engineer to Owner's Project Manager and as needed to the City of Redondo Beach. If the Owner's Project Manager does not feel that the Design Builder is properly and safely implementing traffic and pedestrian controls, then work shall be stopped until such time as the Design Builder can successfully remedy the deficiencies.

B. Pedestrian walkways shall remain open and accessible to the public except during construction activity on or near public walkways will require temporary closures for safety concerns. Coordinate all closures of walkways with City of Redondo Beach and Owner's Project Manager.

C. The Design Builder shall be responsible for notifying the Owner's Project Manager in writing (5) five business days in advance of any work that results in limited access for local residences. The Design Builder shall also notify the local Police, Fire Departments and Bus Transit agencies of intent to limit access to public streets and travel ways. The Design Builder shall ensure that access to all side streets and driveways are maintained at all times. Work in front of or within driveways and side streets shall be conducted in a manner where at no time is access to property denied to the Public or residence.

D. The Design Builder shall maintain a 24-hour emergency service to remove, install, relocate, and maintain warning devices and shall furnish to the Owner's Project Manager names, and telephone numbers of three persons responsible for this emergency service. In the event these persons do not promptly respond when notified, or it becomes necessary to call others to provide these services, the Design Builder will be responsible for any cost incurred. Prior to the start of each workday, the Design Builder shall install all necessary signing, detouring, barricading, etc., that is required for that particular day's schedule of operations. No construction shall be permitted until all safety protocols have been completed.

E. The Design Builder shall furnish flagmen and/or warning signs as necessary to give adequate warning and safety to the public.

F. The safety equipment shall be furnished and kept clean and in good repair by the Contractor, at its expense.

G. Traffic lanes shall be closed only during the hours approved by the City of Redondo Beach. The Design Builder shall use whatever temporary construction measures at its own expense to maintain traffic in a safe non-disruptive manner during non-working hours.

H. Design Builder must coordinate with the City of Redondo Beach in posting any temporary "No Parking" Signs. The Design Builder is responsible to post "Temporary No Parking" signs and have them inspected by Redondo Beach Parking Enforcement as needed.

1.5 WATCHMAN'S SERVICES

A. During all hours that work is not being prosecuted, furnish such watchman's services as Design Builder may consider necessary to safeguard materials and equipment in storage on the project site, including work in place or in process of fabrication, against theft, acts of malicious mischief, vandalism and other losses or damages.

B. Owner will not be liable for any loss or damage.

1.6 SITE DECORUM

A. Design Builder shall control the conduct of its employees so as to prevent unwanted interaction initiated by Design Builder's employees with individuals adjacent to the project site. Without limitation, unwanted interaction by Design Builder employees would include whistling at or initiating conversations with passersby. In the event that any Design Builder employee initiates such unwanted interaction, or utilizes profanity, Design Builder shall, either upon request of Owner's Project Manager or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to District. No radios, other than two-way communication type will be allowed on the project site. No smoking is allowed on site.

1.7 PARKING

A. FOR CONSTRCUTION LOADING AND UNLOADING ONLY
The Design Builder shall utilize the public streets immediately adjacent to the project site and as described in the plans, for material deliveries, loading or unloading of materials, and the placement roll off dumpsters. Design Builder's activities shall not inhibit the flow of traffic along adjacent streets.

B. PARKING ARRANGEMENTS FOR THIS PROJECT
Parking on the surrounding streets is not permitted. District will allow for limited construction parking at designated areas of their property. Design Builder will coordinate with Owner's Project Manager regarding location where parking will be permitted. Should any worker need their work truck to be nearby to do their work, the Design Builder shall provide an area entirely on the project site, and shall not encroach into the public right of way or private property.

1.8 TEMPORARY SHORING AND BRACING

A. Provide temporary shoring and bracing as required for execution of the Work. Refer to SECTION 01 05 00 CONSTRUCTION FACILITIES & TEMPORARY UTILITIES . All shoring and bracing shall comply with safety regulations of authorities having jurisdiction.

1.9 TEMPORARY BARRICADES

A. Provide temporary barricades as necessary. Maintain barricades in a clean and neat condition until no longer required and removal is approved or requested.

1.10 REMOVAL AND RECONDITIONS

A. Temporary facilities, barricades, utilities and other construction of temporary nature shall be removed from the project site as soon as the progress of the work will permit in the opinion of Owner's Project Manager; and the portions of the

project site and building occupied by same shall be reconditioned and restored to original condition. For temporary utilities, SECTION 01 05 00 CONSTRUCTION FACILITIES AND TEMPORARY UTILITIES.

B. Legally dispose of all debris resulting from removal and reconditioning operations.

C. Design Builder is responsible for restoring any 'Contractor Staging Area' to its original condition before the Work will be considered complete.

1.11 CONTROL OF CONSTRUCTION WATER

A. Provide impermeable floor coverings and suitable dams to prevent damage by water used for the work. Immediately clean up and remove surplus water and water spilled in non-working areas. Do not allow water to overflow gutters or flood streets.

1.12 WORK HOURS

A. Unless otherwise approved in advance by Owner's Project Manager, the work of this project shall be accomplished only during the following days and hours:

1. Mondays through Fridays 8:00 a.m. to 5:00 p.m.
2. No work shall be performed on Saturdays.
3. No work shall be performed on Sundays.
4. No work shall be performed on State & National Holidays:

1.13 CONSTRUCTION SIGNAGE

A. Design Builder shall provide all construction signage as approved by Owner's Project Manager.

B. Post warning signs in locations as directed.

C. Advertising Signage: The use of Design Builder/ Subcontractor advertising signage is prohibited

D. Project Sign: Design Builder shall furnish support structures consisting of 6" x 6" painted wooden posts to support 2 each District-furnished project signs. The District will deliver the signs to the project site and Design Builder shall install them by bolting support structure to the wooden signs and placing then, in locations approved by Owner's Project Manager.

1.14 BARRICADE FENCING

A. Fixed and movable temporary barricade chain link fencing shall be installed straight and plumb. Using galvanized steel pipe and 9 gauge galvanized 2-inch diamond mesh wire fabric fastened to the posts end rails.

B. Posts shall be 2.375 inch 0.0.; securely set in the ground and spaced a maximum 10'-0" 0.C. and 8'-0" height with a continuous top pipe rail. Posts shall not be set in or on existing concrete paving or walls to remain, but shall be located in soil, planter or brick paved areas.

C. Maintain fencing in a straight, clean and neat condition throughout construction as approved by Owner's Project Manager. Repair tears and replace damaged portions of fencing.

D. Wire fabric—stretched taut to the satisfaction of Owner's Project Manager--shall be covered on the outside of the barricade with NJP Sports, Inc. Polypropylene fabric #1232, Green, or equal (no known equal) fastened securely to the barricade.

1.15 TEMPORARY STRUCTURES

1. Erect and maintain, for duration of operations and in locations as approved, suitable temporary office facilities as required for Design Builder's and Owner's Project Manager's administration of the work. Provide necessary sheds and facilities for the storage of tools, materials, and equipment employed in the performance of the work.

1.16 SITE USE PLAN

A. Design Builder shall prepare a Site Use Plan to be submitted for review. The Site Plan shall include site fencing, temporary utility locations, Design Builder's trailers, storage areas and a traffic plan for the truck access to the site indicating haul routes, wheel washing stations, storm and construction water erosion control plan, and fire department access. Any updates or change to the Site Use Plan should be submitted for approval as needed during construction activity.

B. Coordinate use of premises and access to site under direction of Owner's Project Manager a detailed construction logistics plan, describing the systems that the Design Builder will employ to expedite the movement of personnel and the handling of materials at the project site to achieve maximum productivity and to minimize loss of production time due to inefficient movement of personnel or equipment, excessive waiting time and rehandling of construction materials.

This planning system should include at a minimum the following criteria (as applicable):

1. Material deliveries, staging, and unloading. Contractor shall arrange for appropriate labor and equipment to receive and unload as promptly as possible. See also Section 01600
2. Cranes/Hoisting - shall be boomed down at the end of each workday and during periods of inactivity during the workday.
3. Material storage areas - Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.
4. Soils & other 3rd party inspections
5. Concrete pour operations (sequencing, durations, etc.)
6. Climate Control in the building for installation of finishes
7. Clean-up procedures/trash removal/dumpster locations
8. Scaffolding, if utilized
9. Wash-down areas.
10. Safety Measures
11. Weather Protection
12. Contractor shall not load any part of an existing structure or a structure under construction with loads that may damage or endanger the stability or soundness of that structure.

13. No propane or similar flammable gas or liquid used in construction is permitted to be stored on the premises. It is to be removed from the premises when not in use during the off hours and weekends.

END OF SECTION

SECTION 01 01 18

PROJECT PHASING

PART I – GENERAL

1.1 DESCRIPTION

A. The work of this Contract is planned as one construction phase.

END OF SECTION

SECTION 01 01 41

PROJECT COORDINATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Coordinate the work and do not delegate responsibility for coordination to any Subcontractor.

B. Anticipate the interrelationship of all Subcontractors and their relationship with the work.

C. Resolve differences or disputes between design team, subconsultants, and Subcontractors concerning coordination, interference, or extent of work between sections of the work.

D. Coordinate the work of Subcontractors so that portions of the work are performed in a manner that minimizes interference with the progress of the work.

E. Do not cover any piping, wiring, or other installations until they have been inspected and approved and required certificates of inspection issued.

F. Remove and replace all work which does not comply with the Contract Documents. Repair or replace any other work or property damaged by these operations with no increase to the Contract Sum or the Contract Time.

G. Coordinate all portions of the work requiring careful coordination in order to fit in space available before commencing such portions of the work. Prepare supplementary Drawings for review by Owner's Project Manager.

1. For portions of the work specified for engineering development by Design Builder's Professional Engineer, shop drawings, calculations, and other data shall be submitted bearing the registration seal and self-written signature of the Design Builder's Professional Engineer.

2. Design Builder's California-registered Professional Engineer shall review the material proposed by Contractor, related to the portions of work requiring Design Builder's engineering development for conformance with the Contract Documents and for compliance with Design Builder's Professional Engineer's own engineering design.

3. The provisions of this Section 01041 do not lessen Design Builder's responsibility for providing adequate coordination, including attendance at work site meetings as required by Owner's Project Manager for any and all work including work not indicated above.

END OF SECTION

SECTION 01 01 43

JOB SITE ADMINISTRATION

PART 1 GENERAL

1.1 DESIGN BUILDER'S CORRESPONDENCE

A. Design Builder's correspondence directed to the following:

1. Owner's Project Manager

1.2 MONTHLY PROGRESS PAYMENTS

A. Submit monthly Application for Payment on approved form and in accordance with General Conditions, Article 9. Use cost breakdown contained in each Application for Payment to summarize quantities and percentages of completion agreed upon by Design Builder and Owner's Project Manager during monthly job site walk.

1.3 CHANGES IN THE WORK

A. Refer to General Conditions.

B. Field Orders: Field Orders, if necessary to preclude unnecessary delays / costs, will be initiated by Owner's Project Manager and numbered sequentially using the "300" series.

C. Change Orders will be numbered in sequence 1, 2, 3, etc.

D. Clarification Drawings: Clarification Drawings will be numbered in sequence using "1000" series.

E. Cost Proposals for changes as follows: Send to Owner's Project Manager. (Attach RFI and / or Field Order to each cost Proposal.)

1. Submit in accordance with the General Conditions.

F. Cost Proposals shall show detailed breakdown of material, labor, etc., plus applicable percentages for Design Builder Fee as specified in Article 9 of the General Conditions. (Sample format for submittal will be distributed at the Pre-Construction Conference specified in Section 01200. PROJECT MEETINGS)

H. Owner's Project Manager will prepare and process Change Orders. Final distribution will be made by Owner's Project Manager after Change Orders are fully executed.

1.4 CERTIFIED PAYROLL RECORDS

A. In addition to the requirements of the General Conditions, Project Labor Agreement, and Project Grant Requirements, the Design Builder shall upload on the DIR website on a monthly basis an accurate payroll record showing the name, address, social security number or classification, straight-time and overtime hours worked each day and week and the actual per diem wages paid

to each journey worker, apprentice, laborer, or other employee employed by it in connection with the work for that period.

1.5 DESIGN BUILDER'S DAILY REPORTS

A. Design Builder shall completely fill out a Design Builder's Daily Report, for each day worked. It is the responsibility of Design Builder to submit all Daily Reports to Owner's Project Manager the following work day.

END OF SECTION

SECTION 01 01 50

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.1 HAZARDOUS MATERIALS PROCEDURES

A. Except as otherwise specified, in the event Design Builder encounters on the project site material reasonably believed to be hazardous materials, which have not been rendered harmless, Design Builder shall immediately stop work in the area affected and report the condition to Owner's Project Manager in writing. The work in the affected area shall not thereafter be resumed except by written agreement of Owner's Project Manager and Design Builder if in fact the material is hazardous materials other than those specified in the above-cited sections and has not been rendered harmless. The work in the affected area shall be resumed in the absence of hazardous materials other than those specified in the above cited sections, or when such materials have been rendered harmless.
.

B. See also Project Soils Management Plan, Abandoned Oil Well Reference Documents, Soils Report and EIR provisions for additional project procedures and requirements.

1.2 ARCHEOLOGICAL AND HISTORICAL REMAINS

A. If any archaeological or historical remains are uncovered during excavation or construction, Design Builder shall immediately suspend work in the affected area. In such an event, an Archaeologist recommended by the State Historic Preservation Office will conduct a survey of the affected area. A preliminary determination will then be made as to the significance of the survey findings. If considered significant, the survey remains will be preserved and appropriate professional actions taken.

1.3 GRANT FUNDING AGREEMENT PROVISIONS

A. See also Project Funding Agreement dated 5/13/23 for additional project procedures and requirements.

1.4 PROJECT LABOR AGREEMENT PROVISIONS

A. See also Project Labor Agreement for additional project procedures and requirements.

END OF SECTION

SECTION 01 02 00

PROJECT MEETINGS

PART 1 GENERAL

1.1 PRECONSTRUCTION CONFERENCE

A. Prior to commencement of work, a preconstruction conference (Kick-Off Meeting) will be conducted by Owner's Project Manager to discuss procedures which are to be formed during performance of the work.

B. Location: As designated by Owner's Project Manager.

C. Attending shall be:

1. Owner's Project Manager
2. Other District consultants and District Staff Members, as appropriate
3. Design-Build Team
4. Subconsultants
5. Subcontractors as appropriate
6. Others as appropriate

1.2 BILLING MEETING

A. A billing meeting shall be conducted by Owner's Project Manager each month prior to submittal of the Application For Payment.

B. Location: As designated by Owner's Project Manager.

C. Attending shall be:

1. Owner's Project Manager
2. Design Build Contractor
4. Subconsultants, Subcontractors as appropriate
5. Others, as appropriate

1.3 PROGRESS MEETING

A. During the course of construction meetings will be held to discuss and resolve field problems. Progress meetings will be on a weekly basis unless determined otherwise by Owner's Project Manager.

B. Location: As designated by the Owner's Project Manager.

C. Attending shall be:

1. Owner's Project Manager
2. Design Build Design Builder
4. Subconsultants, Subcontractors, as appropriate
5. Others as appropriate

D. The minutes of these meetings will be prepared by Owner's Project Manager and issued as expeditiously as possible to Project Team:

1.4 COORDINATION AND DETAILING MEETING

A. During the course of construction, coordination and detailing meetings shall be held to discuss and coordinate the locations of utilities and site elements, problems of fit, trade interferences and constructability.

B. Location: As designated by Owner's Project Manager.

C. Attending shall be:

1. Owner's Project Manager
2. Design- Build Contractor
3. Subconsultants, Subcontractors, as appropriate
4. Others, as appropriate

1.5 QUALITY ASSURANCE & CONTROL MEETING

A. During the course of construction, meetings shall be held for the quality control plan, coordinate and mutually understanding and weekly quality control.

A. Location: As designated by Owner's Project Manager.

B. Attending shall be:

1. Owner's Project Manager
2. Design Build Contractor
3. Subconsultants, Subcontractors, as appropriate
4. Others, as appropriate

END OF SECTION

SECTION 01 03 10

CONTRACT SCHEDULES

PART 1 GENERAL

1.1 DESCRIPTION

A. The work specified in this Section identifies the requirements for the development and submittal of Contract Schedules. The preparation and submittal of the Phase 2 Construction Schedule procedures for its approval and revision, and the submittal review and approval of the Monthly Schedule Updates are collectively referred to as the Network Analysis System (NAS). The planning scheduling, management and execution of the work in accordance with the Contract Documents is the responsibility of Design Builder. The NAS requirements are established to ensure the adequate planning, scheduling and management of the work by Design Builder and to enable Owner's Project Manager to evaluate work progress.

1.2 MATERIALS

A. Owner's Project Manager shall have the right to accept or reject the performance by Contractor's Own organization or the proposed scheduling consultant.

B. The required schedules and reports shall be prepared and submitted for review and approval in accordance with the General Conditions and this Section.

C. The monthly updating of the Contract Schedule and reports shall be a required element upon which progress payments will be made. Submittal by Contractor, and review and approval by Owner's Project Manager of these items shall be a condition precedent to the making of progress payments. If, in the judgment of Owner's Project Manager, Design Builder fails or refuses to provide a complete updated Contract Schedule or reports, as specified, Design Builder will be deemed to have not provided the required documentation upon which progress payments may be made and shall not be entitled to such progress payments unless or until it has furnished the aforesaid schedules.

PART 2 REQUIREMENTS

2.1 NAS COMPONENTS

A. The NAS is comprised of 5 primary components:

1. Preconstruction Schedule
2. Contract Construction Schedule
3. Schedule of Values.
4. Monthly Updates to the Contact Schedule.
5. As-Built Schedule

2.2 CONSTRUCTION SCHEDULE

A. Design Builder shall develop and maintain a network schedule for the Project in accordance with the requirements of this Section, demonstrating fulfillment of all Contract requirements. This Contract Construction Schedule shall identify the planning, coordination and performance of all work of this Contract, including all activities of Subcontractors, Vendors and Suppliers.

1. The Construction Schedule shall include the following:

a. The Construction Schedule shall be comprised of a computer generated, logically networked schedule identifying all activities required to adequately plan and manage the work to be accomplished. The Contract Construction Schedule shall be a graphic depiction of the construction plan which identifies all sequential elements required to complete the work and shall be developed utilizing the Precedence Diagram Method format of Critical Path Method (CPM) Scheduling for identifying all inter-relationships among the scheduled activities.

b. All project / work activities shall be of sufficient detail to provide identification of all components utilized in executing, monitoring and evaluating progress of the Work. A project / work activity is defined as a schedule element which requires time and resources (manpower, equipment, materials, etc.) to complete in a continuous operation.

c. Activity descriptions shall briefly cover the scope of work indicated. Activities shall be discrete items of work that must be accomplished under the Contract and constitute definable, recognizable entities within the project.

d. All activities shall have a defined duration. All durations shall be in multiples of working days.

e. Activities shall have durations of 14 working days or less. Should an activity require more than 14 working days, it shall be subdivided to define appropriate activities. Owner’s Project Manager may approve using longer durations on non-construction activities, including the procurement and fabrication of materials and equipment. The activity durations shall be based on the quantity for the individual work activity divided by a productivity rate and crew size to perform the work in consideration of contractually defined on-site work conditions. Each construction activity shall have its total material requirements established by an accurate material take-off.

f. Activities shall include contract deliverables, including the submittal and approval of permit applications (as necessary), samples of materials, shop drawings, working drawings, inspection and test plans, safety and security plans, worksite control plans, utility company point-of-connection (POC) installations and applications. In addition, activities shall include for the procurement of materials, equipment, and fabrication of special materials and equipment and their installation and testing; and delivery of The Owner furnished items. Activities of

The Owner that may impact activities shall be reflected, as well as those of utilities and other similarly involved third parties.

g. The critical path activities shall be identified, including critical paths for Contract interim and final completion milestone dates. Critical activities are defined as work activities which, if delayed, will delay the scheduled completion of the work (i.e. activities which comprise the path of least total float). All other Work Activities are defined as non-critical and are considered to have float.

h. Scheduled start or completion dates imposed on the schedule by Design-Build Contractor shall be consistent with Contract milestones as identified in the Contract Documents. Milestone dates shall be defined as the interim and final completion milestone dates connected to the appropriate activities.

i. All activities shall be coded to allow logical summarization by Construction Specifications Institute (CSI) Division, responsibility by Contractor, Subcontractor, The Owner project phase, change order / field order, if applicable,

j. All activities for which costs may be associated (i.e. work activities) shall be manpower, resource and cost loaded in accordance with requirements defined herein in Paragraph 2.4, SCHEDULE OF VALUES

k. Failure to include any element of work required for performance of this Contract shall not excuse Design Builder from completing work required to achieve milestones, notwithstanding the acceptance of the Contract Schedule Submittal

l. All holidays and non-work periods shall be identified in the Contract Schedule's calendar.

m. Design Builder shall not sequester float through strategies including extending activity duration estimates to consume available float, using preferential logic, using extensive or insufficient crew / resource loading, use of float suppression techniques special lead / lag logic restraints or imposed dates. Use of float time disclosed or implied by the use of alternate float suppression techniques shall not be for the exclusive use or benefit of either The Owner or Contractor.

n. Potential problems or constraints related to the implementation of the construction plan shall be identified in writing.

o. 10 (ten) foreseeable seasonal weather days shall be considered and included in the planning and scheduling of all work.

p. Imposed completion dates for events other than the Specific Completion Dates are not permitted. Constraints cannot override the logic. Mandatory constraints (start and finish) violate network logic and shall not be used.

q. When scheduling progressed activities use retained logic.

r. Refer also to General Conditions

2. Contract Construction Schedule Submittal

a. The Construction Phase Schedule submittal shall include a Contract Schedule Time Scaled Logic Diagram, computer generated reports, , and a narrative describing Contractor's approach for meeting the required interim and final completion milestone dates. Construction Schedule shall be submitted to Owner’s Project Manager with the Phase 2 Construction GPM package at the end of Phase 1 Preconstruction. Design Builder shall confer with Owner’s Project Manager on the appraisal and evaluation of the proposed Contract Construction Schedule.

b. The Construction Schedule - Time Scaled Logic Diagram shall be time-scaled (by week, starting Monday) and grouped (banded) by work areas and sorted by early start dates. The Contract Schedule shall be clear, neat and legible, and shall be submitted on sheets 30 inches by 42 inches or alternatively on a continuous 36-inch roll on a medium suitable for reproduction. Each sheet shall contain a title block and a revision block.

(1) Schedule Reports shall contain the following information as a minimum activity identification number activity description, estimated total duration, estimated remaining duration, computed or specified early start date, computed early finish date, computed late start date, computed or specified late finish date, and total float. These reports shall be produced as follows:

(a) Ascending Activity Report. This report shall contain all activities as shown on the Contract Schedule listed in order of ascending activity number.

(b) Total Float Report. This report shall contain a, activities as shown on the Contract Schedule listed in the order of the ascending total float values.

(c) Early Start Report. This report shall contain all activities as shown on the Contract Schedule listed in chronological order by early start date.

(d) Predecessor Successor Report - This report shall contain all activities as shown on the Contract Schedule listed in order of ascending activity number identify predecessor and successor activity number.

(e) Subcontractor Activity Report This report shall contain all activities grouped by Subcontractor

as shown on the Contract Schedule listed in chronological order by early start date.

2.3 SCHEDULE OF VALUES

A. All work activities which comprise the Construction Schedule shall be manpower, resource and cost loaded by construction trade. This will allow summarization of project budgets and actual costs by Trade or CSI Division (at a minimum) for establishment of the Schedule of Values. This summarization will be the basis for Contractor's monthly Application for Payment.

2.4 UPDATES TO THE CONTRACT SCHEDULE

A Update Procedures:

1. The Design Builder understands and agrees that its schedule is intended to accurately reflect at all times the status of the Project construction and projected activities. The Design Builder shall revise the schedule, as required by the Owner's Project Manager , to reflect project construction, and not be interpreted as affecting the Contractors means and methods. The Design Builder also understands and agrees that updating the schedule is a key component of this requirement and will make every reasonable effort to provide current information. Submittal of the schedule updates will be understood to be the Contractor's representation that the submitted schedule meets all of the requirements of the Contract Documents, accurately reflects the work accomplished, and that work will be executed in the sequence indicated on the submitted schedule. In accordance with the updating procedure, when an activity is deemed substantially complete by the Owner's Project Manager , such activity will no longer be treated as an activity affecting the critical path or successor activity on the project.
2. The Design Builder has to take appropriate action to:
    - Correct schedule logic to reflect the actual sequence followed by the Design Builder in the field.
    - Revise durations to reflect actual experience in the field. Should such revised durations result in the occurrence of negative float paths jeopardizing specific contract completion dates, the Owner's Project Manager may avail himself of any and all remedies set forth in the Contract Documents to regain the specified completion dates.
    - Revise logic to address out of sequence progress so that the Design Builder and the Owner's Project Manager actually have a network analysis system that reflects the true status of the Project and the actual status and location of the critical path.
    - Reflect actual start and finish dates.

B. The Monthly Schedule Update shall consist of:

a. An Updated Contract Construction Schedule - Time Scaled Logic Diagram (format as specified under Paragraph 2.3.A.2.b), computer generated reports (format as specified under Paragraphs 2.3.A.2.c and 2.3.A.2.d)

b. A Variance Report shall be submitted monthly comparing the approved Contract Schedule with the current month's updated Contract Schedule. The report shall include a description of all activities completed during the preceding month, a description of progress made, and planned activities listed as started but not completed on the updated Contract Schedule and shall report all activities which have been delayed five (5) or more working days. The format of this report shall include:

(1) Activity code and description.
(2) Scheduled early start/finish dates.
(3) Current anticipated early start finish dates.
(4) Working days remaining to complete the activity.
(5) Percentage complete of the activity.
(6) Total float of the activity.

c. A Narrative which identifies the work actually completed and reflects the progress along the critical path in terms of days ahead of or behind the contract interim and final completion milestone dates as specified in the Contract Documents. Specific requirements of the narrative are as follows:

(1) Actual completion dates for activities completed during the report period.
(2) Actual start dates for activities started during the report period.
(3) Estimated start dates for activities scheduled to start during the month following the report period.
(4) Changes in the duration(s) of any activities and / or logic changes to activities which were performed in a different sequence than the accepted Contract Schedule.
(5) Identification of the current critical path(s) to interim and final completion milestones.
(6) Activities proposed to be added to the Contract Schedule.
(7) Identification of executed Change Orders that will be incorporated into the Contract Schedule, following approval by Owner’s Project Manager .
(8) The narrative shall identify any variances or changes in the direct labor hour allocation, the cause, and the activities affected, and shall provide an explanation of the proposed corrective action to meet the planned allocation as in the accepted Contract Schedule.

d. If the Schedule Update indicates an actual or potential delay to the Contract interim or final completion milestone dates as specified in the Contract Documents, Design Builder shall identify the problem, cause, and the specific activities affected and shall provide a proposed corrective action plan to mitigate the indicated delays.

f. Incorporation of all Owner’s Project Manager’s accepted schedule revisions.

g. The mutually agreed-to Schedule Update shall be the basis for evaluating Contractor's progress. Documents in a single Monthly

Status Report shall have the same data date irrespective of the dates of preparation of the individual documents.

h. If the latest completion time for any required interim or final completion milestone date as indicated by the current Monthly Schedule Update does not fall within the time allowed by the Contract, Design Builder shall prepare and submit by hand a fragnet, as described in Paragraph 2.6 herein, from the Contract Schedule which identifies the plan to recover the lost time. Such recovery measures as concurrent operations, logic and sequence changes additional manpower, additional shifts, or overtime, shall he adopted to ensure that Contract interim and final completion milestone dates will be met. Such fragnet schedules shall not be incorporated into the Contract Schedule until it has been reviewed and approved by Owner's Project Manager.

2.5 CONTRACT SCHEDULE REVISIONS

1. Revisions to the accepted Contract Construction Schedule shall be introduced to Owner's Project Manager in a Time Impact analysis package including a separate fragnet schedule for review and approval prior to incorporation into the current Contract Construction Schedule. This fragnet shall adhere to the requirements identified in Paragraph 2.3.A in the development of revisions and must clearly outline the impact of the revision within the context of the Contract Construction Schedule. Each proposed revision shall be submitted on separate fragnets taken from the proposed revision with the following minimum components:

    1. A time scaled logic diagram showing revised and affected activities, and how these activities are incorporated into the current Contract Construction Schedule.

    2. An Activity Report and Predecessor / Successor Report as specified in Paragraph 2.3.A.2.c for all revised and affected activities.

    3. A narrative report identifying Contractor's basis for determining activity durations, assumptions, restraints, requirements and required coordination necessary to complete the revised / affect and work contained in the fragnet schedule.

    4. All work activities contained in the fragnet schedule shall be manpower, resource and cost loaded.

    5. Any request for an adjustment of the Contract Time for completion by Design Builder by hand for changes or alleged delays shall be accompanied by a complete Time Impact Analysis, which shall be submitted by hand for review within 20 days after the request by Contractor. Time extensions will not be granted unless substantiated by the Contract Schedule, and then not until the project float becomes zero.

    6. The Time Impact Analysis shall be determined on the basis of the date or dates when the change or changes were issued, or the date or dates when the alleged delay of delays began. The status of the Project and

Time Impact Analysis shall include event time completion for all affected activities.

7. Owner's Project Manager may require that Time Impact Analysis be provided in order to demonstrate the time impact upon the overall Project and the time for completion, at no additional cost to The Owner.

8. If Owner's Project Manager determines after review of the Time Impact Analysis Design Builder is entitled to any extension of time for completion, the time for completion will be adjusted accordingly by Owner's Project Manager and Design Builder shall then revise the Contract Schedule accordingly.

9. The Contract Schedule will be used in the calculation of liquidated damages or Compensable Delay for each day of delay after the Contract completion date, as adjusted, until the work is accepted.

2.6 CONTRACT TIME ADJUSTMENTS

A. Float time is the time for the exclusive use or benefit of either The Owner or Contractor. Extensions of time for Contract performance as specified in the Contract will be granted only to the extent that time adjustments to the affected work items exceed the total float time along the affected paths of the Contract Schedule current at the time of the delay. Refer to General Conditions.

2.7 AS BUILT SCHEDULE AND DOCUMENTATION

A. Within 30 days after final acceptance of the work by The Owner's Project Manager, Design Builder shall submit for Owner's Project Manager acceptance, an As-Built computer generated report, an As-Built Contract Schedule Time Scaled Logic Diagram, and As-Built computer generated cash flow and direct labor hour curves. The documents shall be prepared in accordance with the requirements for Contract record drawings specified in Section 01 07 20, PROJECT RECORD DOCUMENTS and in Paragraph 2.3 above. Final payment of retention will not be paid until this work is accomplished.

2.8 NAS (NETWORK ANALYSIS SYSTEM) DOCUMENTS

A. Once accepted by Owner's Project Manager , and until they are superseded by subsequent approved iterations, NAS documents are part of the Contract and shall be used by Design Builder for planning, organizing, and directing its work for reporting progress and cash flow distribution and for determining adjustments to interim and final completion milestone dates all specified in the Contract Documents.

PART 3 SCHEDULE SUBMITTALS

3.1 GENERAL

A. Except as modified in this Section 01 03 10, the procedures specified in Section 01340. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES shall be observed.

3.2 CONSTRUCTION SCHEDULE SUBMITTALS

A. Contract Schedule Time Scaled Logic Diagram.
B. Computer generated reports.
C. Narrative of the schedule basis.
E. Schedule of Values.

3.3 PROGRESS REPORTS

A. Monthly Progress Report Submittals:

1. Updated contract schedule time scaled logic diagram
2. Computer generated reports.
5. Narrative of the schedule status.
6. Schedule of Values.

B. Weekly Three Week Look-Ahead Report.

END OF SECTION

SECTION 01 03 40

SHOP DRAWINGS, PRODUCT DATA & SAMPLES

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Shop Drawings, Product Data, and Samples, rather than in connection with proposed substitutions, shall be submitted to Owner's Project Manager only when specifically required; and Owner's Project Manager will not review any other such submittals. Product Data and Samples for proposed substitutions shall be submitted to Owner's Project Manager in accordance with SECTION 01 06 30.

1.2 RELATED REQUIREMENTS

A. Definitions:

1. The term "Shop Drawings" and "Product Data" as used herein also include fabrication, erection, layout and setting drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams, all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment or systems and the positions thereof conform to the Contract Documents.

2. As used herein, the term "manufactured" applies to standard units usually mass-produced. The term "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements. Shop Drawings shall establish the actual detail of all manufactured or fabricated items, indicate correct relation to adjoining work, and amplify design details of mechanical and electrical equipment in accurate relation to physical spaces in the structure.

B. Manufacturers' instructions: where any item of work is required by the Contract Documents to be furnished, installed, or performed in accordance with a specified product manufacturer's instructions. Design Builder shall procure and distribute the necessary copies of such instructions to Owner's Project Manager and all other concerned parties; and Design Builder shall furnish, install, or perform the work in strict accordance therewith.

1.3 SHOP DRAWINGS

A. Present information required on Shop Drawings in a clear and thorough manner. Identify details by reference to drawing, detail, and schedule.

1.4 PRODUCT DATA

A. Preparation:

1. Clearly mark each copy to identify pertinent products or modules.
2. Show performance characteristics and capacities.
3. Show dimensions and clearances required.
4. Show wiring or piping diagrams and controls.

B. Manufacturers' standard schematic drawings and diagrams:

1. Modify the standard schematic drawings and other diagrams to delete information which is not applicable to the work.

2. Supplement standard information to provide information specifically applicable to the work.

1.5 SAMPLES

A. Samples shall be of sufficient size and quality to clearly illustrate the following:

1. Functional characteristics of the products, with integrally related parts and attachment devices.

2. Full ranges of color, texture, and pattern.

1.6 DESIGN BUILDER'S REVIEW OF SUBMITTALS

A. Review, mark up as appropriate, and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittals shall clearly show that they have been reviewed by Design Builder for conformance with the requirements of the Contract Documents and for coordination of the work.

B. Determine and Verify:

1. Field measurements.
2. Field construction criteria.
3. Catalog and similar data.
4. Conformance with Contract Documents.

C. Coordinate each submittal with requirements of the work and of the Contract Documents.

D. Notify Owner's Project Manager in writing, at time of submission, of any changes in the submittals from requirements of the Contract Documents.

E. Begin no fabrication or work which requires submittals until the return of Owner's Project Manager's final reviewed submittals.

1.7 SUBMISSION REQUIEMENTS

A. Make submittals promptly in such sequence as to cause no delay in the work or in the work of any Separate Contractor.

B. Number of Submittals Required:

1. Shop Drawings: Submit electronic (PDF) file to Owner's Project Manager, who will then return with signed approval or with Comments for Subcontractors' use.

2. Product Data and Non-Reproducible Submittals: Submit the number of copies which Design Builder will need, plus 2 copies which will be retained by Owner's Project Manager.

3. Samples: Submit the number of samples that Design Builder will need, plus three (2) copies that will be retained by Owner's Project Manager.

C. Owner's Project Manager will review Design Builder's submittals, such as Shop Drawings, Product Data, and Samples, for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating, instructions for installation or performance of equipment or systems, all of which remain the responsibility of Design Builder as required by the Contract Documents.

END OF SECTION

SECTION 01 04 00

QUALITY ASSURANCE & CONTROL

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

A. Establish and maintain a Quality Assurance Control (QC) program as described in this Section. The QC program shall cover construction operations on-site and off-site and shall be keyed to the proposed construction sequence.

B. As a minimum, the QC program as specified in this section shall include oversight, accountability and regular reporting for related tasks included in all Contract Documents whether referenced specifically to this section or not.

C. The responsibilities of this section shall include enforcement of and coordination with the requirements of SECTIONS 01 00 41, 01 02 00, 01 03 40, 01 04 20, 01 07 20 and 01 07 40.

1.2 DEFINITIONS

A. Quality Assurance: The procedures for guarding against defects and deficiencies before and during execution of the work. includes enforcement of related specification provisions including but not limited to shop drawings, product data and samples, testing, inspection, reports, commissioning; quality assurance, as-built documents, warranties and related requirements.

B. Quality Control: The procedures for evaluation completed activities and elements of the work for conformance with the Contract requirements, including testing and inspection.

1.3 QUALITY ASSURANCE ON INSTALLATION

A. Monitoring. Monitor, track progress and regularly document status of quality assurance over subcontractors, equipment supplier, manufacturers, products, service, site conditions and workmanship to produce work of the specified quality.

B. Compliance. Assure full compliance with manufacturers' instructions including each step in the sequence.

C. Conflicts. Should manufacturers' instructions conflict with the Contract Documents or if portions of Contract Documents conflict with one another, then request clarifications from Owner’s Project Manager before proceeding and incurring additional costs. The fact that the Contract Documents may establish higher or more costly requirements than the manufacturer's instructions shall not constitute a conflict.

D. Coordination. Assure coordination requirements among construction trades are performed as required to assure compliance with design intent.

E. Standards. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, code, or specified requirements indicate higher standards or more precise workmanship.

1.4 PROJECT INSPECTOR

A. Refer to SECTION 01 04 20, INSPECTION OF WORK.

1.5 VERIFICATION OF CONDITIONS

A. Prior to installing any portion of the Work, Design Builder shall inspect the work already in place to receive the work to be installed and arrange for correction of defects in the existing workmanship, material or conditions that may adversely affect work to be installed. Such inspections shall include test applications of the materials to be installed as required to establish the correct condition of surfaces involved. Where the specifications require a material to be installed under the supervision or inspection of the material manufacturer or its Project Manager, Design Builder shall ensure that the manufacturer or its Project Manager also inspects the work in place and issues a letter of approval to Owner's Project Manager.

1.6 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. See Section 01060, REGULATORY REQUIREMENTS, for additional requirements.

1. ASTM A 8801989 - Criteria for Use in Evaluation of Testing Laboratories and Organizations for Examination and Inspection of Steel Stainless Steel and Related Alloys.
2. ASTM C 10771990 - Laboratories Testing Concrete and Concrete Aggregates for Use In Construction and Criteria for Laboratory Evaluation
3. ASTM D 36661990 (Rev. A) -Evaluating and qualifying Agencies Testing and Inspecting Bituminous Paving Materials
4. ASTM D 37401988 Evaluation of Agencies Engaged in the Testing and / or Inspection of Soil and Rock as Used in Engineering Design and Construction
5. ASTM E 3291990 - Evaluation of Testing and Inspection Agencies as Used in Construction
6. ASTM E (Rev. A) -Determining the qualification of Non-Destructive Testing Agencies

1.7 QC PLAN

A. Requirements: Provide for approval by Owner's Project Manager, a QC Plan that covers all the work and includes the following:

1. Testing Laboratory information requirements
2. A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, test procedures, the frequency, schedule activity number and the person responsible for each test.
3. Procedures to identify, record, track and complete rework items, including schedule activity numbers.

4. Report Forms: The following forms shall be submitted and used throughout the project as specified herein.

    a. Contractor's Daily Report
    b. Testing Plan and Log
    c. Rework Items List

1.8 SPECIAL TESTING PROVIDED BY CONTRACTOR

A. Design Builder shall perform sampling and special testing as indicated in the Contract Documents.

1. Testing Laboratory Requirements: Provide an independent testing laboratory or laboratories qualified to perform the required sampling and tests. Submit for approval detailed information on testing laboratory, including facilities, test equipment and personnel.

2. Accredited Laboratories: Acceptable accreditation programs are the National Institute of Standards and Technology (NIST), National Voluntary Laboratory Accreditation Program (NVLAP), the American Association of State Highway and Transportation Officials (AASHTO) program, and the American Association for Laboratory Accreditation (AZLA) program. Furnish to Owner's Project Manager a copy of the Certificate of Accreditation, Scope of Accreditation and latest directory of the accrediting organization for accredited Laboratories. The scope of the laboratory's accreditation shall include the test methods required by the Contract Documents.

3. Inspection of Testing Laboratories: Prior to approval of a laboratory, the proposed testing laboratory facilities and their records shall be subject to inspection by Architect, Owner's Project Manager, and City of Redondo Beach Inspectors. Records subject to inspection include equipment inventory, equipment calibration dates and procedures, library of test procedures, audit and inspection reports by agencies conducting laboratory evaluations and certifications, testing and management personnel qualifications, test report forms, and the internal QC procedures.

5. Test Results: Cite applicable contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the Contract Documents, whichever is applicable. Test results shall be signed by a testing laboratory Project Manager authorized to sign certified test reports. Furnish the signed reports, certifications and other documentation to Owner's Project Manager's Project Manager via the QC Manager. Furnish a summary report of field tests and an exception report listing all items which do not conform and have not been corrected at the end of each month. Attach a copy of the summary report to the last daily Design Builder quality Control Report of each month.

1.9 DOCUMENTATION

A. Maintain current and complete records of on-site and off-site QC program operations and activities.

1. Design Builder Daily Report: Reports are required for each day that work is performed and shall be attached to Design Builder Quality Control Report prepared for the same day. Account for each day throughout the life of the Contract. The reporting of work shall be identified by terminology (activity number and description) consistent with the construction schedule. Design Builder Daily Reports shall be prepared, signed and dated by Design Builder's project superintendent and shall include the following information:

a. Date of report, name of contractor, title and location of contract and superintendent present.

b. Weather conditions in the morning and in the afternoon including maximum and minimum temperatures.

c. A list of Design Builder and sub-contractor personnel on the project site, their trades, employer, work location, description of work performed (keyed to schedule activity numbers) and hours worked.

d. A list of job safety actions taken and safety inspections conducted indicate that safety requirements have been met including the results on the following:

(1) Was a job safety meeting held? (If YES, attach a copy of the meeting minutes.)
(2) Were there any lost time accidents? (If YES, attach a copy of the completed OSHA report).
(3) Trenching / scaffold / high voltage electrical / high work done? (If YES, attach a statement or checklist showing inspection performed.)
(4) Was hazardous material / waste released into the environment? (If YES, attach report of actions taken.)
(5) Meetings held.

e. A list of equipment / material received each day that is incorporated into the project.

f. A list of construction and plant equipment on the project site including the number of hours used, idle and down for repair.

g. Include a "remarks" section in this report which shall contain pertinent information including directions received, problems encountered during construction and delays, conflicts or errors in the drawings, specifications or coordinated drawings, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the project site.

4. Testing Plan and Log: As tests are performed, the QC Manager shall record on the "Testing Plan and Log" the date the test was conducted, the date the test results were forwarded to Owner's Project Manager ,

remarks and acknowledgement that an accredited or approved testing laboratory was used. Attach a current updated copy of the "Testing Plan and Log" to the last daily Design Builder quality control report of each month.

5. Rework Items List: The QC Manager shall maintain a list of work that does not comply with the Contract Documents, identifying what items need to be reworked, the date the item was originally discovered, and the date the item was corrected. Attach the current copy of the "Design Builder Rework Items List" to the last daily Design Builder Quality Control Report of each month. Design Builder shall be responsible for including on this list items needing rework including those identified by Owner's Project Manager's Project Manager or Owner Inspectors.

6. As-Built Drawings: The QC Manager is required to review the as-built drawings required by SECTION 01 07 20 DESIGN BUILDER'S AS-BUILT DOCUMENTS, to ensure that as-built drawings are kept current on a daily basis and marked to show precise locations of items or any deviations which have been made from the contract document drawings. The QC Manager or QC Specialist assigned to an area of responsibility shall initial each deviation and each revision. Upon completion of work, the QC Manager shall furnish a certificate attesting to the accuracy of the as-built drawings prior to submission to Owner's Project Manager.

END OF SECTION

SECTION 01 04 20

INSPECTION OF WORK

PART I GENERAL

1.1 ACCESS TO THE WORK

A. In addition to the requirements of the General Conditions, the Architect, Owner's Project Manager, City Inspectors, and their representatives shall at all times have access to the work wherever it is in preparation or progress and Design Builder shall provide safe and proper facilities for such access and for inspection. The inspection and written acceptance of material and workmanship, unless otherwise stated in these specifications shall be final except as provided in Article 12.2 of the General Conditions.

1.2 TESTING AND APPROVAL

A. In addition to the requirements of the Contract Documents, if any law, ordinance or public authority or the Specifications or Architect's or Owner's Project Manager's instructions require any work to the specially tested or approved, Design Builder shall give Owner's Project Manager timely notice of its readiness for inspection, and of the inspection. The Design Builder shall be responsible to contact and coordinate all inspections directly with third party testing agency.

B. Re-examination of questioned work may be ordered by Architect or Owner's Project Manager.

1.3 THIRD PARTY INSPECTORS

A. Design-Builder shall provide the materials testing services at part of their scope of work. Materials laboratory that shall be shall managed by a California registered Engineer ("CA Engineer") with experience in sampling, inspection and testing of construction materials.

B. Design-Builder shall ensure the CA Engineer shall certify the results of all tests performed by laboratory personnel under the CA Engineer's supervision The materials laboratory shall only use laboratory and testing equipment that is in good working order. Design Builder shall ensure the CA Engineer shall certify the results of all tests performed by laboratory personnel under the CA Engineer's supervision.

A. Laboratory and Testing – Prepare and submit an inspection report to Owner's Project Manager for each inspection performed.
   1. Assist Owner's Project Manager in reviewing the test and inspection results of testing laboratories..
   2. The Inspector is not authorized to permit deviations from the requirements of the Contract Documents unless such deviation has been approved by Owner's Project Manager in writing.
   3. The Inspector is not authorized to advise on or issue directions to Design Builder about any aspect of construction means, methods, techniques, sequences or procedures, or relating to safety programs in connection with the Project.

B. The failure of District's representatives and consultants, or City Inspector to observe or inspect the work, or to detect deficiencies in the work, or to inform Design Builder of any deficiencies which may be discovered, shall not relieve Contractor, its subcontractors regardless of tier, or suppliers from their responsibility for construction means, methods, techniques, sequences and procedures, construction safety, nor from their responsibilities to carry out the work in accordance with the Contract Documents and to detect and correct defective work. The term "defective work" means work that is unsatisfactory, faulty, omitted, incomplete, deficient, or does not conform to the requirements of the Contract Documents directives of Owner's Project Manager, or the requirements of any inspection, reference standard, test, or approval specified in the Contract Documents, or has been damaged prior to final completion, unless responsibility for the protection of such work has been assumed by District through beneficial occupancy in accordance with Article 9.6 of the General Conditions or through substantial completion in accordance with Article 9.7 of the General Conditions.

1.4 INSPECTION REQUESTS

A. Design Builder shall coordinate directly with Testing & Inspection Agency regarding request for inspection of completed portions of the work at least two (2) days advance of the inspection to be performed.

END OF SECTION

SECTION 01 05 00

CONSTRUCTION FACILITIES & TEMPORARY SERVICES

PART 1 - GENERAL

1.1 PROTECTION OF EXISTING STRUCTURES AND UTILITIES (Refer also to General Conditions).

A. The drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities which are known to Owner's Project Manager.

B. Locate all known existing utility installations before proceeding with construction operations which may cause damage to such installations. The existing installations shall be kept in service where shown and damage shall be repaired with no adjustment of Contract Sum or Contract Time.

C. If any other structures or utilities are encountered, request Owner's Project Manager to provide direction on how to proceed with the work.

D. If any structure or utility is damaged, take immediate action to ensure the safety of persons and property.

E. Shoring:

1. General Protection. Pursuant to Labor Code Sections 6705 and 6707, Design Builder shall include in its base all costs incident to the provision, of adequate sheeting, shoring, bracing or equivalent method for the protection of life and limb which shall conform to the applicable Federal and State Safety Orders.

2. Before beginning excavation five feet or more in depth, Design Builder shall submit to Owner's Project Manager a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. The proposed plan shall comply and demonstrate compliance with the standards established by the California Construction Safety Order and Title 24 of the California Code of Regulations (CCR). If the detailed plan varies from such shoring system standards, it shall be prepared by a registered civil or structural engineer whose name and registration number shall be indicated on the drawing. If a dispute arises to whether the plan must be prepared by a registered civil or structural engineer, Owner's Project Manager's determination of the matter shall be final and conclusive on Design Builder and District. The cost of any required engineering services shall be borne by Design Builder and shall be deemed to have been included in the Contract Sum.

3. Neither the review nor approval of any plan showing the design of shoring, bracing, sloping, or other provisions for worker protection shall relieve Design Builder from its obligation to comply with Construction Safety Orders Standards and CCR, Title 24, for the design and construction of this protective work, and Design Builder shall indemnify District and its representatives from any and all claims, liability, costs,

actions and causes of action arising out of or related to the failure of these protective systems. Design Builder shall defend District and its officers, employees, agents, and Owner's Project Manager in any litigation of proceeding brought with respect to the failure of these protective systems.

4. Comply with State of California Construction Safety Orders, Article 6. Excavations, trenches, earthwork whether or not the excavation, trench, or earthwork is five feet or more in depth.

PART 2 - TEMPORARY UTILITIES

2.1 DESCRIPTION

A. Provide and maintain temporary utilities for construction operations and related necessary temporary structures. Remove them when they are no longer needed.

B. Pay for connections for water and electricity to project site sources.

C. District does not guarantee amounts of water and electricity available from existing District sources, nor will District be responsible for interruptions in service.

D. Materials may be new or used, but shall be adequate for the required purposes. Their use and methods of installation shall not create unsafe conditions or violate requirements of applicable codes and requirements

2.2 REQUIREMENTS OF REGULATORY AGENCIES

A. Install and use temporary utilities in accordance with regulatory requirements as specified in Section 01001 PROJECT SUMMARY Paragraph 1.4 and all applicable federal, state, and local codes and regulations.

2.3 TOILET FACILITIES

A. Furnish and install temporary toilets and maintain toilets in a clean and sanitary condition,

1. All portable toilets shall be located within the fenced project site.

2. Provide 1 toilet per each 15 persons on the project site at any one time, minimum.

2.4 TEMPORARY TELEPHONE & INTERNET

A. Temporary Office with telephone & Internet service will not he provided by District. Coordinating with Owner's Project Manager location of any site trailer, storage sheds, or other temporary site structure. Design Builder shall also make arrangements directly with the telephone company for temporary telephone service.

2.5 TEMPORARY ELECTRIC SERVICE

A. Description of System:

1. If Electrical Service Required: Furnish, install and maintain all temporary electrical equipment, connections, etc., as necessary for the work. Before final acceptance, all temporary equipment and connections installed by Design Builder shall be removed in a manner approved by Owner's Project Manager. Design Builder shall be responsible for the cost of electric power through Final Completion.

2. Electric Service: Service connections shall be coordinated with Southern California Edison Company and made by Contractor.

3. At its expense, Design Builder shall repair and make good all damage to existing electrical facilities caused by Design Builder's use, as requested and approved.

B. Use of permanent system: Any part of the permanent electrical system which is used for construction purposes shall be operated in a manner so as to ensure the safety of all personnel and to prevent interference with the orderly progress of the work.

2.6 TEMPORARY WATER

A. Water service shall be coordinated with the California Water Service and made by Contractor. Design Builder shall furnish, install and maintain necessary temporary supply connections, piping, fittings, etc., as necessary for the work. Before final acceptance, all temporary connections and piping installed by Design Builder shall be removed in a manner approved by Owner's Project Manager. Water will be provided by District at no cost to Contractor.

PART 3 EXECUTION

3.1 GENERAL

A. Comply with applicable requirements specified in Section 01060, REGULATORY REQUIREMENTS, and in DIVISION 16 ELECTRICAL.

B. Maintain and operate systems to provide continuous service.

C. Modify and extend systems as required.

3.2 REMOVAL AND RECONDITIONING

A. Remove all temporary servicer installed as a requirement of the Contract Documents. Restore utilities to their original condition at the completion of the work.

B. Legally and properly dispose of all debris resulting from removal and reconditioning operations.

END OF SECTION

SECTION 01 05 60

ENVIRONMENTAL MITIGATION

PART I GENERAL

1.1 DUST CONTROL, AIR POLLUTION AND ODOR CONTROL

A. Design Builder shall employ measures to prevent the creation of dust, air pollution and odors.
   1. Unpaved areas where vehicles are operated shall be periodically wetted down or given an equivalent form of treatment as defined in Air Quality Management District (AQMD) Rule 403 to eliminate dust formation.
   2. All volatile liquids including fuels or solvents shall be stored in closed containers
   3. No open burning of debris, lumber or other scrap will be permitted.
   4. No wood chipping or shredding will be permitted at the job-site. Wood debris must be removed from site in larger bulk pieces.
   5. Equipment shall be maintained in a manner to reduce gaseous emissions.
   6. Electrically powered equipment must be use when possible. Where gas powered tools are required, low sulfur fuel shall be used for construction equipment. All leaf blowers and other clean-up and maintenance equipment must be electrically powered.
   7. Open Trucks and stockpiles of excavated materials shall be covered with material approved by Owner's Project Manager.
   8. Refer to SECTION 01 07 10 CLEAN UP AND DISPOSAL, Paragraph 1.3

1.2 NOISE CONTROL

A. The following noise control procedures shall be employed:
   1. Maximum Noise: The Design Builder shall use equipment and methods during this work that are least disruptive to adjacent buildings and activities. Noise levels for trenchers, graders, trucks and pile drivers shall not exceed 90 dba at 50 feet as measured under the noisiest operating conditions. For all other equipment, noise levels shall not exceed 85 dba at 50 feet. Design Builder shall provide noise level monitoring all day.

   2. Equipment. Jack hammers shall be equipped with exhaust mufflers and steel ruffling sleeves. All diesel equipment shall have exhaust muffled. Air compressors shall be of a quiet type such as a whisper-zed compressor.

   3. Operations: Machines shall not be left idling. Electric power shall be used in lieu of internal combustion engine power wherever possible. Equipment shall be maintained to reduce noise from vibration, faulty or other sources.

   4. Scheduling: Noisy operations shall be scheduled to minimize their disturbance to occupied adjacent areas and duration at any given location. Design Builder shall coordinate with BCHD Project Manager on neighborhood outreach and advanced communication regarding noise level expected from construction activities.

END OF SECTION

SECTION 01 05 71

STORM WATER POLLUTION CONTROL MEASURES FOR CONSTRUCTION ACTIVITIES

PART 1 GENERAL

1.1 PERFORMANCE

A. Minimum Water Quality Protection Requirements

1. The Design Builder is required to meet the following minimum standards of good housekeeping:

a. Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage, or wind.
b. Stockpiles of earth and other construction-related materials must be protected from being transported from the site by wind or water.
c. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil nor the surface waters. All approved toxic storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
d. Excess or waste concrete may not be washed into the public way or any drainage system. Provisions shall be made to retain concrete wastes on-site until they can be appropriately disposed of or recycled.
e. Trash and construction-related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
f. Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public ways. Accidental depositions must be swept up immediately and may not be washed down by rain or by any other means.

B. Wet Weather Erosion Control Plan (WWECP)

1. The Design Builder shall prepare a Wet Weather Erosion Control Plan (WWECP) and implement Best Management Practices (BMPs) necessary.

C. Stormwater Pollution Prevention Plan

1. The Design Builder shall prepare applicable sections and comply with The Stormwater Pollution Prevention Plan (SWPPP). The Design Builder shall complete and submit the Notice of Intent to construct under the California Construction General Permit (NPDES). The Design Builder shall implement Best Management Practices (BMPs) necessary to control stormwater pollution from sediments, erosion, and construction materials leaving the construction site

2. The BMPs contained in the Development Best Management Practices Handbook – Part A, Construction Activities cover the following categories of construction activities

   a. Site preparation/earth removal
   b. Underground structures
   c. Aboveground structures
   d. Roadways, walkways and parking lots
   e. Planting and landscaping

3. The SWPPP document shall include the following information:

4. Whenever the Design Builder is required to get any type of permit from the City of Redondo Beach, the Design Builder shall submit the SWPPP document if needed for approval before obtaining the permit. If the Design Builder does not need any type of grading permit, the Design Builder shall submit the SWPPP document to Owner's Project Manager for review and approval. At least one copy of the approved SWPPP shall be kept at the construction site and accessible to City inspectors.

   a. The name, location, period of construction, and a brief description of the Project.
   b. Contact information for the Contractor, including name, address, and telephone number.
   c. Name, location, and description of any environmentally sensitive areas located on or adjoining the Project.
   d. A list of major construction materials, waste, and activities.
   e. A list of BMPs to be used to control pollutant discharges from major construction materials, wastes, and activities.
   f. A site plan (a construction plan may be used) indicating the location of BMPs where appropriate.
   g. A developer's certification statement that all required and selected BMPs will be effectively implemented.

END OF SECTION

SECTION 01 06 00

MATERIAL & EQUIPMENT

PART 1 - GENERAL

1.1 TRANSPORTATION AND HANDLING

A. Deliver manufactured products in their original unbroken containers or bundles, clearly labeled with manufacturer's name, brand, and grade seal or model number.

B. Keep materials clean, dry, and undamaged. Handle materials and equipment in a manner to avoid damage to products and their finishes.

C. Promptly remove damaged or defective products from the project site and replace with no adjustment of Contract Sum or Contract Time.

1.2 STORAGE AND PROTECTION

A. Store manufactured products in accordance with manufacturers' instructions and with seals and labels intact and legible.

1. Store products subject to damage by the elements in weather tight enclosures
2. Maintain temperature and humidity in accordance with manufacturers' recommendations.

B. Exterior Storage:

1. Store materials equipment above ground on blocking or skids to prevent soiling, staining, and damage.
2. Cover products with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
3. Store sand, rock, or aggregate material in a well-drained area on solid surfaces to prevent mixing with foreign matter.

C. Arrange storage to allow adequate inspection.

D. Periodically inspect stored products to assure that products are maintained under specified conditions and are free from damage and deterioration.

E. Protection after Installation:

1. Prevent damage to materials and equipment.
2. Use whatever protective materials or methods are necessary to prevent damage to installed products from traffic, construction operations, and weather. Remove protection when no longer required.

END OF SECTION

SECTION 01 06 30

PRODUCT OPTIONS & SUBSTITUTIONS

1.1 SUBSTITUTION OF MATERIALS AND EQUIPMENT

A. Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by the specifications to establish the standards of quality, utility and appearance required. Substitutions which are equal in quality, utility, and appearance to those specified may be accepted, subject to the following provisions:

1. All substitutions must be accepted in writing by Owner's Project Manager
2. Design Builder shall submit to Owner's Project Manager within 35 days after the date of commencement specified in the Notice to Proceed, a written list containing a description of each proposed substitute material or equipment.
3. Design Builder shall furnish with the list specified in Paragraph 1.1.above, supporting data required by Paragraph 1.1.C below.
4. Owner's Project Manager will accept, in writing, proposed substitutions that are, in Owner's Project Manager's opinion, equal in quality, utility, and appearance to the material or equipment specified.
5. Such acceptance shall not relieve Design Builder from complying with the requirements of the drawings and the specifications. Design Builder shall be responsible for all costs of any changes resulting from Design Builder's proposed substitutions which affect other parts of the work or the mark of separate contractors.
6. The decision of Owner's Project Manager shall be final.

B. If a request for substitution for its supporting data occurs after the 35 day period, the substitution may be reviewed at the discretion of Owner's Project Manager; and the costs of such review, as approved by Owner's Project Manager, shall be borne by Design Builder and will be deducted from the Contract Sum.

C. Requests for substitutions will only be considered if Design Builder submits the following supporting data:

1. Complete technical data including drawings, performance specifications samples, and test reports of the article proposed for substitution; and any additional information required by Owner's Project Manager.
2. Data described in Paragraph A.3 above for the specified item for which substitution is proposed.
3. Statement by Design Builder that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.
4. List of Subcontractors, if any that may be affected by the substitution.
5. If the substitution requires that portions of the work be redesigned or removed in order to accommodate the substituted item, submit design and engineering calculations prepared by a properly licensed design professional.

D. Owner's Project Manager may reject any substitution not proposed in the manner and within the time prescribed above.

E. Wherever catalog numbers and specific brands or trade names not followed by the designation "or equal" are used in conjunction with material or equipment required by the Specifications, no substitutions will be considered.

F. The 35 day submittal period does not excuse Design Builder from work within the Contract Time or excuse Design Builder from paying Liquidated Damages if final completion is delayed.

G. Wherever more than 1 manufacturer's product is specified, the first named product is the basis for the design used in the work and the use of alternative-name manufacturers' products or substitutes may require modifications in that design. If such alternatives are proposed by Design Builder and are accepted by Owner's Project Manager, Design Builder shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to District consultant(s) for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor.

H. When materials and equipment are specified by first manufacturer's name and product number, second manufacture's name and "or equal" supporting data for the second manufacturer's product if proposed by contractor, shall be submitted in accordance with the requirements for substitutions.

I. If Owner's Project Manager, in reviewing the list of substitution materials and equipment, requires revisions or corrections to be made to previously accepted shop drawings and supplemental supporting data to be resubmitted, Design Builder shall promptly do so. If any proposed substitution is determined by Owner's Project Manager to be acceptable, this specified material or equipment shall be provided.

J. Samples may be required. Tests required by Owner's Project Manager for the determination of quality and utility shall be made by Design Builder's Testing Laboratories and at the expense of Design Builder with acceptance of the test procedure first given by Owner's Project Manager.

K. In reviewing the supporting data submitted for substitutions, Owner's Project Manager will use for purpose of comparison, all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been required. The cost of reviewing the additional supporting data shall be borne by Design Builder and District will deduct the costs from the Contract Sum.

END OF SECTION

SECTION 01 07 10

CLEAN UP & DISPOSAL

1.1 CONTINOUS CLEAN UP

A. Under no circumstances shall rubbish, debris, waste, or surplus materials be allowed to accumulate on the project site, and all such shall be removed continually as the work progresses and by the end of each day's work.

B. Design Builder shall provide street and walkway sweeping whenever silt from construction site is carried over to adjacent public thoroughfares and walkways.

1.2 FINAL CLEAN UP

A. District Inspection: Notify Owner's Project Manager at least 24 hours in advance of readiness for inspection. Any deficient cleaning operations, as determined by Owner's Project Manager, shall be immediately corrected and approved at Design Builder's expense.

1.3 DISPOSAL

A. Under no circumstances shall debris, rubbish, or waste material be disposed of on District property by burying or otherwise; and all shall be removed from District property to a legal disposal area. Design Builder shall bear all collection, transportation and dumping charges.

B. All Construction and Demolition diversion, recycling and disposal must be processed by City permitted recycler or waste hauler with manifesto that documents disposal of all materials.

1.4 CORRECTIVE WORK

A. Where existing work has been dirtied, stained, defaced, or otherwise made defective and cleaning operations are not satisfactory as determined by Owner's Project Manager, Design Builder shall remove the defective work and install new work as requested and approved, at no extra cost to District.

1.5 CLEAN UP SPECIFIED IN OTHER SECTIONS

A. Any clean up specified in other sections of these specifications shall be in addition to and not in lieu of these requirements.

END OF SECTION

SECTION 01 07 20

DESIGN BUILDER'S AS-BUILT DOCUMENTS

1.1 AS BUILT DOCUMENTS

A. Owner's Project Manager will at no cost to Contractor, provide Design Builder with electronic PDF files of the original Contract Documents which shall be used for indicating the "as built" condition of the work.

B. As-Built Drawings: Record the following kinds of information on the As-Built Drawings:

1. Confirm actual locations of any work that is buried, such as plumbing and electrical lines and conduits. Provide horizontal and vertical dimensions fixed points.
2. Actual numbering of each electrical circuit
3. Locations of all items, not necessarily concealed, which vary from the locations shown on the drawings.

C. The following requirements for As-Built Drawings are in addition to those specified elsewhere:

1. They shall be done carefully and neatly by a competent drafter, familiar with the work involved using methods acceptable to Owner's Project Manager.
2. They shall be kept up to date during the entire progress of the work and made available to Owner's Project Manager at any time.
3. Additional drawings shall be provided as required to accurately describe changes.
4. Record all changes in size, location, and other features of installation shown on the drawings.
5. Record all locations of underground work, points of connection, valves, manholes, catch basins, capped stub outs, invert elevations, etc.

D. Shop Drawings: Provide final Shop Drawings which have been updated to show actual conditions, for work specified in the individual sections.

E. Specifications and Addenda:

1. Record the following:

a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
b. Changes made by addenda, change order, or field order, and clarifications and interpretations made by letter of instruction.

END OF SECTION

SECTION 01 07 25

FIELD ENGINEERING

PART 1 GENERAL

1.1 SUBMITTALS

A. General: Submit in accordance with Section 01340

B. Submit following informational submittals:

1. Name, address, and telephone number of Surveyor before starting survey work.
2. On request, documentation verifying accuracy of survey work

C. Closeout Submittals:

1. Submit under provisions of Division 01720.
2. Project record documents:
   a. Submit copy of surveyor's log.
   b. Submit written guarantees in the form contained at the end of this section

1.2 QUALITY ASSURANCE

A. Employ Land Surveyor registered to perform surveying in State where project is located, acceptable to Owner and Architect.

PART 2 EXECUTION

1. 2.1 SURVEY REFERENCE POINTS

A. Control datum is indicated on Drawings

B. Establish and maintain minimum of 2 permanent bench marks on site, referenced to established control points. Record locations with horizontal and vertical data on Project Record Documents.

C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

D. Do not change or relocate benchmarks or control points without prior written approval of Architect.

E. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

F. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect. Base replacements on original survey control points.

G. Existing Utilities and Equipment:

1. Existence and location of indicated existing underground utilities and construction are not guaranteed.
2. Before beginning sitework:

a. Investigate and verify existence, location, and elevations of underground utilities and other construction.

b. Verify location and invert elevation at points of connection for sanitary sewer, storm sewer, and water-service piping.

3. Furnish information necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other appurtenances located in or affected by construction.

4. Coordinate with local authorities having jurisdiction.

2. 2.2 SURVEY REQUIREMENTS

A. Work from lines and levels established by property survey.

B. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.

C. Calculate and measure required dimensions within indicated or recognized tolerances.

D. Do not scale Drawings to determine dimensions.

E. Advise entities engaged in construction activities of marked lines and levels provided for their use.

F. Establish elevations, lines, and levels. Locate, lay out, and periodically verify layouts, by instrumentation and similar appropriate means:

1. Site improvements including pavements; stakes for grading, fill and topsoil placement; and utility locations, slopes, and invert elevations;

2. Grid or axis for structures.

3. Retaining walls and foundations, curbs, cutters,

G. As construction proceeds, check every major element for line, level, and plumb.

H. Surveyor's Log:

1. Maintain and make available for references, surveyor's log of control and other survey work as work progresses. Make this log available for reference.

2. Record deviations from required lines and levels, and advise Architect of deviations exceeding indicated or recognized tolerances.

3. Record deviations on Project Record Drawings that are accepted and not corrected.

3. 1.3 FINAL PROPERTY SURVEY

A. Prior to Substantial Completion, prepare a final property survey illustrating locations, dimensions, angles, and elevations of retaining walls and other site work that have resulted from construction of Project indicating their relationship to permanent bench marks and property lines.

B. Show significant features (real property) for Project.

END OF SECTION

SECTION 01 07 40

GUARANTEES, WARRANTIES, BONDS, SERVICE AND MAINTENANCE CONTRACTS

PART 1 GENERAL

1.1 GENERAL

A. Guarantees from Subcontractors shall not limit Contractor's warranties and guarantees to the District. Whenever possible, Design Builder shall cause warranties of Subcontractors to be made directly to District. If such warranties are made to Contractor, Design Builder shall assign such warranties to District prior to final payment.

1.2 FORM OF GUARANTEE

A. Submit written guarantees in the form contained at the end of this section

1.3 SUBMITTAL REQIREMENTS

A. Assemble required guarantees, bonds, and service and maintenance contracts.

B. Number of original signed copies required: 2 each.

C. Table of Contents: Neatly typed and in orderly sequence. Provide complete information for each item as follows:

1. Product or work item.
2. Firm name, address, and telephone number and name of principal.
3. Scope.
4 Date of beginning of guarantee, bond, or service and maintenance contract.
5. Duration of guarantee, bond, or service and maintenance contract.
6. Design Builder's name, address, and telephone number; and name of responsible principal.
7. Provide information for District personnel:

    a. Correct procedure in case of failure.
    b. Circumstances which might affect the validity of guarantee or bond.

1.4 FORM OF SUBMITTALS

A. Prepare in duplicate packets

B. Format:

1. Size 8½ inch x 11 inch sheets punched for 3-ring binder. Fold larger sheets to fit into binders.
2. Identify each packet on the cover with typed or printed title "GUARANTEES AND BONDS." and the following:

    a. Title of Project.
    b. Name of Contractor

C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers

1.5 TIME OF SUBMITTALS

A. Within 10 days after the date of substantial completion and prior to request for final payment.

B. For work activities, where final completion is delayed materially beyond the date of substantial completion, provide updated submittal within 10 days after final completion, listing the date of final completion as the start of the guarantee to repair period.

1.6 SUBMITTAL REQUIRED

A. Submit guarantees, bonds, and service and maintenance contracts specified in the individual sections.

GUARANTEE

Date: _____

Project Name: _____

_____ _____
Project Number Order Number Order Number

Project Location:_____
GUARANTEE FOR _____(the "Contract") between Beach Cities Health District (Specification Section) Contract No.
and _____("Contractor").

_____ Hereby guarantees to Beach Cities Health District that the
(Name of Subcontractor)

portion of the work described as follows:

_____

_____

Which it has provided for the above referenced project, is of good quality; free from defects, free from any liens, claims, and security interests; and has been completed in accordance with specification section; and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____months after the date of the guarantee the undersigned receives notice from Beach Cities Health District that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the work together with any other parts of the work and any other property which is damaged or destroyed as a result of such defective portion of the work or the correction, repair, or replacement thereof: and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize The Beach Cities Health District to undertake such correction, repair, or replacement at the expense of the undersigned; and Design Builder will pay to The Beach Cities Health District promptly upon demand all costs and expenses incurred by The Beach Cities Health Districting connection therewith. If we fail to fulfill the preceding obligations, and if The Beach Cities Health District brings action to enforce this guarantee, He agree to pay Beach Cities Health District’s attorneys' fees and expenses incurred in connection therewith, and interest at the maximum rate allowed by law. This guarantee is in addition to, and not in substitution of, the rights and remedies available under the Contract Documents or pursuant to applicable law. The guarantee is for the benefit of The Beach Cities Health District.

SUBCONTRACTOR

Signed:_____ Title:_____

Typed Name:_____

Name of Firm:_____

Contractor License Number:_____

Address:_____

Phone Number:_____

DESIGN BUILDER

Signed:_____ Title:_____

Typed Name:_____

Name of Firm:_____

Contractor License Number:_____

Address:_____

Phone Number:_____

END OF SECTIO

SECTION 01 81 13 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes general requirements and procedures for compliance with certain prerequisites and credits needed for Project to obtain "LEED Version 4 for Building Design and Construction" (LEED v4 BD+C) **Gold** certification based on USGBC's LEED v4 BD+C.
   1. Specific requirements for LEED are also included in other Sections.
   2. Some LEED prerequisites and credits needed to obtain LEED certification depend on product selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests.

B. Some LEED prerequisites and credits needed to obtain the indicated LEED certification depend on Architect's design and other aspects of Project that are not part of the Work of the Contract. Related Sections include the following:
   1. Divisions 1 through 16. Sections for LEED requirements specific to the Work of each of those Sections. These requirements may or may not include specific reference to LEED.
   2. Section 01 74 19 – Construction Waste Management and Disposal.
   3. Section 01 91 13 – General Commissioning Requirements.

1.3 ADDITIONAL SUSTAINABILITY REQUIREMENTS’

A. In addition to LEED v4 Gold certification the Project is required to also meet the following:
   1. WELL Building Standard v2 Certification.
   2. BLUE ZONES Certification.

1.4 DEFINITIONS

A. LEED: USGBC's "LEED Version 4 for Building Design and Construction."
   1. Definitions that are a part of "LEED Version 4 for Building Design and Construction" (LEED v4 BD+C) apply to this Section.

B. BLUE ZONES: A population of an area that shows a statistically significant higher longevity compared to national levels and displays various features related to their lifestyle, nutrition, genetics and both human and physical environmental conditions that might be considered as determinants for living longer.

C. Bio-based materials. Bio-based products must meet the Sustainable Agriculture Network’s Sustainable Agriculture Standard. Bio-based raw materials must be tested using ASTM Test Method D6866 and be legally harvested, as defined by the exporting and receiving country. Exclude hide products, such as leather and other animal skin material.

1. Products meeting bio-based materials criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

D. Chain-of-Custody Certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001. Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.

E. Composite Wood: A product consisting of wood or plant particles or fibers bonded together by a synthetic resin or binder.

F. Environmental Product Declaration (EPD): A standardized way of communicating the environmental impacts, such as global warming potential and energy resource depletion, of a product or system.

G. Extended producer responsibility: Products purchased from a manufacturer (producer) that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility.

H. Industry-Wide (Generic) declarations: Third-party (Type III) certification, which includes verification. The declaration is generic to a product, such as concrete, not specific to a particular manufacturer or company. For the product to be eligible, the manufacturer must claim representation either directly on the EPD or through the Program Operator for the associated EPD.

I. LEED: Leadership in Energy & Environmental Design.

J. Forestry Stewardship Council (FSC) Sets standards for responsible forestry management.

K. Product Category Rule (PCR): Defines how to standardize this information for a specific product type, such as flooring. The PCR defines scope, system boundary, measurement procedures, impact measures and other technical requirements

L. Product-Specific Declarations: publicly available and critically reviewed (but not necessarily verified) by a third party to ensure that they conform to ISO 14044, which defines how LCAs are critically reviewed

M. Product-specific Type III declarations: Third-party certification that includes verification. Unlike generic EPDs, however, product-specific declarations are specific to a particular manufacturer and do not necessarily reflect the practices of the rest of the industry.

N. Regionally Manufactured Materials: Materials that are manufactured or assembled as a finished product within a 100-mile radius of the Project site. Assembly does not include on-site assembly, erection or installation of finished components.

O. Regionally Extracted, Harvested, or Recovered Materials: Materials that are extracted, harvested, or recovered, as well as manufactured, within a radius of 100 miles from the Site.
   1. Extracted materials refer to materials that are removed from the Earth by mining or similar processes.
   2. Harvested materials refer to materials that are removed from the Earth through an agricultural process.
   3. Recovered materials are recycled or salvaged materials that are reprocessed for use in a subsequent manufacturing process.

P. Recycled Content: The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.
   1. "Post-consumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.
   2. "Pre-consumer" material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials, such as rework, regrind, or scrap, generated in a process and capable of being reclaimed within the same process that generated it.

Q. Salvaged Materials: Construction materials recovered from existing buildings or construction sites and reused in other buildings.

R. Volatile Organic Compounds (VOCs): Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. Compounds that have negligible photochemical reactivity, listed in EPA 40 CFR 51.100(s), are also excluded from this regulatory definition.

S. WELL Certification: An evidence-based road map for creating and certifying spaces that advance human health and well-being through air, water, nourishment, light, fitness, comfort and mind.

1.5 PREINSTALLATION MEETINGS

A. Pre-installation Conference: Conduct conference at Project site. Review LEED requirements and action plans for meeting requirements.

1.6 ADMINISTRATIVE REQUIREMENTS

A. Respond to questions and requests from Architect and the USGBC regarding LEED credits that are the responsibility of the Contractor, that depend on product selection or product qualities, or that depend on Contractor's procedures until the USGBC has made its determination on the Project's LEED certification application. Document responses as informational submittals.

B. Submit documentation to USGBC and respond to questions and requests from USGBC regarding LEED credits that are the responsibility of the Contractor, that depend on product selection or product qualities, or that depend on Contractor's procedures until the USGBC has made its determination on the Project's LEED certification application.
   1. Document correspondence with USGBC as informational submittals.

1.7 ACTION SUBMITTALS

A. General: Submit additional sustainable design submittals required by other Specification Sections.

B. Multiple Re-Submittals: The LEED Administrator will review the first submittal from the contractor and respond with comments and will review one re-submittal for the same item(s) form the contractor and respond with comments. If the contractor is required to make subsequent submittals for the same item(s) the Engineer shall be compensated by the contractor for the time to review each subsequent re-submittal. The contractor shall agree to compensate the LEED Administrator a minimum of $500 per each re-submittal item.

C. Sustainable design submittals are in addition to other submittals.
   1. If submitted item is identical to that submitted to comply with other requirements, include an additional copy with other submittal as a record copy of compliance with indicated LEED requirements instead of separate sustainable design submittal. Mark additional copy "Sustainable design submittal."

D. Project Materials Cost Data: Provide statement indicating total cost for building materials used for Project, as specified in Divisions 03 through 10 and 31, 32.

E. Sustainable Design Documentation Submittals:
   1. LTc8- Green Vehicles:
      a. Provide product documentation for the Electric Vehicle Charging equipment as stated in the Informational Submittals section within this specification.
   2. SSc5– Heat Island Reduction:
      a. Non-Roof: Product Data for site paving materials indicating solar reflectivity (SR). Also, provide cut sheets for all pervious paving materials.
      b. Roof: Product Data for roofing materials indicating reflectance, emittance, and initial and 3-year aged solar reflectance index (SRI).
   3. WEp2– Indoor Water Use Reduction:
      a. Provide product documentation as per the labeling and performance requirements stated in the Informational Submittals section within this specification.
   4. MRp2: Construction and Demolition Waste Management Planning
      a. LEED Online Credit Form
      b. Documentation complying with Division 1 Section 01 74 19 "Construction Waste Management."
   5. MRc2 – Building Product Disclosure and Optimization - Environmental Product Declarations (EPD)
      a. LEED Online Credit Form
      b. Provide product documentation as per the quantity listed and manufacturer diversification criteria stated in Part 2-Products.
      c. Complete MR building product disclosure and optimization calculator or equivalent tracking tool.
         1) Do not include plumbing, mechanical and electrical components, and specialty items, such as elevators, escalators, process equipment and fire suppression systems, in the calculation.
            a) An exception of the following “passive” (meaning not part of the active portions of the system) products may be included in the calculations: piping, pipe insulation, ducts, duct insulation, conduit, plumbing fixtures, showerheads and lamp housings. Note if they are included in the credit calculations, they must be included consistently across relevant MR credits.
      d. EPD and LCA reports or compliant summary documents
         1) Product-Specific Declarations
            a) Name of declaration holder or producer (typically the manufacturer)
            b) Contact information
            c) Product type
            d) Product name
            e) Product description
            f) Summary of impact categories measured and overall values
            g) Functional unit
            h) Standards met
            i) Independent review entity’s name and statement

2) Documentation of EPDs
   a) Declaration holder (the company, usually the manufacturer, that the EPD is attributed to)
   b) EPD program operator (the entity that creates and registers the EPD)
   c) LCA verifier (the third-party entity that verifies the life-cycle assessment)
   d) PCR reviewer (the third-party entity that has reviewed the product category rules)

6. MRc3 - Building Product Disclosure and Optimization - Sourcing of Raw Materials
   a. LEED Online Credit Form.
   b. Raw Material Source and Extraction Reporting. Provide product documentation as per the quantity listed and manufacturer diversification criteria stated in Part 2-Products.
   c. MR building product disclosure and optimization calculator or equivalent tracking tool.
      1) Do not include plumbing, mechanical and electrical components, and specialty items, such as elevators, escalators, process equipment and fire suppression systems, in the calculation.
         a) An exception of the following “passive” (meaning not part of the active portions of the system) products may be included in the calculations: piping, pipe insulation, ducts, duct insulation, conduit, plumbing fixtures, showerheads and lamp housings. Note if they are included in the credit calculations, they must be included consistently across relevant MR credits.
   d. Corporate sustainability reports for 100% of products contributing toward credit.
   e. Third-party verified corporate sustainability reports (CSR) including environmental impacts of extraction operations and activities associated with the manufacturer’s product and the product’s supply chain Acceptable CSR frameworks include the following:
      a) Global Reporting Initiative (GRI) Sustainability Report
      b) Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises
      c) U.N. Global Compact: Communication of Progress
      d) ISO 26000: 2010 Guidance on Social Responsibility
      e) USGBC approved program: Other USGBC approved programs meeting the CSR criteria.
   f. Leadership Extraction Practices
      1) Provide product documentation as per the cost percentage criteria stated in Part 2-Products.
      2) MR building product disclosure and optimization calculator or equivalent tracking tool and product data, which includes the following:
         a) Extended producer responsibility - Product data and certification letter from product manufacturers, indicating participation in an extended producer responsibility program and statement of costs.
         b) Bio-based materials - Product data and certification for bio-based materials, indicating that they comply with the Sustainable Agriculture Standard. Include statement of costs.
         c) Wood products - Itemized invoice showing certification by the Forest Stewardship Council or USGBC-approved equivalent.
         d) Material reuse - Receipts for salvaged and refurbished materials used for Project, indicating sources and costs.

e) Recycled content - Product data and/or letter from product manufacturers, indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement of costs.
f) Documentation for regional materials, indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material and costs of regional materials.

7. MRc4-Building Product Disclosure and Optimization - Material Ingredients
   a. LEED Online Credit Form
   b. Provide product documentation as per the cost percentage criteria stated in Part 2-Products.
   c. MR building product disclosure and optimization calculator or equivalent tracking tool and product data, which includes the following:
      1) Documentation of chemical inventory through Health Product Declarations, Cradle to Cradle certification labels, Declare labels, ANSI/BIFMA e3 Furniture Sustainability Standard, Cradle to Cradle Material Health Certificates, manufacturers' lists of ingredients with GreenScreen assessment reports for confidential ingredients, or USGBC-approved programs (if applicable)
      2) Verification of ingredient optimization through Cradle-to-Cradle certification labels, manufacturers' lists of ingredients with GreenScreen benchmarks listed for all ingredients, or manufacturers' declaration (for REACH), or USGBC-approved programs (if applicable)
      3) Documentation for products that comply with LEED requirements for product manufacturer supply chain optimization.
      4) Do not include plumbing, mechanical and electrical components, and specialty items, such as elevators, escalators, process equipment and fire suppression systems, in the calculation.
         a) An exception of the following "passive" (meaning not part of the active portions of the system) products may be included in the calculations: piping, pipe insulation, ducts, duct insulation, conduit, plumbing fixtures, showerheads and lamp housings. Note if they are included in the credit calculations, they must be included consistently across relevant MR credits.
   d. Include documentation for regional materials, indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material and costs of regional materials.
8. MRc5 Construction and Demolition Waste Management
   a. LEED Online Credit Form
   b. Comply with Division 1 Section 01 74 19 "Construction Waste Management and Disposal."
9. EQc2 – Low Emitting Materials
   a. LEED Online Credit Form
   b. USGBC Low Emitting Materials Calculator
   c. Adhesives and Sealants
      1) Product data for adhesives and sealants used inside the weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials.
   d. Paints and Coatings
      1) Product data for paints and coatings used inside the weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials.

e. Flooring Materials:
   1) Laboratory test reports for all flooring materials, indicating compliance with California Department of Public Health (CDPH) Standard Method v1.2-2017, using the applicable exposure scenario, and stating the exposure scenario used to determine compliance.
   2) Manufacturers' claims of compliance stating the range of total VOCs after 14 days (336 hours), measured as specified in the CDPH Standard Method v1.2:
      a) 0.5 mg/m3 or less
      b) between 0.5 and 5.0 mg/m3; or
      c) 5.0 mg/m3 or more

f. Composite Wood:
   1) Product data for all composite wood or agrifiber products (including but not limited to particleboard, wheat board, strawboard, agriboard products, engineered wood components, solid-core wood doors, OSB, MDF, and plywood products), or wood glues, indicating compliance with one of the following:
      a) Low formaldehyde emission levels that meet the California Air Resources Board ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins
      b) Contain no added formaldehyde resins

g. Ceilings, Walls, Thermal and Acoustic Insulation
   1) Laboratory test reports for all flooring materials, indicating compliance with California Department of Public Health (CDPH) Standard Method v1.2-2017, using the applicable exposure scenario, and stating the exposure scenario used to determine compliance.
   2) Manufacturers' claims of compliance stating the range of total VOCs after 14 days (336 hours), measured as specified in the CDPH Standard Method v1.2:
      a) 0.5 mg/m3 or less
      b) between 0.5 and 5.0 mg/m3; or
      c) 5.0 mg/m3 or more

h. Furniture (if in scope of work)
   1) Test results for all stand-alone furniture items, indicating compliance with ANSI/BIFMA M7.1-2011 Standard Test Method for Determining VOC Emission from Office Furniture Systems, Components and Seating. Comply with ANSI/BIFMA e3-2011 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2, using either the concentration modeling approach or the emissions factor approach.

10. Construction Indoor-Air-Quality (IAQ) Management:
    a. LEED Online Credit Form
    b. Construction indoor air quality management plan. The plan shall address the protection of the ventilation system components during construction and cleanup of contaminated components after construction is complete, including the applicable SMACNA approaches.
    c. Product data for temporary filtration media, including manufacturer, model number, MERV rating, and location of installed filter.
    d. Product data for filtration media used during occupancy, including manufacturer, model number, MERV rating, and location of installed filter.
    e. Construction Documentation: Six photographs at three different times during the construction period, along with a brief description of the SMACNA approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.

1.8 INFORMATIONAL SUBMITTALS

A. Qualification Data: For LEED coordinator.

B. Project Materials Cost Data: Provide statement indicating total cost for materials used for Project. Costs exclude labor, overhead, and profit. Include breakout of costs for the following categories of items:
1. Plumbing.
2. Mechanical.
3. Electrical.
4. Specialty items, such as elevators and equipment.
5. Furniture.
6. Wood-based construction materials.

C. Sustainable Design Action Plans: Provide preliminary submittals within **30** days of date established for commencement of the Work, indicating how the following requirements will be met:
1. LTc8: Green Vehicles
   a. Product Data for Electric Vehicle Charging equipment indicating conformance with the following requirements:
      1) Provide a Level 2 charging capacity (208 – 240 volts) or greater.
      2) Comply with the relevant regional or local standard for electrical connectors, such as SAE Surface Vehicle Recommended Practice J1772, SAE Electric Vehicle Conductive Charge Coupler or IEC 62196 of the International Electrotechnical Commission for projects outside the U.S.
      3) Be networked or internet addressable and be capable of participating in a demand-response program or time-of-use pricing to encourage off-peak charging.
2. SSp1: Construction Activity Pollution Prevention
   a. Develop an erosion and sedimentation control drawing and/or written erosion and sedimentation control plan, with specifications that detail the erosion and control best management practices used on the project site and the responsible parties for implementation. The plan must conform to the erosion and sedimentation requirements of the 2012 EPA Construction General Permit and touch on the following:
      1) Erosion Control and Minimizing the Impact of Construction
         a) Minimize disturbed area and protect natural features and soil
         b) Phase construction activity
         c) Control stormwater flowing onto and through the project
         d) Stabilize soils promptly
         e) Protect slopes
      2) Sediment Controls
         a) Protect storm drain inlets
         b) Establish perimeter controls
         c) Retain sediment on-site and control dewatering practices
         d) Establish stabilized construction exits
         e) Inspect and maintain controls
   b. Over the course of site work activities, document implementation of the erosion and sedimentation control plan through date-stamped photos, inspection logs or reports, along with descriptions of corrective action in response to problems.
3. WEp2: Indoor Water Use Reduction
   a. Product Data for plumbing fixtures and fittings indicating conformance with the following requirements:

1) Toilets, Urinals, Private Lavatories, Showerheads and Aerators: WaterSense Labeling.
2) Residential Clothes Washers, Residential Dish Washers, Ice Machine: ENERGY Star or performance equivalent. Ice Machine ENERGY Star or performance equivalent and either air-cooled or close-loop cooling.
3) Commercial Clothes Washers: CEE Tier 3A.
4) Prerinse Spray Valve: < or = 1.3 gpm.
5) Heat Rejection and Cooling: No once-through cooling with potable water for any equipment or appliances that reject heat.
6) Cooling Towers and evaporative condensers: Equipped with makeup water meters, conductivity controllers and overflow alarms, efficient drift eliminators that reduce drift to maximum of 0.002% of recirculated water volume for counterflow towers and 0.005% of recirculated water flow for cross-flow towers.

4. MRp2: Waste management plan complying with Section 017419 "Construction Waste Management and Disposal."
5. MRc2: Building Product Disclosure and Optimization – Environmental Product Declarations
   a. Environmental Product Declaration (1 point)
      1) Collect all EPDs and life-cycle assessment (LCA) reports for contributing products for credit documentation. Ensure that EPD documentation includes a summary sheet of measured impacts.
      2) Retain product data for all materials that contribute to credit achievement.
   b. Multi-attribute Optimization (1 point)
      1) Collect Third-party verification on products demonstrating impact reduction below industry average in at least three of the following:
         a) global warming potential (greenhouse gases), in CO2e
         b) depletion of the stratospheric ozone layer, in kg CFC-11
         c) acidification of land and water sources, in moles H+ or kg SO2
         d) eutrophication, in kg nitrogen or kg phosphate
         e) formation of tropospheric ozone, in kg NOx or kg ethene; and depletion of nonrenewable energy resources, in MJ
6. MRc3: Building Product Disclosure and Optimization - Sourcing of Raw Materials
   a. Raw Material Source and Extraction Reporting (1 point)
      1) Collect Third-party verified corporate sustainability reports (CSR)
   b. Leadership Extraction (1 point):
      1) Extended producer responsibility: Manufacturer (producer) data indicating they participate in an extended producer responsibility program or is directly responsible for extended producer responsibility
      2) Biobased Materials - Manufacturer-declared conformance to the Sustainable Agriculture Standard (except bamboo and non-wood forest products that could be FSC certified) under the following three conditions:
         a) A signed letter from the product's manufacturer on company letterhead from the raw material supplier attesting that its practices meet the standard.
         b) The letter includes a link to a publicly available document that specifies how the raw material supplier's practices conform to each paragraph in all 10 sections of the standard and attesting that each "critical criterion" is met
         c) Both the letter and the detailed documentation are dated within one year before the date of project registration
      3) FSC-certified products:
         a) Indicate each product containing certified wood, its source, and cost.

b) Include statement indicating total cost for wood-based materials that will be permanently installed in the Project.
c) Products must be itemized on the vendor's invoice with the COC number for each item

4) Recycled Content: List of materials with recycled content.
a) Indicate cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content.

7. MRc4 - Building Product Disclosure and Optimization - Material Ingredients
a. Material Ingredient Reporting (1 point)
1) Collect documentation of chemical inventory through Health Product Declaration, Cradle to Cradle certification labels, manufacturers' lists of ingredients with GreenScreen assessment reports for confidential ingredients, or USGBC-approved programs (if applicable)
2) Information must be publicly available; direct disclosure to the contractor is not acceptable.
b. Material Ingredient Optimization (1 point)
1) Collect documentation verifying ingredient optimization through Cradle-to-Cradle certification labels, manufacturers' lists of ingredients with GreenScreen benchmarks listed for all ingredients, or manufacturers' declaration (for REACH), or USGBC-approved programs (if applicable)
c. Product Manufacturer Supply Chain Optimization (1 point)
1) Collect documentation of supply chain optimization
8. EQc3: Construction IAQ management plan.
a. Construction indoor-air-quality management plan.
b. Product data for temporary filtration media.
c. Product data for filtration media used during occupancy.
d. Construction Documentation: Six photographs at three different times during the construction period, along with a brief description of the SMACNA approach employed, documenting implementation of the indoor-air-quality management measures, such as protection of ducts and on-site stored or installed absorptive materials.

D. Sustainable Design Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with sustainable design action plans for the following:
1. MRc2-Building Product Disclosure and Optimization - Environmental Product Declaration.
2. MRc3-Building Product Disclosure and Optimization - Sourcing of Raw Materials
3. MRc4-Building Product Disclosure and Optimization - Material Ingredients
4. MRc5-Construction Waste Management

1.9 QUALITY ASSURANCE

A. LEED Coordinator: Engage an experienced LEED-accredited professional to coordinate LEED requirements. LEED coordinator may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide products and procedures necessary to obtain LEED credits required in this Section. Although other Sections may specify some requirements that contribute to these LEED credits, the Contractor shall provide additional materials and procedures necessary to obtain LEED credits indicated.

B. WEp2 – Indoor Water Use Reduction:
   a. All plumbing fixtures and fittings eligible for labeling shall be WaterSense Labeled.
   b. All appliances and process water systems shall meet the labeling or performance requirements as outlined in the Informational Submittals section within this specification.

C. MRc2 - Building Product Disclosure and Optimization - Environmental Product Declaration:
   1. At least 10 different products from at least five different manufacturers shall have Environmental Product Declarations that comply with LEED requirements. Industry-wide (generic) Environmental Product Declarations shall be valued as one-half of a product.
   2. At least 50 percent, by cost, of the permanently installed products for the Project shall comply with LEED requirements for multi-attribute optimization.
   3. Structure and enclosure materials shall not be more than 30 percent, by cost, of the materials used to comply with this requirement.

D. MRc3 - Building Product Disclosure and Optimization - Sourcing of Raw Materials:
   1. At least 20 different products from at least five different manufacturers shall have publicly-released reports that comply with LEED requirements for raw material source and extraction reporting. Self-declared reports by manufacturers shall be valued as one-half of a product.
   2. Not less than 25 percent of building materials, by cost, shall comply with LEED requirements for leadership extraction practices.
   3. Structure and enclosure materials shall not be more than 30 percent, by cost, of the materials used to comply with this requirement.

E. MRc4 - Building Product Disclosure and Optimization - Material Ingredients:
   1. At least 10 different products from at least five different manufacturers shall comply with LEED requirements for material ingredient reporting, which demonstrate the chemical inventory of the product to at least 0.1%.
   2. At least 25 percent, by cost, of the permanently installed products for the Project shall comply with LEED requirements for material ingredient optimization.
   3. At least 25 percent, by cost, of the permanently installed products for the Project shall comply with LEED requirements for product manufacturer supply chain optimization.

2.2 LOW-EMITTING MATERIALS

A. Adhesives and Sealants: For field applications that are inside the weatherproofing system, adhesives and sealants shall comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:
   1. Wood Glues: 30 g/L.
   2. Metal-to-Metal Adhesives: 30 g/L.
   3. Adhesives for Porous Materials (Except Wood): 50 g/L.
   4. Subfloor Adhesives: 50 g/L.
   5. Plastic Foam Adhesives: 50 g/L.
   6. Carpet Adhesives: 50 g/L.
   7. Carpet Pad Adhesives: 50 g/L.
   8. VCT and Asphalt Tile Adhesives: 50 g/L.
   9. Cove Base Adhesives: 50 g/L.
   10. Gypsum Board and Panel Adhesives: 50 g/L.
   11. Rubber Floor Adhesives: 60 g/L.
   12. Ceramic Tile Adhesives: 65 g/L.
   13. Multipurpose Construction Adhesives: 70 g/L.
   14. Fiberglass Adhesives: 80 g/L.

15. Contact Adhesives: 80 g/L.
16. Structural Glazing Adhesives: 100 g/L.
17. Wood Flooring Adhesives: 100 g/L.
18. Structural Wood Member Adhesives: 140 g/L.
19. Single-Ply Roof Membrane Adhesives: 250 g/L.
20. Special-Purpose Contact Adhesives (That Are Used to Bond Melamine-Covered Board, Metal, Unsupported Vinyl, Rubber, or Wood Veneer 1/16 Inch or Less in Thickness to Any Surface): 250 g/L.
21. Top and Trim Adhesives: 250 g/L.
22. Plastic Cement Welding Compounds: 250 g/L.
23. ABS Welding Compounds: 325 g/L.
24. CPVC Welding Compounds: 490 g/L.
25. PVC Welding Compounds: 510 g/L.
26. Adhesive Primer for Plastic: 550 g/L.
27. Sheet-Applied Rubber Lining Adhesives: 850 g/L.
28. Aerosol Adhesive, General-Purpose Mist Spray: 65 percent by weight.
29. Aerosol Adhesive, General-Purpose Web Spray: 55 percent by weight.
30. Special-Purpose Aerosol Adhesives (All Types): 70 percent by weight.
31. Other Adhesives: 250 g/L.
32. Architectural Sealants: 250 g/L.
33. Nonmembrane Roof Sealants: 300 g/L.
34. Single-Ply Roof Membrane Sealants: 450 g/L.
35. Other Sealants: 420 g/L.
36. Sealant Primers for Nonporous Substrates: 250 g/L.
37. Sealant Primers for Porous Substrates: 775 g/L.
38. Modified Bituminous Sealant Primers: 500 g/L.
39. Other Sealant Primers: 750 g/L.

B. Adhesives and Sealants: For field applications that are inside the weatherproofing system, 90 percent of adhesives and sealants, by volume, shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

C. Paints and Coatings: For field applications that are inside the weatherproofing system, paints and coatings shall comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:
   1. Flat Paints and Coatings: 50 g/L.
   2. Nonflat Paints and Coatings: 50 g/L.
   3. Dry-Fog Coatings: 150 g/L.
   4. Primers, Sealers, and Undercoaters: 100 g/L.
   5. Rust-Preventive Coatings: 100 g/L.
   6. Zinc-Rich Industrial Maintenance Primers: 100 g/L.
   7. Pretreatment Wash Primers: 420 g/L.
   8. Clear Wood Finishes, Varnishes: 275 g/L.
   9. Clear Wood Finishes, Lacquers: 275 g/L.
   10. Floor Coatings: 50 g/L.
   11. Shellacs, Clear: 730 g/L.
   12. Shellacs, Pigmented: 550 g/L.
   13. Stains: 100 g/L.
   14. Waterproofing Sealers: VOC not more than 100 g/L.
   15. Waterproofing Concrete/Masonry Sealers: VOC not more than 100 g/L.

D. Paints and Coatings: For field applications that are inside the weatherproofing system, 90 percent of paints and coatings, by volume, shall comply with the requirements of the California

Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

E. Flooring: 100 percent of flooring shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

F. Composite Wood: 100 percent of composite wood, agrifiber products, and adhesives shall be made using ultra-low-emitting formaldehyde (ULEF) resins as defined in the California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no added formaldehyde.

G. Ceilings, Walls, and Thermal Insulation: 100 percent of ceilings, walls, and thermal insulation shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

H. Furniture (if in scope of work): 90 percent of furniture, by cost, shall comply with the requirements of ANSI/BIFMA Standard Method M7.1-2011, based on BIFMA e3-2011 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2 using either concentration modeling approach or emission factor approach. Model test results using open plan, private office, or seating scenarios in ANSI/BIFMA M7.1 as appropriate.

PART 3 - EXECUTION

3.1 LANDSCAPE MAINTENANCE

A. WEc1 – Water Efficient Landscaping: Take responsibility for hand watering plants until all plant materials are well-established or until Final Acceptance, whichever comes first.

3.2 NONSMOKING BUILDING

A. Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor-air intakes.

3.3 CONSTRUCTION WASTE MANAGEMENT

A. Comply with Section 017419 "Construction Waste Management"

3.4 CONSTRUCTION IAQ MANAGEMENT

A. During Construction: The IAQ measures undertaken shall meet or exceed the recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings under Construction, 2nd edition, 2007, ANSI/SMACNA 008–2008, Chapter 3.
   1. Moisture Damage Prevention: Stored on-site or installed absorptive materials shall be protected from moisture damage.
   2. HVAC Protection: Do not operate air handling units (AHU's) during building construction phase unless filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 are used at each return air grill, as determined by ASHRAE 52.2-2007.
      a. Seal all return air openings with plastic and close all return air dampers during construction.

b. Protect fan motors, switches, equipment, fixtures and other items from dirt, rubbish and foreign matter.
c. When running AHU's to dry out the building, the ceiling system shall be completely in place and temporary filters installed with the same efficiency rating as required for the final installation.
d. Control the building temperature to drop very slowly, and verify all doors and windows are installed and closed, to prevent condensation of water from humid air on building interior surfaces, equipment, materials and ductwork.
e. Do not operate AHU's if the building is not clean or if dust can enter the coils or fan housing.
f. Replace all filtration media immediately prior to occupancy with filtration media of at least MERV 13.

3. Source control: Refer to other sections of this Project Manual for the requirements and use of materials such as adhesives, sealants, paints, carpet, and composite wood.
4. Pathway Interruption: During construction, isolate areas of work to prevent contamination of clean or occupied spaces. Provide temporary barriers that contain the construction area.
5. Housekeeping: Keep interiors of duct and pipe systems clean and free from dirt, rubbish and foreign matter. Prevent dust, debris and foreign material from entering the piping and ductwork. Remove temporary labels, stickers, etc. from fixtures and equipment. Do not remove permanent nameplates, equipment model numbers, etc. Remove debris, rubbish, leftover materials, tools and equipment from work areas and site. Final acceptance shall not be approved until site is cleaned.
6. Scheduling: Refer to Division 1 for the requirements for construction sequencing to minimize impacts on indoor air quality.

END OF SECTION 01 81 13