

GBVR NSP Project – Phase I

**Address: #4, #6 & #8 W. 20th Street, #29 East 22nd Street, #42 East 22nd Street,
Wilmington, DE**

General Conditions

- 0.01 Contractor shall include all allowances in the amounts listed in this specification.
- 0.02 All “Builder’s Discounts” on building materials and fixtures covered by allowance shall be passed through to the Owner.
- 0.03 All work shall be done in accordance with the City of Wilmington Building Ordinances, including the 2006 International Residential Code as adopted and modified by the City. All other applicable Codes, which may apply to the work, shall be complied with. Nothing in these drawings or specifications shall be construed to allow violation of the Code. Should discrepancies arise, the Code shall take precedence and the Architect shall be advised of such discrepancy.
- 0.04 The Contractor shall be responsible for all safety measures and methods necessary to ensure safe working conditions on-site and workers’ safety. All workmen shall be protected per all OSHA regulations. The Contractor shall relieve the Owners and Architect of all such responsibilities.
- 0.05 No changes to the specifications or the work shall be made without the Owner’s approval.

1. General Requirements

- 1.01 All materials and work shall be performed in a workmanlike manner and consistent with all codes and standards of quality as established with the various agencies and organizations which establish such standards, including but not necessarily limited to: ASTM, ACI, NEC, UL, etc.
- 1.02 Project site shall be kept in a clean and orderly condition consistent with first class construction and to facilitate the work of each trade. Contractor shall be responsible for site clean up and trash removal. Site conditions shall be subject to Architect’s requirements.
- 1.03 Contractor shall hold periodic project meetings at intervals appropriate to the work in progress. The contractor shall be responsible of keeping minutes of these

meetings. Copy of these minutes should be sent to the Owner on a timely basis after each meeting

- 1.04 The Contractor shall maintain a construction schedule and shall update this schedule monthly which shall be reviewed at project meeting. The Owner shall be advised of any changes in the construction schedule.
- 1.05 The Contractor shall, at project close-out, provide the Owner with instructions as to the operation of all devices and equipment in the project. The Contractor shall provide the Owner with a close-out binder to include all Warranties, Manuals, and Instruction and Maintenance Documentation for all equipment and devices.
- 1.06 Contractor shall furnish comprehensive as-built drawings for the project distribution to the Owner at the completion of construction.
- 1.07 Contractor shall coordinate as necessary with appropriate sub-contractors to arrange and participate in scheduled training sessions with the Owner for all systems and equipment.
- 1.08 The Contractor shall provide temporary toilet facilities, temporary power and water for the project as required.
- 1.09 Contractor shall pay all permit fees, inspection fees, utility connection fees, impact fees, and any other fees directly related to the construction.

2. Site Work

- 2.01 All site work shall be done in accordance with any and all regulations, either local or national.
- 2.02 All grading around the building during construction and as part of final backfilling and grading shall be done in such a manner as to ensure that run-off water is directed away from the building.
- 2.03 Surround all drainage construction with appropriate pervious material and geotextile materials to prevent future clogging.
- 2.04 Contractor is responsible to coordinate that layout of the structure is performed by a licensed Engineer. Layout shall locate all utilities under and above ground all curbing, rights of way and required setbacks. Upon completion Contractor shall provide Owner with a sealed plan denoting all construction and its exact location "as-built" on the property.

- 2.05 Provide tree protection fence and silt fence for trees intended to remain. Additional barricades will be required to prevent compaction of soil around trees designated to be saved.
- 2.06 All backfill shall be clean and free of debris and organic material. Backfill within five feet of the building shall be compacted in lifts no greater than 12" to 90% compaction and graded to slope away from the foundation and to match the grading plan.
- 2.07 Footing drains shall be perforated 4" piping wrapped in geo-textile fabric, set in crushed, drainable stone and sloped to outfalls.
- 2.08 All stone around drainage and under slabs shall be clean ¾" clean crushed stone, free of fines.
- 2.09 Finished grade of site shall match Site Plan. Spread topsoil evenly, rake and seed. Remove all debris from the site and dispose of properly.
- 2.10 Provide chemical soil treatment for the prevention of termites. Provide Owner with applicator's lifetime structural warranty against termite damage.
- 2.11 Site Drainage: All downspouts shall be tied into city storm water drain system in accordance with City requirements.
- 2.12 Gas Service: Provide gas service from street for all units; verify sizing requirements and coordinate with Delmarva Power.
- 2.13 Sewer: Provide connection to existing sewer lateral for all units
- 2.14 Water Service – provide meter connections at existing incoming water service for all units

3. Concrete

- 3.01 All footings shall be poured on undisturbed soil. No fill will be acceptable. Do not pour under freezing conditions without protection to keep concrete from freezing. All formed concrete shall be adequately vibrated to prevent pockets, voids, and honeycombing.
- 3.02 All concrete shall be 3000 psi or greater, or as stipulated on the structural plans.
- 3.02.1 Comply with ACI 301, and the following:

Portland Cement:	ASTM C150
Aggregates:	ASTM C33
Water:	Potable

Air-Entraining:	ASTM C260
Calcium Chloride:	Not permitted.
Reinforcing Bars:	ASTM A615, Grade 60
Welded Wire Fabric:	ASTM A185
Joint Filler:	Asphalt saturated fiberboard, ASTM D1751
Underslab Drainage Fill:	Crushed stone or crushed gravel

3.03 Provide steel trowelled finish on all interior slabs and broom finish on all exterior slabs. Provide welded wire mesh reinforcing in all slabs and .006" poly vapor barrier below all slabs.

3.04 All concrete pours shall be done in a continuous manner so as to eliminate cold joints. If cold joints are unavoidable, they are only acceptable with the Owner's approval.

3.05 Protect all poured concrete from freezing per industry standards.

4. Masonry

4.01 Protect all masonry from freezing. Use only clean, new unbroken units.

Hollow loadbearing block, ASTM C90, Grade N, Type I, normal weight, manufacturer's standard texture and color, nominal face dimensions of 16" long x 8" high (15-5/8" x 7-5/8" actual) x thickness indicated.

Mortar: ASTM C270, Type S; do not add admixtures:

Portland Cement:	ASTM C150, Type I
Hydrated Lime:	ASTM C270, Type S
Aggregate:	ASTM C144
Water:	Potable
Calcium Chloride:	Not permitted

4.02 Provide Dur-o-wall horizontal reinforcement every other course vertically in all concrete block walls. Contractor to provide submittal for Architect's approval

4.03 All masonry ties shall be "wire" type, galvanized steel, conforming with the Building Code. Contractor to provide submittal for Architect's approval

4.04 Parge all exterior concrete block surfaces. Tool all exposed interior block surfaces.

4.05 Waterproof all basement walls with Tuff-n-Dri or equal waterproofing and insulating system. Contractor to provide appropriate submittals for Owner's approval.

5 Metals

- 5.01 Provide all structural steel, connections, welds, and fabrications in accordance with the plans and the American Institute of Steel Construction, AISC.
- 5.02 Metal railings shall be painted wrought iron. Submit shop drawings to Owner for approval.

6. Lumber

- 6.01 All framing lumber to be Standard or Better Spruce Pine Fir seasoned dry except 2x4's and 2x6's, which shall be kiln dried. All lumber shall be straight, unchecked and free of splits.
- 6.02 Engineered lumber shall conform with specifications on plans.
- 6.03 All nailing shall be in compliance with the BOCA and CABO Code nailing schedules.
- 6.04 All plywood shall be CDX. Subfloors shall be 3/4" T&G 5 ply or Advantech sub-flooring. Roof shall be 1/2" LP TechShield radiant barrier sheathing or equal. Provide fire-treated roof sheathing where required at party walls to comply with requirements for fire separation between adjacent units. Wall sheathing shall be 5/8" Type "X" exterior gypsum sheathing as indicated on the Drawings.
- 6.05 Roof sheathing shall be installed using approved roof sheathing spacers between all panels.
- 6.06 All floor sheathing shall be glued and nailed with ringed nails or screws.
- 6.07 Provide solid blocking below all stud walls running parallel with the framing and below the floor at doorways and the top and bottom of stairs.
- 6.08 Provide 1/2" cement board underlayment, DurRock, WonderBoard or approved equal, below all tile floors and walls of showers and bathtub surrounds. Stagger joints off of sub-flooring sheets.
- 6.09 Prior to drywall installation, the contractor shall review with the Owner all conditions where additional blocking may be desired for support of grab bars, railing, mirrors, light fixtures, etc. All such requirements for blocking shall be included in Contractor pricing
- 6.10 All shims must be of non-compressing material.

- 6.11 Provide additional blocking beneath the special floor patterns and where the floor planks run parallel to the framing.

7. Thermal and Moisture Protection

- 7.01 Foundation waterproofing shall be Tuff-n-Dri basement waterproofing system or approved equal.
- 7.02 Roofing shall be GAF 3-tab 30-year shingles. All flashing, gutters and downspouts shall be factory painted aluminum. Install shingles in accordance with manufacture's specifications. Provide aluminum drip edge at roof perimeter. Provide a sample of roofing material for color selection.
- 7.03 Roofing underlayment shall be Interwrap Titanium UDL roof underlayment, or approved substitute, installed per manufacturer's specifications. Contractor to provide submittal to architect for approval.
- 7.04 Gutters shall be ogee, K shape, aluminum. Contractor shall provide an alternate price for gutter covers, i.e. leaf protection.
- 7.04.1 Provide half-round 5" aluminum gutters and 3" round downspouts at locations indicated on the Drawings; finish to be factory-applied white painted finish.
- 7.05 Provide fiberglass batt insulation in all areas between heated space and unheated space. Exterior walls shall be minimum of R-19 fiberglass batts. Roof and attic floor insulation shall be R-38, fiberglass batts.
- 7.06 Insulate all interior walls of bathrooms, Wrap all waste piping with ultra-high density PVC wrap for noise reduction. Install all roof insulation with Owner approved Styrofoam spacing system, such as Proper Vent, to allow adequate ventilation of roof sheathing.
- 7.07 Provide W.R. Grace, Ice & Water Shield, or approved equal, at all instances where walls penetrate roofs or join chimney, beneath shingles on lower three feet of all eaves, and under all roof locations with a slope of less than 4/12.
- 7.08 All roof valleys to be open with factory painted aluminum flashing.
- 7.09 Provide foam Sill Seals between plates and top of all foundation walls.

8. Millwork, Doors and Windows

- 8.01 Interior door hardware shall be as selected by Owner.
- 8.02 Interior doors shall be 6-panel solid MDF units, 1&3/8" thick units. Provide Schlage residential series door hardware in brass finish. Provide locksets with emergency key operation at bathrooms bedrooms and basement doors.
- 8.03 Interior casing, baseboards and crown mouldings shall be as follows:
- | | |
|---------|----------------------------|
| Base: | WM 663 3&1/4 one-pc |
| Casing: | WM 376 2&1/4 beaded casing |
| Stool: | Wm 1197 2&3/8" thick stool |
- 8.04 Exterior fascia & rake shall be aluminum-wrapped pressure-treated lumber.
- 8.04.1 Existing street elevations shall have all exterior wood trim, fascias, molding and rakes repaired or replaced to restore to original condition. No finger-jointed material shall be permitted.
- 8.05 Exterior horizontal siding shall be James Hardie 'Hardie-Plank' over Tyvek infiltration barrier. Install in accordance with manufacturer's instructions.
- 8.06 Exterior soffit shall be James Hardie venting Hardi-soffit.
- 8.07 All interior trim shall be paint grade of finger-jointed poplar, pine or other softwood species, kiln dried.
- 8.08 Front door and other exterior doors shall be insulated fiberglass units built to sizes shown on the drawings. Provide complete weather-stripping and hardware installation.
- 8.08.1 Exterior Doors shall match original opening size on front elevations- do not reduce openings
- 8.09 Door from house to basement stairs shall be fiberglass, insulated doors, pre-hung with integral weather-stripping. Install specified hardware.
- 8.10 All windows and exterior patio doors / sliding doors shall be Andersen 200 series. Cladding shall be selected from manufacturer's standard colors. All interior hardware shall be factory finished in white color, or similar, and style to be selected by Owner. Screen frames shall be standard painted aluminum. Provide factory extension jambs as required for wall thicknesses. Contractor and window supplier shall review all windows to determine if tempered or safety glass is required by code and shall advise the Owner accordingly. Additionally, the window supplier and Contractor shall confirm to the Owner that all bedrooms shall have at least one window which meets the Code egress requirements.

- 8.10.1 Windows shall match original opening size on front elevations- do not reduce openings
- 8.11 All glass shall be “low-e squared”. Submit samples of glass for review and shall advise if glass has any color tint other than clear. The NFRC (National Fenestration Rating Council) rating system for the North/Central zone will be used to specify the energy efficiency requirement for the windows and skylights. Provide screens for all operable windows.
- 8.12 Interior stairs shall be open stringer with paint-grade treads in species of wood matching the flooring selection and painted stringers and risers. Balusters shall be painted wood with a hardwood rail.
- 8.13 All wood flooring, moldings, casings, baseboards, etc. shall be at the optimal moisture content, as recommended by Western Wood Products Association. Contractor shall confirm that the moisture content of the subfloors also meets these requirements prior to installation of the hardwood flooring.

9. Finishes

- 9.01 All drywall shall be 5/8” Type “X” except on interior partitions, which may be 1/2”. Tape and spackle all joints and nails and sand smooth for a Level 4 finish as defined by U.S. Gypsum. Provide moisture resistant drywall in all bathrooms. Provide Durock or similar cement type boards on all walls, which are to receive tile.

Provide 1-hour shaft-wall system at party walls as manufactured by U.S. Gypsum, including all necessary channels, runners, clips and fasteners in accordance with manufacturer’s specifications.

- 9.02 All interior walls except those designated to receive wallpaper shall receive one coat latex primer and two coats of flat latex, Valspar Ultra Premium, wall paint as manufactured by Valspar. Contractor shall provide a four foot by four foot sample of each color in each room. Other paint manufacturers will be considered, but must be approved by Owner.
- 9.03 Contractor shall allow for up to two interior wall colors.
- 9.04 All interior trim and interior doors shall receive one coat latex primer and two coats, Valspar Ultra Premium, semi-gloss latex as manufactured by Valspar. Contractor shall provide a primed and painted sample door, door frame, door casing, six feet of baseboard and six feet of crown molding for Architect’s approval.
- 9.05 All exterior wood trim or synthetic trim shall receive one coat primer and two coats exterior, Valspar Ultra Premium, latex enamel as manufactured by Valspar. Colors shall be selected by the architect and owners. Provide “brush outs” of selected colors on the required sample wall for approval.

- 9.06 All exterior wood siding should be primed on all six sides before installation
- 9.07 All wall paint shall be applied by roller or brush. Spraying shall be permitted only with Owner's approval. Trim paint may be sprayed.
- 9.08 Wood flooring shall be patched and refinished with three coats oil based polyurethane.
- 9.09 Ceramic tile flooring and tub surrounds shall be provided at locations indicated under an allowance of \$4.00 for tile. Provide samples for selection.
- 9.10 Provide an allowance for carpeting on second floor bedroom and hall floors as indicated on the Drawings; \$30.00 per square yard, installed. Provide samples for selection

10. Accessories

- 10.01 Provide and install new toilet paper holder, soap dish, towel rack, and toothbrush holder and shower curtain rod. Provide semi-recessed medicine cabinet with mirror at bathroom sinks.

11. Equipment

- 11.01 Provide new frost free refrigerator/freezer with ice maker, range/oven and exhaust hood, and dishwasher. GE or approved alternate.

11. Furnishings

- 12.01 Provide new kitchen cabinets and countertops. Counters shall be 1&1/2" thick plastic laminate with post-formed edge and backsplash.

13. Special Construction

None

14. Conveying Systems

None

15. Mechanical

- 15.01 Install all plumbing, HVAC or other systems in a manner that facilitates future maintenance, service, repairs and retrofits.
- 15.02 Design and install all mechanical to allow ease of seasonal shutdowns.
- 15.03 Maintain as large a pipe size throughout as is practical; ¾" supply lines with ½" to individual fixtures except ¾" to showers.
- 15.04 All supply piping shall be PEX with brass fittings. All piping shall be installed according to the Building Code and good construction practices. Review piping layout with Owner prior to installation.
- 15.05 All drainage and vent piping shall be Schedule 40 PVC.
- 15.06 Provide one 50 gallon electric water heater per unit. Locate water heaters to create the shortest run for hot water piping as possible for the Bath and the Kitchen.
- Location of water heaters shall be approved by Owner.
- 15.07 Install kitchen sink, fixtures, dishwasher and clothes washer. Install bathroom fixtures as indicated on the drawings.
- 15.08 Provide high-efficiency direct-vent gas furnace with central air conditioning, minimum 16 SEER.
- Provide alternate pricing for geo-thermal HVAC units; closed-loop ground wells. Alternate bid shall include all necessary well drilling, pumps, controls, etc. for a complete geo-thermal system.
- 15.09 Provide high-efficiency, pleated replaceable filters on all units.
- 15.10 Provide seven day, programmable thermostats with multiple daily cycles.
- 15.11 Provide easily accessible system shut-off and drain valves, throughout.
- 15.12 Provide interior valves for exterior pipes and faucets.
- 15.13 Install piping in such a way as to minimize noise.
- 15.14 Bathroom exhaust fans shall be 120cfm, low sones units.
- 15.15 HVAC ductwork shall be designed to minimize the transfer of fan noise into the rooms.
- 15.16 Insulation inside the ductwork shall not be permitted.

- 15.17 Provide shut-offs at all plumbing fixtures.
- 15.18 Owner reserves right to review and approve all design intent, system design and equipment specification prior to award of mechanical contracts
- 15.19 All duct work, piping and other mechanical system distribution shall be installed in a neat organized and orderly manner so as not to conflict with other trades or constraint future utilization of spaces and shall be run perpendicular or parallel to framing. Equipment locations and locations of all piping and duct runs shall be reviewed with the Architect prior to installation.
- 15.20 Provide one frost-proof hose bib at front and rear per unit in locations to be determined.
- 15.21 All mechanical equipment shall be located within locations approved by the Owner prior to installation.

16. Electrical

- 16.01 Install all electrical, CATV, telephone, security and other systems in a manner that facilitates future maintenance, service repairs and retrofits.
- 16.02 Provide at least one CATV connections in all rooms. Locations to be coordinated with Architect
- 16.03 Electrical: Electrical System distribution, circuiting, etc., to be designed by electrical subcontractor. Convenience circuits to be wired with 14 gauge min., 3 wire romex copper. Appliance circuits to be wired with 12 gauge min., 3 wire romex copper. Location of devices, fixtures, etc. to be coordinated with the Owner. Outlets to be spec grade standard duplex, color as selected from standard colors. Provide GFI and arc-fault protection in locations required by code. Provide 150 amp minimum electrical service with 22 circuit panel board.
- 16.04 All electrical work shall be in accordance with the National Electric Code and the International Residential code. Smoke alarms are included in the scope of work.
- 16.05 No aluminum wiring shall be permitted.
- 16.06 Provide surge protection at the Main Panel and service entrance for the Electrical, Telephone, Cable TV.
- 16.07 All electrical wiring, cabling, conduit runs, panel placement and other electrical system distribution shall be installed in a neat organized and orderly manner so as not to conflict with other trades or constraint future utilization of spaces. Equipment

locations and locations of all panels and visible conduit and wiring shall be reviewed with the Owner prior to installation.

16.08 All electrical panels shall be fully labeled to identify all breakers and circuits.

16.09 Provide switched exterior light fixtures at front and rear doors

16.10 Provide vanity light at each bathroom sink

16.11 Provide exhaust ducting for exhaust fans and clothes dryers.

Alternates

1. Providing and installing leaf guards on gutters.