ADDENDUM NO. 1

The Architect/ Engineer issues this addendum, applicable to the above named project, to all known Contractors before receipt of proposal.

This addendum includes Items Number 1-1 to 1-9. This addendum item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included.

LANDSCAPE ARCHITECTURE

Drawings

Item 1-1: L2.01 – Concordia Plaza Site Layout Plans: Areas A & B

Refer to the Concordia Plaza Site Layout Plan: Area A. Remove the following note in its entirety, "Ramp Handrail, both sides typ. as shown, ref Detail 12, Sheet L6.01."

Refer to the Concordia Plaza Site Layout Plan: Area A. Remove the following item in its entirety, "Buried 2'x2'x2' aggregate filled French drain pits connected to paver drains."

Item 1-2: L3.01 – Concordia Plaza Grading Plans: Areas A & B

This sheet has been reissued in its entirety

Item 1-3: L3.02 – Heartfelt Memorial Site Grading Plan

This sheet has been reissued in its entirety

Item 1-4: L4.01 – Concordia Plaza Planting Plans: Areas A & B

Refer to ARF, Acer rubrum 'Franks Jr. in the Plant List. Remove size and method of handling and replace with "6" Cal., Spade"

Item 1-5: L5.01 – Concordia Plaza Irrigation Plans: Areas A & B

This sheet has been reissued in its entirety.

Item 1-6: L5.02 – Heartfelt Memorial Site Irrigation Plan

This sheet has been reissued in its entirety.

Item 1-7: L6.01 – Site Details

Reference Detail 9, Unit Paver w/ Conc Base. Remove from the detail the following note, "1" PVC drain pipe, placed at 48" O.C. at low side of slab, drain to french drains as shown on plans."

Reference Detail 11, Plaza Steps. Remove from the detail the following note, "1" PVC drain pipe, placed at 48" O.C. at low side of slab, drain to french drains as shown on plans."

Reference Detail 12, Typical Ramp Handrail. Remove Detail 12 in its entirety.

Specification

Item 1-8: 042000 – Unit Masonry

Add this section in its entirety to the construction documents.

Item 1-9: 047200 – Cast Stone Masonry

Add this section in its entirety to the construction documents.

SECTION 042000 - UNIT MASONRY

1. GENERAL

1.1 RELATED DOCUMENTS

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

1. See Section “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.

1.2 SUMMARY

A. This Section includes the following:

1. Clay unit masonry.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. See Section 047200 “Cast Stone Masonry” for cast stone in masonry walls.
2. See Section 079200 “Joint Sealants” for joint sealants at perimeter of masonry walls.

1.3 SUBMITTALS

A. Product data for each different type of masonry unit and accessory.

B. Samples: Clay unit masonry showing full range of colors and textures expected in finished construction.

1.4 QUALITY ASSURANCE

A. Unit Masonry Standard: Comply with ACI 530.1/ASCE 6 "Specifications for Masonry Structures," except as otherwise indicated.

1. Revise ACI 530.1/ASCE 6 to exclude Sections 1.4 and 1.7; Parts 2.1.2, 3.1.2, and 4.1.2; and Articles 1.5.1.2, 1.5.1.3, 2.1.1.1, 2.1.1.2, and 2.3.3.9 and to modify Article 2.1.1.4 by deleting requirement for installing vent pipes and conduits built into masonry.

B. Field Constructed Mock-Ups: Prior to installation of unit masonry, erect sample wall panels. Build Mock-up approximately 4 foot by 4 foot and maintain on site during construction. Mockup panel shall be laid 7 days prior to inspection, shall be washed down and include full wall assembly including flashing and weeps.

C. Mortar/Grout Testing Service: Engage a testing laboratory acceptable to Architect/Engineer to perform material evaluation tests and to design mortar/grout mixes.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver masonry materials to project in undamaged condition.

B. Store and handle masonry units, cementitious materials, and accessories off the ground, under cover, and in a dry location.

1.6 PROJECT CONDITIONS

A. Protection of Masonry: During erection, cover tops of walls with waterproof sheeting at end of each day's work. Prevent grout, mortar, and soil from staining the face of masonry.

B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit masonry damaged by frost or freezing conditions. Comply with the following requirements:

1. Cold-Weather Construction: When the ambient temperature is within the limits indicated, use the following procedures:

    a. 40 to 32 deg F: Heat mixing water or sand to produce mortar temperatures between 40 and 120 deg F.
    b. 32 to 25 deg F: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry.
    c. 25 to 20 deg F: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry. Heat masonry units to 40 deg F if grouting. Use heat on both sides of walls under construction.
    d. 20 deg F and Below: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry. Heat masonry units to 40 deg F. Provide enclosures and use heat on both sides of walls under construction to maintain temperatures above 32 deg F within the enclosures.

2. Cold-Weather Protection: When the mean daily temperature is within the limits indicated, provide the following protection:

    a. 40 to 25 deg F: Cover masonry with a weather-resistant membrane for 48 hours after construction.
    b. 25 to 20 deg F: Cover masonry with insulating blankets or provide enclosure and heat for 48 hours after construction to prevent freezing. Install wind breaks when wind velocity exceeds 15 mi./h.
    c. 20 deg F and Below: Provide enclosure and heat to maintain temperatures above 32 deg F within the enclosure for 48 hours after construction.

3. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried out, but not less than 7 days after completion of cleaning.

C. Hot-Weather Requirements: Protect unit masonry work when temperature and humidity conditions produce excessive evaporation of water from mortar and grout. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg F and above.

2. PRODUCTS

2.1 CLAY MASONRY UNITS

A. Face Brick: Provided by Owner.

B. Face Brick Standard: ASTM C 216 and as follows:

C. Provide units without cores or frogs where cores would be exposed.

2.2 MORTAR AND GROUT MIXES

A. General: Do not add admixtures unless otherwise indicated. Do not use calcium chloride in mortar or grout.

B. Mortar for Unit Masonry: ASTM C 270, portland cement and lime blend, Type S unless otherwise indicated.

1. Provide pre-blended mortar mix, not field mixed.

C. Grout for Unit Masonry: ASTM C 476.

2.3 PROPORTIONING AND DESIGN OF MIXES

A. Prepare design mixes for each type and strength of concrete by laboratory trial batch as specified in ACI 301. Use an independent testing facility acceptable to the Architect/Engineer for preparing and reporting proposed mix designs.

B. Submit written reports to Architect of proposed mix. Do not begin concrete production until proposed mix designs have been approved by Architect/Engineer.

C. Design mixes to provide normal weight concrete with the following properties, unless otherwise indicated on drawings and schedules:

1. All grout shall have a 28 day F'c = 2000 psi, unless otherwise indicated on the structural drawings.
2. All mortar shall have a 28 day F'c = 1800 psi, unless otherwise indicated on the structural drawings.

a. Minimum Water Retention Percentage = 75
b. Maximum Air Content Percentage = 12

D. Slump Limits: Proportion and design mixes to result in grout slump at point of placement as follows:

1. Between 8 and 10 inches.

2.4 JOINT REINFORCEMENT AND ANCHORS

A. Continuous Joint Reinforcement: Provide manufacturer's standard welded-wire units prefabricated from galvanized carbon steel wire, minimum 0.1483 inch (9 gage) diameter with 3/16" diameter pintle and eyes. Provide prefabricated corner and tee units at corners and wall intersections.

1. Single-Wythe Masonry: Truss design, unless noted otherwise.
2. Multi-Wythe Masonry: Adjustable tie system: truss design reinforcement for back-up CMU wythe with rectangular eye sections welded on 16" centers; provide rectangular pintle sections for face brick wythe.

B. Screw-Attached, Masonry Veneer Anchors: Units consisting of a wire tie section and a metal anchor section complying with the following requirements:

1. Anchors and installation shall comply with ACI 530.1/ASCE 6.
2. Wire Tie: Manufacturer's standard triangular shape.
3. Anchor Section: Prefabricated, sheet metal plate with screw holes top and bottom and adjustable slot to allow horizontal and vertical movement.

a. Provide Dur-O-Wal D/A 210/W Tri-Tie or equal.

C. Adjustable Anchors for Connecting Masonry to Structural Framework: Pre-fabricated, two-piece assemblies designed to allow vertical or horizontal differential movement between wall and structural framework. Provide manufacturer's standard anchors for welding to steel with triangular-shaped wire tie sections.

1. Anchors and installation shall comply with ACI 530.1/ASCE 6.
2. Provide Dur-O-Wal D/A 207/W Tri-Tie or equal.

D. Manufacturers: Subject to compliance with requirements, provide joint reinforcement and anchors by one of the following:

1. AA Wire Products, Co., Cincinnati, OH (513) 242-3325.
2. Dur-O-Wal, Inc., Aurora, IL (630) 851-8400.
3. Hohmann & Barnard, Inc., Hauppauge, NY (631) 234-0600.

2.5 EMBEDDED FLASHING MATERIALS

A. In-Wall Flashing:

1. Copper-Fabric Laminate Flashing: 3 oz. copper sheet bonded with asphalt between 2 layers of glass fiber cloth for in-wall flashing.

a. Metal Drip Edges: Fabricate from stainless steel. Extend at least 3 inches (75 mm) into wall with ¾ inch upward vertical bend and 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees.

B. Thru-Wall Flashing:

1. Stainless Steel: 0.0156 inch (0.4 mm) thick for through-wall flashing with ¼" drip.

C. Rubber Membrane Flashing: Manufacturer's standard elastomeric rubber membrane with an overall thickness of 40 mils (1.02 mm).

1. Attachment: Flashing manufacturer's standard attachment method for attaching flashing sheets to masonry and concrete.
2. Product: Subject to compliance with requirements, provide "Flashgard" by Firestone Building Products or approved equal.

2.6 MISCELLANEOUS MASONRY ACCESSORIES

A. Expansion Joint Strips: ASTM D 1056, Type 2, Class A, Grade 1 , compressible up to 35 percent.

B. Control Joint Gaskets: Styrene-butadiene, ASTM D 2000, Designation 2AA-805.

C. Bond Breaker Strips: ASTM D 226, Type I, No. 30 asphalt felt.

D. Cavity vent product, color to match mortar, space at 24" o.c. at base and top of wall construction.

E. Flashing Pan: Provide stainless steel flashing pan set in a bed of sealant / mastic at thru wall flashing locations.

2.7 Cavity Drainage Material

A. Cavity Drainage Material: Reticulated, nonabsorbent mesh, made from polyethylene strands and shaped to maintain drainage at weep holes without being clogged by mortar droppings. Install per manufacturers written instructions.

1. Product: Subject to compliance with requirements, provide "Green Mortar Net" by Mortar Net USA, Ltd or approved equal.
2. Thickness: Match cavity width. See drawings.

2.8 MASONRY CLEANERS

A. Job-Mixed Detergent Solution: Solution of 1/2-cup trisodium phosphate and 1/2-cup laundry detergent dissolved in one gallon of water.

B. Prosoco SureKleen 600.

3. EXECUTION

3.1 EXAMINATION

A. Examine work area for conditions affecting performance of unit masonry. Examine rough-in and built-in construction to verify locations of piping connections.

3.2 INSTALLATION, GENERAL

A. Comply with referenced unit masonry standards and other requirements indicated.

B. Cut masonry units where required with motor-driven saws.

C. Coursing: Running Bond, unless otherwise indicated.

3.3 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces of columns, walls, and arises, do not exceed 1/4 inch in 10 feet , nor 3/8 inch in 20 feet, nor 1/2 inch in 40 feet or more. For external corners, expansion joints, control joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet , nor 1/2 inch in 40 feet or more. For vertical alignment of head joints, do not exceed plus or minus 1/4 inch in 10 feet, nor 1/2 inch maximum.

B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines, do not exceed 1/4 inch in 20 feet, nor 1/2 inch in 40 feet or more. For top surface of bearing walls, do not exceed 1/8 inch in 10 feet, nor 1/16 inch within width of a single unit.

C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls, and partitions, do not exceed 1/2 inch in 20 feet, nor 3/4 inch in 40 feet or more.

D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4 inch nor plus 1/2 inch.

E. Variation in Mortar-Joint Thickness: Do not vary from bed-joint thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary bed-joint thickness from bed-joint thickness of adjacent course by more than 1/8 inch. Do not vary from head-joint thickness indicated by more than plus or minus 1/8 inch. Do not vary head-joint thickness from adjacent head-joint thickness by more than 1/8 inch. Do not vary from collar-joint thickness indicated by more than minus 1/4 inch or plus 3/8 inch.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing and locations of openings and offsets. Avoid the use of less-than-half-size units.

B. Bond Pattern for Exposed Masonry: Match bond pattern of existing building, unless otherwise noted.

C. Stopping and Resuming Work: In each course, rack back 1/2-unit length; do not tooth.

D. Built-In Work: Fill in solidly with masonry around built-in items.

E. Hollow Metal Frames: Fill space between hollow metal frames and masonry solid with mortar. At exterior frames insert extruded polystyrene board insulation around perimeter of frame.

1. Where built in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
2. Fill CMU cores with grout not less than 3 courses (24") under bearing plates, beams, lintels, posts and similar members unless otherwise indicated.

3.5 MORTAR BEDDING AND JOINTING

A. Lay concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar all courses of pilasters and columns. Spread out full mortar bed for starting courses.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

C. Cut joints flush for masonry walls to be concealed or to be covered by other materials, unless otherwise indicated.

D. Keep cavities/air spaces clean of mortar droppings and other materials. Strike flush joints facing cavities/air spaces.

E. Keep cavities open where unfilled space is indicated between back of dimension stone cladding and back-up wall; do not fill cavities with mortar or grout.

3.6 HORIZONTAL JOINT REINFORCEMENT AND ANCHORS

A. Provide continuous horizontal joint reinforcement at locations and spacing as indicated or if not indicated as recommended in referenced standards. Lap reinforcing 6" minimum.

B. Use continuous horizontal joint reinforcement with adjustable 2-piece ties for bond tie between wythes.

C. Anchor masonry to structural members using adjustable 2-piece anchors where masonry abuts or faces structural members.

D. Anchor brick veneer to steel stud backup with a minimum of one brick veneer tie for every 2-2/3 sq. ft. of wall area and a maximum spacing of 24 inches on center. Attach ties to steel studs with corrosion-resistant screws. Embed ties 2 inches minimum into bed joints of veneer and completely surround with mortar.

3.7 MOVEMENT (CONTROL AND EXPANSION) JOINTS

A. Install control and expansion joints in unit masonry where indicated. If not indicated, provide joints at 16' o. c. Interrupt horizontal joint reinforcement through movement joints.

3.8 FLASHING/WEEP HOLES

A. Install flashing and cavity vents over stainless steel flashing drip at shelf angles, lintels, ledges, and other obstructions to the downward flow of water in the wall, and where indicated.

B. Prepare masonry surfaces so that they are smooth and free from projections that could puncture flashing. Place through-wall flashing on sloping bed of mortar and cover with mortar. Seal penetrations in flashing with adhesive/sealant/tape as recommended by flashing manufacturer before covering with mortar. Attach flashing to substrates as required by manufacturer to prevent water infiltration behind flashing membrane.

C. At lintels and shelf angles, extend flashing a minimum of 4 inches into masonry at each end. At heads and sills, extend flashing as specified above but turn up ends not less than 2 inches to form a pan.

D. Cut off flashing flush with face of wall after masonry wall construction is completed.

E. Stainless steel flashing shall protrude ½" beyond face of wall and form a drip. Exposed flashing material shall be hemmed and turned down 30 degrees from horizontal.

F. Install cavity vents at 24 inches o. c. in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing.

3.9 QUALITY CONTROL TESTING DURING CONSTRUCTION

A. General: The Contractor will employ a testing laboratory to perform tests and to submit test reports to the Architect/Engineer for review.

1. Testing Frequency: Tests and Evaluations listed in this Article will be performed during construction for each 5000 sq. ft. (460 sq. m) of wall area or portion thereof. In no case, no fewer than 2 tests shall be performed.
2. Mortar properties will be tested per ASTM C 780.
3. Mortar composition and properties will be evaluated per ASTM C 270.
4. Grout will be sampled and tested for compressive strength per ASTM C 1019.
5. Evaluation of Quality-Control Tests: In the absence of other indications of noncompliance with requirements, masonry will be considered satisfactory if results from construction quality-control tests comply with minimum requirements indicated.

3.10 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units. Install new units to match adjoining units, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge any voids or holes and completely fill with mortar. Point-up all joints including corners, openings, and adjacent construction to provide a neat, uniform appearance.

C. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry by means of bucket and brush hand-cleaning method described in BIA "Technical Note No. 20 Revised." Use job-mixed detergent solution. Protect all dissimilar adjoining materials during and after cleaning process. Repair or replace any materials that are damaged during cleaning.

D. Protection: Provide final protection in a manner that insures unit masonry is without damage and deterioration at time of Substantial Completion.

END OF SECTION 042000

SECTION 047200 - CAST STONE MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Cast stone trim including the following:
   a. Wall caps.

B. Related Sections:

1. See Section 042000 "Unit Masonry" for installing cast stone units in unit masonry

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

1. For cast stone units, include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Show fabrication and installation details for cast stone units. Include dimensions, details of reinforcement and anchorages if any, and indication of finished faces.

1. Include building elevations showing layout of units and locations of joints and anchors.

C. Samples for Verification:

1. For each color and texture of cast stone required, 10 inches (250 mm) square in size.

D. Qualification Data: For manufacturer.

1. Include copies of material test reports for completed projects, indicating compliance of cast stone with ASTM C 1364.

E. Material Test Reports.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer of cast stone units similar to those indicated for this Project, that has sufficient production capacity to manufacture required units, and is a plant certified by the Cast Stone Institute.

B. Source Limitations for Cast Stone: Obtain cast stone units through single source from single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Coordinate delivery of cast stone with unit masonry work to avoid delaying the Work and to minimize the need for on-site storage.

B. Pack, handle, and ship cast stone units in suitable packs or pallets.

1. Lift with wide-belt slings; do not use wire rope or ropes that might cause staining. Move cast stone units, if required, using dollies with wood supports.
2. Store cast stone units on wood skids or pallets with nonstaining, waterproof covers, securely tied. Arrange to distribute weight evenly and to prevent damage to units. Ventilate under covers to prevent condensation.

C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

D. Store mortar aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

1.6 PROJECT CONDITIONS

A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and above and will remain so until cast stone has dried, but no fewer than seven days after completing cleaning.

B. Hot-Weather Requirements: Comply with hot-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 CAST STONE MATERIALS

A. General: Comply with ASTM C 1364 and the following:

B. Portland Cement: ASTM C 150, Type I or Type III, containing not more than 0.60 percent total alkali when tested according to ASTM C 114. Provide natural color or white cement as required to produce cast stone color indicated.

C. Coarse Aggregates: Granite, quartz, or limestone complying with ASTM C 33; gradation and colors as needed to produce required cast stone textures and colors.

D. Fine Aggregates: Natural sand or crushed stone complying with ASTM C 33, gradation and colors as needed to produce required cast stone textures and colors.

E. Color Pigment: ASTM C 979, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis.

F. Admixtures: Use only admixtures specified or approved in writing by Architect.

1. Do not use admixtures that contain more than 0.1 percent water-soluble chloride ions by mass of cementitious materials. Do not use admixtures containing calcium chloride.
2. Use only admixtures that are certified by manufacturer to be compatible with cement and other admixtures used.
3. Air-Entraining Admixture: ASTM C 260. Add to mixes for units exposed to the exterior at manufacturer's prescribed rate to result in an air content of 4 to 6 percent, except do not add to zero-slump concrete mixes.
4. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
5. Water-Reducing, Retarding Admixture: ASTM C 494/C 494M, Type D.
6. Water-Reducing, Accelerating Admixture: ASTM C 494/C 494M, Type E.

G. Reinforcement: Deformed steel bars complying with ASTM A 615/A 615M, Grade 60 (Grade 420). Use galvanized or epoxy-coated reinforcement when covered with less than 1-1/2 inches (38 mm) of cast stone material.

1. Epoxy Coating: ASTM A 775/A 775M.
2. Galvanized Coating: ASTM A 767/A 767M.

H. Embedded Anchors and Other Inserts: Fabricated from stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666, Type 304.

2.2 CAST STONE UNITS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Thunderstone – Lincoln, NE
2. Stone Co. – Omaha, NE
3. Edwards Cast Stone – Dubuque, IA
4. Artisan Stone Company, Inc.
5. Continental Cast Stone Manufacturing, Inc.

B. Provide cast stone units complying with ASTM C 1364 using either the vibrant dry tamp or wet-cast method.

1. Provide units that are resistant to freezing and thawing as determined by laboratory testing according to ASTM C 666/C 666M, Procedure A, as modified by ASTM C 1364.
2. Slope exposed horizontal surfaces 1:12, unless otherwise indicated.
3. Provide drips on projecting elements, unless otherwise indicated.

C. Fabricate units with sharp arris and accurately reproduced details, with indicated texture on all exposed surfaces unless otherwise indicated.

1. Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.
2. Provide raised fillets at backs of sills and at ends indicated to be built into jambs.
3. Provide drips on projecting elements unless otherwise indicated.

D. Fabrication Tolerances:

1. Variation in Cross Section: Do not vary from indicated dimensions by more than 1/8 inch (3 mm).
2. Variation in Length: Do not vary from indicated dimensions by more than 1/360 of the length of unit or 1/8 inch (3 mm), whichever is greater, but in no case by more than 1/4 inch (6 mm).
3. Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or 1/8 inch (3 mm), whichever is greater.
4. Location of Grooves, False Joints, Holes, Anchorages, and Similar Features: Do not vary from indicated position by more than 1/8 inch (3 mm) on formed surfaces of units and 3/8 inch (10 mm) on unformed surfaces.

E. Cure units as follows:

1. Cure units in enclosed moist curing room at 95 to 100 percent relative humidity and temperature of 100 deg F (38 deg C) for 12 hours or 70 deg F (21 deg C) for 16 hours.
2. Keep units damp and continue curing to comply with one of the following:

a. No fewer than five days at mean daily temperature of 70 deg F (21 deg C) or above.
b. No fewer than six days at mean daily temperature of 60 deg F (16 deg C) or above.
c. No fewer than seven days at mean daily temperature of 50 deg F (10 deg C) or above.
d. No fewer than eight days at mean daily temperature of 45 deg F (7 deg C) or above.

F. Acid etch units after curing to remove cement film from surfaces to be exposed to view.

G. Colors and Textures: As selected by Architect from manufacturer's full range.

2.3 MORTAR MATERIALS

A. Comply with requirements in Division 04 Section "Unit Masonry" for mortar materials and mixes.
1. For setting mortar and pointing mortar, use Type N.

2.4 ACCESSORIES

A. Dowels: 1/2-inch- (12-mm-) diameter, round bars, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

B. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cast stone manufacturer and expressly approved by cleaner manufacturer for use on cast stone and adjacent masonry materials.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Diedrich Technologies, Inc.
b. EaCo Chem, Inc.
c. ProSoCo, Inc.

2.5 SOURCE QUALITY CONTROL

A. Engage a qualified independent testing agency to sample and test cast stone units according to ASTM C 1364.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SETTING CAST STONE IN MORTAR

A. Install cast stone units to comply with requirements in Division 04 Section "Unit Masonry."

B. Set cast stone as indicated on Drawings. Set units accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.

1. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.
2. Coordinate installation of cast stone with installation of flashing specified in other Sections.

C. Wet joint surfaces thoroughly before applying mortar or setting in mortar.

D. Set units in full bed of mortar with full head joints unless otherwise indicated.
1. Build anchors and ties into mortar joints as units are set.
2. Fill dowel holes and anchor slots with mortar.
3. Fill collar joints solid as units are set.
4. Build concealed flashing into mortar joints as units are set.
5. Keep head joints in coping and other units with exposed horizontal surfaces open to receive sealant.

E. Rake out joints for pointing with mortar to depths of not less than 3/4 inch (19 mm). Rake joints to uniform depths with square bottoms and clean sides. Scrub faces of units to remove excess mortar as joints are raked.

F. Point mortar joints by placing and compacting mortar in layers not greater than 3/8 inch (10 mm). Compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.

G. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

H. Provide sealant joints at copings and other horizontal surfaces, at expansion, control, and pressure-relieving joints, and at locations indicated.

1. Keep joints free of mortar and other rigid materials.
2. Build in compressible foam-plastic joint fillers where indicated.
3. Form joint of width indicated, but not less than 3/8 inch (10 mm) <**Insert dimension**>.
4. Prime cast stone surfaces to receive sealant and install compressible backer rod in joints before applying sealant unless otherwise indicated.
5. Prepare and apply sealant of type and at locations indicated to comply with applicable requirements in Division 07 Section "Joint Sealants."

3.3 SETTING ANCHORED CAST STONE WITH SEALANT-FILLED JOINTS

A. Set cast stone as indicated on Drawings. Set units accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.

1. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.
2. Shim and adjust anchors, supports, and accessories to set cast stone in locations indicated with uniform joints.

B. Keep cavities open where unfilled space is indicated between back of cast stone units and backup wall; do not fill cavities with mortar or grout.

C. Fill anchor holes with sealant.

1. Where dowel holes occur at pressure-relieving joints, provide compressible material at ends of dowels.

D. Set cast stone supported on clip or continuous angles on resilient setting shims. Use material of thickness required to maintain uniform joint widths. Hold shims back from face of cast stone a distance at least equal to width of joint.

E. Keep joints free of mortar and other rigid materials. Remove temporary shims and spacers from joints after anchors and supports are secured in place and cast stone units are anchored. Do not begin sealant installation until temporary shims and spacers are removed.

F. Prime cast stone surfaces to receive sealant and install compressible backer rod in joints before applying sealant unless otherwise indicated.

G. Prepare and apply sealant of type and at locations indicated to comply with applicable requirements in Division 07 Section "Joint Sealants."

3.4 INSTALLATION TOLERANCES

A. Variation from Plumb: Do not exceed 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.

B. Variation from Level: Do not exceed 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.

C. Variation in Joint Width: Do not vary joint thickness more than 1/8 inch in 36 inches (3 mm in 900 mm) or one-fourth of nominal joint width, whichever is less.

D. Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than 1/16 inch (1.5 mm), except where variation is due to warpage of units within tolerances specified.

3.5 ADJUSTING AND CLEANING

A. Remove and replace stained and otherwise damaged units and units not matching approved Samples. Cast stone may be repaired if methods and results are approved by Architect.

B. Replace units in a manner that results in cast stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.

C. In-Progress Cleaning: Clean cast stone as work progresses.

1. Remove mortar fins and smears before tooling joints.
2. Remove excess sealant immediately, including spills, smears, and spatter.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed cast stone as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample; leave one sample uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of cast stone.
3. Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
5. Clean cast stone by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean cast stone with proprietary acidic cleaner applied according to manufacturer's written instructions.

END OF SECTION 047200

GENERAL NOTES

1. CONTRACTOR SHALL PRESERVE ALL SURVEY CONTROL POINTS.

2. PRIOR TO MOVING OF THE JOB, THE CONTRACTOR SHALL NOTIFY THE OWNER & ARCHITECT AND REQUEST A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

3. LOCATION AND ELEVATIONS OF IMPROVEMENTS TO BE MET (OR AVOIDED) BY WORK TO BE DONE SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH FIELD EXPLORATIONS PRIOR TO DEMOLITION. CONTRACTOR SHALL REPORT TO ARCHITECT ANY DISCREPANCIES BETWEEN HIS MEASUREMENTS AND THESE PLANS.

4. BEFORE EXCAVATING FOR THIS CONTRACT, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF UNDERGROUND UTILITIES. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF DEMOTION AND EARTHWORK TO PERMIT REVISIONS TO PLAN IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.

5. THE CONTRACTOR SHALL USE CAUTION AROUND ANY EXISTING PLANT MATERIAL, IMPROVEMENTS OR UTILITIES THAT ARE TO REMAIN ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS OF SUCH FEATURES WHEN BROKEN OR OTHERWISE DAMAGED BY CONSTRUCTION ACTIVITIES.

6. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL EROSION CONTROL MEASURES DAMAGED BY CONSTRUCTION ACTIVITIES.

GRADING NOTES

1. AN EARTHWORK PACKAGE WAS PREFORMED BY OTHERS PRIOR TO THIS GENERAL CONSTRUCTION PROJECT. THE EARTHWORK CONTRACTOR WAS RESPONSIBLE FOR COMPACTING SUBGRADES IN PREPARATION FOR THIS PROJECT. ANY AREA THAT IS DISTURBED DUE TO THIS CONTRACT WILL BE WILL NEED TO BE RESPONSIBILITY OF THE CONTRACT AND THE CONTRACTOR FOR THIS PROJECT WILL NEED TO RE-COMPACT SOILS AS NECESSARY TO MEET SPECIFICATION PRIOR TO THE INSTALLATION OF ANY FEATURES.

2. THE EARTHWORK CONTRACTOR WAS RESPONSIBLE TO GRADE GREEN SPACES TO ALLOW FOR 6" OF TOPSOIL REDISTRIBUTION UNDER THIS CONTRACT. TOPSOIL WAS STOCKPILED FOR THIS PURPOSE, BUT ADDITIONAL SOIL MAY BE NECESSARY TO MEET THE REQUIRED SOIL DEPTH AS WELL AS SOIL REQUIREMENTS FOR THE PLANTING BEDS.

3. CONTRACTOR WILL BE HELD RESPONSIBLE FOR SETTLEMENT DUE TO IMPROPER COMPACTION OF ANY RE-COMPACTED AREAS.

4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSPECTIONS PRIOR TO COMMENCING CONSTRUCTION. COORDINATE WITH THE EARTHWORK CONTRACTOR AND OWNER, THE SWPPP MAY BE TRANSFERRED.

5. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL, PEDESTRIAN ACCESS AND SAFETY MEASURES.

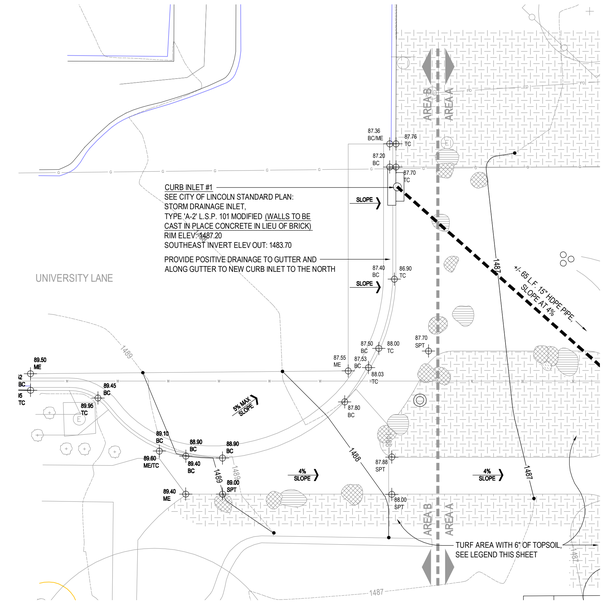
6. ANY GEOTECHTENICAL/TESTING REPORTS COLLECTED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE OWNER AND THE ENGINEER.

7. GRADE AREAS WITHIN TREE PROTECTION FENCES AFTER MAJOR GRADING OPERATIONS ARE COMPLETED. GRADE BY HAND.

TOPSOIL LEGEND

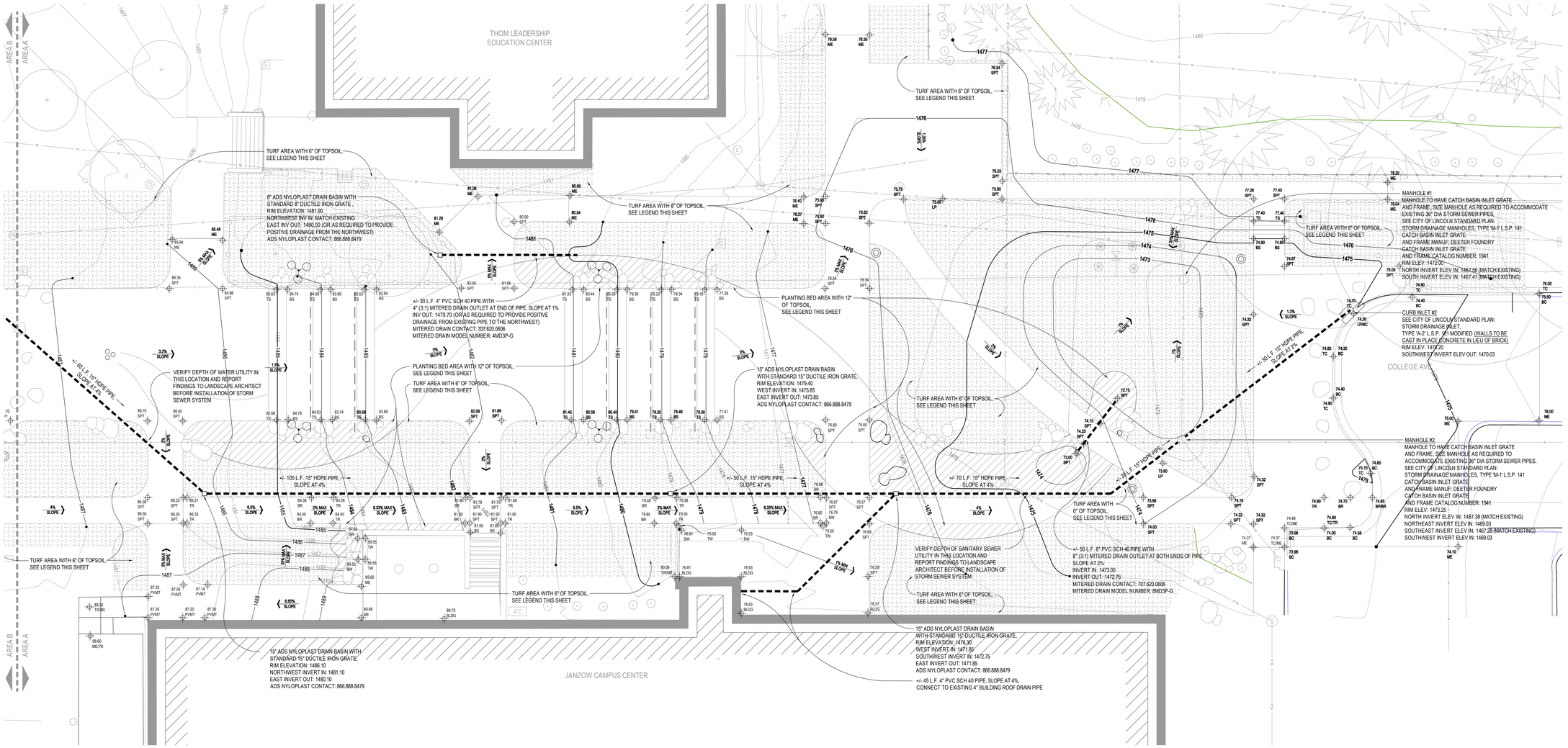
TOPSOIL IN PLANTING BED AREAS
PROVIDE AND INSTALL 12" OF TOPSOIL IN PLANTING BED AREAS AS SHOWN ON SITE GRADING PLAN. BLEND 12" OF TOPSOIL TO A DEPTH OF 24", REFERENCE DETAIL 2 SHEET L4.01 FOR PLANTING BED REQUIREMENTS. DISTRIBUTE TOPSOIL STOCKPILE FROM THE PREVIOUS EARTHWORK PACKAGE. ADDITIONAL TOPSOIL MAY BE NECESSARY TO MEET THE 12" TOPSOIL DEPTH REQUIREMENTS.

TOPSOIL IN TURF AREAS
PROVIDE AND INSTALL 6" OF TOPSOIL IN TURF AREAS AS SHOWN ON SITE GRADING PLAN. DISTRIBUTE TOPSOIL STOCKPILE FROM THE PREVIOUS EARTHWORK PACKAGE. ADDITIONAL TOPSOIL MAY BE NECESSARY TO MEET THE 6" TOPSOIL DEPTH REQUIREMENTS.



CONCORDIA PLAZA GRADING PLAN: AREA B

SCALE: 1"=10'-0"



CONCORDIA PLAZA GRADING PLAN: AREA A

SCALE: 1"=10'-0"

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Fairway, Kansas

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A - 1	06/04/2014	AS PER ADDENDUM #1, THIS SHEET IS REISSUED IN ITS ENTIRETY.

Concordia University
Concordia Plaza &
Heartfelt Memorial
Construction Documents

Concordia University
Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014

Concordia Plaza
Grading Plans:
Areas A & B

L3.01

Plot Time Stamp: 5 / 04 / 2014 9:57:03 AM
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GENERAL NOTES

1. CONTRACTOR SHALL PRESERVE ALL SURVEY CONTROL POINTS.

2. PRIOR TO MOVING OFF THE JOB, THE CONTRACTOR SHALL NOTIFY THE OWNER & ARCHITECT AND REQUEST A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

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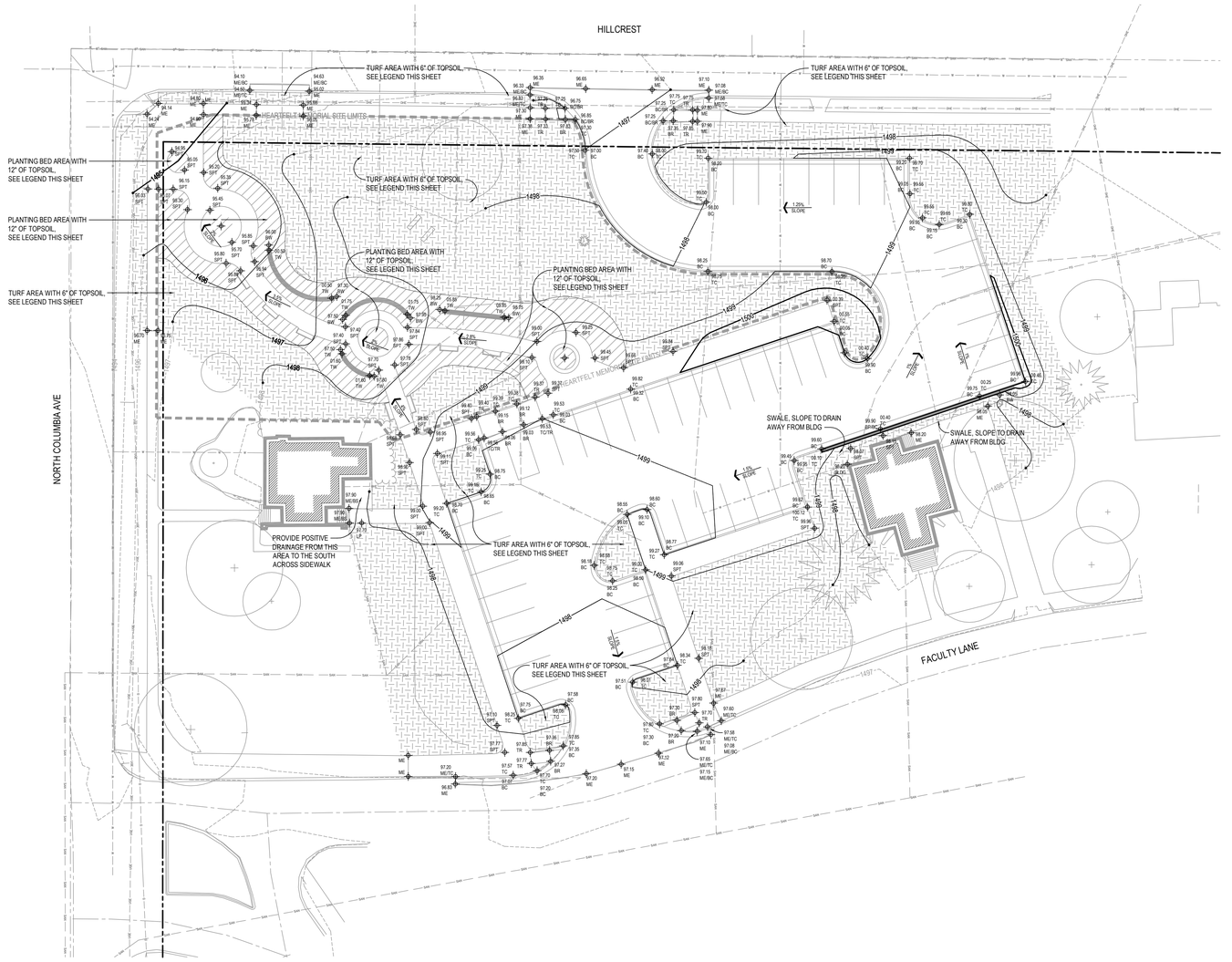
TOPSOIL LEGEND

TOPSOIL IN PLANTING BED AREAS
PROVIDE AND INSTALL 12" OF TOPSOIL IN PLANTING BED AREAS AS SHOWN ON SITE GRADING PLAN. BLEND 12" OF TOPSOIL TO A DEPTH OF 24", REFERENCE DETAIL 2 SHEET L4.02 FOR PLANTING BED REQUIREMENTS. DISTRIBUTE TOPSOIL STOCKPILE FROM THE PREVIOUS EARTHWORK PACKAGE. ADDITIONAL TOPSOIL MAY BE NECESSARY TO MEET THE 12" TOPSOIL DEPTH REQUIREMENTS.

TOPSOIL IN TURF AREAS
PROVIDE AND INSTALL 6" OF TOPSOIL IN TURF AREAS AS SHOWN ON SITE GRADING PLAN. DISTRIBUTE TOPSOIL STOCKPILE FROM THE PREVIOUS EARTHWORK PACKAGE. ADDITIONAL TOPSOIL MAY BE NECESSARY TO MEET THE 6" TOPSOIL DEPTH REQUIREMENTS.



HEARTFELT MEMORIAL GRADING PLAN
SCALE: 1"=20'-0"

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Kansas City, Missouri
Fairway, Kansas

SHEET HISTORY:

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Concordia University
Concordia Plaza &
Heartfelt Memorial
Construction Documents

Concordia University
Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014

PROFESSIONAL LANDSCAPE ARCHITECT
DEAN SCHEER
LA-159
STATE OF NEBRASKA
05.12.2014

Heartfelt Memorial
Grading Plan

L3.02

Plot Time Stamp: 6 / 04 / 2014 10:44:13 AM
File Location/Name: M:\530-017-11 Concordia Jansow Open Space\3) Active Work\3) AutoCAD\530017-L302.dwg

IRRIGATION LEGEND:

QUANTY	SYMBOL	DESCRIPTION
15	10'	HUNTER, PROS SERIES, 4" POP UP W/ 10' NOZZLE
2	12'	HUNTER, PROS SERIES, 4" POP UP W/ 12' NOZZLE
19	15'	HUNTER, PROS SERIES, 4" POP UP W/ 15' NOZZLE
35		HUNTER, PROS-PRS40-CV SERIES, 4" POP UP W/MP2000 NOZZLE
4		HUNTER, PGP-SERIES, 4" GEAR DRIVEN ROTOR, W/ 1.5 NOZZLE
6		HUNTER, PGP-SERIES, 4" GEAR DRIVEN ROTOR, W/ 3.0 NOZZLE
1		HUNTER, PGP-SERIES, 4" GEAR DRIVEN ROTOR, W/ 6.0 NOZZLE
1		HUNTER, PGV-101G, ELECTRIC VALVE, 1.0"
3		HUNTER, PGV-151G, ELECTRIC VALVE, 1.5"
1		HUNTER, PCZ-10140, CONTROL ZONE KIT, 1"
1		ISOLATION GATE VALVE, MAINLINE SIZE
105 (ft)		PVC SLEEVE, SCHEDULE 40, SIZE AS SHOWN
1		TIE IN TO EXISTING SYSTEM
1655 (ft)		PVC LATERAL, CLASS 200, BE, SIZE AS SHOWN
300 (ft)		PVC MAINLINE, CLASS 200, BE, SIZE, 2"
860 (ft)		NETAFIM, TLDL-04-12 SERIES, DRIP TUBING, @ 12" SPACING (GRID PATTERN)

VALVE QUANTITIES WERE CALCULATED BY THE USING THE FOLLOWING DATA:

CALCULATE THE TOTAL GPM FOR EACH SPRINKLER EMISSION DEVICE /SYSTEM AVAILABILITY

TOTAL ROTOR GPM = 00 GPM.
00 GPM / TOTAL SYSTEM REQUIREMENT (00 GPM) = 0 VALVES, 1" SIZE

TOTAL SPRAY GPM = 00 GPM.
00 GPM / TOTAL SYSTEM REQUIREMENT (00 GPM) = 0 VALVE,1" SIZE

TOTAL DRIP GPM (4660 FT) = 00 GPM.
00 GPM / TOTAL SYSTEM REQUIREMENT (00 GPM) = 0 VALVE,1" SIZE

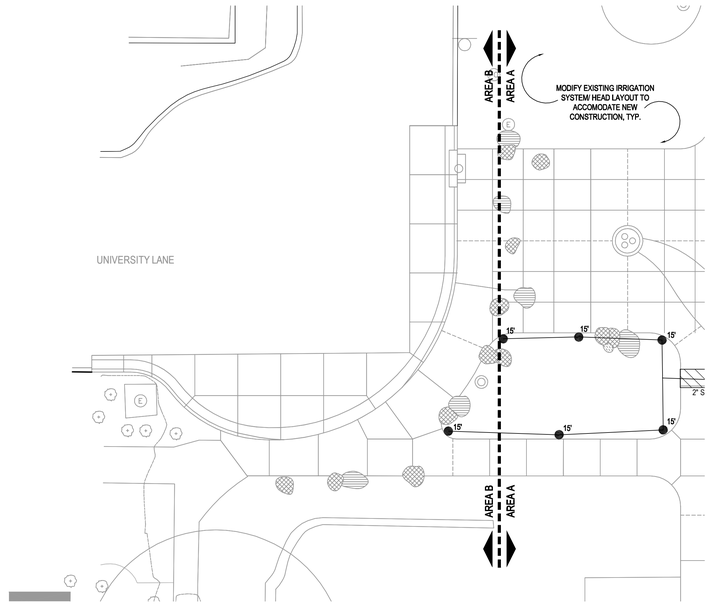
IRRIGATION SPECIFICATION:

1. IRRIGATION SYSTEM DESIGN BASED ON 40 GPM AT 60 PSI.
2. IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION(POC)ONLY. THE DESIGN IS BASED ON GALLONS PER MINUTE(GPM)AND POUNDS PER SQUARE INCH(PSI)FURNISHED BY OTHERS.
3. IRRIGATION CONTRACTOR IS TO VERIFY POINT OF CONNECTION IN THE FIELD. INSTALLER IS TO CONFIRM THE MINIMUM DISCHARGE REQUIREMENTS OF THE POINT OF CONNECTION AS INDICATED ON THE LEGEND PRIOR TO INSTALLATION.
4. THE PRESSURE REQUIREMENT AT THE POINT OF CONNECTION IS BASED ON NO MORE THAN 5 FEET OF ELEVATION CHANGE IN THE AREAS OF IRRIGATION.
5. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.
6. IRRIGATION CONTRACTOR WILL ARRANGE INSPECTIONS REQUIRED BY LOCAL AGENCIES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION AS REQUIRED. ALL WIRING TO BE PER LOCAL CODE. BACKFLOW PREVENTION TO BE PER LOCAL CODE.
7. LOCATION OF IRRIGATION COMPONENTS SHOWN ON DRAWING IS APPROXIMATE. ACTUAL PLACEMENT MAY VARY SLIGHTLY AS REQUIRED TO ACHIEVE FULL, EVEN COVERAGE.
8. ALL SPRINKLER HEADS SHALL BE INSTALLED PERPENDICULAR TO FINISH GRADES. EXCEPT AS OTHERWISE INDICATED.
9. INSTALL IRRIGATION MAINS WITH A MINIMUM 18" OF COVER BASED ON FINISH GRADES. INSTALL IRRIGATION LATERALS WITH MINIMUM 12" OF COVER BASED ON FINISH GRADES.
10. PIPE LOCATIONS ARE DIAGRAMATIC. VALVES AND MAINLINE SHOWN IN PAVED AREAS ARE FOR GRAPHIC CLARITY ONLY.
11. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH PIPE SIZES AS INDICATED.
12. ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH APPROVED WATERPROOF WIRE CONNECTIONS AND BE IN A VALVE OR SPLICE BOX.
13. ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 14 AWG, UL APPROVED DIRECT BURY.
14. THE DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWING SUPPLIED WITH THE DESIGN CRITERIA BEING SET(AREA TO BE IRRIGATED, EQUIPMENT MANUFACTURER AND MODEL TO BE USED, WATER SOURCE INFORMATION, ELECTRICAL POWER AVAILABILITY, ETC...). JOHN DEERE LANDSCAPES BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR INSTALLATION THAT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCED INFORMATION SUPPLIED TO JOHN DEERE LANDSCAPES IN RELATION TO THIS PROJECT, UNLESS OTHERWISE NOTED.
15. CONTRACTOR TO FILLED VERIFY EXACT LOCATION OF POC.

Prepared by:

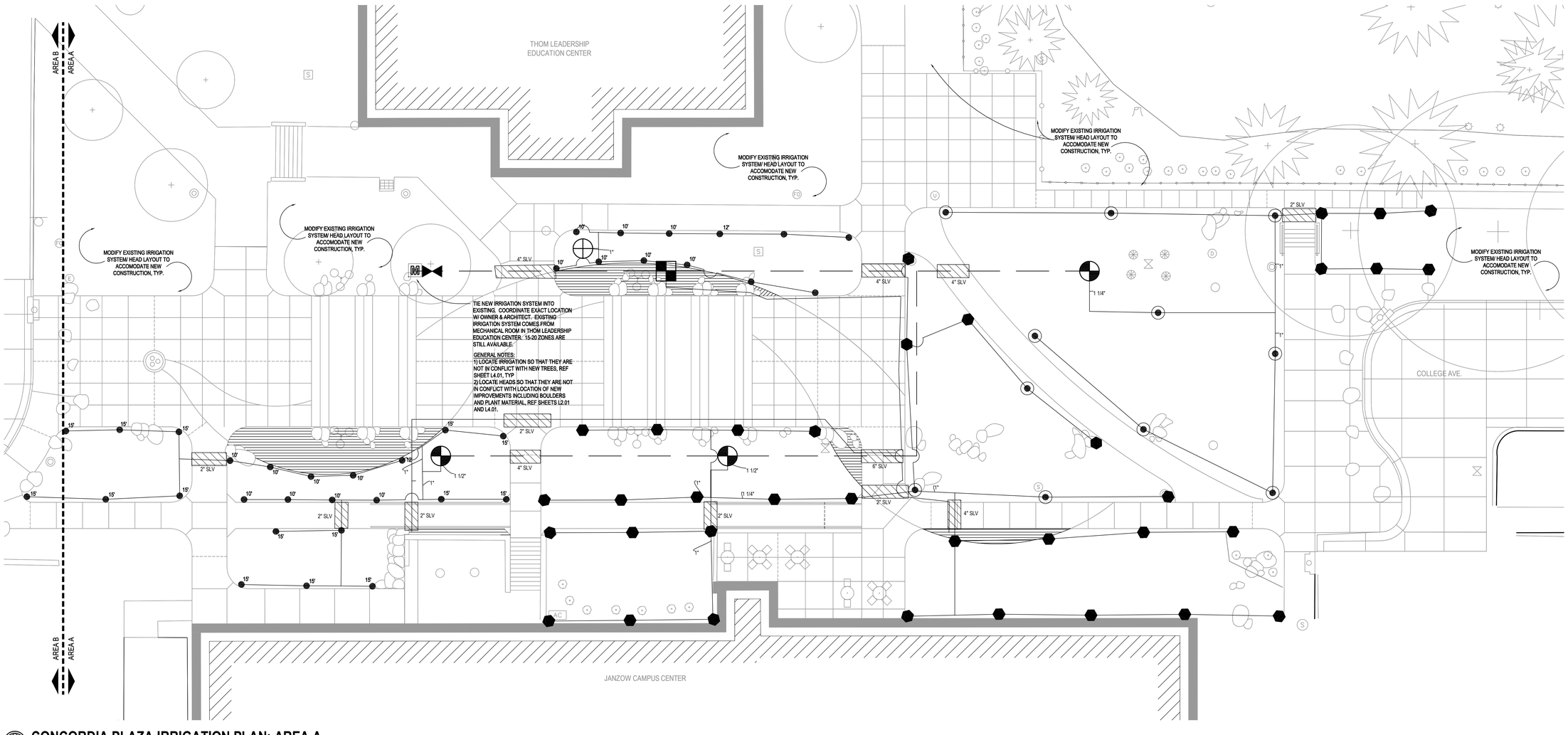
JOHN DEERE LANDSCAPES

Contact: Chad Rowley, C.I.D (402-213-6094)



CONCORDIA PLAZA IRRIGATION PLAN: AREA B

SCALE: 1"=10'-0"



CONCORDIA PLAZA IRRIGATION PLAN: AREA A

SCALE: 1"=10'-0"

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Kansas City, Missouri
Fairway, Kansas

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A - 1	06/04/2014	AS PER ADDENDUM #1, THIS SHEET IS REISSUED IN ITS ENTIRETY.

Concordia University
Concordia Plaza &
Heartfelt Memorial
Construction Documents

Concordia University
Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014

Concordia Plaza
Irrigation Plans:
Areas A & B

L5.01

Plot Time Stamp: 6 / 03 / 2014 11:44:11 AM
File Location/Name: M:\530-017-11 Concordia Janzow Open Space\3) Active Work\3) AutoCAD\530017-L501.dwg

IRRIGATION LEGEND:

APPROXIMATE QUANTITY	SYMBOL	DESCRIPTION
5		HUNTER, PROS-PRS40-CV SERIES, 4" POP UP W/MP1000 NOZZLE
13		HUNTER, PROS-PRS40-CV SERIES, 4" POP UP W/MP2000 NOZZLE
6		HUNTER, PGP-SERIES, 4" GEAR DRIVEN ROTOR, W/ 1.5 NOZZLE
17		HUNTER, PGP-SERIES, 4" GEAR DRIVEN ROTOR, W/ 3.0 NOZZLE
4		HUNTER, PGP-SERIES, 4" GEAR DRIVEN ROTOR, W/ 6.0 NOZZLE
2		HUNTER, PCZ-10140, CONTROL ZONE KIT, 1"
7		HUNTER, PGV-101G, ELECTRIC VALVE, 1.0"
1		HUNTER, PRO-C SERIES, AUTOMATIC CONTROLLER
1		ISOLATION GATE VALVE, MAINLINE SIZE
1		HUNTER, WRC, WIRELESS RAIN-CLIK
40 (ft)		PVC SLEEVE, SCHEDULE-40, SIZE AS SHOWN
1		POINT OF CONNECTION
1350 (ft)		PVC LATERAL, CLASS 200, BE, SIZE 1"
190 (ft)		PVC MAINLINE, SCHEDULE-80, BE, SIZE, 1 1/4"
3780 (ft)		NETAFIM, TLDL-04-12 SERIES, DRIP TUBING, @ 12" SPACING (GRID PATTERN)

Prepared by:

JOHN DEERE LANDSCAPES

Contact: Chad Rowley, C.I.D (402-213-6094)

IRRIGATION SPECIFICATION:

1. IRRIGATION SYSTEM DESIGN BASED ON 12 GPM AT 60 PSI.
2. IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION(POC)ONLY. THE DESIGN IS BASED ON GALLONS PER MINUTE(GPM)AND POUNDS PER SQUARE INCH(PSI)FURNISHED BY OTHERS.
3. IRRIGATION CONTRACTOR IS TO VERIFY POINT OF CONNECTION IN THE FIELD. INSTALLER IS TO CONFIRM THE MINIMUM DISCHARGE REQUIREMENTS OF THE POINT OF CONNECTION AS INDICATED ON THE LEGEND PRIOR TO INSTALLATION.
4. THE PRESSURE REQUIREMENT AT THE POINT OF CONNECTION IS BASED ON NO MORE THAN 5 FEET OF ELEVATION CHANGE IN THE AREAS OF IRRIGATION.
5. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.
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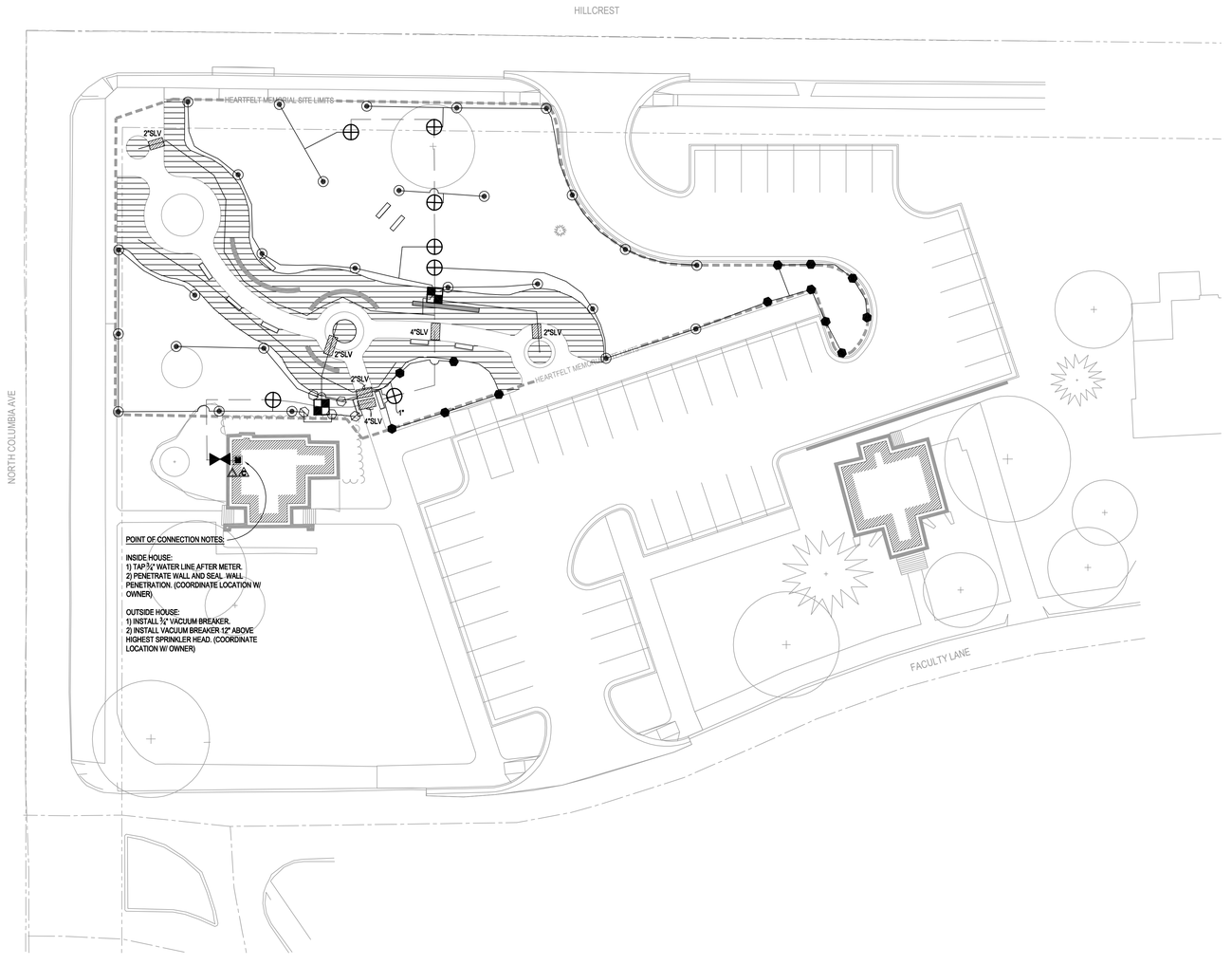

HEARTFELT MEMORIAL SITE IRRIGATION PLAN

SCALE: 1"=20'-0"

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Concordia University
Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014

Heartfelt Memorial
Site Irrigation Plan

L5.02