



Project Manual for:

Addison Village Green Phase 4 Improvements

RFQ No. 19-11-1

**1 Friendship Plaza
Addison, Illinois 60101**

November 4, 2019

22 E. Chicago Avenue
Suite 200 A
Naperville, Illinois 60540
630.961.1787

hitchcockdesigngroup.com

Prepared for:

Village of Addison
1 Friendship Plaza
Addison, Illinois 60101

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REQUEST FOR QUOTES (RFQ)

RFQ No. 19-11-1

Village of Addison
1 Friendship Plaza
Addison, Illinois 60101

Addison Village Green Phase 4 Improvements

The Village of Addison does hereby request quotes for the Village Green Phase 4 Improvements. Work will include modifications and additions to the site work that was completed as part of the Village Green Improvements (Phases 1-3) completed in 2018.

This is an Illinois Prevailing Wage Project. Performance, Labor, and Material bonds will be required within 10 days of acceptance.

Submit quotes to the Village of Addison Purchasing Department, 1 Friendship Plaza, Addison, Illinois 60101. All quotes must be submitted in a sealed envelope with the label provided in the Project Manual attached to the face of the envelope. Submit quotes no later than November 15, 2019 3:00 PM local time.

The Village of Addison reserves the right to reject any and all quotes, parts of any and all quotes, or to waive technical errors or omissions in submitted quotes. The Village of Addison encourages the successful contractor to utilize minority businesses as sub-contractors for supplies, equipment, services, and construction.

IMPORTANT

The attached label must be affixed to the front of the sealed envelope the completed bid is submitted in. This attached label may be printed on an 8.5 X 11 label stock or printed on paper and securely fastened to the front of envelope.

Quotes without the attached label may be delayed and not arrive in the proper location.

If you have questions you may contact:

Anna Hendrey 630-693-7507
ahendrey@addison-IL.org

Contractors Name: _____

Address: _____

City: _____

State: _____ Zip: _____

Village of Addison
1 Friendship Plaza
Addison, IL 60101

Sealed Quote Enclosed

RFQ No. _____

Submittal Date _____



www.AddisonAdvantage.org

QUOTE FORM
RFQ No. 19-11-1
Page 1 of 2

Submittal Date: _____

TO: Village of Addison
1 Friendship Plaza
Addison, Illinois 60101

PROJECT: Village Green Phase 4 Improvements

Having read the Specifications and examined the Drawings entitled:

Addison Village Green Phase 4 Improvements

Prepared by **Hitchcock Design Group** for the construction of said Project and having inspected the site and the conditions affecting and governing the construction of the Project Work, the undersigned proposes to furnish all material and perform all labor, as specified and described in the Specifications and as shown in the Drawings, for the following stipulated lump sums:

TOTAL MATERIALS AND LABOR FOR THE SUM OF:

** _____ DOLLARS (** \$ _____)

In submitting the quote, the undersigned agrees:

1. To enter into a lump sum Contract agreement with the Owner and to construct the work as drawn and specified for the stated lump sum amounts regardless of quantity discrepancies. No additional payments will be made due to quantity discrepancies. No changes in the work that would increase the contract amount shall be permitted without the prior approval of the Board of Trustees of the Village of Addison.
2. To provide a Schedule of Values breakdown by major project items.
3. To hold the quote open for sixty (60) working days following the submittal date.
4. To furnish evidence of insurance with quote, as provided in the specifications.
5. To substantially complete the work no later than the specified completion date.

NAME & ADDRESS OF SUBMITTER: _____

PHONE NO.: _____
(Area Code)

SIGNATURE: _____

AUTHORIZED SIGNATURE/TITLE: _____

NOTARY PUBLIC:

-ACCEPTANCE-

Date of Board of Trustee Approval: _____

VILLAGE OF ADDISON, a Municipal Corporation

By: _____
Rich Veenstra, Mayor

ATTEST:

Lucille A. Zucchero
Village Clerk

Acceptance of a quote is not a binding contract. This quote becomes a contract binding upon the person, partnership, or corporation, to provide services and/or equipment as specified, and the Village of Addison to accept these services or equipment only when the Village approves a written contract by ordinance of motion. The Village reserves the right to extend any and all contracts based on mutual written agreement between the vendor and the Village.

SECTION 000415 - SCHEDULE OF VALUES

Date: **November 4, 2019**
 RE: **Addison Village Green Phase 4 Improvements**

NOTES:

1. Submitter is responsible for performing all quantity take-offs necessary to estimate the work as drawn and specified.
2. No additional payments will be made due to discrepancies between contractor's estimated quantities and the actual installed quantities to construct the work as drawn and specified . If a required item is not specifically identified as a line item in the Schedule of Values, the cost of that item will be included in the cost of other related line items. All project requirements and costs are to be included in
3. This Schedule of Values form will become part of the Contract Documents and will be used as a basis for reviewing the Contractor's Applications for Payment.

Description	Lump Sum Cost
Tree Removal	
Existing Tree and Planting Adjustment	
Existing Turf Removal	
Tree Protection Fencing	
Adjustment to Existing Irrigation System	
Fence	
Security Bollards	
Masonry Columns (2 for sign, 1 for fence)	
Monument Sign Panel	
Uplights	
Topsoil	
Soil Conditioner	
Turf Restoration (Sod)	
Mulch	
Deciduous Shrubs	
Evergreen Shrubs	
Perennials	
Total:	

**CONTRACT BETWEEN THE VILLAGE OF ADDISON
AND THE CONTRACTOR**

This Contract is made and entered into this day of , , by and between the Village of Addison, DuPage County, Illinois (the "Village") and

(hereinafter "Contractor"). For and in consideration of the Contract Sum, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, it is agreed by and between the parties hereto as follows:

1. CONTRACT DOCUMENTS

The "Contract Documents" shall consist of the following documents which are either attached hereto as exhibits or are incorporated into this Contract by this reference, with the same force and effect as if set forth at length herein:

- A. This Contract, including all Exhibits and attachments;
- B. Project Plans and Technical Specifications, including General Conditions and any Special Conditions;
- C. Notice Inviting Bids;
- D. Instructions to Bidders;
- E. Bidder's Proposal;
- F. Bidding Form; and
- G. Bidding Addenda Nos. (if any)

2. SCOPE OF WORK

Within the time for completion set forth in the Contract Documents and for the stated Contract Price, the Contractor shall perform and provide all necessary labor, services, supervision, materials, tools, equipment, apparatus, facilities, supplies, tools, permits, supervision, utilities and transportation necessary to complete the Work in strict conformity with the Contract Documents for:

[Insert Project Name]

3. CONTRACT SUM

In consideration of the Contractor's full, complete, timely, and faithful performance of the Work required by the Contract Documents, the Village shall pay Contractor in accordance with the unit prices payable as set forth in the Contract Documents ("Contract Price").

4. COMPLETION DATE

The Contract Work shall be completed on or before , 20.

IN WITNESS WHEREOF, the parties have caused this Contract to be executed the date and year first above written.

[Contractor]

By: _____
An Authorized Signatory

Date: _____

VILLAGE OF ADDISON

By: _____
Mayor

Date: _____

**VILLAGE OF ADDISON
GENERAL TERMS AND CONDITIONS**

The following conditions apply to all purchases or services and become a definite part of each request for quotes. Failure to comply may disqualify your quote.

1. Non-Discrimination In Employment - The Contractor, in performing under this contract, shall not discriminate against any worker, employee or applicant, or any member of the public because of race, creed, color, age, sex, or national origin, or otherwise commit an unfair employment practice. The bidder, his sub-contractors, or labor organizations furnishing skilled or unskilled workers, craft union skilled labor, or anyone who may perform any labor or service, shall not commit within the State of Illinois, under this contract, any unfair employment practices as defined in the act of the 72nd General Assembly entitled “Fair Employment Practices Act”. The Contractor is referred to Ill-Rev. Stat. (1961) Ch. 48, paragraph 851 *et seq.* The contractor further agrees that this article will be incorporated by the Contractor in all contracts entered into with suppliers of materials or services, contracts and subcontractors, and all labor organizations furnishing skilled, unskilled and craft union skilled labor, or who may perform any such labor or services in connection with this contract.

2. Prevailing Wages (if applicable) – The Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* (“the Act”) requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor’s website at: <http://www.state.il.us/agency/idol/rates/rates.HTM>. All contractors and subcontractors rendering services under this contract shall comply with all requirements of the Act to the extent applicable, *including but not limited to*, all wage, notice and record keeping duties.”

“IMPORTANT NOTICE OF RESPONSIBILITY FOR PERIODIC REVISIONS TO PREVAILING WAGE RATES

The most recently ascertainable Prevailing Wage Rate Determination for Dupage County is attached to and incorporated in the Contract Documents. Revisions of the following prevailing wage rates are made periodically by the Illinois Department of Labor. As required by the Wage Act any and all such revisions supersede the Public body’s June determination. Bidders, contractors and subcontractors performing work on this project are responsible for determining the applicable prevailing wage rates at the time of bid submission and performance of the Work. Failure of a bidder/contractor/subcontractor to make such determination shall not relieve it of its obligations in accordance with the Contract Documents. In consideration for the award to it of the contract for this Project, the contractor agrees that the foregoing notice satisfies any obligation of the public body in charge of this Project to notify the contractor of periodic changes in the prevailing wage rates and the contractor agrees to assume and be solely responsible for, as a material

obligation of the contractor under the contract, the obligation to determine periodic revisions of the prevailing wage rates, to notify its subcontractors of such revisions, to post such revisions as required for the posting of wage rates under the Act, and to pay and require its subcontractors to pay wages in accordance with such revised rates.”

To the extent that federal funds are used to fund the project, the Davis-Bacon Act may be applicable.

3. Removal or Suspension of Submitters - The Purchasing Department may remove or suspend any contractor from the opportunity to provide quotes for a specified period not to exceed two (2) years. The vendor will be given notice of such removal or suspension if:
 - a) Services performed do not comply with specifications of contract with the vendor;
 - b) Work is not done within the contract’s specified time;
 - c) An offer is not kept firm for the length of time specified in the contract;
 - d) Contractor fails to provide performance bond when required by invitation to bid;
 - e) Contractor is found guilty of collusion;
 - f) Bankruptcy or other evidence of insolvency is found;
 - g) An employee currently serves as a Board member or employee of Addison and is financially involved in the proposed work.

4. To Rescind a Removal or Suspension – The contractor may submit a written explanation of the circumstances which caused the removal or suspension, or may prove that circumstances have been corrected; on the basis of such explanation, the Purchasing Department may modify or rescind the removal or suspension.

5. Compliance to Law
 - a) The contractor shall at all times observe and comply with all laws, ordinances, regulations and codes of federal, state, county, and village governments and/or any other local governing agencies which may in any manner affect the preparation of proposals or the performance of this contract.
 - b) All merchandise or commodities must conform to all standards and regulations as set forth under the Occupational Safety Hazards Act (O.S.H.A.).

CONDITIONS FOR BIDDING

1. Definitions

- a) Quote documents include the request for quotes, the quote form and the contract documents including addenda issued prior to the receipt of bids.

b) Addenda are written or graphic instruments issued prior to the execution of the contract which modify or interpret the bidding documents, including drawings and specifications, by additions, deletions, clarifications, or corrections. Addenda will become part of the contract documents when the contract is executed.

2. Quote Form – The quote shall be submitted on the quote form that has been provided. This form shall be completed properly and signed in ink. The quote form shall be submitted in a sealed envelope addressed to the Village of Addison and shall be identified with the quote number.

4. Withdrawal of Quotes – A written request for withdrawal is required to withdraw a quote. After the submittal, a quote becomes a legal document and may not be withdrawn. Requests to withdraw quotes are to be directed to the attention of the Village Purchasing Agent:

Attn: Anna Hendrey
Village of Addison
1 Friendship Plaza
Addison, Illinois 60101

5. Examination of Documents – Each contractor shall carefully examine all contract documents and all addenda thereto and shall thoroughly familiarize himself with the detailed requirements thereof prior to submitting a bid. Should a contractor find discrepancies or ambiguities in, or omissions from documents, or should he be in doubt as to their meaning, he shall at once notify the Purchasing Agent. After submittal, no allowance will be made for oversight by the contractor.

6. Mistake in Quotes and Quote Changes – No quote may be modified after submittal; however, if an error is made in extending a total price, the unit price will govern. Erasures on the quote form must be initialed by the contractor.

7. Binding – Unless otherwise specified, all quotes shall be binding for sixty (60) working days following the submittal date.

8. Changes in Contract Documents – Changes or corrections may be made by the Village in the contract documents after they have been issued and before bids are received. In such case, a written Addendum describing the change or corrections will be issued by the Village to all bidders of record. Such addendum or addenda shall take precedence over that portion of the documents concerned, and shall become part of the contract documents. Except in unusual cases, addenda will be issued to reach the contractors at least four (4) days prior to date established for receipt of quotes.

9. Quote Attachments – Contractors may attach to the quote form any descriptive material necessary to fully describe the work he proposes to furnish.

10. Contractor's Competence – All contractors shall attach a list of current references to their quote form. In addition, the Village may require proof of facilities or equipment, insurance coverage and financial resources to perform the work. If required, the contractor shall submit to the Village a properly executed Contractor's Qualification statement, AIA Document A305.

12. Award – The contractor acknowledges the right of the Village to reject any or all quotes and to waive informality or irregularity in any quote received and to award each item to different contractors or all items to a single contractor (to accept, split, and/or reject part(s) of any or all quotes). In addition, the contractor recognizes the right of the Village to reject a quote if the contractor failed to submit the data required by the documents, or if the quote is in any way incomplete or irregular.

13. Hold Harmless Agreement – All contractors must sign and notarize the attached Hold Harmless agreement.

AWARD OR REJECTION OF QUOTES

1. Award or Rejection – Contracts are awarded to the lowest, most responsible quote. In determining the responsibility of a contractor, the following are taken into consideration:

- a) The ability and skill of the contractor’s personnel who will perform the services;
- b) The character, integrity, reputation, judgment, experience and efficiency of the contractor;
- c) The current, uncompleted work in which a contractor is involved, which might hinder or prevent prompt completion of the Village’s work;
- d) The financial resources of the contractor;
- e) Case discounts offered;
- f) Quality, utility, suitability of work or material; the quality of the commodity to be furnished, as well as the price therefore, is to be taken into consideration, and a bid which is low in point of price may be rejected if the material to be furnished is not the best;
- g) Direct, indirect and incidental costs to the Village;
- h) Prior work completed by the contractor for the Village.

2. Notice of Award – A signed contract mailed to the successful contractor within the time specified for acceptance shall be the binding contract.

CONTRACT PROVISIONS

1. Subletting of Contract – If any portion of the work is to be sublet, the contractor shall submit in writing to the Village for their approval, the name of the subcontractor, the portion of the work to be done, and the value of the subcontract. Any and all subcontractors shall be bound by the contract to the same terms as the general contractor. Prior to commencing work, subcontractors must place on file with the Village a certificate of insurance as outlined “Insurance”.

Except as set forth hereinabove, no contract shall be assigned or any part of the same subcontracted without the written consent of the Village, but in no case shall such consent relieve the contractor from his obligation or change the terms of the contract. The contractor shall not transfer or assign any contract funds or claims due, or to become due, without the written approval of the Village having first been obtained.

The transfer or assignment of any contract funds either in whole or in part, or any interest therein, which shall be due, or to become due, the contractor, shall cause the annulment of said transfer or assignment.

2. General Independent Contractor Clause – This agreement does not create an employee/employer relationship between the parties. It is the parties' intention that the contractor will be an independent contractor and not the Village's employee for all purposes, including, but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, the Illinois revenue and taxation law, the Illinois worker's compensation law, and the Illinois unemployment insurance law. The contractor will retain sole and absolute discretion in the judgment of the manner and means of carrying out the contractor's activities and responsibilities hereunder. The contractor agrees that it is a separate and independent enterprise from the public employer, that it has a full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This agreement shall not be construed as creating any joint employment relationship between the contractor and the Village, and the Village will not be liable for any obligation incurred by the contractor, including but not limited to unpaid minimum wages and/or overtime premiums.

3. Equipment and Shop Drawings – When equipment requires installation, bidder shall submit detailed shop drawings to the Village Manager or his designee, for his approval. Drawings shall show the characteristics of equipment and installation details.

4. Village Supervision – The Village Manager, or his designee, shall have full authority over the contracted work. He will interpret specifications in the event of a dispute. He will order cessation of work for poor performance. Any work performed after order to stop will not be paid for. He shall oversee the work but not the supervision and/or training of workers. He may order minor changes in a specification if it becomes obvious to do so. Major changes will be treated as "additional work".

5. F.O.B. – All prices must be quoted F.O.B. Addison, Illinois. Shipments shall become the property of the Village after delivery and acceptance.

6. Delivery Schedule – Items must be delivered within thirty (30) days from the date of execution of the contract unless a specific delivery date is stated on the quote. Contract may be cancelled without obligation by the Village if delivery requirements are not met. If said contract is not cancelled by the Village, liquidated damages may be due and owing to the Village pursuant to the liquidated damage provision enumerated herein. All deliveries must be made on Monday through Friday, excluding Village holidays, between the hours of 8:00 am and 4:00 pm. Contractor is expected to ship in full truckload quantities within said thirty (30) day period unless prior approval has been granted by the Village in advance for circumstances beyond the control of the contractor.

7. Delivery – Bid price shall include delivery as indicated herein.
8. Default – The Village may, subject to the provisions specified herein, by written notice of default to the contractor, terminate the whole or any part of this contract in any one of the following circumstances:
 - a) If the contractor fails to make delivery or to perform the services within the time specified herein or any extension hereof; or
 - b) If the contractor fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not correct such failure within a period of ten (10) calendar days (or such other period as the Village may authorize in writing) after receipt of notice from the Village specifying such failure.

In the event the Board terminates this contract in whole or in part as provided above, the Village may procure, upon such terms and in such manner as the Village may deem appropriate, supplies or services similar to those terminated, and the contractor shall be liable to the Village for any excess costs for such similar supplies for services; provided that the contractor shall continue the performance of this contract to the extent not terminated under the provisions of this clause.

9. Alternate Materials or Equipment – Where specifications read “or approved equal”, contractor shall direct a written description to the Purchasing Agent for approval, as set forth herein below. Generally, where specifications indicate a particular brand or manufacturer’s catalog number, it shall be understood to mean that specification or equal, or item that will perform a comparable function and be equal thereto to fill the needs of the Village, unless “No Substitutes” is specified. When offering alternatives, they must be identified by brand name and catalog number. In addition, the manufacturer’s literature shall be included with the bid. However, bidders will be required to furnish samples upon request and without charge to the Village.
10. Access to Procurement Information – All procurement information concerning this quote shall be a public record to the extent provided in the Illinois Freedom of Information Act and Public Act #85-1295 and shall be available to all contractors as provided by such acts.
11. Acceptance – Contracted work will be accepted by our Board of Trustees when the appropriate Village department, by going through the proper committee, certifies that all work was completed in accordance with the specifications.
12. Payment
 - a) For services or merchandise ordered by purchase order, payment will be made to a vendor provided the service or merchandise has been properly tendered to and accepted by the Village.
 - b) With respect to other purchases, depending on the circumstances, Waivers of Lien and/or original title documents or bills of sale may also be required before payment can be made.
 - c) NO partial payments will be made by the Village unless agreed upon in writing between the Village and the Vendor/Service Provider.

d) Payment by check to a vendor is mailed the week approval of payouts is made by the Board. Payout requests are considered at the regular Village Board meetings on the first and third Mondays of the month.

13. Reorders – Reorders for the same item(s) shall be furnished at the base contract price or shall be furnished pursuant to a schedule of prices attached hereto by the contractor. Reordering shall be within the sole discretion of the Village.

14. Guarantees and Warranties

a) All material, workmanship, services and purchased commodities will be guaranteed from defects for a period of at least one (1) year, or for a period of time specified in the documents, based on the date of completion. Upon written notice of defect, contractor shall make all necessary repairs, without delay, at no additional charge to the Village.

b) All warranties for materials or equipment must be received with title before payment for same is recommended.

15. Changes/Additional Services/Deletions – Any requests for changes or modifications to this contract must be submitted in writing and approved by the Village Manager, or his designee, prior to such changes or modifications being made. Any additional service desired from the contractor under this contract will be requested in writing and the additional charges for these services will be in accordance with the rate submitted on the proposal page and will be agreed to with the contractor prior to additional work commencing. In the event that charges for additional services cannot be agreed to with the agreed upon, bids will be requested. The Village reserves the right to negotiate additional services based upon the contractor’s price and performance, within all legal constraints.

16. Change Order Authorization – No change orders, which would increase the price of the contract by more than \$5,000.00, shall be permitted without the prior approval of the Board of Trustees of the Village of Addison. Any requests for change orders shall first be submitted to the administrating department within five (5) days, who shall promptly thereafter forward any change orders, requiring Village Board approval, to the Board. No work pertaining to said change orders shall proceed without Board approval.

17. Insurance – Contractor shall maintain all necessary and proper insurance for the duration of the work to be performed, including comprehensive general liability insurance and property damage insurance and workers compensation insurance, as well as automobile liability insurance. Successful contractor must be covered for the following requirements prior to receiving a contract with the Village:

- a) Comprehensive general liability..... \$1,000,000
General Aggregate..... \$2,000,000
- b) Automobile Liability
per person..... \$1,000,000

- c) per occurrence..... \$2,000,000
Workers Compensation..... State of Illinois
Statutory Limits
- d) Errors and Omissions

(Engineering or Architectural only) Legal Limits

The contractor’s insurance policies, as outlined above, shall provide coverage to the Village of Addison for any and all claims arising out of the contractual obligation; further the Village’s policies shall name the Village of Addison as primary non-contributory additional insured, and with original endorsements affecting coverage required by this clause. The Village reserves the right to request full certified copies of any insurance. Policy coverage shall contain no special limitations on the scope of protection afforded to the municipality, its agents, employees, or volunteers. Evidence of coverage must be presented to the Village, with quote, as provided in the specifications.

Coverage shall state that contractor’s insurance shall apply separately to each insured against whom claim is made or suit is brought. Any failure to comply with reporting provisions or any policy shall not affect coverage provided to the municipality, its agents, or employees.

If this insurance is written on the Comprehensive General Liability Policy Form, the certificates shall be ACORD25, Certificate of Insurance. If this insurance is written on a Commercial General Liability Policy Form, ACORD 25-S form will be acceptable. In Form ACORD 25 and 25-S, strike out (delete) in the cancellation provision, the following words: “Endeavor to” and “but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives”.

It is mandatory for the Village Manager, or his designee, to be notified if the CONTRACTOR fails to pay the premium for the above-required coverages.

Insurer shall agree to waive all rights of subrogation against the municipality, its agents, and employees.

The insurance carrier of the contractor shall provide a minimum of thirty (30) days written notice to the Village Manager, or his designee, before insurance limits and scope of coverage are materially altered or insurance protection is cancelled.

All insurance Contracts must maintain a Best’s rating of **A: Class VI** or better. No contract shall be approved by the Village, nor shall the contractor commence any work under this contract until he has submitted evidence of compliance with the above-insurance requirements.

18. Subcontractors – Contractors shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all requirements stated under “Insurance”.

19. Removal of Spoils/Debris – When work involves spoils and/or debris which is not hauled or removed by vendor’s own equipment, a private scavenger must be used. **The Village requires the use of Republic Services, Inc., exclusively.**

20. Contract Termination – The contract may be terminated by the mutual agreement of both parties, upon written request. Said termination will take effect no more than thirty (30) days after acceptance of request.

The Village reserves the right to extend any and all contracts based on mutual, written agreement between the vendor and the Village.

Should this contract be on a multi-year basis, all years, after the initial one, will be contingent upon subsequent funding by the Village Board. At all times, written notice will be given to vendor prior to such actions.

21. Liquidated Damages – The time of completion of the delivery of these materials in the essence of this contract. Should the contractor neglect, refuse, or fail to complete the contract, after giving effect to extensions of time, if any herein provided, then, in that event and in view of the difficulty of estimating with exactness damages caused by such delay, the Village shall have the right to deduct from and retain out of such monies which may then be due, or which may become due and payable to the contractor the sum of \$250.00 per day for each and every day that such contract is delayed in its completion beyond the estimated time, as liquidated damages and not as penalty. If any such monies are due and owing to the Village after such deductions, liquidated damages shall not relieve the contractor or his sureties from any other obligations under this contract.

The party authorized to execute the above certification is the Village of Addison.

**VILLAGE OF ADDISON
CONTRACTOR'S CERTIFICATION**

(1) Pursuant to P.A. 85-1295 (720 ILCS 5/33E-1 *et seq.*) the undersigned contactor hereby certifies to the Village of Addison that the contractor is not barred from bidding on the contract as a result of violation of either Section 33 E-3 or 33-4 or that Act.

(2) The contractor further certifies that the contractor is not delinquent in the payment of any tax administered by the Illinois Department of Revenue or,

a) is contesting such liability or the amount of tax in accordance with procedures established by the appropriate revenue act, or

b) has entered into an agreement with the Department of Revenue for payment of all taxes due and is in compliance with that Agreement.

Dated: _____

(Company)

(Mailing Address)

(Area Code) (Phone Number)

Primary Contact (Signature), Title

**VILLAGE OF ADDISON
FAIR EMPLOYMENT PRACTICES
AFFIDAVIT OF COMPLIANCE**

NOTE: THIS AFFIDAVIT MUST BE EXECUTED AND SUBMITTED WITH THE SIGNED CONTRACT FORM. NO CONTRACTS WILL BE ACCEPTED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF ADDISON UNLESS SAID AFFIDAVIT IS SUBMITTED CONCURRENTLY WITH THE CONTRACT.

(Name)
being first duly sworn, deposes and says that he/she is the

(Title)

of _____
(Name of Company)

and that he/she has authority to make the following affidavit; that he/she has knowledge of the Village of Addison Bid Specifications and Documents relating to Fair Employment Practices and knows and understands the contents thereof; that he/she certifies hereby that it is the policy of

(Name of Company)
to recruit, hire, train, upgrade, promote and discipline its employees without regard to race, color, creed, religion, age, sex, or physical or mental handicap; and that the Company has and enforces policies which prohibit sexual harassment in the workplace.

(Signature)

SUBSCRIBED and sworn to before me this _____ day of _____, _____

(Notary Public)

EQUAL EMPLOYMENT OPPORTUNITY

Section I. This EQUAL EMPLOYMENT OPPORTUNITY CLAUSE is required by the Illinois Human Rights Act and the Rules and Regulations of the Illinois Department of Human Rights published at 44 Illinois Administrative Code Section 750, et seq.

Section II. In the event of the Contractor's noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Human Right Act, or the Rules and Regulations for Public Contracts of the Department of Human Rights (hereinafter referred to as the Department) the Contractor may be declared non responsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and this agreement may be canceled or avoided in whole or in part, and such other sanctions or penalties may be imposed or remedies involved as provided by statute or regulation.

During the performance of this Agreement, the Contractor agrees:

A. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

B. That, if it hires additional employees in order to perform this Agreement, or any portion hereof, it will determine the availability (in accordance with the Department's Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

C. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, or physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

D. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and Department's Rules and Regulations for Public Contract.

E. That it will submit reports as required by the Department's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts.

F. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and Department for purposes of

investigation to ascertain compliance with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts.

G. That it will include verbatim or by reference the provisions of this Equal Employment Opportunity Clause in every subcontract it awards under which any portion of this Agreement obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as the other provisions of this Agreement, the Contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Department to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

Section III. For the purposes of subsection G of Section II, "subcontract" means any agreement, arrangement or understanding, written or otherwise, between the Contractor and any person under which any portion of the Contractor's obligations under one or more public contracts is performed, undertaken or assumed; the term "subcontract", however, shall not include any agreement, arrangement or understanding in which the parties stand in the relationship of an employer and an employee, or between a Contractor or other organization and its customers.

ACKNOWLEDGED AND AGREED TO:

BY: _____

ATTEST: _____

DATE: _____

**VILLAGE OF ADDISON
ANTI-COLLUSION AFFIDAVIT OF COMPLIANCE**

_____, being
(Name)

first duly sworn, deposes and says:

That he/she is _____ of
(Partner, Officer, Owner, etc.)

(Contractor)

The party making the foregoing proposal or bid, that such bid is genuine and not collusive, or sham; that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any person; to fix the bid price element of said bid, or that of any other bidder, or to secure any advantages against any other bidder or any person interested in the proposed contract.

(Name, if an Individual)
(Name of Partner, if is a Partnership)
(Name of Officer, if is a Corporation)

The above statements must be subscribed and sworn to before a notary public.
Subscribed and sworn to

This _____ day of _____, _____.

Name _____

(Notary Public)

**VILLAGE OF ADDISON
INDEMNITY HOLD HARMLESS AGREEMENT**

To the fullest extent permitted by law, the Contractor hereby agrees to defend, indemnify and hold harmless the Village of Addison, its officials, agents and employees against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, cost and expenses, which may in anywise accrue against the Village of Addison, its officials, agents and employees, arising in whole or in part of in consequence of the performance of this work by the Contractor, its employees, or subcontractors, or which may in anywise result in therefore, except that arising out of the sole legal cause of the Village of Addison, its agents or employees, the Contractor shall, at its own expense, appear, defend and pay all charges of attorneys and all cost and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be rendered against the Village of Addison, its officials, agents and employees, in any such action, the Contractor shall, at its own expense, satisfy and discharge the same.

Contractor expresses, understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village of Addison, its officials, agents and employees as herein provided.

The Contractor further agrees that to the extent that money is due the Contractor, by virtue of this contract as shall be considered necessary in the judgment of the Village of Addison may be retained by the Village to protect itself against said loss until such claims, suits, or judgments shall have been settled or discharged and/or evidence to that extent shall have been furnished to the satisfaction of the Village of Addison.

CONTRACTOR:

ATTEST:

(Notary Public)

REFERENCES-GENERAL

1. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

2. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

3. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

4. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

5. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

REFERENCES-PUBLIC BODY

Please list all Public Bodies you have performed work for in the last five years.

1. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

2. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

3. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

4. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

5. Name: _____
Address: _____
Telephone #: (Area Code) _____
Contact: _____

Contact Information

**PLEASE LET US KNOW WHO WE SHOULD CONTACT
REGARDING THIS QUOTE.**

Please attach business card here

**IF YOU DO NOT HAVE A BUSINESS CARD, PLEASE TYPE YOUR
INFORMATION BELOW:**

Company Name: _____

Company Address: _____

City: _____ State: _____ Zip Code: _____

Name of Contact Person: _____

Title: _____ Phone Number: _____

E-mail: _____

**VILLAGE OF ADDISON
PROOF OF INSURABILITY**

PROPOSAL SUBMITTED BY:

(Contractor's Name)

(Address)

I, being duly sworn, do hereby acknowledge that I have read the insurance specifications herein and agree that the above bidder is eligible for insurance per the aforesaid specifications.

Subscribed and sworn to before me this _____ day of _____, 20_____.

Signed: _____
(Authorized Agent)

Date: _____

Insurance Company: _____

Address: _____

(Notary Public)

**VILLAGE OF ADDISON
CERTIFICATE OF INSURANCE/EXPLANATION**

An original Certificate of Insurance form must be followed as shown, with no exceptions.

1. The companies affording coverages are shown with their complete name.
2. The policy numbers and dates are correct.
3. The verbiage in the “Cancellation” box is crossed out.
4. The “Description of Operations/Locations/Vehicles/Exclusions Added By Endorsement/Special Provisions” box on the form has the exact verbiage as on the example.
5. Carriers must maintain a Best’s rating of “A” with a “**Class VI**” or better.
6. Insurance coverage shall be in force for the duration of said project.
7. Subcontractors are to comply with all above requirements.

If you have any questions regarding the above, please contact the Village Purchasing Agent at (630) 693-7507.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
INSURED	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	<input checked="" type="checkbox"/>	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> <input type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC				EACH OCCURENCE	\$
						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$
						MED EXP (Any one person)	\$
						PERSONAL & ADV INJURY	\$
						GENERAL AGGREGATE	\$
						PRODUCTS - COMP/OP AGG	\$
							\$
B	<input checked="" type="checkbox"/>	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> <input type="checkbox"/>				COMBINED SINGLE LIMIT (Each Occurrence)	\$
						BODILY INJURY (Per person)	\$
						BODILY INJURY (Per accident)	\$
						PROPERTY DAMAGE (Per accident)	\$
		GARAGE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/>				AUTO ONLY - EA ACCIDENT	\$
						OTHER THAN AUTO ONLY:	EA ACC \$
							AGG \$
		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$				EACH OCCURRENCE	\$
						AGGREGATE	\$
							\$
							\$
							\$
C	<input checked="" type="checkbox"/>	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
						E.L. EACH ACCIDENT	\$
						E.L. DISEASE - EA EMPLOYEE	\$
						E.L. DISEASE - POLICY LIMIT	\$
	<input type="checkbox"/>	OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Additional Insureds are added to the GL primary/noncontributory w/respect to work performed by the named Insured as required by signed written contract/agreement: Village of Addison

CERTIFICATE HOLDER	CANCELLATION
Village of Addison 1 Friendship Plaza Addison, IL 60101	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT.
	AUTHORIZED REPRESENTATIVE

**VILLAGE OF ADDISON
CONTRACTOR'S DRUG-FREE WORKPLACE CERTIFICATION**

Pursuant to “30 ILCS 580/1 et seq. (“Drug-Free Workplace Act”), the undersigned contractor hereby certifies to the Village of Addison that it will provide a drug-free workplace by:

A. Publishing a statement:

1. Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance, including cannabis, is prohibited in the contractor’s workplace.
2. Specifying the actions that will be taken against employees for violations of such prohibition.
3. Notifying the employees that, as a condition of employment on such contract or grant, the employee will abide by the terms of the statement: and

B. Notify the Village of Addison of any criminal drug statute conviction for a violation occurring in the workplace no later than 5 days after such conviction.

1. Establishing a drug-free awareness program to inform the employees about:
 - a) The dangers of drug abuse in the workplace.
 - b) The contractor’s policy of maintaining a drug-free workplace.
 - c) Any available drug counseling rehabilitation and employee-assistance program.
 - d) The penalties that may be imposed upon employees for drug violations.
2. Making it a requirement to give a copy of the statement required by subsection (A-3) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.
3. Notifying the Village of Addison within 10 days after receiving notice.
4. Imposing a sanction on or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by any employee who is so convicted, as required by “the Drug-Free Workplace Act”.
5. Assisting employees in selecting a course of action in the event drug counseling treatment and rehabilitation is required and indicating that a trained referral team is in place.

6. Making a good faith effort to continue to maintain a drug-free workplace through implementation of this Section.

Failure to abide by this certification shall subject the contractor to the penalties provided in the “Drug-Free Workplace Act”.

Contractor’s Signature

Date

(Notary Public)

**EMPLOYMENT OF ILLINOIS WORKERS ON PUBLIC WORKS ACT
CERTIFICATION**

_____,
being

first and duly sworn, deposes and says:

That he is _____ of

(Partner, Officer, Owner, etc.)

(Contractor)

The undersigned hereby agrees that, to the extent required by the Employment of Illinois Workers on Public Works Act (30 ILCS 570/1 et seq.), as now existing or hereafter amended, the undersigned shall comply with the Illinois labor employment requirements as set forth in the Act.

(Name of Contractor, if Contractor is an Individual)
(Name of Partner, if Partner is a Partnership)
(Name of Officer, if Contractor is a Corporation)

The above statements must be subscribed and sworn to before a notary public.
Subscribed and sworn to

This _____ day of _____, _____.

By _____

(Notary Public)

**VILLAGE OF ADDISON
CONTRACTOR AND SUBCONTRACTOR
SUBSTANCE ABUSE PREVENTION POLICY**

Pursuant to P.A. 95-0635 (the “Substance Abuse Prevention on Public Works Act”), employees of the Contractor and employees of any Subcontractor are prohibited from the use of drugs or alcohol, as defined in the Act, while performing work on any public works project.

Before the Contractor or Subcontractor commences work, the Contractor and any Subcontractor shall have in place a written Substance Abuse Prevention Program for the prevention of substance abuse among its employees which meets or exceeds the requirements in P.A. 95-0635 or shall have a collective bargaining agreement in effect dealing with the subject matter of P.A. 95-0635.

The Contractor and any Subcontractor shall file with the public body engaged in the construction of the public works: a copy of the substance abuse prevention program along with a cover letter certifying that their program meets the requirements of the Act or a letter certifying that the Contractor or Subcontractor has a collective bargaining agreement in effect dealing with the subject matter of this Act. A certification form is attached and must be completed by the Contractor and each Subcontractor to this Contract.

VILLAGE OF ADDISON

Re: Substance Abuse Prevention Program

Pursuant to Public Act 95-0635, the undersigned hereby certifies that it is in compliance with the terms and provisions of the Substance Abuse Prevention on Public Works Act. In particular, the undersigned hereby represents and warrants to the (Name of public body) as follows:

[Complete either A or B below]

- A. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has signed collective bargaining agreements that are in effect for all of its employees, and that deal with the subject matter of Public Act 95-0635.

Contractor/Subcontractor

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Date: _____

Signature of Authorized Representative

- B. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has in place for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act, the attached substance abuse prevention program that meets or exceeds the requirements of Public Act 95-0635.

Contractor/Subcontractor

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Date: _____

Signature of Authorized Representative



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
INSURED	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

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INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	<input checked="" type="checkbox"/>	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> <input type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC				EACH OCCURENCE	\$
						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$
						MED EXP (Any one person)	\$
						PERSONAL & ADV INJURY	\$
						GENERAL AGGREGATE	\$
						PRODUCTS - COMP/OP AGG	\$
							\$
B	<input checked="" type="checkbox"/>	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> <input type="checkbox"/>				COMBINED SINGLE LIMIT (Each Occurrence)	\$
						BODILY INJURY (Per person)	\$
						BODILY INJURY (Per accident)	\$
						PROPERTY DAMAGE (Per accident)	\$
		GARAGE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/>				AUTO ONLY - EA ACCIDENT	\$
						OTHER THAN AUTO ONLY:	EA ACC \$
							AGG \$
		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$				EACH OCCURRENCE	\$
						AGGREGATE	\$
							\$
							\$
							\$
C	<input checked="" type="checkbox"/>	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
						E.L. EACH ACCIDENT	\$
						E.L. DISEASE - EA EMPLOYEE	\$
						E.L. DISEASE - POLICY LIMIT	\$
	<input type="checkbox"/>	OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

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CERTIFICATE HOLDER	CANCELLATION
Village of Addison 1 Friendship Plaza Addison, IL 60101	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT.
	AUTHORIZED REPRESENTATIVE

Village of Addison

Certified Payroll for Public Works Projects

Dear Contractor/Subcontractor,

As you may know, the Governor signed into law Public Act 94-0515 amending the Prevailing Wage Act. Effective August 10, 2005, all contractors and their subcontractors who are engaged in public works project must provide a certified monthly payroll report either in person, by mail or electronically for our records.

Please refer to the attached exhibits.



Village of Addison

Wage Rates

Each CONTRACTOR or Subcontractor performing Work on this Project shall comply in all respects with all laws governing the employment of labor, Social Security, and Unemployment Insurance of both the State and Federal government. There shall be paid to each employee engaged in Work under this Contract at the site of the Project, no less than the minimum wage for the classifications of labor employed in compliance with 820 ILCS 130/1 et seq., as now existing or hereafter amended.

In accordance with 820 ILCS 130/5, The Contractor and each subcontractor shall make and keep, for a period of not less than 5 years, records of all laborers, mechanics, and other workers employed by them on the Project; the records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each period, the number of hours worked each day, and the starting and ending times of work each day.

The Contractor and each subcontractor shall submit monthly, in person, by mail, or electronically a certified payroll to the Village. The certified payroll shall consist of a complete copy of the records. The certified payroll shall be accompanied by a statement signed by the contractor or subcontractor which avers that:

- (i) such records are true and accurate;
- (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required; and
- (iii) the contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor

Upon 2 business days' notice, the contractor and each subcontractor shall make available for inspection for the records to the Village, its officers and agents, and to the Director of Labor and his deputies and agents at all reasonable hours at a location within this State. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor.

See, Certified Payroll forms and instructions attached.



**Village of Addison
Contractor/Subcontractor
VILLAGE OF ADDISON
Contractor/Subcontractor
Monthly Report Cover Sheet**

Contractor/Subcontractor

Name: _____

Project Description - Bid number of physical description and/or area where work is
being done: _____

Dates of Work Covered By this Report:

Name of the Person Making the Report:

Telephone Number:

Reporting Person's Title:

All reports here-in are to be forwarded to:

**Attn: Roseanne Benson, Finance Director
Village of Addison
1 Friendship Plaza
Addison, IL 60101
630-543-4100**

*** The attached reports are to be in complete compliance with the Illinois
Consolidated Statute 820.I.L.C.S. 130/5.**



**INSTRUCTIONS FOR COMPLETING IDOL'S CERTIFIED TRANSCRIPT OF PAYROLL FORM.
THIS FORM MUST BE COMPLETED AND SUBMITTED FOR ALL WORK ON PROJECTS
COVERED BY THE PREVAILING WAGE ACT.**

1. Complete all items contained on the form pertaining to the project.
2. Please note that pertinent information is required on the second sheet including the full legal and correct name of the contractor/subcontractor as well as fringe benefit information where contributions are not made to a fringe benefit fund that is jointly administered by one or more employers or one or more labor organizations in accordance with the federal Labor Management Relations Act. It is **IMPERATIVE** that the **AFFIDAVIT** information on page 2 be completed in its **ENTIRETY** including **SIGNATURE**. The second sheet including affidavit must accompany every certified transcript of payroll.
3. Please note that **ALL** hours worked during the week (**Prevailing Wage "PW"** and **Non Prevailing Wage "N"**) have to be recorded.
4. If a contractor pays into a fringe benefit fund for such fringe benefits as health insurance, pension, 401(k), and/or vacation fund, for which the contractor/subcontractor wants to take credit and the fund is jointly administered by one or more employers or one or more labor organizations in accordance with the federal Labor Management Relations Act, place the letter **"F"** behind the hourly rate. If contributions for fringe benefits for which you seek credit are not paid to a fringe benefit fund that is jointly administered by one or more employers or one or more labor organizations in accordance with the federal Labor Management Relations Act, then 1) the name and address of the benefit fund, 2) the plan sponsor of each benefit if applicable, and 3) the plan administrator of each benefit must be included on the certified transcript of payroll in the place indicated on page 2.
5. If a contractor/subcontractor wants to take credit for contributions for fringe benefits and contributions are not made on a per hour worked basis for all hours worked, then the contractor must convert the rate of contribution to an annualized per hour rate for purpose of reporting. The annualized rate is calculated by dividing the total amount of contributions by the total hours worked (including all hours worked both prevailing and non prevailing wage work) during the twelve month period ending with the month preceding the month in which the work was performed for which the certified transcript of payroll is being completed. If employees make co-payments for benefits, the contractor/subcontractor's contributions cannot include the employee co-pays in the calculation. The only amount that may be included in the calculation of the contractor's contributions is the net amount (amount of contractor contribution not including employee co-pays).
6. Credit for fringe benefits cannot exceed the sum of the hourly rate of all the fringe benefits set forth in the schedule for the appropriate classification and amounts in excess of the total cannot be used as an off-set to the required amount to be paid in wages.
7. Contributions for training may only be credited where the contributions are made to apprenticeship and training programs approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training. An apprentice rate where applicable may only be paid for those persons in programs approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training.
8. The items requested under the heading, "Contract Information", help to correctly identify the project. If a Contract or Project Number is not known please do your best to secure the information. The information requested for "Project" and "Project Location" should always be completed.
9. No later than the 15th of each calendar month following a month in which construction on the project has occurred, a contractor/subcontractor must file a certified payroll with the public body in charge of the project.
10. The contractor/subcontractor must maintain the original copies of all Prevailing Wage and Non-Prevailing Wage time and payroll records required under the Prevailing Wage Act and which will verify the information contained in this form for a period of five years.

You are invited to visit IDOL'S web site at <http://labor.illinois.gov> for more detailed information regarding application of the Prevailing Wage Act.

PLEASE NOTE: THE SUBMISSION OF FALSIFIED CERTIFIED TRANSCRIPT OF PAYROLL IS A CRIMINAL OFFENSE. IN ADDITION FILING A FALSIFIED CERTIFIED PAYROLL CONSTITUTES A VIOLATION OF THE PREVAILING WAGE ACT AND THE SUBMISSION OF FALSE RECORDS AND/OR THE FAILURE TO MAINTAIN THE RECORDS REQUIRED UNDER THE ACT CAN RESULT IN A NOTICE OF VIOLATION AND SUBSEQUENT DEBARMENT ON ALL PUBLIC WORKS FOR A PERIOD OF UP TO FOUR YEARS.



Public Works Contractor Information Form

This form constitutes an official certification of wages and benefits paid to workers, laborers, and mechanics working on the public works projects identified below.

Note: Use Separate Page (add page) to Provide Information for Each Project Subcontractor.

Contractor and/or Subcontractor

County where work was performed: _____

_____ (Company Name) _____ (Contact Name)

Are you signatory to union contract? Yes No

_____ (Street Address) _____ (City)

Are you a member of a Contractor's Association? Yes No
If yes, which one? _____

_____ (State) _____ (Zipcode) _____ (Telephone Number)

Does Association negotiate contract on your behalf? Yes No

Date of Project. From: _____ To: _____

Name of project: _____

Type of construction: Building Highway

Work performed for: _____
(Public Body Name) (Public Body Address)

Trade Classification	Total ST Hours	Total OT Hours	Basic Hourly Rate	M-F OT	SAT OT	SUN/HOL OT	Hourly H/W	Hourly ** Pension	Hourly Vacation	Hourly Training
Foreman Classification										

Total Hours - Include total hours worked in each classification when total benefit packet is the same. If not the same, use separate line for each.
Overtime Wages - Indicate overtime as 1.5 (time and one-half), 2.0 (double time).
Hourly Benefits - List hourly amounts paid on behalf of the employees ABOVE their basic hourly wage toward pension, medical insurance (H/W), and vacation. Do not include any amounts which are DEDUCTED from their wages.

** Combined Pension and Annuity

The undersigned hereby certifies that the information provided herein is correct.

Date _____ Signature _____

Certified Transcript of Payroll

IDOL Case File Number: _____ Payroll Start: _____

Payroll End: _____

Contractor and/or Subcontractor

Public Body Information

_____ (Contract Number)	_____ (Company Name)	_____ (Contact Name)
_____ (Project Number)	_____ (Street Address)	_____ (City)
_____ (Project Location)	_____ (State) _____ (Zipcode)	_____ (Telephone Number)

Report Hours for Each Day, Including Overtime Hours, List Hourly Prevailing Wage Rate and Hourly Fringe Benefits Allotments.

Worker Name, Address Last Four of SSN & Telephone Number	PW	* Hours worked each day							Total Straight Time Hours	Total OT Hours	Hourly Wage Rate	OT Wage Rate	Per Pay Period	
		SUN	MON	TUE	WED	THR	FRI	SAT					Gross	Net
	N													
Labor Classification		Hourly Fringe Benefit: Pension: <input type="text"/> Health/Welfare: <input type="text"/> Vacation: <input type="text"/> Training: <input type="text"/>												
	N													
Labor Classification		Hourly Fringe Benefit: Pension: <input type="text"/> Health/Welfare: <input type="text"/> Vacation: <input type="text"/> Training: <input type="text"/>												
	N													
Labor Classification		Hourly Fringe Benefit: Pension: <input type="text"/> Health/Welfare: <input type="text"/> Vacation: <input type="text"/> Training: <input type="text"/>												

Please place an "F" by the hourly rate for fringe benefits paid to a Fund jointly managed by one or more labor organizations or employers in accordance with the federal Labor Management Relations Act (See instruction 4 for completing this form). In addition contractors/subcontractors who do not make contributions for covered fringe benefits to a fringe benefit fund that is jointly managed and jointly governed by one or more labor organizations or employers in accordance with the federal Labor Management Relations Act must provide the additional information set forth on the form on page 2 (see Instruction 5). Contractors/subcontractors who do not make contributions for fringe benefits on a per hour basis for each hour worked must convert such contributions to an annualized per hour basis for purpose of reporting on this form in accordance with instruction 5. You must keep original records showing start and end time each day.

***PW - Prevailing Hours Worked *N - Non Prevailing Hours Worked**



Certified Transcript of Payroll

AFFIDAVIT

Weekly Statement of Compliance

Date: _____

I, _____,
(name signatory party)
_____, do
(Title)

hereby state: that I pay or supervise the payment
of the persons employed on the public works
project _____;

(name of project)

that during the payroll period commencing on the
_____ day of _____,
(day) (month) (year)

all persons employed on said project have been
paid the full weekly wages earned, that no
rebates have been or will be made either directly
or indirectly to or on behalf of said

(name of contractor or subcontractor)

from the full weekly wages earned by any person,
and that no deductions have been made either
directly or indirectly from the full weekly wages
earned by any persons, other than permissible
deductions as defined by Federal and/or State
Law. I further certify that this payroll is correct
and complete; that the wage rates contained
therein are not less than the actual rates herein
stated and that the classification set forth for each
laborers or mechanic conform to the work he/she
performed.

Signature

Digital Signature _____

FRINGES

Health Fund _____

Health Address _____

Health Sponsor _____

Health Admin _____

Pension Fund _____

Pension Address _____

Pension Sponsor _____

Pension Admin _____

401(k) Fund _____

401(k) Address _____

401(k) Sponsor _____

401(k) Admin _____

Vacation Fund _____

Vacation Address _____

Vacation Sponsor _____

Vacation Admin _____

SUBCONTRACTORS

Attach explanation of Monies paid, copy of contract
of billing, or other pertinent information.

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Effective Date	County	Trade Title	Region	Type	Class	Base Wage	Foreman	V OT M-F	OT Sa	OT Su	OT Hol	H/W	Pension	Vacation	Training	Other Fringe	Benefit
11/23/2018	DuPage	ASBESTOS ABT-GEN	All	ALL		42.72	43.72	1.5	1.5	2	2	14.9	12.57	0	0.72	0	
11/5/2018	DuPage	ASBESTOS ABT-MEC	All	BLD		37.88	40.38	1.5	1.5	2	2	12.92	11.82	0	0.72	0	
8/15/2018	DuPage	BOILERMAKER	All	BLD		49.46	53.91	2	2	2	2	6.97	20.41	0	0.4	0	
11/16/2018	DuPage	BRICK MASON	All	BLD		46.19	50.81	1.5	1.5	2	2	10.65	17.92	0	0.92	0	
1/11/2019	DuPage	CARPENTER	All	ALL		47.35	49.35	1.5	1.5	2	2	11.79	20.41	0	0.63	0	
4/5/2019	DuPage	CEMENT MASON	All	ALL		45.25	47.25	2	1.5	2	2	14.25	18.03	0	1.1	0	
8/15/2018	DuPage	CERAMIC TILE FNSHER	All	BLD		39.56	39.56	1.5	1.5	2	2	10.75	12.02	0	0.77	0	
11/5/2018	DuPage	COMMUNICATION TECH	All	BLD		33.82	36.62	1.5	1.5	2	2	12.35	20.39	1.89	0.68	0	
8/15/2018	DuPage	ELECTRIC PWR EQMT OP	All	ALL		42.59	57.95	1.5	1.5	2	2	5.75	13.21	0	0.75	0	
8/15/2018	DuPage	ELECTRIC PWR EQMT OP	ALL	HWY		41.45	56.38	1.5	1.5	2	2	5.5	12.87	0	0.73	0	
4/5/2019	DuPage	ELECTRIC PWR GRNDMAN	All	ALL		32.86	57.95	1.5	1.5	2	2	5.75	10.2	0	0.58	0	
8/15/2018	DuPage	ELECTRIC PWR GRNDMAN	ALL	HWY		32	56.38	1.5	1.5	2	2	5.5	9.92	0	0.66	0	
10/26/2018	DuPage	ELECTRIC PWR LINEMAN	All	ALL		51.06	57.95	1.5	1.5	2	2	5.75	15.85	0	0.9	0	
8/15/2018	DuPage	ELECTRIC PWR LINEMAN	ALL	HWY		49.67	56.38	1.5	1.5	2	2	5.5	15.4	0	0.88	0	
8/15/2018	DuPage	ELECTRIC PWR TRK DRV	All	ALL		34.03	57.95	1.5	1.5	2	2	5.75	10.55	0	0.6	0	
8/15/2018	DuPage	ELECTRIC PWR TRK DRV	ALL	HWY		33.14	56.38	1.5	1.5	2	2	5.5	10.29	0	0.59	0	
11/5/2018	DuPage	ELECTRICIAN	All	BLD		40.5	44.5	1.5	1.5	2	2	12.35	23	5.25	0.75	0	
4/5/2019	DuPage	ELEVATOR CONSTRUCTOR	All	BLD		54.85	61.71	2	2	2	2	15.43	9.71	4.38	0.61	0	
4/5/2019	DuPage	FENCE ERECTOR	NE	ALL		40.88	42.88	1.5	1.5	2	2	13.59	14.5	0	0.65	0	
8/15/2018	DuPage	FENCE ERECTOR	W	ALL		45.06		1.5	1.5	1.5	1.5	10.52	20.76	0	0.7	0	
2/8/2019	DuPage	GLAZIER	All	BLD		43.85	45.35	1.5	2	2	2	14.17	21.11	0	0.94	0	
11/5/2018	DuPage	HT/FROST INSULATOR	All	BLD		50.5	53	1.5	1.5	2	2	12.92	13.16	0	0.72	0	
8/15/2018	DuPage	IRON WORKER	E	ALL		48.33	51.83	2	2	2	2	14.15	23.28	0	0.35	0	
4/5/2019	DuPage	IRON WORKER	W	ALL		45.84	49.51	2	2	2	2	11.77	22.9	0	0.83	0	
4/5/2019	DuPage	LABORER	All	ALL		42.72	43.47	1.5	1.5	2	2	14.9	12.57	0	0.72	0	
8/15/2018	DuPage	LATHER	All	ALL		47.35	49.35	1.5	1.5	2	2	11.79	20.41	0	0.63	0	
8/15/2018	DuPage	MACHINIST	All	BLD		48.38	50.88	1.5	1.5	2	2	7.23	8.95	1.85	1.47	0	
8/15/2018	DuPage	MARBLE FINISHERS	All	ALL		34.65	47.7	1.5	1.5	2	2	10.65	16.46	0	0.49	0	
8/15/2018	DuPage	MARBLE MASON	All	BLD		45.43	49.97	1.5	1.5	2	2	10.65	17.39	0	0.61	0	
4/5/2019	DuPage	MATERIAL TESTER I	All	ALL		32.72	32.72	1.5	1.5	2	2	14.9	12.57	0	0.72	0	
10/26/2018	DuPage	MATERIALS TESTER II	All	ALL		37.72	37.72	1.5	1.5	2	2	14.9	12.57	0	0.72	0	
4/5/2019	DuPage	MILLWRIGHT	All	ALL		47.35	49.35	1.5	1.5	2	2	11.79	20.41	0	0.63	0	
2/15/2019	DuPage	OPERATING ENGINEER	All	BLD	1	51.1	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
2/15/2019	DuPage	OPERATING ENGINEER	All	BLD	2	49.8	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
8/15/2018	DuPage	OPERATING ENGINEER	All	BLD	3	47.25	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
4/5/2019	DuPage	OPERATING ENGINEER	All	BLD	4	45.5	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
8/15/2018	DuPage	OPERATING ENGINEER	All	BLD	5	54.85	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
8/15/2018	DuPage	OPERATING ENGINEER	All	BLD	6	52.1	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
4/5/2019	DuPage	OPERATING ENGINEER	All	BLD	7	54.1	55.1	2	2	2	2	19.65	15.1	2	1.4	0	
11/9/2018	DuPage	OPERATING ENGINEER	All	FLT		38	38	1.5	1.5	2	2	18.8	14.35	2	1.3	0	
12/28/2018	DuPage	OPERATING ENGINEER	All	HWY	1	49.3	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
11/9/2018	DuPage	OPERATING ENGINEER	All	HWY	2	48.75	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
11/9/2018	DuPage	OPERATING ENGINEER	All	HWY	3	46.7	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
8/15/2018	DuPage	OPERATING ENGINEER	All	HWY	4	45.3	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
11/9/2018	DuPage	OPERATING ENGINEER	All	HWY	5	44.1	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
8/15/2018	DuPage	OPERATING ENGINEER	All	HWY	6	52.3	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
11/9/2018	DuPage	OPERATING ENGINEER	All	HWY	7	50.3	53.3	1.5	1.5	2	2	19.65	15.1	2	1.4	0	
8/15/2018	DuPage	ORNAMNTL IRON WORKER	E	ALL		48.05	50.55	2	2	2	2	14.09	20.59	0	1.25	0	
8/15/2018	DuPage	ORNAMNTL IRON WORKER	W	ALL		45.06	48.66	2	2	2	2	10.52	20.76	0	0.7	0	
4/5/2019	DuPage	PAINTER	All	ALL		45.28	47.28	1.5	1.5	1.5	1.5	11.55	8.2	0	1.35	0	
8/15/2018	DuPage	PAINTER SIGNS	All	BLD		38.2	43.25	1.5	1.5	2	2	2.6	3.25	0	0	0	
8/15/2018	DuPage	PILEDRIIVER	All	ALL		47.35	49.35	1.5	1.5	2	2	11.79	20.41	0	0.63	0	

11/16/2018 DuPage	PIPEFITTER	All	BLD		48.5	51.5	1.5	1.5	2	2	10.05	18.85	0	2.54	0
11/5/2018 DuPage	PLASTERER	ALL	BLD		43.25	45.85	1.5	1.5	2	2	14.25	16.69	0	1.45	0
10/26/2018 DuPage	PLUMBER	All	BLD		50.25	53.25	1.5	1.5	2	2	14.34	14.42	0	1.31	0
4/5/2019 DuPage	ROOFER	All	BLD		43.65	47.65	1.5	1.5	2	2	9.73	12.44	0	0.53	0
12/14/2018 DuPage	SHEETMETAL WORKER	All	BLD		48.02	50.42	1.5	1.5	2	2	10.75	16.19	0	1.03	3.5
4/5/2019 DuPage	SPRINKLER FITTER	All	BLD		48.1	50.6	1.5	1.5	2	2	13.25	15.9	0	0.55	0
8/15/2018 DuPage	STEEL ERECTOR	E	ALL		42.07		2	2	2	2	13.45	19.59	0	0.35	0
8/15/2018 DuPage	STEEL ERECTOR	W	ALL		45.06	48.66	2	2	2	2	10.52	20.76	0	0.7	
8/15/2018 DuPage	STONE MASON	All	BLD		46.19	50.81	1.5	1.5	2	2	10.65	17.92	0	0.92	0
11/16/2018 DuPage	TERRAZZO FINISHER	All	BLD		41.54	44.54	1.5	1.5	2	2	10.75	13.71	0	0.86	0
11/16/2018 DuPage	TERRAZZO MASON	All	BLD		45.38	48.88	1.5	1.5	2	2	10.75	15.17	0	0.89	0
8/15/2018 DuPage	TILE MASON	All	BLD		46.49	50.49	1.5	1.5	2	2	10.75	14.99	0	0.9	0
4/5/2019 DuPage	TRAFFIC SAFETY WRKR	All	HWY		36	37.6	1.5	1.5	2	2	8.9	9.27	0	0.25	0
4/5/2019 DuPage	TRUCK DRIVER	All	ALL	1	37.61	38.16	1.5	1.5	2	2	9.08	11.36	0	0.15	0
4/5/2019 DuPage	TRUCK DRIVER	All	ALL	2	37.76	38.16	1.5	1.5	2	2	9.08	11.36	0	0.15	0
4/5/2019 DuPage	TRUCK DRIVER	All	ALL	3	37.96	38.16	1.5	1.5	2	2	9.08	11.36	0	0.15	0
4/5/2019 DuPage	TRUCK DRIVER	All	ALL	4	38.16	38.16	1.5	1.5	2	2	9.08	11.36	0	0.15	0
10/26/2018 DuPage	TUCK POINTER	All	BLD		46	48	1.5	1.5	2	2	8.34	16.81	0	0.93	0

GENERAL REQUIREMENTS

SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Work under other contracts.
 - 3. Use of premises.
 - 4. Owner's occupancy requirements.
 - 5. Specification formats and conventions.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: **Addison Village Green Phase 4 Improvements**
 - 1. Project Location: **1 Friendship Plaza, Addison, Illinois 60101**
- B. Owner: **Village of Addison**
- C. Landscape Architect: **Hitchcock Design Group, 22 E. Chicago Avenue, Suite 200A, Naperville, Illinois 60540**
- D. The Work consists of the following:
 - 1. The Work consists of additional improvements to the Addison Village Green including: Fence, Masonry, Electrical, Irrigation, and Landscape.

1.3 PROJECT SCHEDULE

- A. Authorization to Proceed is anticipated to be on December 2, 2019. Contractor can begin work during winter months weather dependent.
- B. Substantial Completion by May 1, 2019.
- C. Final Acceptance by May 22, 2019

1.4 PERMITS

- A. Village will issue a non-fee permit for new sign, landscaping, irrigation, and fencing. Contractor not required to facilitate permitting.

1.5 USE OF PREMISES

- A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work, and the other contractors to perform work on their portions of Project.
- B. Use of Site: Limit use of premises to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Owner Occupancy: Owner will occupy areas adjacent to the site during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of site, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Standard Specifications: The Village of Addison Standard Specifications for Design and Construction shall govern except as modified herein.
- B. Illinois Department of Transportation Standard Specifications for Road and Bridge Construction: Where the Specifications and other Contract Documents refer to IDOT, the conditions as stated in the Standard Specifications for Road and Bridge Construction, dated April 1, 2016 shall apply.

END OF SECTION

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

- A. Owners Representative will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Owners Representative will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Owners Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to the Owners Representative.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.

2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

1.4 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Owners Representative will issue a Change Order for signatures of Owner and Contractor.

1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Owners Representative may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 APPLICATIONS FOR PAYMENT

- A. Comply with requirements as listed in Village Certified Payroll for Public Works Projects section. Submit all forms with payment applications as required.
- B. Each Application for Payment shall be consistent with previous applications and payments as certified by Owners Representative and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- C. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- D. Payment Application Times: The period covered by each Application for Payment is one month, ending on the last day of the month.
- E. Payment Application Forms: Use Village required forms.
- F. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owners Representative will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- G. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Owners Representative by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Schedule of unit prices.
 4. Initial progress report.
- J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.2 USE CHARGES

- A. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- B. Electric Power Service: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.3 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Utility Locator Service: Notify utility locator service for area where Project is located before beginning work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with requirements of the Standard Specifications.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 SUPPORT FACILITIES INSTALLATION

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- B. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- C. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 - 2. Remove snow and ice as required to minimize accumulations.
- D. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

- B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- C. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- E. Work Area Protection Fence: Before construction operations begin, furnish and install orange temporary construction fence in a manner that will prevent people and animals from easily entering the active work areas. Be sure all areas under construction are enclosed at the end of each work day.
- F. Traffic Control, Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

END OF SECTION

TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with requirements of the Standard Specifications.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Temporary Fencing: Install temporary fencing around tree protection zones to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- C. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.

3.2 EXCAVATION

- A. Install shoring or other protective support systems to minimize sloping or benching of excavations.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where utility trenches are required within tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
 - 1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.3 REGRADING

- A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones.
- B. Minor Fill: Where existing grade is 6 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.
- C. Moderate Fill: Where existing grade is more than 6 inches but less than 12 inches below elevation of finish grade, place drainage fill, filter fabric, and topsoil on existing grade as follows:
 - 1. Carefully place drainage fill against tree trunk approximately 2 inches above elevation of finish grade and extend not less than 18 inches from tree trunk on all sides. For balance of area within drip-line perimeter, place drainage fill up to 6 inches below elevation of grade.
 - 2. Place filter fabric with edges overlapping 6 inches minimum.
 - 3. Place fill layer of topsoil to finish grade. Do not compact drainage fill or topsoil. Hand grade to required finish elevations.

3.4 TREE REPAIR AND REPLACEMENT

- A. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

3.5 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess excavated material and displaced trees from Owner's property.

END OF SECTION

EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. General installation of products.
 - 3. Progress cleaning.
 - 4. Starting and adjusting.
 - 5. Protection of installed construction.
 - 6. Correction of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before

fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Owners Representative. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Owners Representative promptly.
- B. General: Lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Owners Representative when deviations from required lines and levels exceed allowable tolerances.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Lines and Levels: Locate and lay out control lines and levels for structures and foundations. Level structures and foundations from two or more locations.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

- E. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

END OF SECTION

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.

1.2 SUBSTANTIAL COMPLETION

- A. Before requesting Substantial Completion inspection, complete the following:
 - 1. Complete startup testing of systems.
 - 2. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 3. Advise Owner of changeover in utilities.
 - 4. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 5. Complete final cleaning requirements, including touchup painting.
 - 6. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Owners Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. After inspection, Owners Representative will prepare list of items to be completed and corrected (Punch List). Punch List items must be completed prior to certification of Substantial Completion.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting Final Completion, complete the following:
 - 1. Submit certified copy of Owners Representative's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owners Representative. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

2. Submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 5. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 6. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 7. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Owners Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Owners Representative will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Owner's Representative for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to project site.
 - f. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove labels that are not permanent.
 - h. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - i. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

- j. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use to comply with requirements for new fixtures.
 - k. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION 042000 - UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
 - 1. Concrete masonry units (CMUs).

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For reinforcing steel. Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement." Show elevations of reinforced walls.
- C. Samples for each type and color of exposed masonry units and colored mortars.
- D. Material Certificates: For each type of product indicated. Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards.
- E. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1.3 QUALITY ASSURANCE

- A. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects.
 - 1. Build sample panels for each type of exposed unit masonry construction in sizes approximately 48 inches long by 48 inches high.

1.4 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. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in Section 2104.3 in the Uniform Building Code.
- B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 CONCRETE MASONRY UNITS (CMUs)

- A. Concrete Masonry Units: ASTM C 90.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2500 psi.
 - 2. Weight Classification: Normal weight.
 - 3. Size: 15-5/8"x7-5/8"x5-5/8" actual size (16"x8"x6" nominal)

2.2 MORTAR AND GROUT MATERIALS

- A. Mortar and Grout: Provide Mortar and Grout samples from supplier's standard range of materials for selection by Owners Representative that meet the following requirements:
 - 1. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction.
 - 2. Hydrated Lime: ASTM C 207, Type S.
 - 3. Masonry Cement: ASTM C 91.
- B. Mortar Pigments: Iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar.
- C. Colored Cement Product: Packaged blend made from portland cement and lime or masonry cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
 - 1. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
- D. Aggregate for Mortar: ASTM C 144.
 - 1. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
- E. Aggregate for Grout: ASTM C 404.
- F. Epoxy Pointing Mortar: ASTM C 395, epoxy-resin-based material formulated for use as pointing mortar for structural-clay tile facing units.
- G. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
- H. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with concrete masonry units, containing integral water repellent by same manufacturer.
- I. Water: Potable.

2.3 REINFORCEMENT

- A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60.
- B. Masonry Joint Reinforcement: ASTM A 951; mill galvanized, carbon-steel wire for interior walls and hot-dip galvanized, carbon-steel wire for exterior walls.
 - 1. Wire Size for Side Rods: W1.7 or 0.148-inch diameter.
 - 2. Wire Size for Cross Rods: W1.7 or 0.148-inch diameter.
 - 3. Wire Size for Veneer Ties: W1.7 or 0.148-inch diameter.
 - 4. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches o.c.
 - 5. Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.

2.4 TIES AND ANCHORS

- A. Materials:
 - 1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82; with ASTM A 153/A 153M, Class B-2 coating.
 - 2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, hot-dip galvanized after fabrication to comply with ASTM A 153/A 153M.
 - 3. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Wire Ties, General: Unless otherwise indicated, size wire ties to extend at least halfway through veneer but with at least 5/8-inch cover on outside face. Outer ends of wires are bent 90 degrees and extend 2 inches parallel to face of veneer.
- C. Individual Wire Ties: Rectangular units with closed ends and not less than 4 inches wide.
 - 1. Wire: Fabricate from 3/16-inch-diameter, hot-dip galvanized steel wire.
- D. Adjustable Anchors for Connecting to Structure: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
 - 1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- diameter, hot-dip galvanized steel wire.
 - 2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.188-inch-diameter, hot-dip galvanized steel wire.
 - 3. Connector Section for Concrete: Dovetail tabs for inserting into dovetail slots in concrete and attached to tie section; formed from 0.053-inch-thick, steel sheet, galvanized after fabrication.
- E. Partition Top anchors: 0.097-inch- thick metal plate with 3/8-inch- diameter metal rod 6 inches long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication.
- F. Rigid Anchors: Fabricate from steel bars 1-1/2 inches wide by 1/4 inch thick by 24 inches long, with ends turned up 2 inches or with cross pins.
- G. Adjustable Masonry-Veneer Anchors

1. General: Provide anchors that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs, and as follows:
 - a. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.
2. Screw-Attached, Masonry-Veneer Anchors: Units consisting of a wire tie and a metal anchor section.
 - a. Anchor Section: Rib-stiffened, sheet metal plate with screw holes top and bottom, and slotted holes for inserting wire tie.
 - b. Fabricate sheet metal anchor sections from 0.067-inch-thick, steel sheet, galvanized after fabrication.
 - c. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.188-inch-diameter, hot-dip galvanized steel wire.

2.5 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing, where flashing is exposed or partly exposed and where indicated, complying with Division 07 Section "Sheet Metal Flashing and Trim."
 1. Metal Drip Edges: Fabricate from stainless steel. Extend at least 3 inches into wall and 1/2 inch out from wall, with outer edge bent down 30 degrees.
 2. Metal Flashing Terminations: Fabricate from stainless steel. Extend at least 3 inches into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch and down into joint 3/8 inch to form a stop for retaining sealant backer rod.
 3. Metal Expansion-Joint Strips: Fabricate from [**stainless steel**] [**copper**] to shapes indicated.
- B. Flexible Flashing: For flashing not exposed to the exterior, use one of the following, unless otherwise indicated:
 1. Copper-Laminated Flashing: 5-oz./sq. ft. copper sheet bonded with asphalt between 2 layers of glass-fiber cloth.
 2. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.030 inch.
 3. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy 0.025 inch thick, with a 0.015-inch-thick coating of rubberized-asphalt adhesive.
 4. EPDM Flashing: Sheet flashing product made from ethylene-propylene-diene terpolymer, complying with ASTM D 4637, 0.040 inch thick.

- C. Solder and Sealants for Sheet Metal Flashings: As specified in Division 07 Section "Sheet Metal Flashing and Trim."
- D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer.

2.6 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from neoprene, urethane or PVC.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).
- D. Weep/Vent Products: Use one of the following, unless otherwise indicated:
 - 1. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, 3/8 by 1-1/2 by 3-1/2 inches long.
 - 2. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch less than depth of outer wythe, in color selected from manufacturer's standard.
 - 3. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; in color selected from manufacturer's standard.
- E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
 - 1. Provide one of the following configurations:
 - a. Strips, full-depth of cavity and 10 inches wide, with dovetail shaped notches 7 inches deep.
 - b. Strips, not less than 1-1/2 inches thick and 10 inches wide, with dimpled surface designed to catch mortar droppings and prevent weep holes from being clogged with mortar.
 - c. Sheets or strips full depth of cavity and installed to full height of cavity.

2.7 INSULATION

- A. Loose-Granular Fill Insulation: Perlite complying with ASTM C 549, Type II (surface treated for water repellency and limited moisture absorption) or Type IV (surface treated for water repellency and to limit dust generation).

- B. Molded-Polystyrene Insulation Units: Rigid, cellular thermal insulation formed by the expansion of polystyrene-resin beads or granules in a closed mold to comply with ASTM C 578, Type I. Provide specially shaped units designed for installing in cores of masonry units.
- C. Extruded-Polystyrene Board Insulation: ASTM C 578, Type IV, closed-cell product extruded with an integral skin.
- D. Polyisocyanurate Board Insulation: ASTM C 1289, Type I (aluminum-foil-faced), Class 2 (glass-fiber-reinforced).

2.8 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains from new masonry without damaging masonry. Use product approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.9 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, unless otherwise indicated.
 1. Do not use calcium chloride in mortar or grout.
 2. Limit cementitious materials in mortar for exterior masonry to portland cement and lime.
 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Property Specification.
 1. For masonry below grade or in contact with earth, use Type M.
 2. For reinforced masonry, use Type S.
 3. For mortar parge coats, use Type S.
 4. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.
 5. For interior non-load-bearing partitions, Type O may be used instead of Type N.
- D. Pigmented Mortar: Use colored cement product. Do not add pigments to colored cement products.
 1. Pigments shall not exceed 10 percent of portland cement by weight.
 2. Pigments shall not exceed 5 percent of masonry cement by weight.
- E. Grout for Unit Masonry: Comply with ASTM C 476.
 1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
 2. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.

- F. Epoxy Pointing Mortar: Mix epoxy pointing mortar to comply with mortar manufacturer's written instructions.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
- C. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.
- D. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and with the following:
 - 1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
 - 2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.

3.2 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- D. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.
- E. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

3.3 MORTAR BEDDING AND JOINTING

- A. Lay hollow brick and concrete masonry units as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
 2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
 3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
 4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Lay structural-clay tile as follows:
1. Lay vertical-cell units with full head joints, unless otherwise indicated. Provide bed joints with full mortar coverage on face shells and webs.
 2. Lay horizontal-cell units with full bed joints, unless otherwise indicated. Keep drainage channels, if any, free of mortar. Form head joints with sufficient mortar so excess will be squeezed out as units are placed in position.
 3. Maintain joint thicknesses indicated except for minor variations required to maintain bond alignment. If not indicated, lay walls with 1/4- to 3/8-inch- thick joints.
 4. Where epoxy-mortar pointed joints are indicated, rake out setting mortar to a uniform depth of 1/4 inch and point with epoxy mortar.
- D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.
- E. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint), unless otherwise indicated.

3.4 CAVITY WALLS

- A. Bond wythes of cavity walls together using one of the following methods:
1. Individual Metal Ties: Provide ties as shown installed in horizontal joints, but not less than one metal tie for 4.5 sq. ft. of wall area spaced not to exceed 36 inches o.c. horizontally and 16 inches o.c. vertically. Stagger ties in alternate courses. Provide additional ties within 12 inches of openings and space not more than 36 inches apart around perimeter of openings. At intersecting and abutting walls, provide ties at no more than 24 inches o.c. vertically.
 2. Masonry Joint Reinforcement: Installed in horizontal mortar joints.
 - a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes or tab-type reinforcement.
 - b. Where bed joints of wythes do not align, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties.
 - c. Where one wythe is of clay masonry and the other of concrete masonry, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties to allow for differential movement regardless of whether bed joints align.

3. Masonry Veneer Anchors: Comply with requirements for anchoring masonry veneers.
- B. Keep cavities clean of mortar droppings and other materials during construction. Bevel beds away from cavity, to minimize mortar protrusions into cavity. Do not attempt to trowel or remove mortar fins protruding into cavity.
- C. Parge cavity face of backup wythe in a single coat approximately 3/8 inch thick. Trowel face of parge coat smooth.
- D. Coat cavity face of backup wythe to comply with Division 07 Section "Bituminous Dampproofing."
- E. Installing Cavity-Wall Insulation: Place small dabs of adhesive, spaced approximately 12 inches o.c. both ways, on inside face of insulation boards, or attach with plastic fasteners designed for this purpose. Fit insulation between wall ties and other confining obstructions, with edges butted tightly. Press units firmly against inside wythe of masonry.

3.5 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
- B. Install flashing as follows, unless otherwise indicated:
 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing as recommended by flashing manufacturer.
 2. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
 3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.
 4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal flashing termination.
- C. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
 1. Use specified weep/vent products to form weep holes.
 2. Space weep holes 24 inches o.c., unless otherwise indicated.
 3. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.
- D. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in Part 2 "Miscellaneous Masonry Accessories" Article.

- E. Install vents in head joints in exterior wythes at spacing indicated. Use specified weep/vent products to form vents.
 - 1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.6 FIELD QUALITY CONTROL

- A. Inspectors: Owners Representative will perform inspections and prepare reports. Allow Owners Representative access to work areas, as needed to perform inspections.
- B. Inspection Frequency: One inspection for each column.

3.7 CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes.
 - 2. Protect adjacent surfaces from contact with cleaner.
 - 3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 4. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
 - 5. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
 - 6. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.8 MASONRY WASTE DISPOSAL

- A. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 - 1. Do not dispose of masonry waste as fill within 18 inches of finished grade.
 - 2. Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 042010 - BRICK MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes the following applications of stone masonry:
 - 1. Brick veneer anchored to concrete backup.
- B. Related Sections:
 - 1. Division 04 Section "Unit Masonry" for additional requirements.

1.2 SUBMITTALS/REQUIREMENTS

- A. Product Data: For each type of product indicated.
- B. Samples:
 - 1. For brick type indicated.
 - 2. For each color of mortar required.
- C. Mock-up:
 - 1. Provide on-site mock-up of masonry veneer with a 5' x 5' minimum area representing full range of stone indicated. Mock-up to be approved by Owner's Representative prior to ordering stone. Mock-up can remain in place as part of completed work if acceptable to Owner's Representative.

1.3 QUALITY ASSURANCE

- A. Comply with ACI 530 for all masonry work.

1.4 PROJECT CONDITIONS

- A. Protection of Stone Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work.
- B. 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 contained in ACI 530.1/ASCE 6/TMS 602.
 - 1. 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.

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

PART 2 - PRODUCTS

2.1 Brick Veneer

- A. Brick Veneer (to match Village Hall):
 - 1. Contractor to submit brick sample to match Village Hall for review and approval prior to ordering.

2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
 - 1. Low-Alkali Cement: Not more than 0.60 percent total alkali when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Masonry Cement: ASTM C 91.
- D. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in stone masonry mortar.
- E. Colored Cement Product: Packaged blend made from portland cement and lime or masonry cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
 - 1. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
- F. Aggregate: ASTM C 144 and as follows:
 - 1. For pointing mortar, use aggregate graded with 100 percent passing No. 16 sieve.
 - 2. White Aggregates: Natural white sand or ground white stone.
 - 3. Colored Aggregates: Natural-colored sand or ground marble, granite, or other sound stone; of color necessary to produce required mortar color.
- G. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement mortar bed, and not containing a retarder.
- H. Water: Potable.

2.3 VENEER ANCHORS

- A. Materials:
 - 1. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304.
 - 2. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304.
- B. Wire Veneer Anchors: Wire ties formed from W1.7 or 0.148-inch- diameter, stainless-steel wire.
- C. Adjustable, Screw-Attached Veneer Anchors: Units consisting of a wire tie section and a metal anchor section that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall.
 - 1. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.
 - 2. Anchor Section: Sheet metal plate, with screw holes top and bottom and with raised rib-stiffened strap stamped into center to provide a slot between strap and plate for inserting wire tie.
 - 3. Fabricate sheet metal anchor sections and other sheet metal parts from 0.078-inch-thick, stainless-steel sheet.
 - 4. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.188-inch-diameter, stainless-steel wire.

2.4 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing, where flashing is exposed or partly exposed and where indicated, complying with SMACNA's "Architectural Sheet Metal Manual and as follows:
 - 1. Stainless Steel: ASTM A 240/A 240M, Type 304, 0.016 inch thick.
- B. Flexible Flashing: For flashing not exposed to the exterior, use the following unless otherwise indicated:
 - 1. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.030 inch.

2.5 MISCELLANEOUS MASONRY ACCESSORIES

- A. Cementitious Dampproofing: Cementitious formulations that are recommended by ILI and that are nonstaining to stone, compatible with joint sealants, and noncorrosive to veneer anchors and attachments.
- B. Asphalt Dampproofing: Cut-back asphalt complying with ASTM D 4479, Type I or asphalt emulsion complying with ASTM D 1227, Type III or IV.
- C. Weep Hole/Vent Products: Use one of the following unless otherwise indicated:
 - 1. Wicking Material: Absorbent rope, made from cotton or UV-resistant synthetic fiber, 1/4 to 3/8 inch in diameter, in length required to produce 2-inch exposure on exterior and 18 inches in cavity behind stone masonry. Use only for weep holes.

2. Round Plastic Tubing: Medium-density polyethylene, 3/8-inch OD by thickness of stone masonry.
- D. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
1. Provide one of the following configurations:
 - a. Strips, full-depth of cavity and 10 inches wide, with dovetail shaped notches 7 inches deep.
 - b. Strips, not less than 3/4 inch thick and 10 inches wide, with dimpled surface designed to catch mortar droppings.
 - c. Sheets or strips full depth of cavity and installed to full height of cavity.
 - d. Sheets or strips not less than 3/4 inch thick and installed to full height of cavity with additional strips 4 inches high at weep holes and thick enough to fill entire depth of cavity.

2.6 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar and grout stains, efflorescence, and other new construction stains from stone masonry surfaces without discoloring or damaging masonry surfaces; expressly approved for intended use by cleaner manufacturer and stone producer.

2.7 MORTAR MIXES

- A. General: Do not use admixtures unless otherwise indicated.
1. Do not use calcium chloride.
 2. Limit cementitious materials in mortar to portland cement and lime.
 3. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding water. Then mix again, adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for one to two hours. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.
- B. Mortar for Stone Masonry: Comply with ASTM C 270, Proportion Specification.
1. Mortar for Setting Stone: Type N.
 2. Mortar for Pointing Stone: Type N.
- C. Latex-Modified Portland Cement Setting Mortar: Proportion and mix portland cement, aggregate, and latex additive to comply with latex-additive manufacturer's written instructions.
- D. Cement-Paste Bond Coat: Mix either neat cement and water or cement, sand, and water to a consistency similar to that of thick cream.

1. For latex-modified portland cement setting-bed mortar, substitute latex admixture for part or all of water, according to latex-additive manufacturer's written instructions.
- E. Pigmented Mortar: Use colored cement product. Do not add pigments to colored cement products.
 1. Pigments shall not exceed 10 percent of portland cement by weight.
 2. Pigments shall not exceed 5 percent of masonry cement by weight.

2.8 FABRICATION

- A. Select stone to produce pieces of thickness, size, and shape indicated, including details on Drawings. Dress joints (bed and vertical) straight and at right angle to face unless otherwise indicated.
- B. Gage backs of stones for adhered veneer if more than 81 sq. in. in area.
- C. Shape stone for type of masonry (pattern) as follows:
 1. Random ashlar pattern with stone blend consisting of bedface, splitface, or hand-rockfaced pieces as indicated on Drawings and with random lengths.
- D. Finish exposed faces and edges of stone to comply with requirements indicated for finish and to match approved samples and mockups.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Coat concrete and unit masonry backup with asphalt dampproofing.

3.2 SETTING OF BRICK VENEER MASONRY, GENERAL

- A. Perform necessary field cutting and trimming as stone is set.
 1. Use power saws to cut brick.
- B. Sort brick before it is placed in wall to remove stone that does not comply with requirements relating to aesthetic effects, physical properties, or fabrication, or that is otherwise unsuitable for intended use.
- C. Arrange bricks with color and size variations uniformly dispersed for an evenly blended appearance to match existing Village Hall.
- D. Maintain uniform joint widths. Lay walls with 3/8-inch (10mm) joints.
- E. Provide sealant joints of widths and at locations indicated.
 1. Keep sealant joints free of mortar and other rigid materials.

- F. Install embedded flashing and weep holes at shelf angles, ledges, other obstructions to downward flow of water in wall, and where indicated.
 - 1. At concrete backing, extend flashing through stone masonry, turned up a minimum of 4 inches and insert in reglet.
 - 2. Extend sheet metal flashing 1/2 inch beyond face of masonry at exterior and turn flashing down to form a drip.
 - 3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.
 - 4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal flashing termination.
 - 5. Cut flexible flashing flush with face of wall after masonry wall construction is completed.
- G. Coat brick veneer with cementitious dampproofing as follows:
 - 1. Stone at Grade: Beds, joints, and back surfaces to at least 12 inches above finish-grade elevations.
- H. Place weep holes and vents in joints where moisture may accumulate, including at base of cavity walls, above shelf angles, and at flashing.
 - 1. Use wicking material, round plastic tubing or open head joints to form weep holes.
 - 2. Use wicking material to form weep holes above flashing in stone sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
 - 3. Space weep holes 24 inches o.c.
 - 4. Space weep holes formed from plastic tubing or wicking material 16 inches o.c.
 - 5. Trim wicking material used in weep holes flush with outside face of wall after mortar has set.
 - 6. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.
- I. Install vents in vertical head joints at the top of each continuous cavity at spacing indicated. Use round plastic tubing or open head joints to form vents.

3.3 CONSTRUCTION TOLERANCES

- A. Variation from Plumb: For vertical lines and surfaces, do not exceed 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 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 or 1/2 inch in 40 feet or more.
- 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 or 1/2 inch in 40 feet or more.

3.4 INSTALLATION OF ANCHORED BRICK MASONRY

- A. Anchor stone masonry to concrete with corrugated-metal veneer anchors unless otherwise indicated. Secure anchors by inserting dovetailed ends into dovetail slots in concrete.

- B. Anchor stone masonry to concrete with veneer anchors unless otherwise indicated. Embed anchors in unit masonry mortar joints for distance at least one-half of unit masonry thickness.
- C. Space anchors not more than 16 inches o.c. vertically and 24 inches o.c. horizontally. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches.
- D. Set stone in full bed of mortar with full head joints unless otherwise indicated. Build anchors into mortar joints as stone is set.
- E. Provide 1-inch cavity between stone masonry and backup construction unless otherwise indicated. Keep cavity free of mortar droppings and debris.
 - 1. Place mortar spots in cavity at veneer anchors to maintain spacing.
 - 2. Slope beds toward cavity to minimize mortar protrusions into cavity.
- F. Rake out joints for pointing with mortar to depth of not less than 1/2 inch. Rake joints to uniform depths with square bottoms and clean sides.

3.5 POINTING

- A. Prepare stone-joint surfaces for pointing with mortar by removing dust and mortar particles. Where setting mortar was removed to depths greater than surrounding areas, apply pointing mortar in layers not more than 3/8 inch deep until a uniform depth is formed.
- B. Point stone joints by placing and compacting pointing mortar in layers not more than 3/8 inch deep. Compact each layer thoroughly and allow to become thumbprint hard before applying next layer.
- C. Tool joints, when pointing mortar is thumbprint hard, with a smooth jointing tool to produce the following joint profile:
 - 1. Joint Profile: Concave.

3.6 ADJUSTING AND CLEANING

- A. In-Progress Cleaning: Clean stone masonry as work progresses. Remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean stone masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on mockup; leave one-half of panel uncleaned for comparison purposes.
 - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaner; remove cleaner promptly by rinsing thoroughly with clear water.

5. Clean stone masonry by bucket and brush hand-cleaning method described in BIA Technical Note No. 20 Revised II, using job-mixed detergent solution.
6. Clean stone masonry with proprietary acidic cleaner applied according to manufacturer's written instructions.

3.7 EXCESS MATERIALS AND WASTE

- A. Disposal as Fill Material: Legally dispose of all excess materials and waste offsite.

END OF SECTION 044300

SECTION 047200 - CAST STONE MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Cast stone column caps.

1.2 SUBMITTALS

- A. 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.
- B. Samples: For each color and texture of cast stone required.
- C. Colored Mortar Samples: For each mortar color required.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer of cast stone units similar to those indicated for this Project, with sufficient production capacity to manufacture required units.
1. Manufacturer is a producing member of the Cast Stone Institute.
 2. Comply with ACI 530 for all masonry work.

PART 2 - PRODUCTS

2.1 CAST STONE UNITS

- A. Provide cast stone units complying with ASTM C 1364 using the vibrant dry tamp or wet-cast method.
1. Provide units that are resistant to freezing and thawing.
 2. Slope exposed horizontal surfaces 1:12, unless otherwise indicated.
 3. Provide drips on projecting elements, unless otherwise indicated.
- B. Cure units by one of the following methods:
1. Cure units with steam in enclosed curing room at temperature of 105 deg F or above and 95 to 100 percent relative humidity for 6 hours.

2. Cure units with dense fog and water spray in enclosed warm curing room at 95 to 100 percent relative humidity for 24 hours.
 3. Cure units to comply with one of the following:
 - a. Not less than 5 days at mean daily temperature of 70 deg F or above.
 - b. Not less than 6 days at mean daily temperature of 60 deg F or above.
 - c. Not less than 7 days at mean daily temperature of 50 deg F or above.
 - d. Not less than 8 days at mean daily temperature of 45 deg F or above.
- C. Acid etch units after curing to remove cement film from surfaces to be exposed to view.
- D. Colors and Textures: As selected by Owners Representative from manufacturer's full range.

2.2 ACCESSORIES

- A. Anchors and Dowels: Type 304 stainless steel.
- B. Proprietary Acidic Cleaner: Manufacturer's standard-strength, general-purpose cleaner approved for intended use by cast stone manufacturer and approved by cleaner manufacturer for use on cast stone and adjacent masonry materials.

2.3 MORTAR

- A. Comply with requirements in Division 04 Section "Unit Masonry" for mortar materials and mixes.
 1. For setting mortar, use Type N.
 2. For pointing mortar, use Type N.
 3. Pigmented Mortar: Use colored cement product.

2.4 SOURCE QUALITY CONTROL

- A. Employ an independent testing agency to sample and test cast stone units according to ASTM C 1364.

PART 3 - EXECUTION

3.1 SETTING CAST STONE IN MORTAR

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

- B. Rake out joints for pointing with mortar to depths of not less than 3/4 inch. Rake joints to uniform depths with square bottoms and clean sides. Scrub faces of units to remove excess mortar as joints are raked.
- C. Point mortar joints by placing and compacting mortar in layers not greater than 3/8 inch. Compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
- D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.
- E. Provide expansion, control, and pressure-relieving joints of widths and at locations indicated. Keep joints free of mortar and other rigid materials.

3.2 SETTING ANCHORED CAST STONE WITH SEALANT-FILLED JOINTS

- A. Set cast stone units accurately in locations indicated with edges and faces aligned.
 - 1. Install anchors, supports, fasteners, and other attachments to secure units in place.
 - 2. Shim and adjust anchors, supports, and accessories.
- B. Fill anchor holes with sealant. Where dowel holes occur at pressure-relieving joints, provide compressible material at ends of dowels.
- C. Set cast stone supported on clip or continuous angles on resilient setting shims. Hold shims back from face of cast stone a distance at least equal to width of joint.
- D. Keep joints free of mortar and other rigid materials. Remove temporary spacers from joints after anchors and supports are secured in place and cast stone units are anchored.

3.3 INSTALLATION TOLERANCES

- A. Variation from Plumb: Do not exceed 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- B. Variation from Level: Do not exceed 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- C. Variation in Joint Width: Do not vary joint thickness more than 1/8 inch in 36 inches 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, except due to warpage of units.

3.4 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 Owners Representative.
 - 1. Replace units in a manner that shows no evidence of replacement.
- B. 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.
- C. Final Cleaning: After mortar is thoroughly set and cured, clean exposed cast stone as approved by the Owner's Representative.

END OF SECTION 047200

SECTION 101426 - PANEL SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 1. Nonilluminated panel signs.
 2. Dimensional characters.

1.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide panel signs capable of withstanding the effects of gravity loads and the loads and stresses under project conditions.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for panel signage.
 1. Include plans, elevations, sections, details, and attachments to other work.
 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 3. Provide message list, typestyles, graphic elements, and layout for each sign at least half size and full-size details of graphics.
- C. Samples: For each sign type and for each color and texture required.

1.4 QUALITY ASSURANCE

- A. Sign fabricator to be licensed per applicable State and Municipal requirements and have a minimum of 5 years experience fabricating signage of comparable type and quality.
- B. Installation to be performed only by experienced workers with a satisfactory record of performance on completed projects of comparable type and quality.
- C. Camera ready artwork of the Village Text will be provided to the fabricator by the Village of Northfield prior to fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
- B. Aluminum Sheet and Plate: ASTM B 209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.
- C. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- D. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications, 3M high performance or approved equal as determined by owners representative.
- E. Color: As indicated on plans.

2.2 PANEL SIGNS

- A. Sign Message Panels: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements
 - 1. Aluminum Sheet: 0.125 inch thick.
 - 2. Edge Condition: Square cut.
 - 3. Corner Condition: Square.
 - 4. Mounting: As indicated on plans.
 - 5. Color: As indicated on plans.
- B. Brackets: Fabricate brackets and fittings for bracket-mounted signs from extruded aluminum to suit panel sign construction and mounting conditions indicated. Factory paint brackets in color matching background color of panel sign.
- C. Panel Sign Frames:
 - 1. Extruded-Aluminum Frames: Mitered and welded corners, ground smooth.
 - a. Depth: 2 inch.
 - b. Profile: Square.
 - c. Corner Condition: Square.
- D. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications, 3M high performance or approved equal as determined by owners representative. Apply copy as indicated on plans.

2.3 DIMENSIONAL CHARACTERS

- A. Cast Characters: Produce characters with smooth flat faces, sharp corners, and precisely formed lines and profiles, free of pits, scale, sand holes, and other defects. Cast lugs into back of characters and tap to receive threaded mounting studs. Alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated. Comply with the following requirements.
 - 1. Character Material: Aluminum.
 - 2. Thickness: As indicated on plans.
 - 3. Color(s): As indicated on plans.
 - 4. Mounting: As indicated on plans for substrates encountered.
- B. Cutout Characters: Provide characters with square-cut, smooth edges. Comply with the following requirements:
 - 1. Aluminum Sheet: 0.50 inch thick.
 - a. Finish: Painted.
 - b. Color: As indicated on plans.
 - 2. Mounting: As indicated on plans for substrates encountered.

2.4 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance.
- B. All sign hardware shall be Type 304 Stainless Steel.

2.5 FABRICATION

- A. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
- B. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
- C. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.
- D. Post Fabrication: Fabricate posts designed to withstand wind pressure indicated for Project location and of lengths required for installation method indicated for each sign.
 - 1. Aluminum Posts: Manufacturer's standard 0.125-inch-thick, extruded-aluminum tubing unless otherwise indicated, with brackets or slots to engage sign panels.
 - 2. Direct Burial: Fabricate posts 36 inches longer than height of sign to permit direct burial or embedment in concrete foundations or concrete-filled postholes.

3. Baseplates: Fabricate posts with baseplates welded to bottom of posts. Drill holes in baseplate for anchor-bolt connection.
 - a. Provide preset or drilled-in-place anchor bolts of size required for connecting posts to concrete foundations.
4. Sleeves: Fabricate posts 12 inches longer than height of sign to permit embedment in sleeves cast in concrete foundations or concrete-filled postholes. Provide sleeves by manufacturer, sized to receive outside diameter of posts. Size sleeves for direct embedment in concrete foundations or concrete-filled postholes and to prevent sign movement, but not less than 24 inches for embedment.
5. Reverse Sleeves: Provide inserts by sign manufacturer, sized for close fit inside posts. Size inserts for direct embedment in concrete foundations and to attach sign posts securely and prevent sign movement, but of a height not less than one-third of post height plus 36 inches for embedment.
 - a. Provide through bolts to fasten posts to inserts.

2.6 ALUMINUM FINISHES

A. Cast aluminum:

1. All finish components shall be cleaned, etched phosphotized and electrostatically powder-coated. Color: As indicated on plans.

B. Dimensional and flat stock aluminum:

1. Paint with a 2-part polyurethane applied paint (Mathews or Carbit), in conjunction with a 2-part primer (DuPont Chroma Premier CF-22860(S) and DuPont Chroma Premier 22805(S)) or approved equal as determined by owner's representative. Color: As indicated on plans.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set anchor bolts and other embedded items required for installation of signs. Use templates furnished by suppliers of items to be attached.
- B. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 2. Mechanical Fasteners: Use nonremovable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.

- C. Dimensional Characters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
- D. Upon completion of work, remove all excess materials, debris, tools and equipment. Repair any damage resulting from operations.

END OF SECTION 101426

SECTION 323119 - DECORATIVE METAL FENCES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Ornamental fence.
 - 2. Security bollard.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For fences and bollards. Include plans, elevations, sections, details, and attachments to other work.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for decorative metallic-coated steel tubular picket fences, including finish, indicating compliance with referenced standard.

PART 2 - PRODUCTS

2.1 STEEL

- A. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Bars (Pickets): Hot-rolled, carbon steel complying with ASTM A 29/A 29M, Grade 1010.
- C. Tubing: ASTM A 500, cold formed steel tubing.
- D. Pipe: Schedule 40, 6" nominal size (6-5/8" external diameter)

2.2 COATING MATERIALS

- A. Epoxy Zinc-Rich Primer for Steel: Complying with MPI #20 and compatible with coating specified to be applied over it.
- B. Epoxy Primer for Galvanized Steel: Complying with MPI #101 and compatible with coating specified to be applied over it.
- C. Epoxy Intermediate Coat: Complying with MPI #77 and compatible with primer and topcoat.
- D. Polyurethane Topcoat: Complying with MPI #72 and compatible with undercoat.

2.3 MISCELLANEOUS MATERIALS

- A. Concrete: Normal-weight concrete complying with requirements in Division 03 Section "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 3000 psi, 3-inch slump, and 1-inch maximum aggregate size.
- B. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107 and specifically recommended by manufacturer for exterior applications.

2.4 GROUNDING MATERIALS

- A. Grounding Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
 - 1. Material above Finished Grade: Copper.
 - 2. Material on or below Finished Grade: Copper.
- B. Grounding Connectors and Grounding Rods: Comply with UL 467.

2.5 DECORATIVE STEEL TUBULAR PICKET FENCES

- A. Decorative Steel Fences: Fences made from steel tubing and shapes.
 - 1. Manufacturers: Ameristar Fence Products (888) 333-3422
 - 2. 4'-0" height Ornamental Metal Fence: Montage II (standard picket space), Majestic style, 3-rail, extended picket bottom rail. Refer to drawings.
- A. Fasteners: Per Manufacturer
 - 1. Color: Black
- B. Finish: Per Manufacturer
 - 1. Color: Black

2.6 SECURITY BOLLARD

- A. Security Bollard: Bollard made from steel tubing and shapes.
- B. Bollard Cap: As shown in plans.
- C. Finish: Vinyl coated.
 - 1. Color: Black

PART 3 - EXECUTION

3.1 DECORATIVE FENCE INSTALLATION

- A. Install fences according to manufacturer's written instructions.
- B. Install fences by setting posts as indicated and fastening rails and infill panels to posts. Peen threads of bolts after assembly to prevent removal.
- C. Post Excavation: Excavate holes to a diameter of not less than 4 times post size and a depth of not less than 42".
- D. Post Setting: Set posts in concrete with mechanical anchors at indicated spacing into firm, undisturbed soil.
 - 1. Hold posts in position during setting with concrete or mechanical devices.
 - 2. Concrete Fill: Place concrete around posts and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - 3. Posts Set in Concrete: Extend post to within 6 inches of specified excavation depth, but not closer than 3 inches to bottom of concrete.
 - 4. Space posts uniformly at spacing indicated on drawings but not to exceed manufacturer's recommendations.

3.2 SECURITY BOLLARD INSTALLATION

- A. Install bollards according to details and setting pipe to depth indicated.

3.3 FIELD QUALITY CONTROL

- A. Grounding-Resistance Testing: Owner may engage a qualified testing agency to perform tests and inspections.

END OF SECTION 323119

SECTION 32 8400 – PLANTING IRRIGATION – PERFORMANCE SPECIFICATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes modifications to an existing irrigation system including piping, valves, sprinklers, specialties, controls, and wiring for automatic -control irrigation system.
- B. Village Green Phase 3 Irrigation specifications and as-built drawings are included for reference. Contractor responsible for design and construction of a fully functional irrigation system.

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Attention is directed to the Bidding and Contract Requirements and General and Supplemental Requirements, which are hereby made a part of this Section.

1.2 DESCRIPTION OF WORK

- A. Furnish all labor, materials, supplies, equipment, tools, and transportation, and perform all operations in connection with and reasonably incidental to the complete installation of the irrigation system, and guarantee/warranty as shown on the drawings, the installation details, and as specified herein. The system shall be constructed to grades and conform to areas and locations as shown on the drawings. Removal and or restoration of existing improvements, excavation and back-fill, and all other work in accordance with plans and specifications are required. Contractor to acquire all registrations, inspections and permits to complete the irrigation system.
- B. Extent of irrigation system work is shown on drawings and by provisions of this Section.
- C. Sprinkler lines shown on the drawings are essentially diagrammatic. Spacing of the sprinkler heads or quick coupling valves are shown on the drawings and shall be exceeded only with the permission of the Owner’s authorized representative.
- D. The irrigation system shall include a controlled valve distribution system. CONTRACTOR shall furnish and install equipment as common in the industry, associated piping and incidentals as shown and specified.
- E. Items of work specifically included, but not limited to are:
 - 1. Procurement of all applicable licenses, permits, and fees.
 - 2. Coordination of all utilities.
 - 3. Connection of electrical power supply to the irrigation control system.
 - 4. Sleeving for irrigation pipe and wire.
 - 5. As-Built Drawings

1.3 RELATED WORK

- A. Division 2-Site Work:
 - 1. Section 32 92 00 – Lawns and Grasses
 - 2. Section 31 20 00 – Earthwork
 - 3. Section 32 93 00 – Trees, Shrubs and Ground Cover

1.4 QUALITY ASSURANCE

- A. The “Contractor” shall maintain continuously a competent superintendent satisfactory to the Owner, with authority to act for him in all matters pertaining to the work. The “Contractor” shall coordinate his work with the other trades. The superintendent shall speak English and write in English.
- B. The “Contractor” shall confine his operations to the area to be improved and to the areas allotted him by the Owner’s representative for material and equipment storage.
- C. The “Contractor” shall have a minimum of 5 years experience installing irrigation systems of comparable size and complexity. The contractor shall also have suitable financial status to meet obligations for this project.
- D. The “Contractor” shall have completed Baseline training prior to the beginning of the irrigation installation.
- E. The contractor is to be a CIC, certified irrigation contractor through the Irrigation Association and the State of Illinois prior to bidding.

1.5 SUBMITTALS

- A. Materials List: At a minimum include the following, valves, sprinklers, controller, wire, wire connectors, pipe, fittings, valve boxes, swing joints, pipe hangers, electric valves, wire splices, sprinklers, nozzles, fusing devices, grounding components and quick couplers to be used on the project prior to purchasing materials. Quantities of material need not be included.
- B. Manufacturer’s Data: Submit manufacturer’s catalog cuts, specifications, and operating instructions for the equipment mentioned above and equipment shown on the materials list.
- C. Shop Drawings: If there is a change in the design, submit shop drawings for acceptance, submit written operating and maintenance instructions. Provide format and contents as directed by the Landscape Architect. Include instruction sheets and parts lists for all operating equipment.
- D. Project Record (As-Built) Drawings
 - 1. The CONTRACTOR is to provide the OWNER a scaled drawing of the completed field “As-Built” of the system.
 - 2. All components of the system are to be drawn and referenced to 2 fixed locations on the site.
 - 3. Components of the system but not limited to, sprinkler heads, electric valves, isolation valves, all PVC piping, quick couplers, PVC pipe sizing, grounding, wire routes and size and decoder routes from the controller to the electric valves including common runs, sensors, grounding locations, decoder fusing devices and any other installed components. When used for decoders, all decoder ID’s and numbering must be documented and provided to the Owner.
 - 4. All PVC piping shall be referenced in the trench for lengths of run, change in direction and distance and locations of all components referenced in feet

- from a known point.
5. Two final hard copies of the overall drawings with dimension and notes are to be provided to the LANDSCAPE ARCHITECT and OWNER and one copy of the As-Built in AutoCAD 2018 digital format at the same scale drawing as provided to the Contractor. The contractor is to provide individual controller sequencing sheets in the same format as original drawings and 11" x 17" format. Both submittals shall be laminated and placed as directed by Owner. Contractor may contact the Landscape Architect for these services if needed.
 6. The contractor is to provide proof of daily field As-Built with pay submittal for each area the pay submittal is being submitted for. Payment will not be approved if progress drawings are not submitted. The daily "as-built notes" will be required to be submitted in a three ring binder at the end of the project.
 7. The contractor is to take daily pictures of the work installed for that day prior to any backfilling of the trench and/or in the process of filling the trench. The picture log shall be documented in order of installation and shall be assembled daily and submitted at the end of the project in on a zip drive. The contractor is to provide a sample of the daily as-built log and picture log for approval during the first week of installation.

1.6 RULES AND REGULATIONS

- A. Work and materials shall be in accordance with the latest edition of the National Electric Code, the Uniform Plumbing Code as published by the Western Plumbing Officials Association, and applicable laws and regulations of the governing authorities.
- B. When the contract documents call for materials or construction of a better quality or larger size than required by the above-mentioned rules and regulations, provide the quality and size required by the contract documents.
- C. If quantities are provided either in these specifications or on the drawings, these quantities are provided for information only. It is the "Contractor's" responsibility to determine the actual quantities of all material, equipment, and supplies required by the project and to complete an independent estimate of quantities and wastage.
- D. Contractor to provide any plan signatures that are required for irrigation design in the state or jurisdiction in which the project is located in.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.
- B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends either threaded or plain.
- C. Store and handle materials to prevent damage and deterioration.
- D. Provide secure, locked storage for valves, sprinkler heads and similar

components that cannot be immediately replaced, to prevent installation delays.

1.8 CODES AND STANDARDS

- A. The entire installation shall fully comply with local and state laws and ordinances and with all established codes applicable thereto. Contractor to provide final documents with all licenses and certifications needed for the work in this location.
- B. Any permits for the installation or construction of the work included under this contract which are required by any of the legally constituted authorities having jurisdiction, shall be obtained and paid for by the "Contractor", each at the proper time. He shall also arrange for and pay all costs concerning any inspections and examinations required by these authorities.
- C. In all cases where inspection of the sprinkler system work is required and/or where portions of the work are specified to be performed under the direction and/inspection of the Owner's authorized representative, the "Contractor" shall notify the Owner's authorized representative at least 48 hours in advance of the time and such inspection and/or direction is required.
- D. Any necessary re-excavation or alterations to the system needed because of failure of the "Contractor" to have the required inspections, in the opinion of the Landscape Architect, shall be performed at the "Contractor's" own expense.

1.9 TESTING

- A. Notify the engineer/landscape architect/owner's representative three days in advance of testing.
- B. Pipelines jointed with rubber gaskets or threaded connections may be subjected to a pressure test at any time after partial completion of backfill. Pipelines jointed with solvent-welded PVC joints shall be allowed to cure at least 24 hours before testing.
- C. Subsections of mainline pipe may be tested independently, subject to the review of the landscape architect/owner's representative.
- D. Furnish clean, clear water, pumps, labor, fittings, and equipment necessary to conduct test or retests.
- E. Volumetric Leakage Test:
 - 1. Cap riser of mainline components for volumetric pressure tests. Backfill to prevent pipe from moving under pressure. Expose coupling and fitting.
 - 2. Purge all air from the pipeline before test.
 - 3. Subject mainline pipe to the anticipated operating pressure of the system. Maintain constant pressure. Test complete system under full line pressure. Pressure must be maintained with less than 2lbs loss in the system for 4 hours. If the system does not hold pressure, repair leaks and retest system until the system maintains pressure.
 - 4. All necessary testing equipment shall be furnished by CONTRACTOR.

5. Cement or caulking to seal leaks is prohibited.
- F. Operational Test:
1. Activate each remote control valve in sequence from controller. The engineer/landscape architect/owner's representative will visually observe operation, water application patterns, and leakage.
 2. Replace defective remote control valve, solenoid, wiring, or appurtenance to correct operational deficiencies.
 3. Replace, adjust, or move water emission devices to correct operational or coverage deficiencies.
 4. Replace defective pipe, fitting, joint, valve, sprinkler, or appurtenance to correct leakage problems. Cement or caulking to seal leaks is prohibited.
 5. Repeat test(s) until each lateral passes all tests. Repeat tests, replace components, and correct deficiencies at no additional cost to the owner.

1.10 CONSTRUCTION REVIEW

- A. The purpose of on-site reviews by the engineer/landscape architect/owner's representative is to periodically observe the work in progress, the "Contractor's" interpretation of the construction documents, and to address questions with regard to the installation.
- B. Scheduled reviews such as those for irrigation system layout or testing must be scheduled with the engineer/landscape architect's/owner's representative as required by these specifications.
- C. Impromptu reviews may occur at any time during the project.
- D. A review may occur at the completion of the irrigation system installation and project record (as-built) drawing submittal.

1.11 GUARANTEE/WARRANTY AND REPLACEMENT

- A. It shall be the "Contractor's" responsibility to ensure and guarantee satisfactory operation of the entire system and the workmanship and restoration of the area. The entire system shall be guaranteed to be complete and perfect in every detail for a period of one year from the final acceptance and he hereby agrees to repair or replace any such defects occurring within that year, free of expense to the Owner.
- B. Minor maintenance and adjustment shall be by the Owner.
- C. For a period of one year from commencement of the final acceptance, fill and repair depressions or settling more than one inch (1"). Restore landscape or structural features damaged by the settlement of irrigation trenches or excavation. Repair damage to the premises caused by a defective item.
- D. Make repairs within seven (7) days of notification from the engineer/landscape architect/owner's representative.
- E. Contract documents govern replacements identically as with new work. Make replacements at no additional cost to the contract price.

- F. Guarantee/warranty applies to originally installed materials, equipment, and replacements made during the guarantee/warranty period. Equipment salvaged and re-used shall not be warranted unless the original warranty is still in effect. The workmanship shall be warranted.

1.12 START-UP AND SEASONAL MAINTENANCE

- A. Coordinate the start-up with the Owner's landscape maintenance personnel.
- B. "Contractor" shall provide seasonal maintenance of the system the first year as part of this contract, and will provide written instructions to the Owner for future service and maintenance.
- C. Return to the site during the subsequent spring season and demonstrate to the Owner the proper procedures for the system start-up, operation and proper maintenance. Repair any damage caused within the warranty period, adjust pressures, adjust nozzles at no additional cost to the owner.
- D. After completion, testing and acceptance of the system, the "Contractor" will instruct the Owner's personnel in the operation and maintenance of the system.

PART 2 – MATERIALS

2.1 GENERAL

Use materials that are new and without flaws or defects of any type, and which are the best of their class and kind. All material overages at the completion of the installation are the property of the "Contractor" and are to be removed from the site.

- A. Each major component of equipment shall have manufacturer's name, address, catalog and serial number permanently attached in a conspicuous place.
- B. The same brand or manufacturer shall be used for each specific application of valves, fittings, controls, and other equipment.
- C. All materials shall be new and of the quality specified.
- D. All equipment shall be listed, approved or rated by a nationally recognized testing and rating bureau of recognized manufacturer's association responsible for setting industry standards. All electrical equipment and apparatus shall be U.L. listed.
 - 1. Acceptable irrigation manufacturers – As indicated on the drawings.

2.2 SUBSTITUTIONS

- A. Equipment Substitutions
 - 1. Whenever a piece of equipment or material is identified by a manufacturer's trade name, catalog number, etc., it is intended to establish a standard; and any equipment of another manufacturer which will perform adequately the requirements of design and is of equal or greater quality

than the specifications in the opinion of the LANDSCAPE ARCHITECT will be considered equally acceptable.

2. The specifications shall permit use of materials of any nationally recognized manufacturer so long as they are fully equal to quality and performance of named item in opinion of LANDSCAPE ARCHITECT. Materials or equipment of other manufacturers may be used upon following conditions.
 - a. Proposed substitute is equal in design, materials, construction and performance in opinion of LANDSCAPE ARCHITECT. No compromise in quality level will be allowed.
 - b. Service capabilities, availability of service parts, and stability of manufacturer are adequate in opinion of LANDSCAPE ARCHITECT.
 - c. CONTRACTOR assumes responsibility for any modifications required for installation of substitute equipment and for accommodation of such substitution by work of other contractors. Any additional expense on part of other contractors or OWNER due to substitution of equipment shall be borne by CONTRACTOR making such substitution.
 - d. Substitute equipment shall fit into space provided with adequate provisions for service and maintenance.

The Contractor shall use materials as specified. Material other than specified will be permitted only after written application by the "Contractor" and written approval by the Landscape Architect. Substitutions will only be allowed when in the best interest of the Owner.

2.3 SLEEVING

- A. Install separate sleeve beneath paved areas to route each run of irrigation pipe or wiring bundle.
 1. Sleeving material beneath pedestrian pavements shall be SDR21 PVC Class 200 pipe with solvent welded joints.
 2. Sleeving beneath drives and streets shall be SDR21 PVC Class 200 pipe with solvent welded joints.
 3. Sleeving diameter: equal to twice that of the pipe or as indicated on drawings. Minimum wire sleeve to be 2" unless indicated.
 4. Sleeve pipe and wire separately.
 5. All piping in sleeves are to be glued, no gasketed pipe will be allowed in the sleeve.

2.4 PIPE AND FITTINGS

- A. Mainline Pipe and Fittings, Green Roof Piping:
 1. Use rigid, unplasticized polyvinyl chloride (PVC) 1120, 1220 National Sanitation Foundation (NSF) approved pipe, extruded from material meeting the requirements of Cell Classification 12454-A or 12454-B, ASTM Standard D1784, with an integral belled end.
 2. Use Class 200, SDR-21, rated at 200 PSI, conforming to the dimensions and tolerances established by ASTM Standard D2241. Use PVC pipe rated at higher pressures than Class 200 in the case of small nominal

diameters that are not manufactured in Class 200.

3. Use rubber-gasketed pipe equipped with Reiber Gasket System for mainline pipe with a nominal diameter 3-inches and greater. Contractor may also use gasketed pipe on 2.5" if desired. For 4" and greater fittings, use rubber-gasketed deep bell ductile iron fitting conforming to ASTM A-536 and ASTM F-477 by LEEMCO or approved equal. Use lubricant approved by the pipe manufacturer. Size slip fitting socket taper to permit a dry unsoftened pipe end to be inserted no more than halfway into the socket. Saddle and cross fittings are not permitted. Mainline pipe going through sleeves shall be solvent weld. No gasketed pipe is allowed in sleeves.
4. Use solvent weld pipe for mainline pipe with a nominal diameter 2", 2.5" inches and less or where a pipe connection occurs in a sleeve. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standard D2466 and D1784. S-40 fittings to be by Lasco. Use primer approved by the pipe manufacturer. Solvent cement to conform to ASTM Standard D2564.
5. Provide pipe homogeneous throughout and free from visible cracks, holes, foreign materials, blisters, wrinkles and dents.
6. Provide pipe continuously and permanently marked with manufacturer's name and trademark, size schedule and type of pipe working pressure at 73 degrees F. and (NSF) approval.
7. Pipe sizes referenced in the construction documents are minimum sizes, and may be increased at the option of the "Contractor" at no cost to the Owner.
8. All pipes damaged or rejected because of defects shall be removed from the site at the time of said rejection.
9. All mainlines and sleeves are to have a metallic tracer tape placed 6" from the surface. The tape shall be 3" wide and indicate buried water below. Sleeves shall have tape brought just below the surface at the ends for ease of locating or terminated in valve boxes.

B. Lateral Pipe and Fitting

1. All sprinkler laterals pipe downstream from the zone valves, sized 2" and smaller shall be flexible non-toxic polyethylene (PE) pipe. Use SDR-11.5, HD100 PE23, rated at 100 PSI that is National Sanitation Foundation (NSF) approved, conforming to ASTM Standard D2239. Use Type 1, PVC insert fitting conforming to ASTM Standard D2609 designed for use with flexible polyethylene (PE) pipe. Use stainless steel worm gear clamps (including stainless steel screw) to join pipe and fittings. On joints 1.5" and larger use two stainless worm clamps per joint. For 1" joints stainless steel crimp clamps may be used, but use 2 clamps per joint.
2. Lateral piping on spray heads and small gear drives shall be PE pipe.

C. Specialized Pipe and Fittings:

1. Assemblies calling for threaded pipe connections shall use PVC Schedule 80 nipples and PVC Schedule 40 threaded fittings.
2. Joint sealant: Use only Teflon-type tape on plastic threads.
3. Ductile iron fittings: Joint Restraints – all isolation valves shall have a joint restraint system by LEEMCO or approved equal. All ductile iron fittings shall be slanted, deep bell, gasketed style made in accordance with

ASTM-A-536, Grade 65-45-12. Fittings shall have four lugs to accommodate joint restraints and other fittings. Bell sections shall allow 5 degree freedom of pipe deflection within the bell end. Gasket design shall be rib-enforced "U-Cup" configuration to seal and assist in restraining pipe at all pressures. Fittings shall be manufactured by LEEMCO or approved equal.

4. When called for on main lines, use joint restraints on pipe to pipe gasketed joints by LEEMCO or approved equal.
5. Contractor may substitute joint restraints in place of thrust blocks. If joint restraints were to be used, a joint restraint plan must be submitted for approval prior to construction.

D. Thrust Blocks:

1. Use thrust blocks for fitting on pipe utilizing a rubber gasket pipe.
2. Use 3,000 –PSI concrete.
3. Use 2-mil plastic to encapsulate the fitting or valve.

2.5 SPRINKLER COMPONENTS

- A. Sprinkler Assembly: as presented in the drawings and installation details. When required use the sprinkler manufacturer's pressure compensating screens or bodies to achieve operating conditions on each spray head sprinkler and to control excessive operating pressures.

2.6 CONTROL SYSTEM COMPONENTS:

- A. Controller – Hunter ICORE Metal wall mount controller with 36 stations. 24 volt controller
1. The controller shall be mounted as directed by the OWNER inside of the building.
 2. Controller is to be installed and grounded per manufacturer recommendations.
 3. Power to the controllers will be provided by the Owner to the Fountain Room rooms. The contractor will be responsible for making the connection from the power drop to the controller. The controller will be mounted as directed by the Owner. Provide and install a Paige lightning surge arrestor 250090LED on the power to the controller.
 5. Product manufacturer and local distributor are to provide base training for the operation of the controllers at no cost to the owner. The distributor is to have complete knowledge of the operation and programming background of the control system.
 6. Provide and install a Hunter Roam XL kit.
- B. Control Wire:
24v path
1. All 24 volt wiring shall be done with an UL listed 3M DBY/R splice kit. All wiring is to be installed following existing local and state codes.
 2. All signal wire shall include a solid copper conductor and polyethylene (PE) insulation. It shall be rated for 600 volts direct bury and manufactured by Paige Electric or equal. Minimum wire size shall be a minimum #16 gauge, follow color chart.

- C. Instrumentation:
1. As presented in the drawing and installation details.
 2. Hunter Wireless Rain Click system. One per controller
 3. The rain sensor shall be mounted in a location that will be vandal resistant and is able to gather all of the necessary data without interference. Coordinate with Owner for proposed mounting location.
- D. Power Wire:
1. Electric wire from the power source to control unit shall be solid or stranded copper. Type UF single-conductor cable, UL approved for direct underground burial. Power wires shall be black, white and green in color.
 2. Splices: Use approved connectors.
 3. Conduit: PVC Schedule 40.
 4. Follow all local and state codes.
- E. Electric Control Valves
1. All valves shall be of globe or globe/angle configuration with a female pipe thread inlet and outlet connections. Diaphragm assembly shall be sonically welded to form a solid-piece component. The diaphragm shall be of rubber construction to retain flexibility and provide maximum sealing throughout its area.
 2. Electric valves shall be 1" and 1.5" Hunter PGV series electric valve series or approved equal. The valve shall have a manual flow control with a hand-operated, rising-type flow control stem with control wheel/handle and an internal manual bleed assembly. Size per plan.
 3. All parts shall be serviceable without removing valve from line. Valve may be installed at any angle without affecting valve operation.
 4. 22" solenoid lead wires shall be attached to a 24 VAC solenoid with waterproof molded coil capable of being removed by turning coil. Valve shall be held normally closed by internal water pressure with manual bleed screw.
 5. The legend and flow arrow shall be applied at all valve locations. Valve numbering shall be located so as to be conspicuous and legible. The controller and valve numbering can be engraved in black on a purple plastic tag, by Christy's Enterprise or equal. The tag size shall be standard size of 2.25" x 2.66".
- F. Valve Boxes
1. Valve boxes shall be manufactured by RainBird or approved equal and shall be rectangular, 12" /w 6" extension or 6" and 7", 10" round and have "T" lid tops. Valve box lids in turf areas to be green; valve box lids in plantings to be brown.
 2. Valve box shall be of a size that provides adequate space for valve repairs. For decoder systems and valve boxes with the decoder, two valves per 12" rectangular box, other wise 1 electric valve per smaller valve box. A 10" round valve box may be used for isolation valves, quick couplers and wire drops only. For all decoder valves with the decoder when used, leave 5' of excess wire coiled to allow the removal of the decoder.
 3. The valve box cover shall have the component markings engraved or heat stamped into the cover. Use the following symbols for corresponding

components in the valve box.

- GV – for Gate Valves
- EV – for Electric Valves
- WS – for Wire Splice
- QC – for Quick Coupler
- GR- for Grounding
- SEN- for sensor connections

The final valve numbering shall also be branded into the tops with electric valves. Contractor may find an example of the branding tool at Brand New Industries Inc. Product # VB2x3.

4. Contractor to coordinate location of valve boxes that are ganged together in clusters of three or more in planting beds with the Landscape Architect. Receive his approval of locations prior to installation.

G. Quick Coupler Valves

1. Valves shall be 1” Hunter HQ-44RC-AW series valves or approved equal. The quick coupling shall have a yellow vinyl cover. The matching Key shall be Hunter HK44 and HS-1. The quick coupler is to have stabilizer wings. If the valve does not have stabilizers originally installed, use attachable stabilizers manufactured by LEEMCO.
2. Quick coupler valves are to be mounted on a Lasco swing joint with brass male threads and placed in a 10” round valve box. The valve box is to be filled with 3/8” clear chip gravel as detailed. Ensure proper height when backfilling.

H. Swing Joints

1. Swing Joints riser assemblies shall have a working pressure rating of 315 psi @73F. The swing joint shall have O-rings at each swivel joint. The inlet and outlet sockets and threads conforming to ASTM standards D 2467 and D 2464, respectively. The body wall thickness of all components conforming to ASTM D 2464.
2. The swing joint riser assemblies will be molded of Rigid Poly (vinyl) Chloride (PVC) Type 1, Cell Classification 12454-B per ASTM Standard D 1784. It shall be manufactured in such a way, that both the male and female O-ring sealing areas be free from mold parting lines. The burst pressure tested per ASTM D2467 and the long term pressure tested at 1,000psi for 1,000 hours.
3. The swing joint shall have a five year warranty for the swing joint riser. The sprinkler swing joint shall have a minimum length 10” riser and quick coupler swing joints shall have a minimum length 12” riser and be by Lasco or approved equal. The threads shall correlate to sprinklers, quick couplers and related components. Quick Coupler Swing Joints are to have a special reinforced 90 Ell outlet male threaded 90 ell outlet to enter the bottom of the quick coupler.

I. Sprinkler Heads – Spray Heads

1. The spray head sprinklers shall be a 6” or 12” Hunter PROS-PRS30-CV series 6 ”or 12” riser spray head or approved equal. Sprinkler shall be mounted flush with final finish grade.

2. Retraction shall be achieved by a heavy-duty stainless steel retraction spring. Sprinkler shall have a riser seal and a wiper. Sprinkler housing shall be of high impact molded plastic. Sprinkler shall have a large strainer so as to prevent nozzle clogging. Sprinkler shall be constructed such that it is serviceable from top in that drive assembly, screen, and all internal components are accessible throughout top of sprinkler without disturbing case installation. The sprinkler shall have a built-in pressure regulation device to regulate nozzle pressure regardless of the inlet pressure. The sprinkler shall have a drain check valve for up to 14 feet of elevation change.
 3. Type and location of nozzles shall be RainBird HEVann or U series nozzles in planting beds and turf, nozzle patterns vary, see plan to measure for arcs and radius.
- J. Sprinkler heads shall be mounted on funny/flex pipe flexible connection. Maximum funny pipe length to be 18". Appropriate saddles may be used on lateral piping. Contractor may use a Hunter SJ-012 series swing joint or approved equal in place of the flex pipe and barb fitting.
- K. Sprinkler Heads – MP Rotators
1. The MP rotator sprinklers shall be a 6" or 12" Hunter PROS-PRS40-CV or approved equal, w/check Series pop up sprinkler or approved equal. Sprinkler shall be mounted flush with final grade.
 2. Retraction shall be achieved by a heavy-duty stainless steel retraction spring. Sprinkler shall have a riser seal and a wiper. Sprinkler housing shall be of high impact molded plastic. Sprinkler shall have a large strainer so as to prevent nozzle clogging. Sprinkler shall be constructed such that it is serviceable from top in that drive assembly, screen, and all internal components are accessible throughout top of sprinkler without disturbing case installation. The sprinkler shall have a built-in pressure regulation device to regulate nozzle pressure regardless of the inlet pressure. The sprinkler shall have a drain check valve for up to 14 feet of elevation change. Type and location of nozzles shall be Hunter MP Rotator. Nozzles vary.
- N. Solvent Weld Fittings
1. Solvent weld PVC fittings shall be Schedule 40, ASTM D-2466 and ASTM D-1784. PVC Schedule-40 fittings shall be produced from PVC Type 1, Cell Classification 1245B. Fittings shall be manufactured by Lasco or approved equal. All solvents and cements shall be that recommended by the manufacturer.
 2. S-80 PVC fittings may be used and may be threaded or solvent weld. S-80 TOE Nipples with S-80 couplings for plastic to metal connections. (S-80 nipples cut in half will not be allowed)
- O. Gate/Isolation Valves
1. Isolation valves 3" and smaller shall be ductile iron resilient seated globe valves. Valve body and restraint clamps shall be constructed of ductile iron per ASTM A-536, Grade 65-42-12. Epoxy coating on all interior and exterior surfaces shall be fusion bonded epoxy, 10-12 mil thickness. Valve mechanism and hardware shall be made of 100% 304-series stainless steel. The valve stem shall be fine threaded stainless steel, O-ring sealed for ease of

operation. Valve outlet shall be deep bell gasket and equipped with integrally cast joint restraint clamps to securely fasten pipe to the valve. Restraint shall have blunt cast serrations. Valve shall be made by LEEMCO LGV-BB series or approved equal.

P. RPZ/Meter Enclosure:

1. The RPZ and meter shall be in an aluminum enclosure. The enclosure shall have .05" Mill Finish H32 Aluminum. A stainless steel hinged drain. 304 stainless steel rivets and pins. Mounting supports shall be 1/8" Mill finish 5052 H32 Aluminum. Concrete fasteners shall be AISI 304 Stainless Steel Wedge Anchor conforming to ASTM A276. Enclosure shall be a minimum of 14" wide, 46" long and 44" high. The enclosure shall be by Safe-T-Cover or approved equal, WS 200S-AL single front access panel or approved equal. Contractor to verify that the 1.5" Apollo RP4LFA2174 backflow with Unions and the 1.5" meter with flanges, will fit in the enclosure per code. Contractor is responsible to submit shop drawings of the enclosure with components shown inside drawn to scale. If a larger enclosure is required, contractor is responsible for the larger enclosure size.
2. Enclosure to be mounted on a 6" concrete pad. See manufactures recommendations for mounting and concrete specifications.
3. Meter and RPZ to be mounted inside the enclosure on permanent supports or channel.
4. The enclosure shall be powder coated black in color.

Q. Meter Unit:

1. Contractor to supply and install a 1.5" meter, Coordinate acquiring the meter from the Village. Coordinate with water department for any special requirements needed by the Village. The meter is to have flanges on both ends for winter removal. Install in Aluminum RPZ enclosure.

R. RPZ Backflow unit:

- a. The backflow unit shall be a 1.5" Reduced pressure backflow unit (RPZ). The RPZ is to have union ball valves for winter removal. The unit shall have quarter turn ball valves at each end and strainer.
- b. The unit shall be a Apollo RP 4ALF with strainer or approved equal.
- c. Install in Aluminum enclosure.

2.7 OTHER COMPONENTS

A. Tools and Extra Equipment

1. The contractor is to provide to the Owner, two (2) sets of tools to repair and work on all equipment specified in this irrigation section.
2. The contractor is to provide the Owner with two (2) sprinkler heads and nozzles of each type specified and used, (2) electric valve of each size used.
3. The contractor shall provide to the Owner, two (2) keys and two (2) hose swivel matching the quick coupling valve installed.
4. Two (2) 5' valve wrenches with 2" nuts for smaller gate valves are to be provided.

- B. Other Materials: Provide imported fill material as required to complete this work. Provide other materials or equipment shown on the drawings or installation details, which are part of the irrigation system, although such items may not have been referenced in these specifications.

PART 3 – EXECUTION

3.1 INSPECTION AND REVIEWS

- A. Site Inspections:
 - 1. The bidder acknowledges that he has examined the site, plans and specifications, and the submission of a proposal shall be considered evidence that examination has been made.
 - 2. Verify construction site conditions and note irregularities affecting work of this section. It shall be the contracting installer’s responsibility to report to the Owner’s authorized representative any deviations between drawings, specifications and the site. Failure to do so before the installing of equipment and resulting in replacing and/or relocation of equipment shall be done at the “Contractor’s” expense.
 - a. Examine final grades and installation conditions. Do not start irrigation system work until unsatisfactory conditions are corrected.
 - b. Beginning work of this section implies acceptance of existing conditions.
- B. Utility Locations:
 - 1. The exact location of all existing utilities and structures and underground utilities are not indicated on the drawings; their locations shall be determined by the “Contractor”, and he shall conduct his work so as to prevent interruption of service or damage to them.
 - 2. Arrange for and coordinate with local authorities the location of all underground utilities.
 - 3. Repair any underground utilities damaged during construction. Make repairs at no additional cost above the contract price.
 - 4. The “Contractor” shall protect existing structures and utility services and be responsible for their replacement if damaged by him.
- C. Irrigation System Layout Review:
 - 1. Irrigation system layout review will occur after the staking has been completed unless specifically waived by the Landscape Architect. Notify the engineer/landscape architect one week in advance of review.
 - 2. The engineer/landscape architect at this review will identify modifications.

3.2 LAYOUT OF WORK

- A. Stake out the irrigation system. Items staked include: sprinklers, pipe, control valves, manual drains, quick coupling valves, controller, isolation valves and any misc. components.
- B. Install all mainline pipe and mainline components inside of project property lines.

- C. Minor adjustments in system layout will be permitted to clear existing fixed obstructions. Final system layout shall be acceptable to the Landscape Architect.

3.3 EXCAVATION, TRENCHING, AND BACKFILLING

- A. Excavating shall be considered unclassified and shall include all materials encountered, except materials that cannot be excavated by normal mechanical means.
- B. Excavate to permit the pipes to be laid at the intended elevations and to permit work space for installing connections and fittings.
- C. Minimum cover (distance from top of pipe or control wire to finish grade):
 1. 18-inch over top of pipe mainline pipe.
 2. 10-inch over control wire, follow local and state requirements if they dictate a deeper bury depth.
 3. 18-inch over top of pipe lateral pipe to sprinklers.
 4. Rooftop laterals will be knifed into the tray and will be shallower than 12”.
- D. PVC mainlines or PVC lateral pipes 2 1/2” and smaller may be pulled into the soil using a vibratory plow device specifically manufactured for pipe pulling, if in the opinion of the Landscape Architect that conditions are suitable. Minimum burial depths equals minimum cover listed above provided soil moisture content and other conditions are suitable to allow for full depth of the right to determine suitability or conditions.
- E. Backfill only after lines have been reviewed and tested.
- F. Excavated material is generally satisfactory for backfill. Backfill shall be free from rubbish, vegetable matter, and stones larger than 2 inches in maximum dimension. Remove material not suitable for backfill. Backfill placed next to pipe shall be free of sharp objects, which may damage the pipe.
- G. Backfill unsleeved pipe by depositing the backfill material equally on both sides of the pipe in 6-inch layers and compacting each layer to 90% Standard Proctor Density, ASTM D698-78. Use of water for compaction, “puddling,” will not be permitted.
- H. Enclose pipe and wiring beneath roadways, walks, curbs, etc., in sleeves. Minimum compaction of backfill for sleeves shall reference geotechnical report for compaction requirements. Use of water for compaction around sleeve, “puddling,” will not be permitted.
- I. Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades.
- J. Where utilities conflict with irrigation trenching and pipe work, contact the engineer/landscape architect for trench depth adjustments.
- K. Provide approved fine grained earth fill or sand to point 4” above the top of pipe, where soil conditions are rocky or otherwise objectionable.

- L. Excavate trenches and install piping and backfill during the same working day. Do not leave open trenches or partially-filled trenches open over night.
- M. The CONTRACTOR will be responsible for all finish and fine grading of trenches, disturbed areas around sprinklers heads, electric valves and any other excavated or disturbed areas by the CONTRACTOR. Contractor will also be responsible for all trench settling throughout the project during the one-year warranty period. If settling occurs, the contractor will repair and bring back to originally set grade.
- N. When additional backfill material is needed to replace the unsuitable materials, it will be the CONTRACTOR'S responsibility and expense to supply such material. It will also be the CONTRACTOR'S responsibility to dispose of the unsuitable material.

3.4 WORKMANSHIP

- A. All work shall be done by qualified irrigation installers that are knowledgeable and experienced in operations they are performing. Installation methods, procedures and materials shall be in accordance with accepted industry practice and with standards of manufacturing and contracting associations applicable to the work. All work shall be neatly done with special emphasis on appearance of work exposed to view.

3.5 SLEEVING AND BORING

- A. Install sleeving at a depth that permits the encased pipe or wiring to remain at the specified burial depth.
- B. Extend sleeve ends 2 feet beyond the edge of the paved surface. Cover pipe ends and mark with stakes.
- C. Bore for sleeves under obstructions or as indicated. Employ equipment and methods designed for horizontal boring.

3.6 ASSEMBLING PIPE AND FITTING:

- A. General:
 1. Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends.
 2. Keep ends of assembled pipe capped. Removed caps only when necessary to continue assembly.
 3. All mainline and continuously pressurized pipe is to be installed using open trenches. Lateral pipe may be installed by "Plowing" if soil conditions permit, and soils do not contain gravel, rock, construction debris, or other potential damaging material.
 4. Trenches may be curved to change direction or avoid obstructions within the limits of the curvature of the pipe.
- B. Mainline, lateral piping and Fittings:
 1. Use only strap-type friction wrenches for threaded plastic pipe.
 2. PVC Rubber-Gasketed Pipe:
 - a. Use pipe lubricant. Join pipe in the manner recommended by

- manufacturer and in accordance with accepted industry practices.
 - b. Epoxy-coated steel fittings shall not be struck with a metallic tool. Cushion blows with a wood block or similar shock absorber.
 - 3. PVC Solvent Weld Pipe:
 - a. Use a primer and solvent cement. Join pipe in a manner recommended by the manufacturer and in accordance with accepted industry practices.
 - b. Cure for 30 minutes before handling and 24 hours before allowing water in pipe.
 - c. Snake pipe from side to side within the trench.
 - 4. Fittings: the uses of cross type fittings are not permitted.
 - 5. Install thrust blocks on the mainline pipe work in accordance with pipe manufacturer's written instructions.
 - D. Specialized Pipe and Fitting:
 - 1. Low-Density Polyethylene Hose: Install per manufacturer's recommendations.
 - 2. PVC Threaded Connections:
 - a. Use only factory-formed threads. Field-cut threads are not permitted.
 - b. Use only Teflon-type tape.
 - 3. Threaded Connections:
 - a. Make metal-to-metal, threaded connections with Teflon-type tape applied to the male threads only.
 - C. Thrust Blocks:
 - 1. Use cast-in-place concrete bearing against undisturbed soil.
 - 2. Orientation and placement shall be as shown on the installation details, size per manufacturer's recommendations.
 - 3. Wrap fitting with plastic to protect bolts, joint and fitting from concrete.
- 3.7 INSTALLATION OF MAINLINE COMPONENTS
 - A. Quick coupling Valve Assembly: Install where indicated on the drawings.
- 3.8 INSTALLATION OF SPRINKLER AND IRRIGATION COMPONENTS:
 - A. Remote Control Valve (RCV) Assembly:
 - 1. Flush mainline before installation of RCV assembly.
 - 2. Install where indicated on the drawing. Wire connectors and waterproof sealant shall be used to connect control wires to remote control valve wire. Install connectors and sealant per the manufacturer's recommendations.
 - 3. Install only one RCV to a valve box. Locate valve box at least 12 inches from and align with nearby walls and edges of paved areas. Group RCV assemblies together where practical. Arrange grouped valve boxes in rectangular patterns. Allow at least 12 inches between valve boxes.
 - 4. Adjust RCV to regulate the downstream operating pressure.
 - 5. Attach ID tag with controller station number to control wiring.
 - B. Sprinkler Assembly:
 - 1. Flush lateral pipe before installing sprinkler assembly.

2. Install per the installation details at locations shown on the drawings.
3. Locate rotor sprinklers 6 inches from adjacent walls, fences or edges of paved areas.
4. Locate spray sprinklers 3 inches from adjacent walls, fences or edges of paved areas.
5. Install sprinklers perpendicular to the finish grade.
6. Supply appropriate nozzle or adjust arc of coverage of each sprinkler for best performance.
7. Adjust the radius of throw of each sprinkler for best performance.

3.9 INSTALLATION OF CONTROL SYSTEM COMPONENTS:

A. Irrigation Controller Unit:

1. The location of the controller unit as depicted on the drawings is approximate the engineer/landscape architect/owner's representative will determine the exact site location during sprinkler layout review.
2. Attach wire markers to the ends of control wires inside the controller unit housing. Label wires with the identification numbers (see drawings) of the remote control valve to which the control wire is connected.
3. Connect control wires to the corresponding controller terminal.

B. Control Wire:

1. For decoder systems, bundle control wires where two or more are in the same trench. Bundle with pipe wrapping tape at 15-foot intervals.
2. Control wiring may be chiseled into the soil using a vibratory plow device specifically manufactured for pipe pulling and wire installation. Appropriate chisel must be used so that wire is fed into a chute on the chisel, and wire is not subject to pulling tension. Minimum burial depth must equal minimum cover previously listed.
3. Provide a 24-inch excess length of wire in an 8-inch diameter loop at each 90-degree change of direction, at both ends of sleeves and at 100-foot intervals along continuous runs of wiring. Do not tie wiring loop. Coil 24-inch length of wire within each remote control valve box.
4. If a control wire must be spliced, make splice with wire connectors and waterproof sealant, installed per the manufacturer's instructions. Locate splice in a valve box that contains an irrigation valve assembly, or in a separate 10-inch round valve box.
5. Use same procedure for connection to valves as for in-line splices.
6. Protect wire not installed with PVC mainline pipe with a continuous run of warning tape placed in the backfill six inches above the wiring.
7. Allow 5 feet of extra wire on the decoder cable and allow 5' of extra wire for decoder to solenoid wiring to allow for above grade maintenance.

C. Instrumentation:

1. Install sensor per the installation details and manufacturer's recommendations. Install at locations shown on the drawings.
2. Install electrical connections between central control unit components and sensors per manufacturer's recommendations.

3.10 INSTALLATION OF OTHER COMPONENTS:

- A. Tools and Spare Parts: Prior to the review at completion of construction, supply to the owner operating keys, servicing tools, spare parts, test equipment and any other items indicated in general notes on the drawings.
- B. Other Materials: Install other materials or equipment shown on the drawings or installation details which are part of the irrigation system, even though such items may not have been referenced in these specifications.

3.11 BALANCING AND ADJUSTING

- A. The Contractor will be responsible for the balancing and adjustments of the various components of the system so the overall operation of the system is the most efficient. Including, but not limited to, the synchronization of the controllers, adjustments to the pressure regulator valves and sprinkler adjustments. Coordinate controller setup with Landscape Architect.

3.12 REQUIREMENT FOR SUBSTANTIAL COMPLETION

- A. Cleaning Equipment and Premises
 1. Thoroughly clean all parts of the piping, valves and equipment.
 2. Remove all construction debris, excess materials and equipment.
- B. Operating and Maintenance Manuals
 1. CONTRACTOR shall furnish to LANDSCAPE ARCHITECT two operating manuals for furnished equipment. Information sheets shall be bound in standard three-ring binders labeled to show contractor's name, address, regular business phone number, emergency phone number and date. Operating manuals shall be submitted prior to completion of work to allow time for review. Manual shall contain following information:
 - List (keyed with identification numbers used) each item of equipment which requires service, giving the name of the item, model number, manufacturer's name and address, and providing the name, address and phone number of the nearest representative of authorized service organization.
 - Cut sheets to be included for the following, but not limited to: electric valves, isolation valves, swing joints, valve boxes, controllers and sprinkler heads.
 2. A copy of the shop drawing for each item.
 3. A complete operating and maintenance manual, parts list, wiring diagrams, lubrication requirements, and service instructions for each major item.
 4. Complete control diagrams with description of all operation sequences and control devices.
 5. Properly executed registrations and registered manufacturer's warranties.
 6. After completion of work and when OWNER has had sufficient time to examine operating manuals and become somewhat familiar with operation of equipment, a meeting will be arranged by the Contractor with the Owner for purpose of instructing OWNER in proper maintenance of system and to answer questions he/she may have regarding it's operation. Prior to this meeting, contractor shall have programmed a base program for all stations and run times.

7. Contractor to complete the irrigation submittal for all irrigation systems to the IL State Public Health. Provide the owner with a copy of the submitted form.

3.13 ACCEPTANCE

- A. Periodic site visits will be made by the Architect or Irrigation Consultant to review the quality and progress of the work. Work found to be unacceptable must be corrected within five (5) calendar days. Remove rejected materials promptly from the project.
- B. Upon completion of the work, the Architect or Irrigation Consultant will issue a punch list for work to be corrected. Where work does not comply with requirements, replace rejected Work.
- C. It will be the responsibility of the Irrigation Contractor to provide a reliable communication system (i.e.: Two way radios or remote radio control activation system) for Substantial Completion, final acceptance and all periodic site visits. Once the controllers are operational, the contractor will be required to have a tablet device on site to operate the system. This tablet is to be accessible to the designer for any walk troughs that are scheduled.
- D. If a site visit to verify Substantial Completion and final acceptance has been scheduled and the Architect or Irrigation Consultant arrives at the site and determines that the irrigation system is not substantially complete or ready for final acceptance (all system components in place, operational and checked) the Contractor shall be responsible for all costs incurred by the Architect or Irrigation Consultant to visit the site. Reimbursable expenses include but are not limited to the following: Mileage, airfare, consultants' time, parking fee, meals, rental car, etc. All incurred expenses will be deducted from the final contract amount.

3.14 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, soils, debris and equipment. Repair damage resulting from sprinkler system installation.

END OF SECTION 328400

The contractor is to complete this form and record it with Baseline and present the acceptance of the warranty period from Baseline.

BaseStation 3200™

Extended 5 Year Equipment Warranty Application

Congratulations! You have purchased the Ultimate Two-Wire Controller. Automatically included with your purchase is a 1 year equipment warranty against defects in material or workmanship as documented in the Owner's Manual and Warranty Card included with your controller.

In order to receive Baseline's Extended 5 Year Equipment Warranty, you **MUST** complete and sign the following application within 30 days of installing your controller, and Fax to Baseline at (208)323-1834. Baseline will review faxed applications, and send written approval notification via Fax or mail within 15 business days. See the Terms and Conditions of the Extended Warranty at the end of this application for details on warranty coverage.

If you have questions regarding the contents of this form, please contact Baseline at 1-866-294-5847, or consult our website at [6](#) for relevant specifications and guidelines.

Site/Project Name and Address (for reference purposes):

Controller Details:

Addison Village Green Improvements
PLANTING IRRIGATION

328400-21

Installation Date (for Warranty Term Purposes):

Controller Type (circle): Wall mount / Pedestal (circle): Interior / Exterior

Controller Location:

AC Power Connection (circle): Hardwired / Outlet

Hardwired earth ground at controller? Yes / No Notes:

(Controller must be grounded as specified in the BaseStation 3200 Owner's Manual to receive warranty coverage for surge/lightning damage. Contact Baseline for additional details. Also see Surge/Lightning Protection, below.)

Total Number of Zones – Initial: _____ Final* (w/in 5 years):

(Maximum zone count cannot exceed 200 zones plus two master valves.)

* Note: "Final" figures are intended to be an estimate of expected future system configuration and are primarily for the purposes of assuring expectations match specifications. Coverage under the terms of this warranty will not depend on conformance of "Final" estimates to specification limits. **BASELINE DOES NOT WARRANT THAT "FINAL" CONFIGURATION PARAMETERS WILL BE WITHIN ACCEPTED SYSTEM SPECIFICATIONS. IT IS THE CUSTOMER'S RESPONSIBILITY TO STAY WITHIN SYSTEM SPECIFICATIONS WHEN ALTERING OR EXPANDING THE SYSTEM.**

biLine™ (Two-wire) Wiring Details:

biLine Wire Type (circle): Paige spec P7072D or Equivalent / P7295D or Equivalent / Other

If "Equivalent" or "Other", please specify:

If "Other", written approval from Baseline? (Circle): Yes / No

(Consult Baseline for approved equivalent wire types. Failure to use approved wire will invalidate warranty. Consult the Baseline biLine Technical Data Sheet for details.)

Wiring Configuration (circle): Looped / Linear / Combination / Other:

(Baseline recommends a looped configuration where possible, but not excessive looping which can complicate maintenance. Consult the Baseline biLine Technical Data Sheet for details.)

Wire Gauge(s):

(Provide details if multiple gauges used. Include a site wiring diagram if available.)

Total wire length to *farthest* device: Initial: _____ Final (w/in 5 years):

(Maximum supported distance to farthest device determined by wire size and configuration: Generally, total wire length = largest loop length / 2 + longest spur. Consult the Baseline biLine Technical Data Sheet for details.)

Total biLine™ devices to be connected to Controller:

Initial / Final(est)	Description (biLine Loads)
_____ / _____	BL-5201 Single Zone biCoder™ (1 Load each)
_____ / _____	BL-5202 Dual Zone biCoder™ (2 Loads each)
_____ / _____	BL-5204 Four Zone biCoder™ (2 Loads each)
_____ / _____	BL-5212 12 Zone biCoder™ (1 Load each)
_____ / _____	BL-5224 24 Zone biCoder™ (2 Loads each)
_____ / _____	BL-5201PS Pump Start biCoder™ (2 Loads each) <i>(Maximum of 2 Pump Start biCoders supported per BaseStation 3200 Controller.)</i>
_____ / _____	BL-5303 Air Temperature Sensor (2 Loads each) <i>(Maximum of 1 Air Temp Sensor supported per BaseStation 3200 Controller.)</i>
_____ / _____	BL-5304 Flow biCoder™ (2 Loads each) <i>(Maximum of 4 Flow biCoders supported per BaseStation 3200 Controller.)</i>
_____ / _____	BL-5305 or BL-5315 biSensor™ (3 Loads each) <i>(Maximum of 25 sensors supported per BaseStation 3200 Controller.)</i>
_____ / _____	BL-5401 Outside Operation or BL-5402 Pause biCoder™ (2 Loads each) <i>(Maximum of 3 total Pause biCoders supported per BaseStation 3200 Controller.)</i>
_____ / _____	Other (please specify): _____

Total biLine™ Loads: Initial: _____ Final (w/in 5 years): _____

(A total of 110 biLine™ Loads are supported per two-wire controller.)

Wire connectors used (circle): 3M DBY / Other (specify): _____

(Failure to use supported, fully waterproof connectors can result in communication errors and can void extended warranty. Consult Baseline for details on supported connector types.)

Longest Valve Wire (12 & 24 Valve biCoders, if used):

(A maximum distance of 1500 feet to the most distant valve from a 12 or 24 zone biCoder is supported. Consult the 12 & 24 Valve biCoder Technical Data Sheet for details.)

Longest Valve Wire (1, 2 or 4 Valve biCoders, from biCoder to Valve):

(A maximum distance of 100 feet to the most distant valve from a 1, 2 or 4 zone biCoder is supported. Consult the 1, 2 & 4 Valve biCoder Technical Data Sheet for details.)

Surge / Lightning Protection

When surge protection equipment is installed to specifications, Baseline warrants all Baseline equipment against damage caused by direct or indirect lightning strikes or other power surges for the entire warranty period. See the Terms and Conditions below for replacement details.

THIS WARRANTY IS LIMITED SOLELY TO BASELINE EQUIPMENT, AND DOES NOT WARRANT AGAINST DAMAGE CAUSED BY LIGHTNING OR OTHER POWER SURGES TO NON-BASELINE EQUIPMENT, WIRING, LANDSCAPE, OR FACILITIES. THIS WARRANTY DOES NOT COVER ANY EFFECTS TO LANDSCAPE OR PROPERTY DUE TO BASELINE EQUIPMENT’S OPERATION OR FAILURE TO OPERATE FOLLOWING A SURGE OR LIGHTNING STRIKE, NOR DOES IT COVER LABOR COSTS ASSOCIATED WITH TROUBLESHOOTING OR REPAIRS.

This warranty does include unlimited phone and internet / e-mail support for troubleshooting and repairing lightning or surge damage to Baseline controlled irrigation systems. Baseline reserves the right to, at its sole discretion, repair or replace any Baseline controller or equipment in association with this warranty.

Important: Consult the Baseline biLine Technical Data Sheet and the Baseline biLine Lightning Technical Data Sheet for details on surge protection installation. Failure to install surge protection hardware to specification will void surge protection coverage under this warranty.

Controller – Has the Controller been grounded per specification at the two-wire connection board? (Circle): Yes / No Notes:

AC Surge Suppression: Yes / No

(AC Surge Suppression built in on Pedestal units. Separate surge suppression required for wall mount units.)

biLine – Has the biLine wiring been grounded and protected using Baseline Lightning Arrestors per specification? (Circle): Yes / No

Notes: _____

Are all Lightning Arrestors properly attached to acceptable ground rods or plates per specification? (Circle): Yes / No Notes:

Total Lightning Arrestors Installed – Initial: _____ Final (w/in 5 years):

Baseline Extended 5 Year Warranty Terms and Conditions

THIS WARRANTY IS CONTINGENT ON WRITTEN BASELINE APPROVAL, AS SET FORTH IN THE BASELINE APPROVAL SECTION, BELOW. Baseline's Extended 5 Year Warranty, once approved, supersedes any other Baseline warranty terms, under which circumstances Baseline's warranty obligations are limited to the terms set forth below:

Baseline warrants to the original consumer purchaser that the new Baseline system and associated components as outlined in the Extended Warranty Application will be free from defects in material and workmanship for a 5 Year Warranty Period. The start of the warranty period is from the date of installation of the system or component, as documented in the Extended Warranty Application. For replacement irrigation components, the warranty on the replacement component is the remainder of the warranty on the original component, or 90 days, whichever is longer.

If a customer detects a defective component, contact your installer, distributor, or Baseline at 1-866-294-5847 in order to receive warranty benefits.

Baseline will, at its option, repair or replace the component at no charge to the customer, provided it is returned during the warranty period, with transportation charges prepaid, to Baseline Inc. in Boise, Idaho. Baseline will pay return shipping of its choice. Computers, displays, controllers, and pedestal enclosures must be properly packaged in the original packaging or Baseline approved packaging to obtain warranty service.

For warranty service, contact Baseline at 1-866-294-5847 to obtain a "Return Materials Authorization (RMA) number." A copy of the receipt or a bill of sale bearing the appropriate Baseline serial number and model number may be required for warranty service. Additional PO may be required. Credits may be applied.

Express/Cross-Shipping: at the request of the customer, and at Baseline's sole discretion in conjunction with issuance of an RMA number, Baseline may authorize the immediate shipment of urgent replacement parts directly to the customer without prior receipt of the defective part. Under these circumstances, Baseline must receive the original defective part within 30 days of shipment of the replacement part, or the customer will be billed for the full price of the replacement part. If the defective part, once evaluated by Baseline, is

found to be in fully operating condition, Baseline may, at its sole discretion, bill the customer for the full price of the replacement part.

Warranty Exclusions:

- Normal wear and tear, including discoloration due to direct burial or repeated immersion
- Abuse, unreasonable use, mistreatment, or neglect
- Damage caused during installation or incorrect installation
- Damage caused by modification or repair not made or authorized by Baseline
- Computers or sub-components whose Manufacturer's Serial Number and/or Material Number label have been removed, torn or defaced
- Damage caused by use of non-Baseline or Baseline approved packaging
- Damage caused by improper or improperly used packaging

THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, WHETHER ORAL OR WRITTEN, EXPRESSED OR IMPLIED. Baseline SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND AGAINST INFRINGEMENT. No Baseline dealer, agent or employee is authorized to make any modification, extension or addition to this warranty.

BASELINE IS NOT RESPONSIBLE FOR SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF DATA, LOST PROFITS, DOWNTIME, GOODWILL, DAMAGE OR REPLACEMENT OF EQUIPMENT AND PROPERTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or exclusions of implied warranties, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Application Signatures & Instructions

After completing this form, please sign below and send via Fax to Baseline at 1-208-323-1834. Please provide a contact name and information for Baseline to contact regarding details of this application, if necessary.

Application Date: _____

Contact Name: _____

Contact Address:

	_____	_____	_____
	Street	City	State
Zip	_____		
Contact Phone:	_____		
Contact Fax:	_____		

I, the undersigned, do hereby attest that the above information is true and correct for the installation or intended installation of this system. I understand that if this information is materially incorrect, the extended warranty may be voided. I further understand and agree to the terms and conditions set forth in this extended warranty.

Signed: _____

Write name: _____

Company: _____

Title: _____

Please send approval via [] Fax, or [] US Mail, or [] Both to the contact name above.

EXTENDED 5 YEAR EQUIPMENT WARRANTY

BASELINE APPROVAL

(To be filled out by an authorized Baseline representative, only.)

Site/Project Name (for reference purposes):

Warranty Reference Number: _____

Date Application Received: _____

Based on the information provided in this Extended Warranty Application, Baseline

Approves, or

Declines, Reason: _____

the Extended 5 Year Equipment Warranty Coverage of this system, and,

Approves, or

Declines, Reason: _____

Surge/Lightning Coverage for this system.

Additional Terms or Conditions:

Approved by: _____

Write name: _____

Title: _____

Date: _____

Please retain a copy of this extended warranty application and approval form with your controller.

FINAL CERTIFICATION OF TESTS AND ADJUSTMENTS

CONTRACTOR: _____

PROJECT NAME: _____

PROJECT NUMBER: _____

The CONTRACTOR named above certifies that the tests and adjustments indicated below have been completed in accordance with the specifications on the date indicated.

TESTS	DATE
1. Hydrostatic test of main line	_____
Static Pressure tested at _____	
2. Water line tested under full pressure and made watertight	_____
3. Water pressure at the farthest & highest sprinkler	_____
4. Pattern of water coverage and adjustment	_____
5. Complete cycle of program control	_____
6. System Operation gone through with Owner	_____

COMPANY: _____

SIGNED BY: _____

TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sodding.

1.2 DEFINITIONS

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

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product certificates.

1.4 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.

1.5 DELIVERY, STORAGE, AND HANDLING

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

1.6 MAINTENANCE SERVICE

- A. Initial Lawn Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted, continue until acceptable lawn is established, and until Final Acceptance.

PART 2 - PRODUCTS

2.1 TURFGRASS SOD

- A. Turfgrass Sod: Number 1 Quality / Premium, including limitations on thatch, weeds, diseases, nematodes, and insects, complying with TPI's "Specifications for Turfgrass Sod Materials" in its "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.
- B. Turfgrass Species: Kentucky Bluegrass.

2.2 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient.

2.3 FERTILIZER

- A. Sod Slow-Release Fertilizer: Granular or pelleted non-burning fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 10N, 18P₂SO₅, 22K₂O, or similar composition as approved by Owners Representative.
 - 2. Weight of Sod Slow-Release Fertilizer per 1000 Sq. Ft.: 8 lbs.

2.4 MULCHES AND ACCESSORIES

- A. If temporary erosion control is necessary until sod can be installed, provide the following:
- B. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

- C. Tackifier: Liquid concentrate diluted with water forming a transparent 3-dimensional-like crust permeable to water and air and containing no agent toxic to seed germination and growth.
- D. Erosion control fabric: Curlex I, manufactured by: American Excelsior Company. Phone: (800) 777-7645, www.curlex.com, or equal as approved by Owners Representative.
- E. Wood stakes: Softwood, ¾" dia. X 8" long
- F. Metal stakes: Steel, tee-shaped pins, 4" head x 8" leg

PART 3 - EXECUTION

3.1 LAWN PREPARATION

- A. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 1 inch in any dimension and sticks, vegetation, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Thoroughly blend planting soil mix with topsoil off-site before spreading or spread topsoil, till-in soil amendments, and add fertilizer on surface.
 - 2. Spread planting soil mix to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Reduce elevation of planting soil to allow for soil thickness of sod if required.
- B. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:
 - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 - 2. Loosen surface soil to a depth of at least 6 inches. Apply soil amendments according to planting soil mix proportions and mix thoroughly into top 6 inches of soil. Till soil to a homogeneous mixture of fine texture. Apply fertilizer directly to surface soil.
 - 3. Remove stones larger than 1 inch in any dimension and sticks, roots, trash, and other extraneous matter.
 - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- D. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- E. Before planting, restore areas if eroded or otherwise disturbed after finish grading.

3.2 SODDING

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

3.3 LAWN MAINTENANCE

- A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.
- B. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings.

3.4 SATISFACTORY LAWNS

- A. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- B. Use specified materials to reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

END OF SECTION

SECTION 329300 - PLANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plants.
2. Fertilizers.
3. Mulches.
4. Pesticides.
5. Tree-watering devices.

B. Related Requirements:

1. Section 328400 "Irrigation" for automatic irrigation of planting areas.
2. Section 329200 "Turf and Grasses" for turf seeding and sodding.

1.2 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils with sand and/or stabilized organic soil amendments to produce acceptable topsoil.
- D. Planting Soil: Existing, on-site topsoil; imported topsoil; or manufactured topsoil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.
- F. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- G. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

1.3 SUBMITTALS

- A. Product Data and Certificates: For each type of product.
- B. Samples of mulch, in a small ziplock bag.

1.4 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
- B. Provide quality, size, genus, species, and cultivar and form of plants indicated, complying with applicable requirements in ANSI Z60.1. Obtain approval from the landscape architect for any substitution in quantity, size, genus, species, cultivar and form for any plant material installed, prior to installation.
- C. Tree planting mock-up: Contractor to provide a fully planted tree, including excavation, placement of tree relative to finish grade and root flare, watering in, mulching for review and approval as the accepted standard for the project, prior to the planting of other trees on site. This tree may remain as part of the work if accepted.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- B. Handle planting stock by root ball. Cracked or deformed root balls will be rejected.
- C. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1.6 MAINTENANCE

- A. Initial Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below.
- B. Maintenance Period for Trees, Shrubs, and Perennials: From initial installation until Final Acceptance.
- C. Plantings must be weed-free from Substantial Completion through Final Acceptance or they will be rejected at Final Acceptance.

1.7 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner. A plant that is 1/3 dead will be considered dead, and in need of replacement.
 - b. Structural failures including plantings falling or blowing over.
 - 2. Warranty Periods: From date of Final Acceptance.
 - a. Trees, Shrubs, and Perennials: 12 months.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, weeds, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- C. Provide plants matched in form when arranged in groups.
- D. Provide balled and burlapped trees.
- E. Provide balled and burlapped or container grown shrubs.
- F. Tree and shrub sizes indicated on Drawings are sizes after pruning.
- G. Perennials and Groundcovers: Provide plants that are fully established in their containers. Plants that are not established will be rejected, or accepted at the smaller size – with a credit due to the Owner.

2.2 TOPSOIL AND PLANTING SOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; fertile, friable, natural topsoil of a medium-textured, loamy character, with a clay content not exceeding 27%, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign material, free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.

1. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean topsoil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.3 ORGANIC SOIL AMENDMENTS

- A. Soil Conditioner for amended topsoil: 1-step till-in soil conditioner – available from Midwest Trading 48 W. 805 Route 64 Virgil, IL 60501 Contact: Mike Curry Phone: 630-365-1990 <http://www.midwest-trading.com/products> or equal as approved by Owners Representative.

2.4 FERTILIZER

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, and potassium in the following composition:
 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 0 percent phosphorous, and 2 percent potassium, by weight.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, and potassium in the following composition:
 1. Composition: 20 percent nitrogen, 0 percent phosphorous, and 10 percent potassium, by weight.

2.5 MULCHES

- A. Organic Mulch for trees and shrubs: Shredded hardwood bark, six-month old, well-rotted, shredded, uncolored, native hardwood bark mulch, not larger than 4” in length and ½” in width, free of wood chips and sawdust.
- B. Organic Mulch for Perennials: Soil Conditioner: 1-step till-in soil conditioner – available from Midwest Trading 48 W. 805 Route 64 Virgil, IL 60501 Phone: 630-365-1990 <http://www.midwest-trading.com/products> or equal as approved by Owners Representative.

2.6 PESTICIDES

- A. General: Pesticide registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

2.7 WATER

- A. Water: Free of substances harmful to plant growth. Contractor to confirm from Owner that acceptable on-site water will be available for use during construction and through the maintenance period. Hoses or other methods of transportation and dispersal are to be furnished by Contractor.

2.8 TREE-WATERING DEVICES

- A. Slow-Release Watering Device: Standard product manufactured for drip irrigation of plants and emptying its water contents over an extended time period; manufactured from UV-light-stabilized nylon-reinforced polyethylene sheet, PVC, or HDPE plastic.
- B. For each new shade and ornamental tree provide a slow-release watering bag. The bag may be used by the Contractor for tree maintenance between tree installation and Final Acceptance, but will become the property of the Owner upon completion of the project. Bags that have been damaged during the project will be replaced prior to Final Acceptance, at no charge to the Owner.
 - 1. For single stem trees: Treegator Original, or approved equal.
 - 2. For multi-stem or low-branched trees: Treegator Junior Pro, or approved equal.

PART 3 - EXECUTION

3.1 PLANTING AREA ESTABLISHMENT

- A. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.2 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
 - 1. Excavate planting pits with sides sloping inward at a 45-degree angle, and per the plantings details on the Drawings. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed or compacted base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
- B. Backfill Soil: Subsoil and topsoil removed from excavations **may** be used as backfill soil unless otherwise indicated, as long as it is placed in the same strata from where it was excavated. Lawfully dispose of all excess excavation materials off-site.

3.3 TREE AND SHRUB PLANTING

- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
 - 1. Backfill: Planting soil. For trees, use excavated soil for bottom half of backfill required.]
 - 2. Balled and Burlapped Stock: After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - 3. Balled and Potted and Container-Grown Stock: Carefully remove root ball from container without damaging root ball or plant.
 - 4. Fabric Bag-Grown Stock: Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - 5. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 6. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Slopes: When planting on slopes, set the plant, per the planting detail on the Drawings, so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.4 PERENNIAL AND GROUND COVER PLANTING

- A. Set out and space plants other than trees, shrubs, and vines as shown on the plans and on the Planting details. If no spacing or details are given, space the plants equally within the area shown on the plans. If multiple plants area shown within the same planting area (hatch), the plants area to be evenly, and randomly planted within the area.
- B. Use planting soil for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- E. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- F. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.5 EDGING

- A. Shovel-Cut Edging: Separate mulched areas from turf areas with a 45-degree, 4- to 6-inch-deep, shovel-cut edge as indicated in the details on Drawings.

3.6 PLANTING AREA MULCHING

- A. Mulch backfilled surfaces of planting areas and other areas indicated. Refer to the planting details for additional information.
 - 1. Trees in Turf Areas: Apply organic mulch in a 5' minimum diameter ring, 3-inch depth on the outside, tapering to 1 1/2-inch at the trunk.
 - 2. Plantings in Bed Areas: Apply 2-inch to 3-inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch over the crowns of plants, and take care not to cover branches or stems of plants with mulch. Refer to the plant material list for plants with special mulching requirements.

3.7 INSTALLING SLOW-RELEASE WATERING DEVICE

- A. Provide one device for each tree.

3.8 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
- D. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Get prior approval from the owner for the use of each specific pesticide on the site. Notify Owner two days before each application is to be performed.
- E. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- F. At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

END OF SECTION 329300



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Addison Village Green Phase 4 Improvements

1 Friendship Plaza
Addison, IL 60101

Village of Addison
1 Friendship Plaza
Addison, IL 60101

RFQ No. 19-11-1
November 4, 2019

Project Team

Landscape Architect
Hitchcock Design Group
22 E Chicago Avenue
Suite 200A
Naperville, Illinois 60540
T 630.961.1787

License Number: 157.000931

Expiration Date: 8.31.2020



Statement of Compliance

I have prepared, or caused to be prepared under my direct supervision, the attached plans and specifications and state that, to the best of my knowledge and belief and to the extent of my contractual obligation, they are in compliance with the Environmental Barriers Act [410 ILCS 25] and the Illinois Accessibility Code (71 Ill. Adm. Code 400).

Signed: Tim King

ILLINOIS REGISTRATION NO.: 157.000931

Date: 11.04.18

General Notes

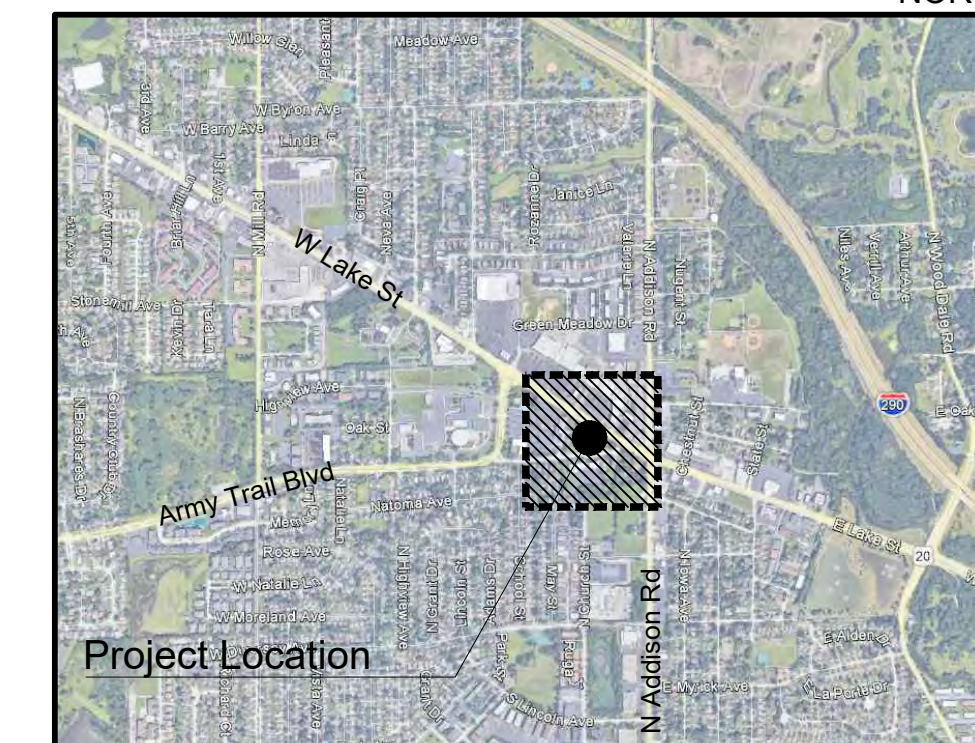
1. Basemap information obtained from plans prepared by Civiltech, Inc. received September 29, 2015 and Village Green Phase 1-3 plans dated April 4, 2018.
2. Verify site conditions and information on drawings. Promptly report any concealed conditions, mistakes, discrepancies or deviations from the information shown in the Contract Documents. The Owner is not responsible for unauthorized changes or extra work required to correct unreported discrepancies.
3. Refer to specifications for additional conditions, standards and notes.

Sheet Index

01	Site Plan
02	Existing Conditions and Removal Plan
03	Grading, Layout and Materials Plan
04	Construction Details
05	Construction Details
06	Planting Plan
07	Planting Details
08	Irrigation Plan

Included for Reference Only:
Phase 1 Electrical Plan
Electrical As-Built
Phase 3 Irrigation Plan
Irrigation As-Built

Project Location Map



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ILLINOIS ONE-CALL SYSTEM

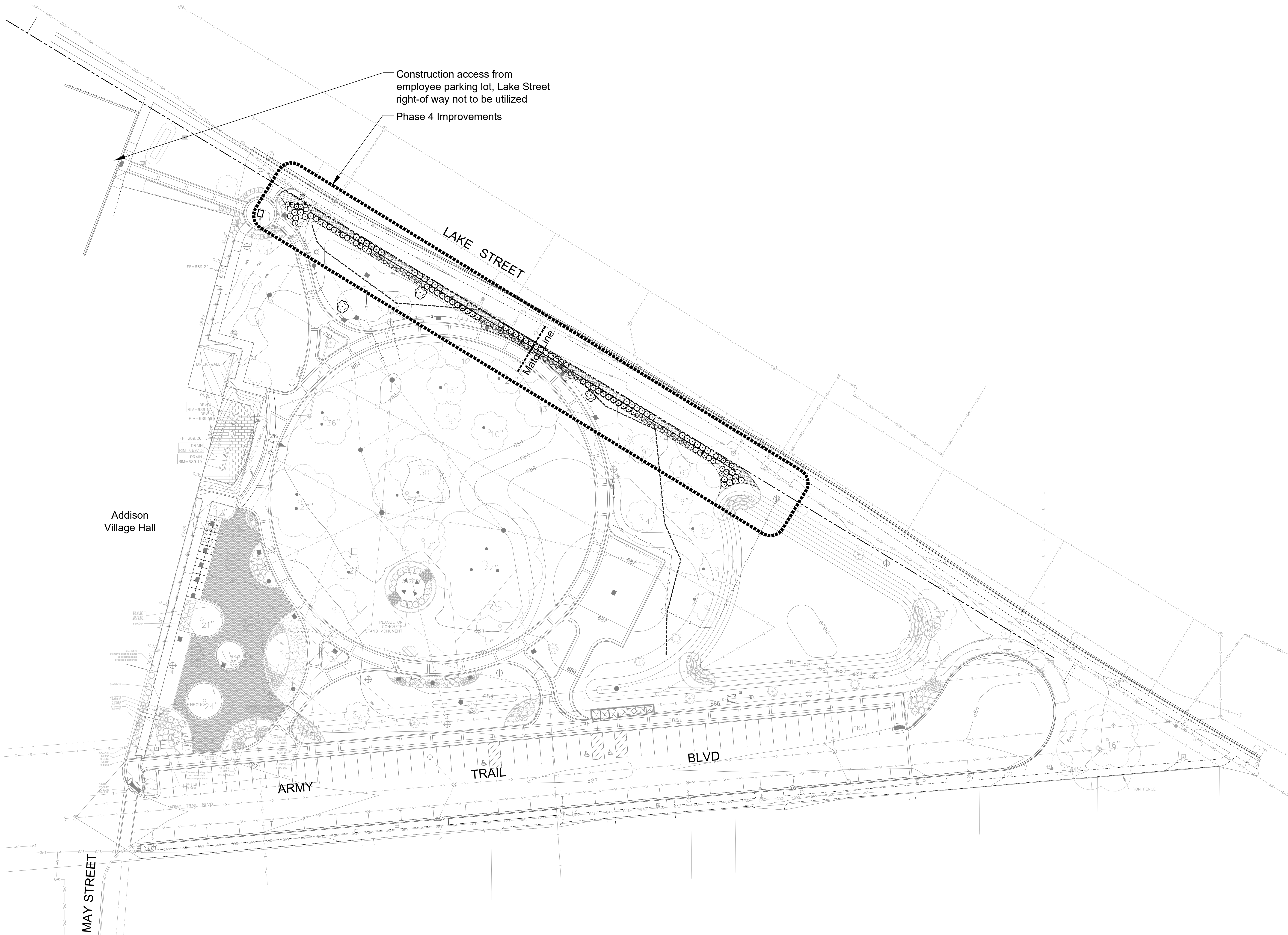
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**Village Green
Phase 4**

1 Friendship Plaza
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Construction access from
employee parking lot, Lake Street
right-of way not to be utilized

Phase 4 Improvements

LAKE STREET

Match line

Addison
Village Hall

ARMY

TRAIL

BLVD

MAY STREET

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November 4, 2019
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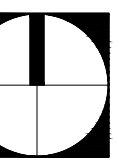
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MPW/XS

SHEET TITLE
Site Plan

SCALE IN FEET
1" = 30'

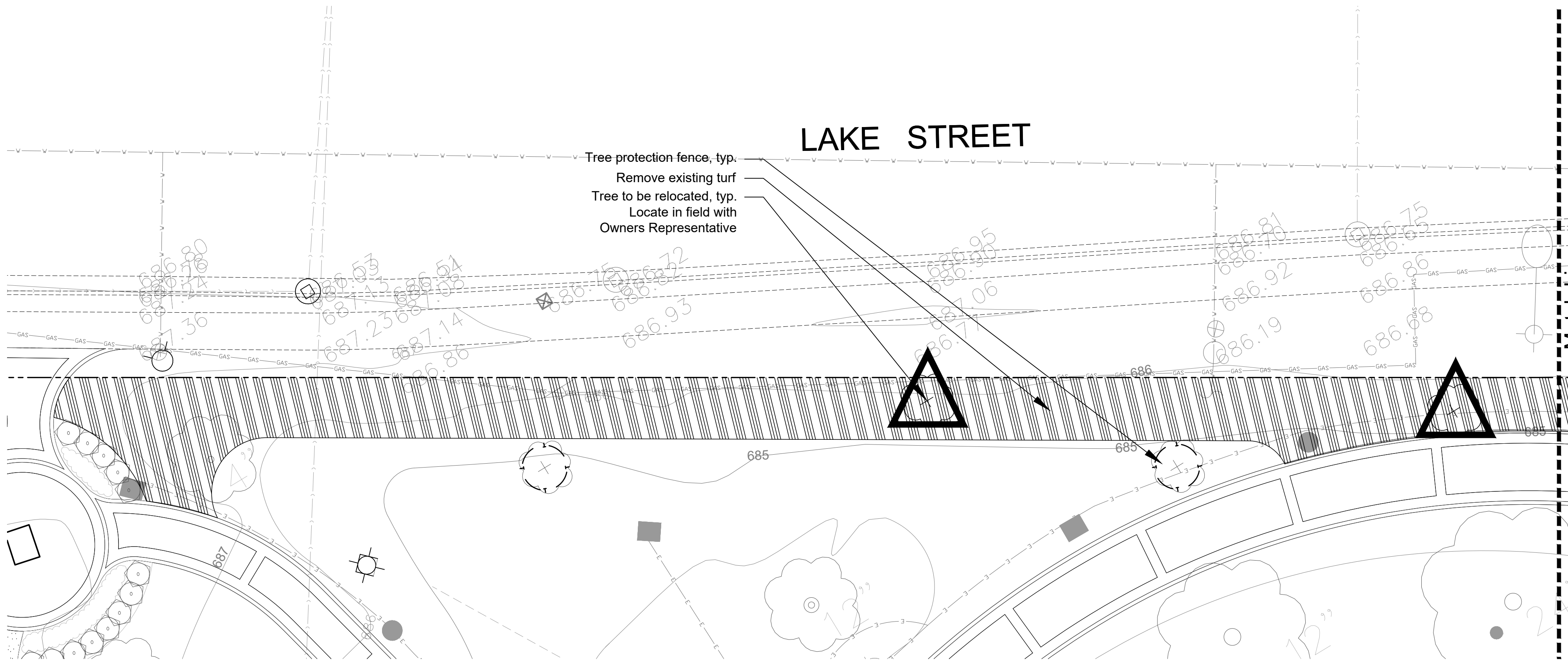


NORTH



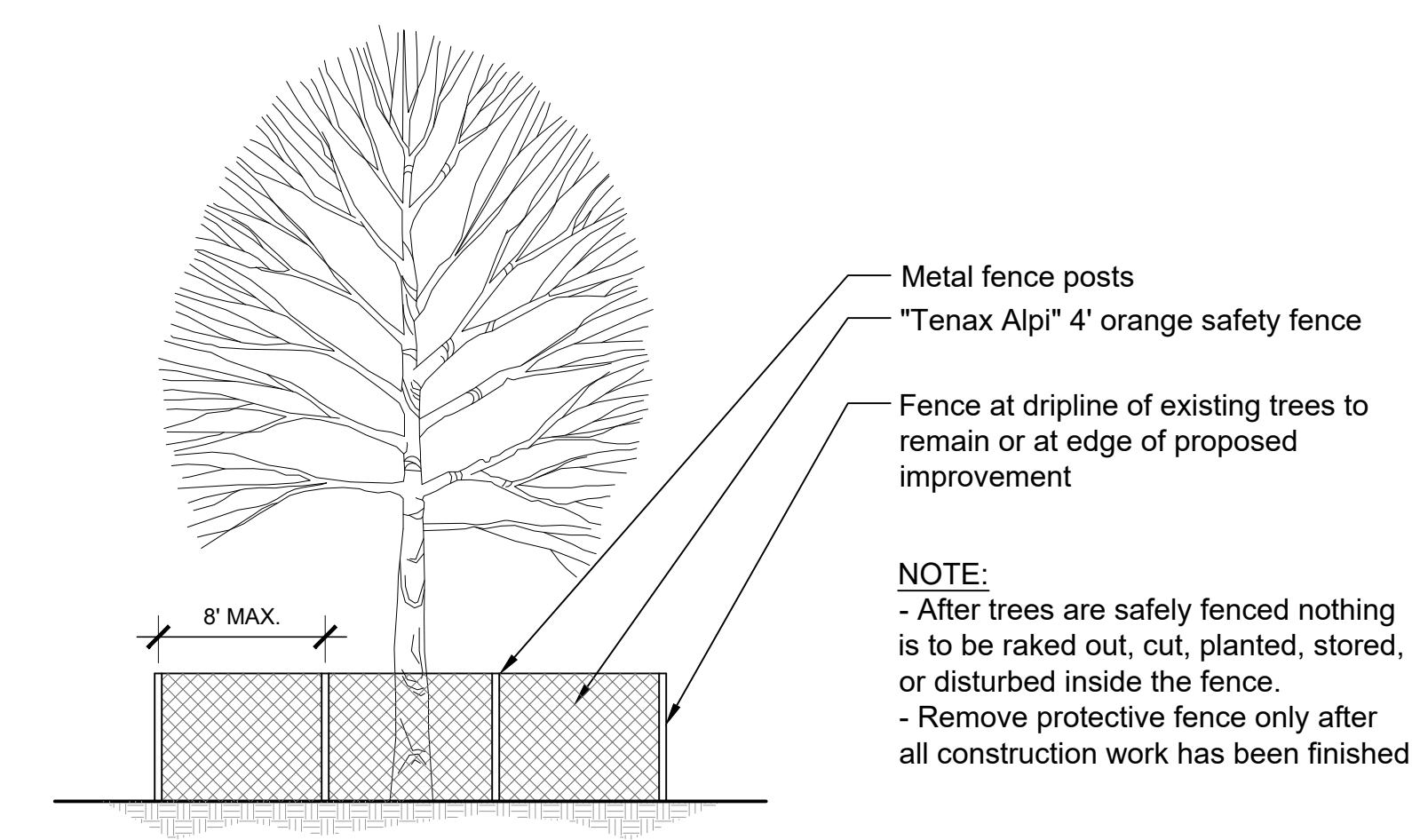
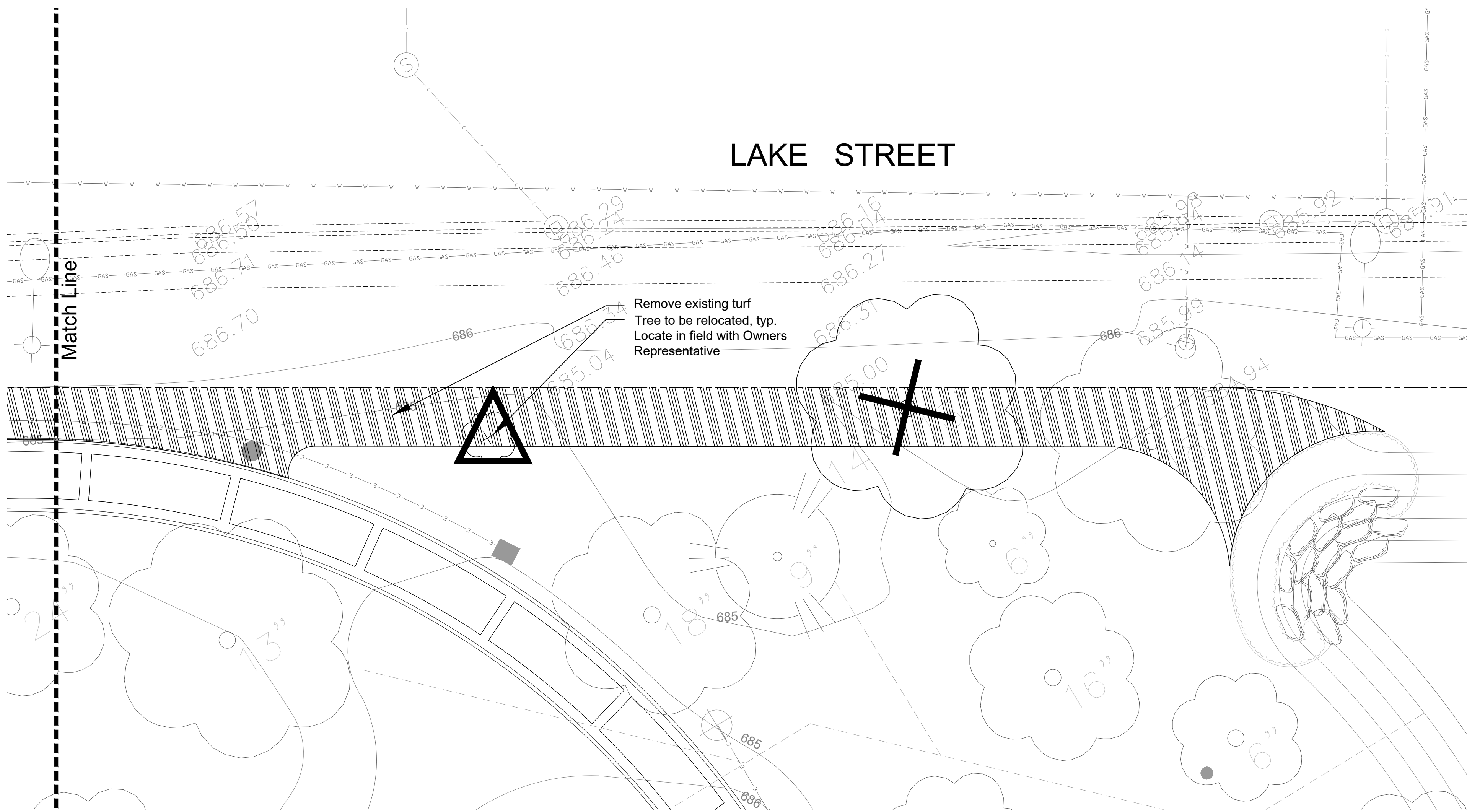
SHEET NUMBER

01



- SITE PREPARATION AND REMOVALS NOTES**
- Contractor to access site through parking lot at northwest corner of Village Hall, along the sidewalk adjacent to building. Lake Street right-of-way not to be utilized.
 - Contractor to install tree protection fencing prior to beginning work. Maintain and adjust tree protection fencing as needed during progress of construction. Storage of materials, vehicular access, and all other construction activities are strictly prohibited within the limits of the tree protection fencing.
 - Plans indicate general location and limits of removals. Contractor to perform removals only as necessary for construction of proposed improvements. No additional payments will be made for removals or restoration not required to construct the improvements as drawn and specified. Refer to Layout Plan for more specific information regarding proposed improvements and verify conditions in the field prior to performing removals.
 - Protect all items designated to remain. Contractor responsible to repair or replace all damaged items to condition prior to construction if damaged.
 - Contractor responsible for maintaining existing utility services (electrical, sanitary, storm) during construction unless otherwise indicated in the Contract Documents.
 - Field locate existing irrigation main line and lateral lines. Adjust existing irrigation as required to allow for proposed improvements, see sheet 08 for additional irrigation detail.
 - Refer to specifications for additional conditions, standards and notes.
- SITE PREPARATION AND REMOVALS LEGEND**
- Limit of Turf Removal
 - Tree Protection Fence
 - Item to be relocated
See planting plan for proposed locations, locate in field with Owners Representative
 - Item to be removed

- EXISTING CONDITIONS LEGEND**
- Electric Box
 - Hand Hole
 - Water Valve
 - Storm Structure
 - Sewer Man Hole
 - Water Man Hole
 - Roadway Light Pole
 - Pedestrian Light Pole
 - Hydrant
 - Building Uplight
 - Existing Tree
 - Storm Sewer
 - Sanitary Sewer
 - Water Main
 - Gas Line
 - Telephone Cable
 - Electricity Conduit
Note: conduit routing is approximate, verify in field
 - Storm Inlet
 - Strip Drain
 - Pedestrian Light Pole-Phase 2
 - Power Bollard
 - Light Bollard
 - Unit Paving
 - Outcropping



1 Tree Protection Fence
Scale: 1/2" = 1'-0"
d-tree-protection-fence

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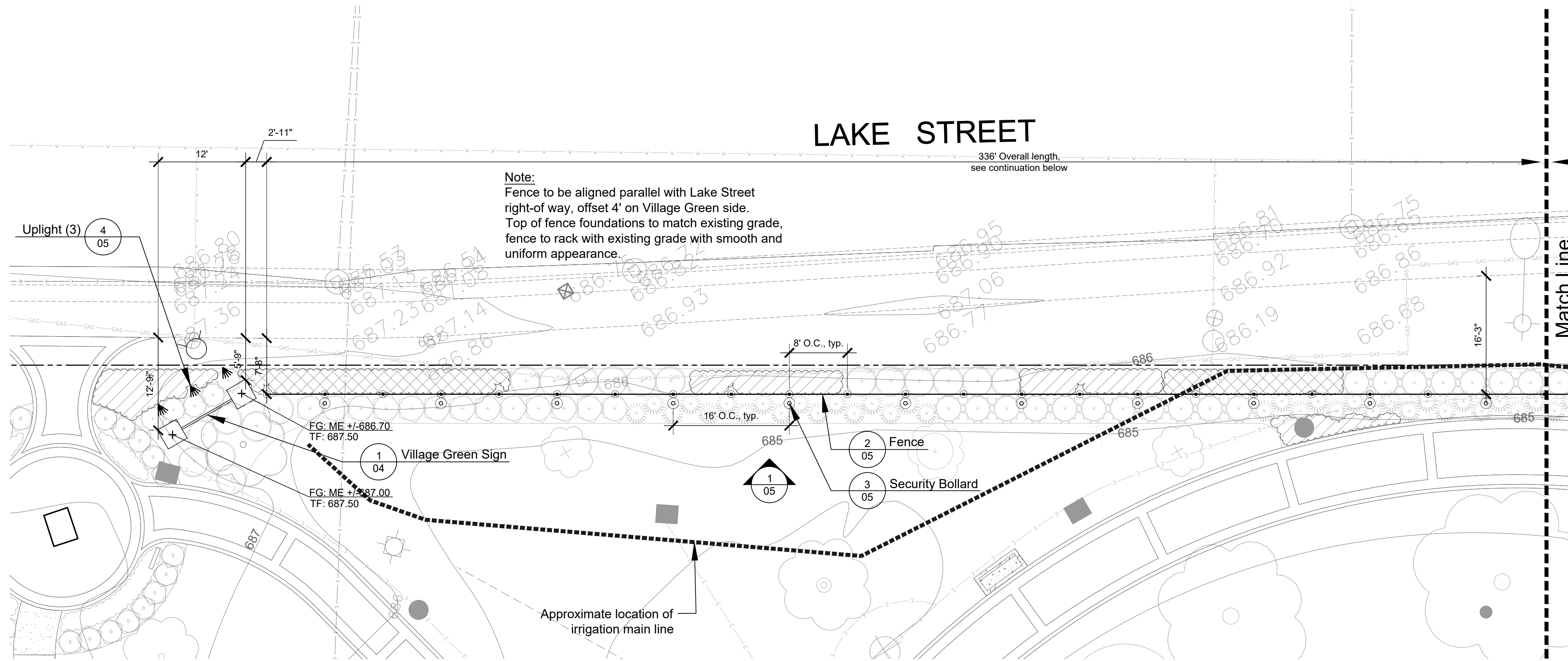
SHEET TITLE
**Existing Conditions
and Removal Plan**

SCALE IN FEET
1" = 10'

NORTH

SHEET NUMBER

J:\Projects\Alpha\Addison_Village of Village Green Phase 4\09 Graphics\02 DD-CDD02_Site Prep and Removal.dwg



GRADING NOTES

- Contractor to remove and dispose of all turf and debris off-site following applicable codes and ordinances.
- Promptly notify Owners Representative if unsatisfactory sub-grade materials are discovered. No payment will be made for additional work completed without prior authorization by Owners Representative.
- Refer to specifications for additional conditions, standards and notes.

GRADING LEGEND

- 797.00 Spot Elevation
- ME 797.00 Match Existing
- 2% Direction of Slope
- 99 Contour (1 foot)
- 100 Contour (5 foot)
- 1"x12" Strip drain

LAYOUT AND MATERIALS NOTES

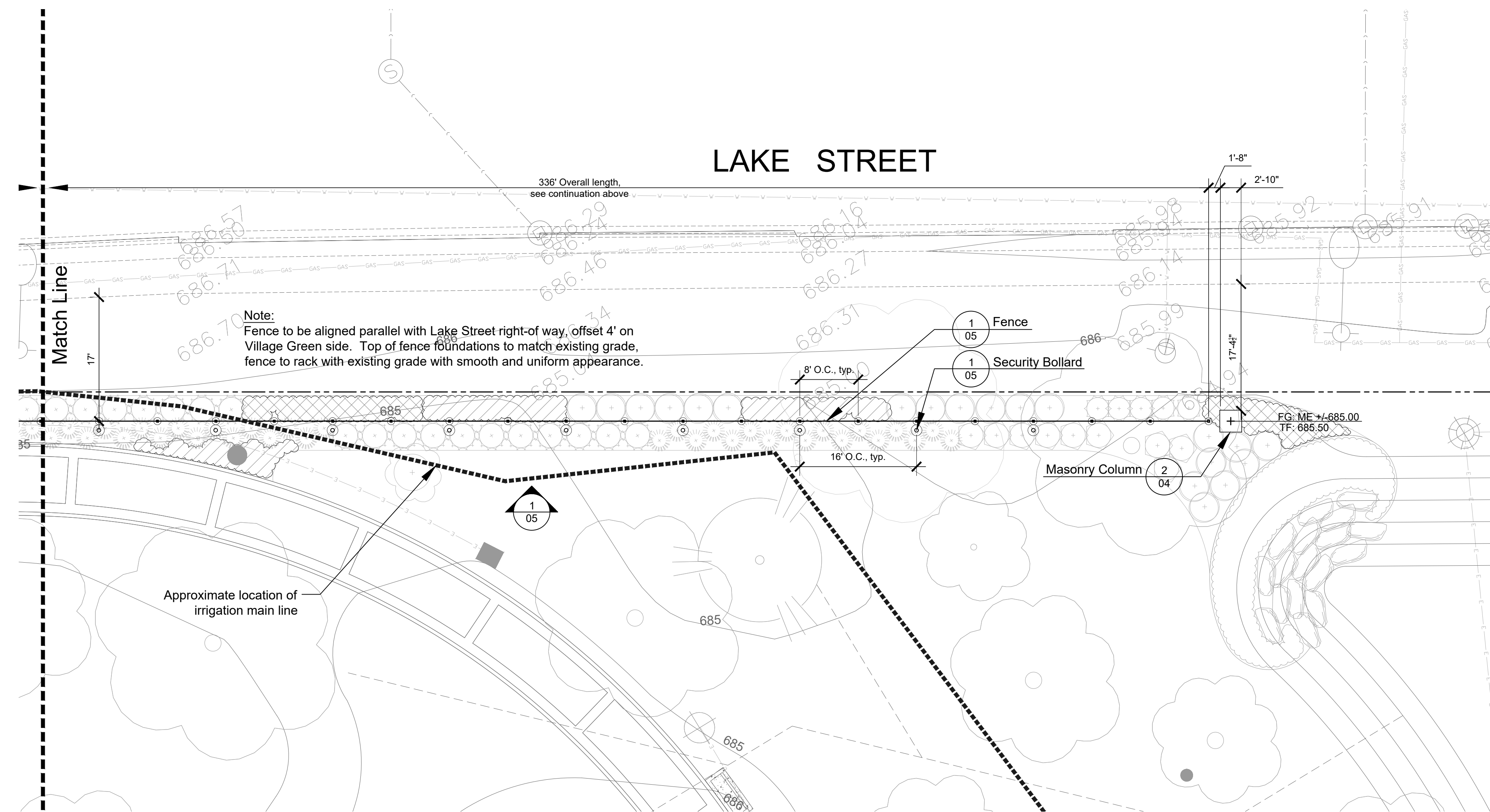
- Contractor responsible for field layout of all new improvements. Digital files of geometric information will be provided upon request in AutoCAD format. No additional payment will be made for adjustments necessary to construct the work as drawn.
- Contractor responsible to coordinate work in order to obtain approval of all layout by Owners Representative prior to construction. No additional payment will be made to correct work if constructed incorrectly without pre-approval by Owners Representative.
- Field locate existing irrigation main line, adjust fence and security bollard footings as required to avoid damaging main line and achieve design intent. Obtain approval from Owners Representative prior to adjusting layout.
- Contractor responsible to maintain all layout stakes during construction. No additional payment will be made to replace layout stakes.
- All measurements are to back-of-curb unless otherwise shown on the plans.
- Contractor to provide layout stakes every 10 feet minimum for large arcs where radius points are not accessible.
- Refer to specifications for additional conditions, standards and notes.

LAYOUT AND MATERIALS LEGEND

- 4' Ornamental Metal Fence
- Security Bollard
- Proposed Uplight

ELECTRICAL NOTES

- Tie (3) proposed uplights into existing electrical system. Connect to closest light bollard and verify that system is adequately sized to accommodate the additional lights. Refer to Phase 1-3 as-built plan for further information. Contractor required to meet all local, state, and national code requirements as applicable.



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SHEET TITLE
**Grading, Layout
and Materials Plan**

SCALE IN FEET
1" = 10'

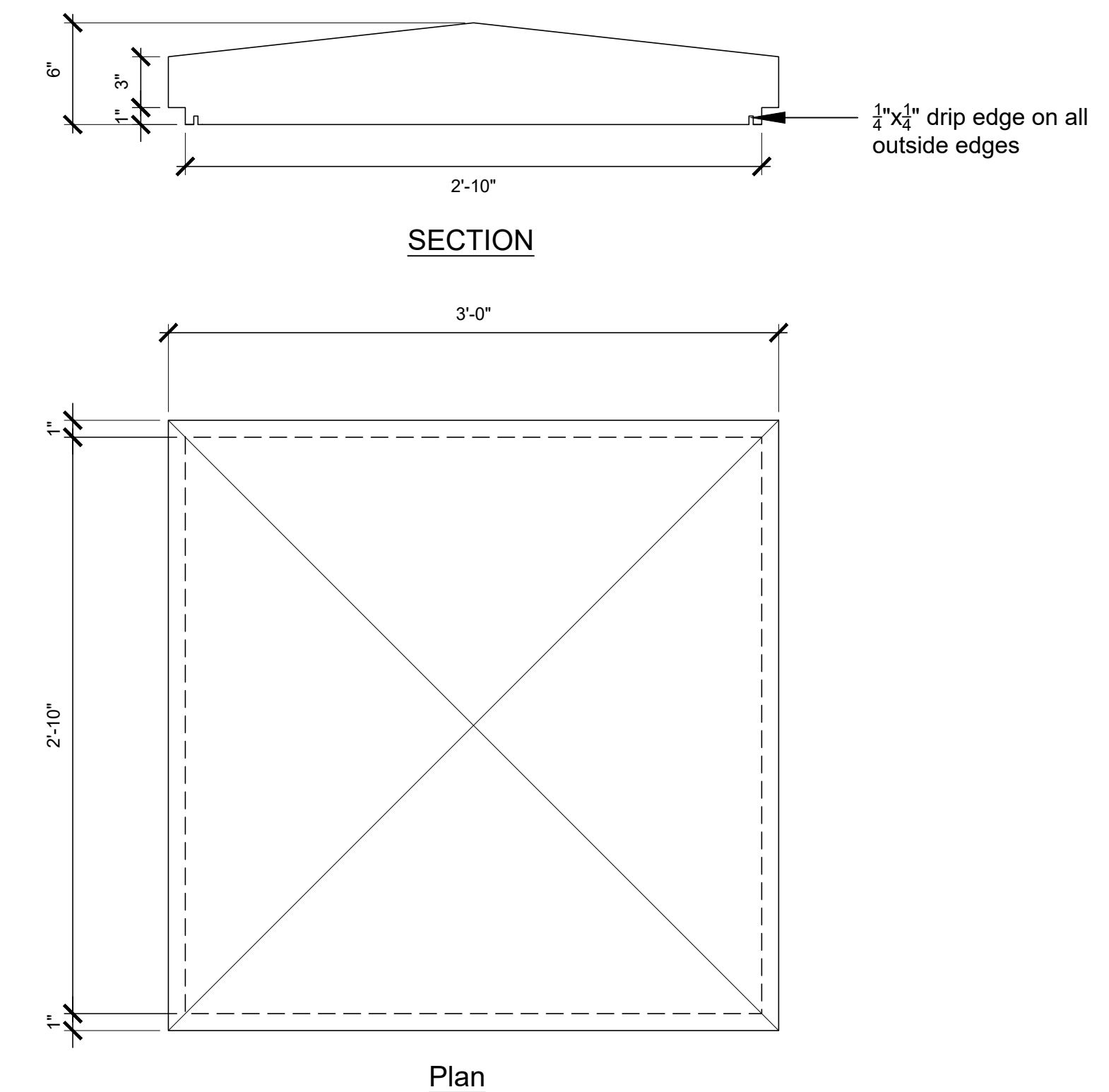
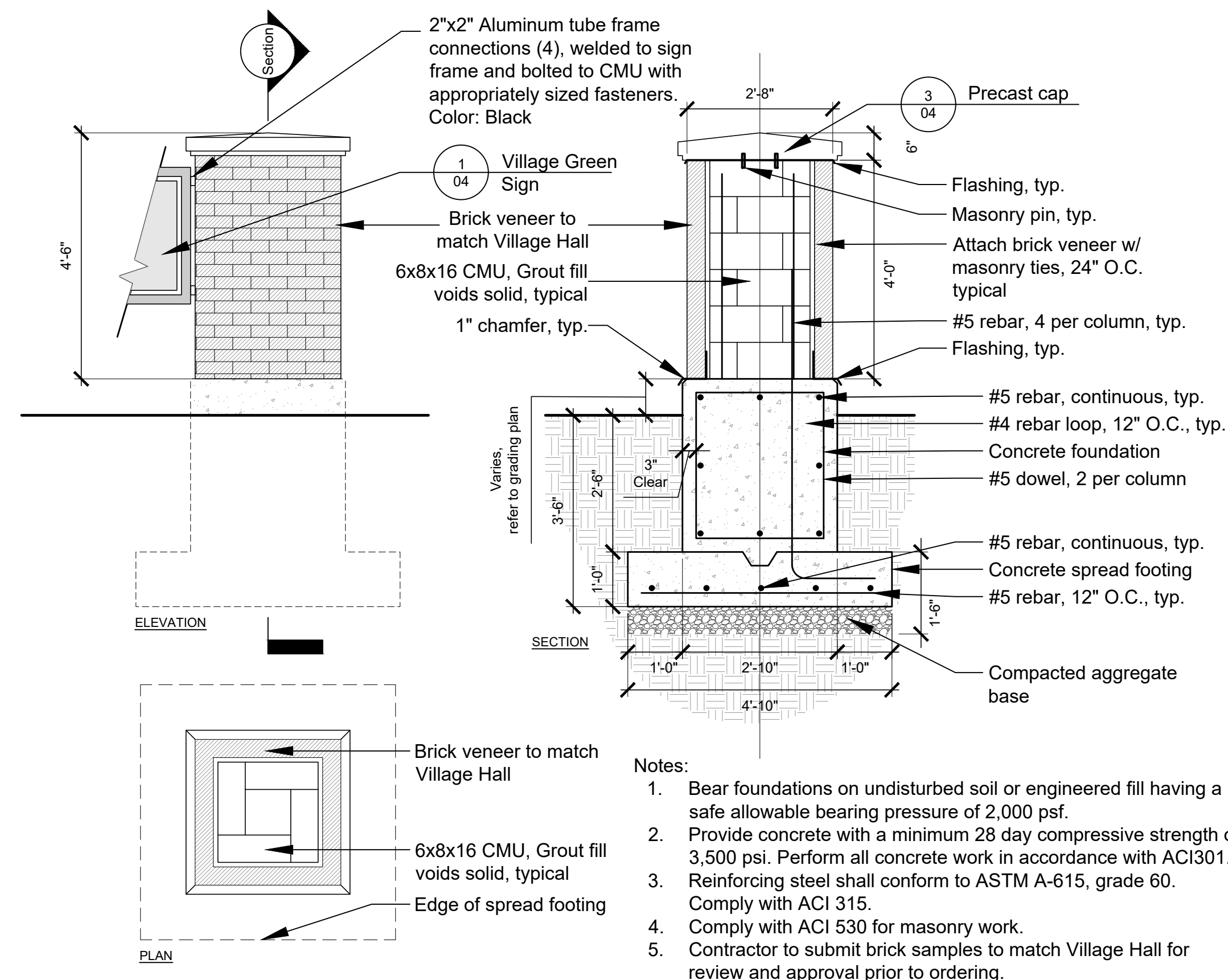
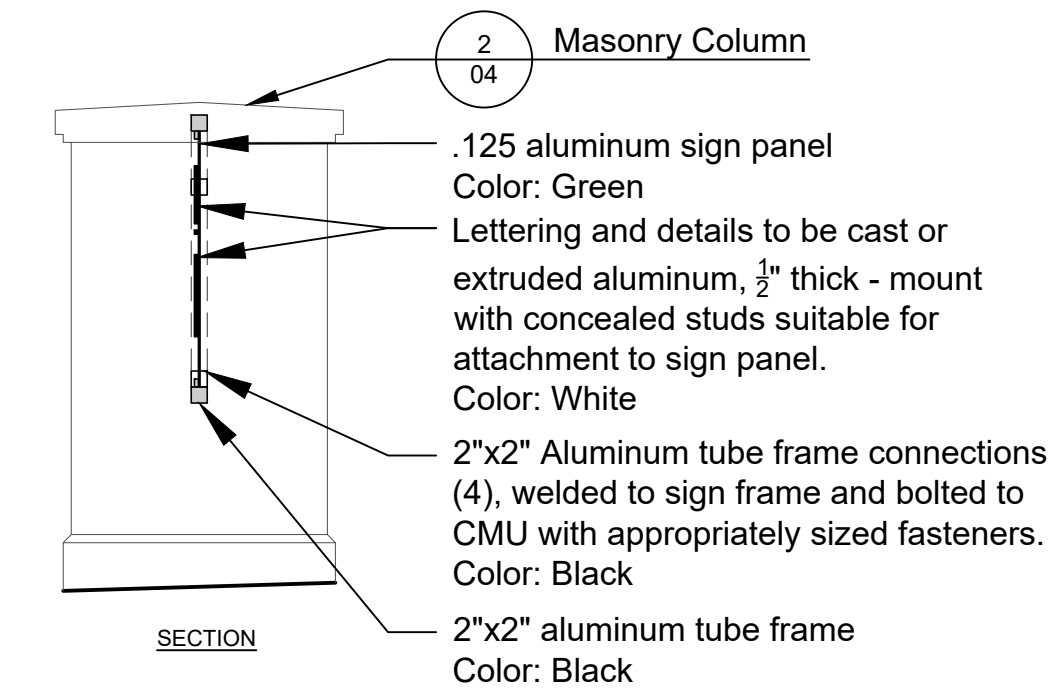
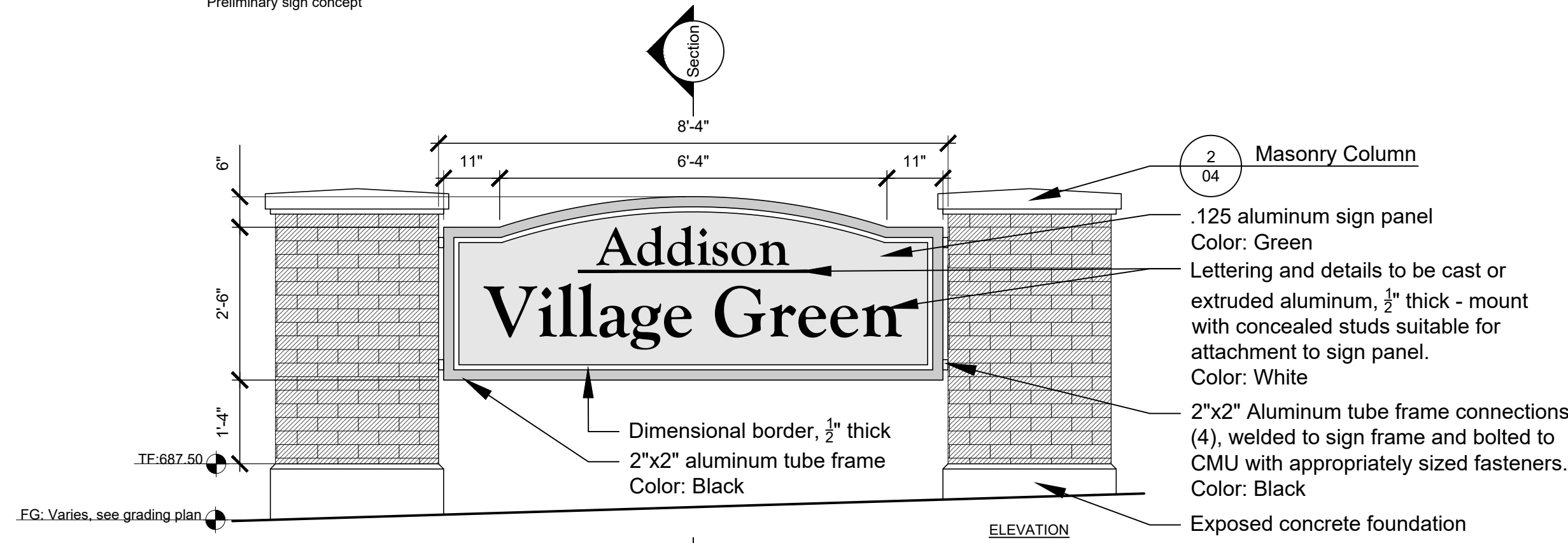
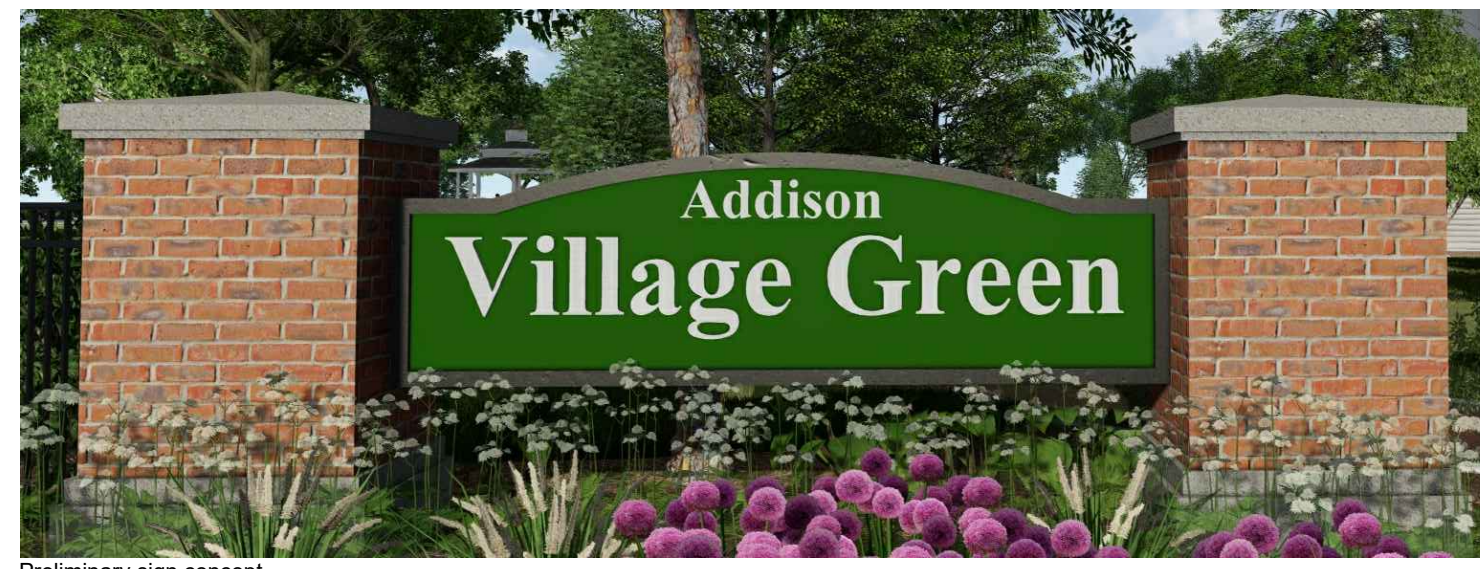


NORTH



SHEET NUMBER

03



SIGNAGE GENERAL NOTES

- Sign fabricator to submit shop drawings including all materials, connection methods, sizing, text, layout and color designations per details as shown on plans. If modifications are proposed by the fabricator, provide comprehensive explanation to the owner's representative for review. The owner's representative has sole discretion to approve or reject the proposed modifications to achieve a superior product.
- Sign fabricator to submit color chip samples of all specified colors, and mock-ups of all artwork, logos, graphics and text for approval by the owner's representative prior to fabrication.
- All aluminum materials to be powder coated per the specifications, colors as indicated on details.
- All text to be Humanist 521 BT Bold Condensed, custom Village Logo font, or approved equal as determined by the Owners Representative.
- Refer to specifications for additional information, standards and notes.
- Drawings to be provided in an electronic format upon request for further dimensional detail.



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PROJECT
**Village Green
Phase 4**

1 Friendship Plaza
Addison, IL 60101

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SHEET TITLE
**Construction
Details**

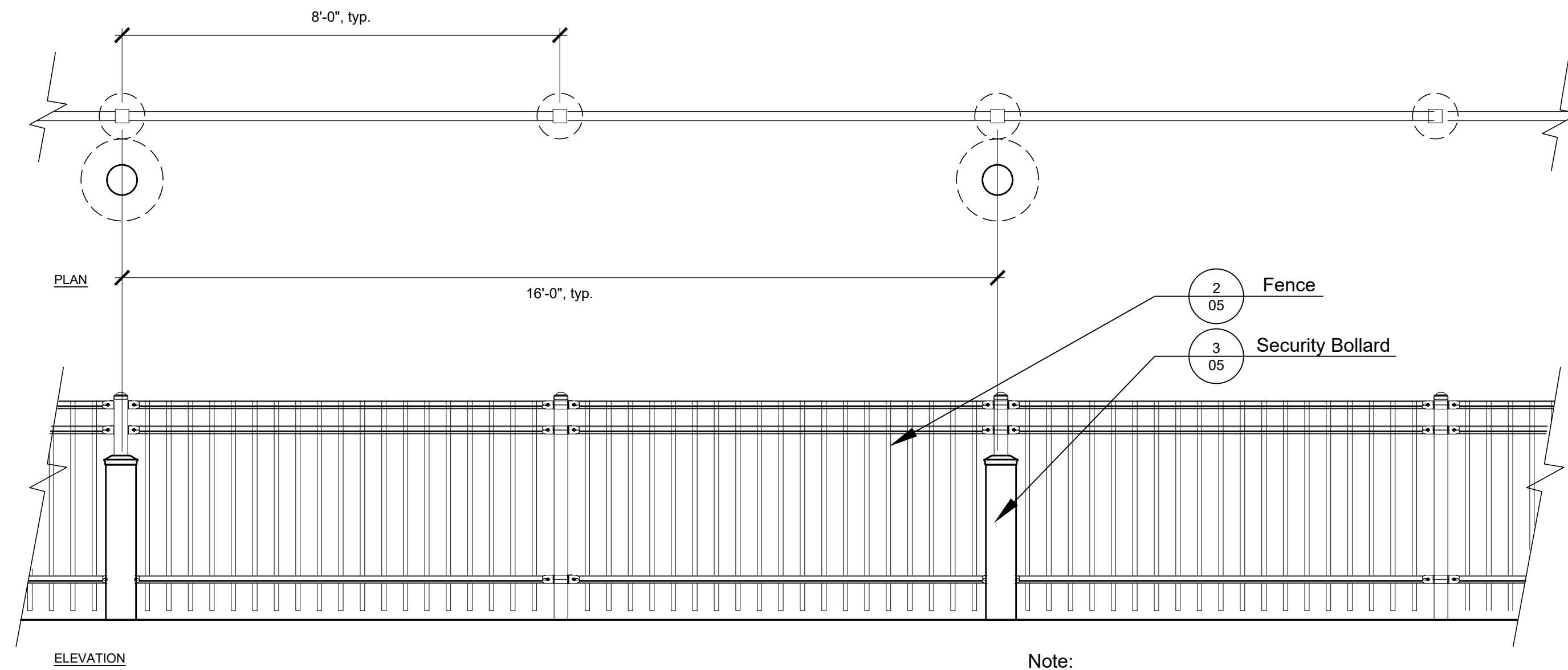
SCALE IN FEET
as noted

NORTH

SHEET NUMBER

04

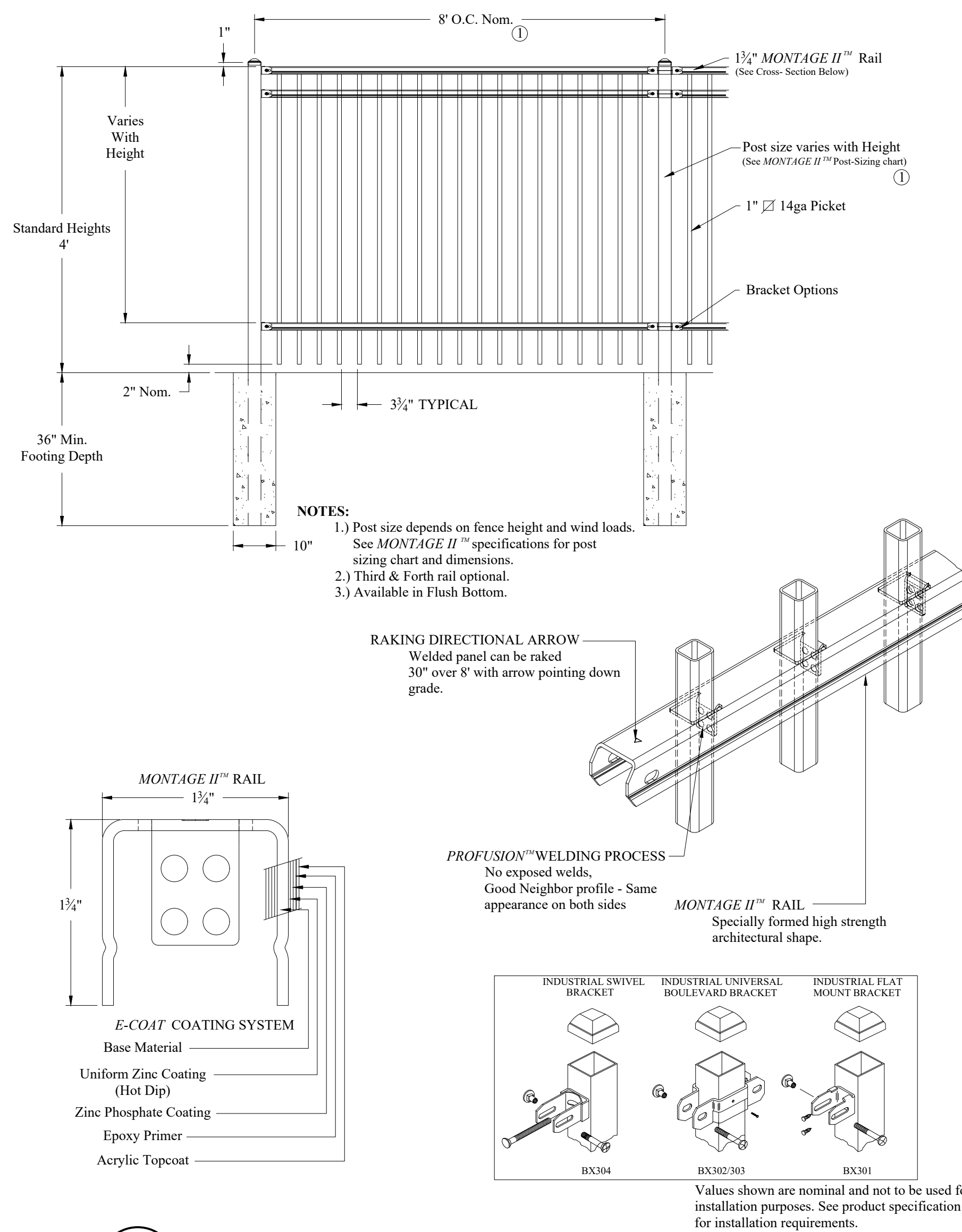
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Note:
Security Bollards to be installed on South (Village Green) side of fence. Fence to rack with existing grade with smooth and uniform appearance.

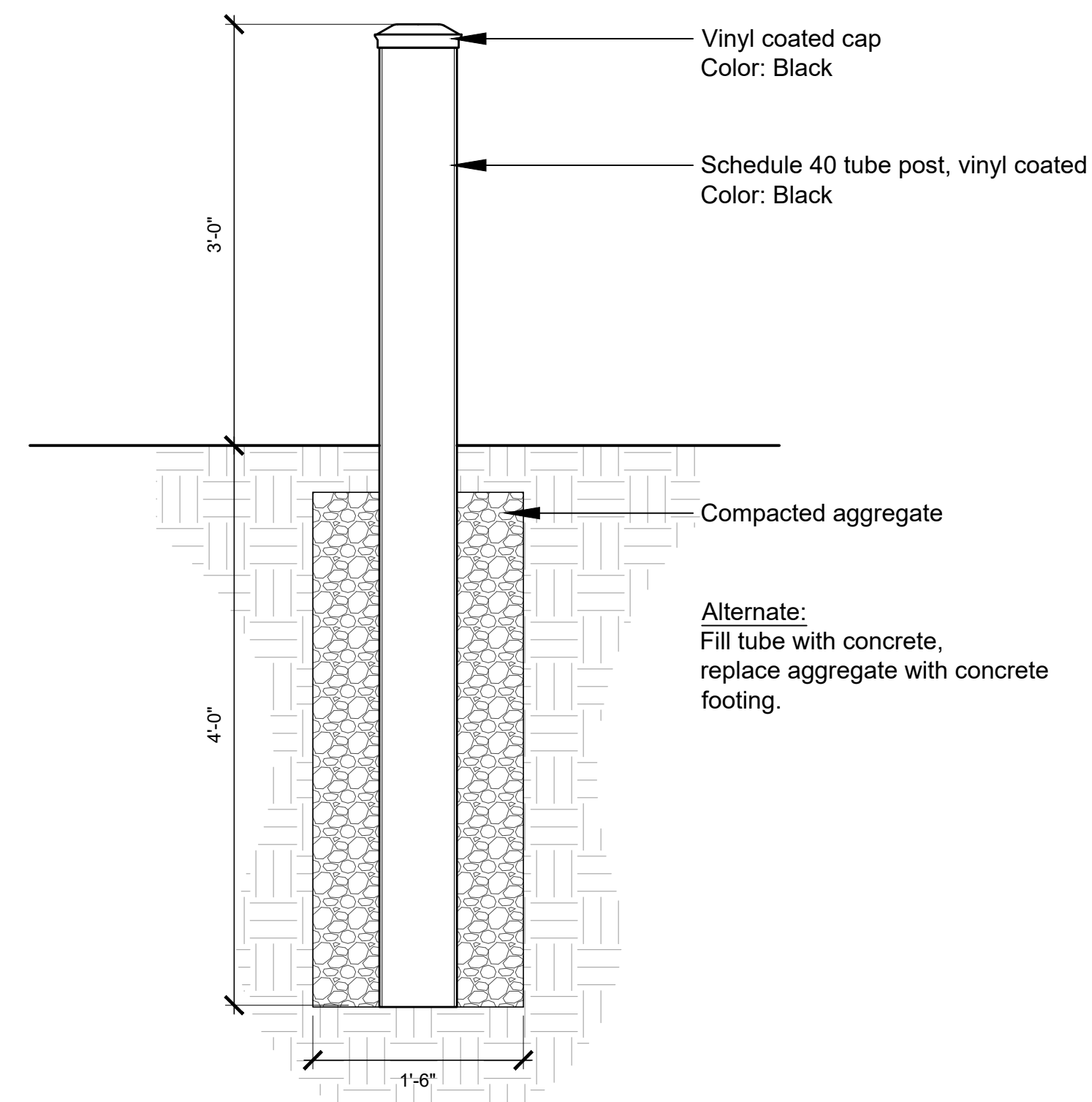
1 Fence and Bollard Enlargement

Scale: 1/2" = 1'-0"



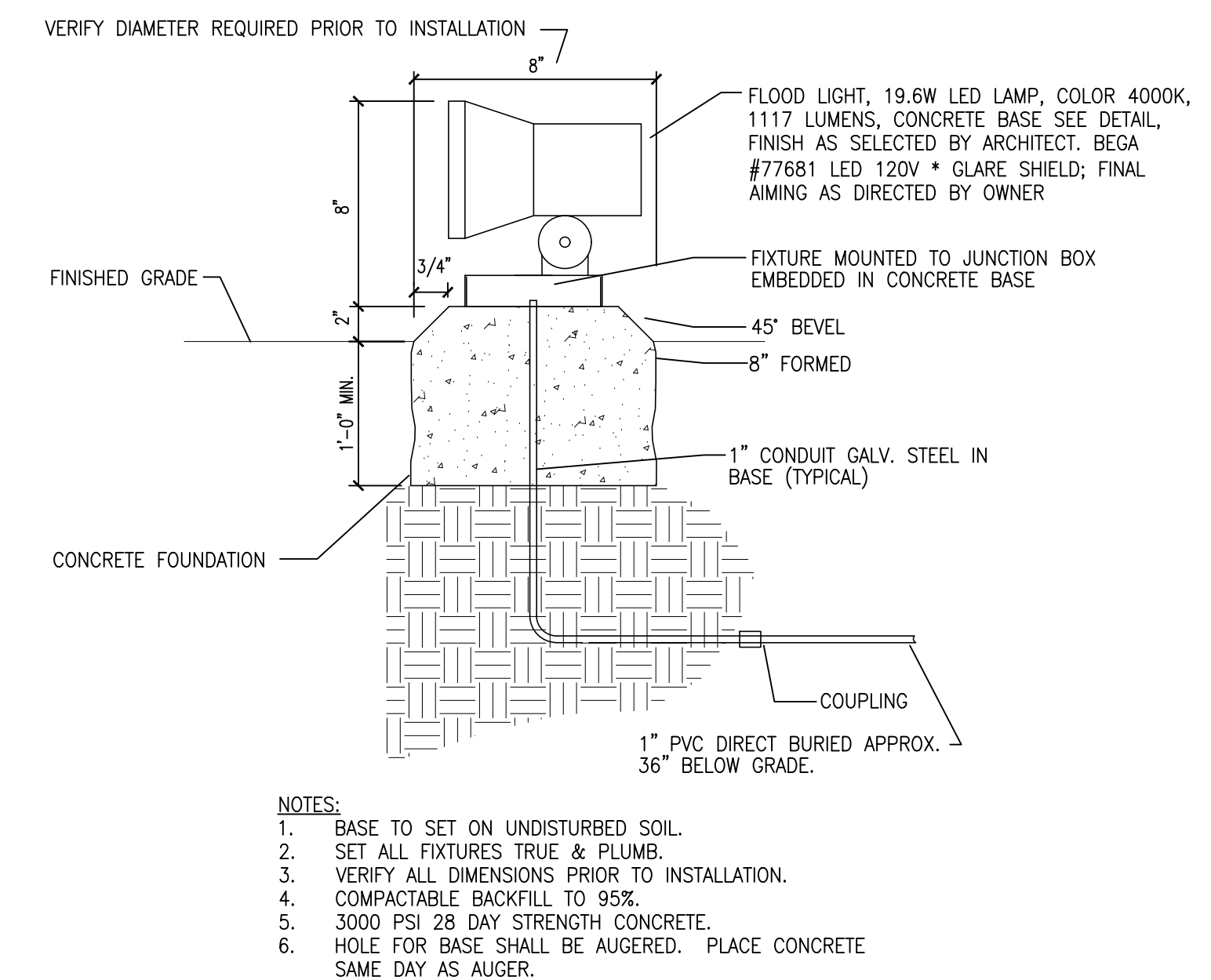
2 Fence

Scale: 1/2" = 1'-0"



3 Security Bollard

Scale: 1" = 1'-0"



4 Uplight

NTS



View looking toward Lake Street









View looking toward Village Green

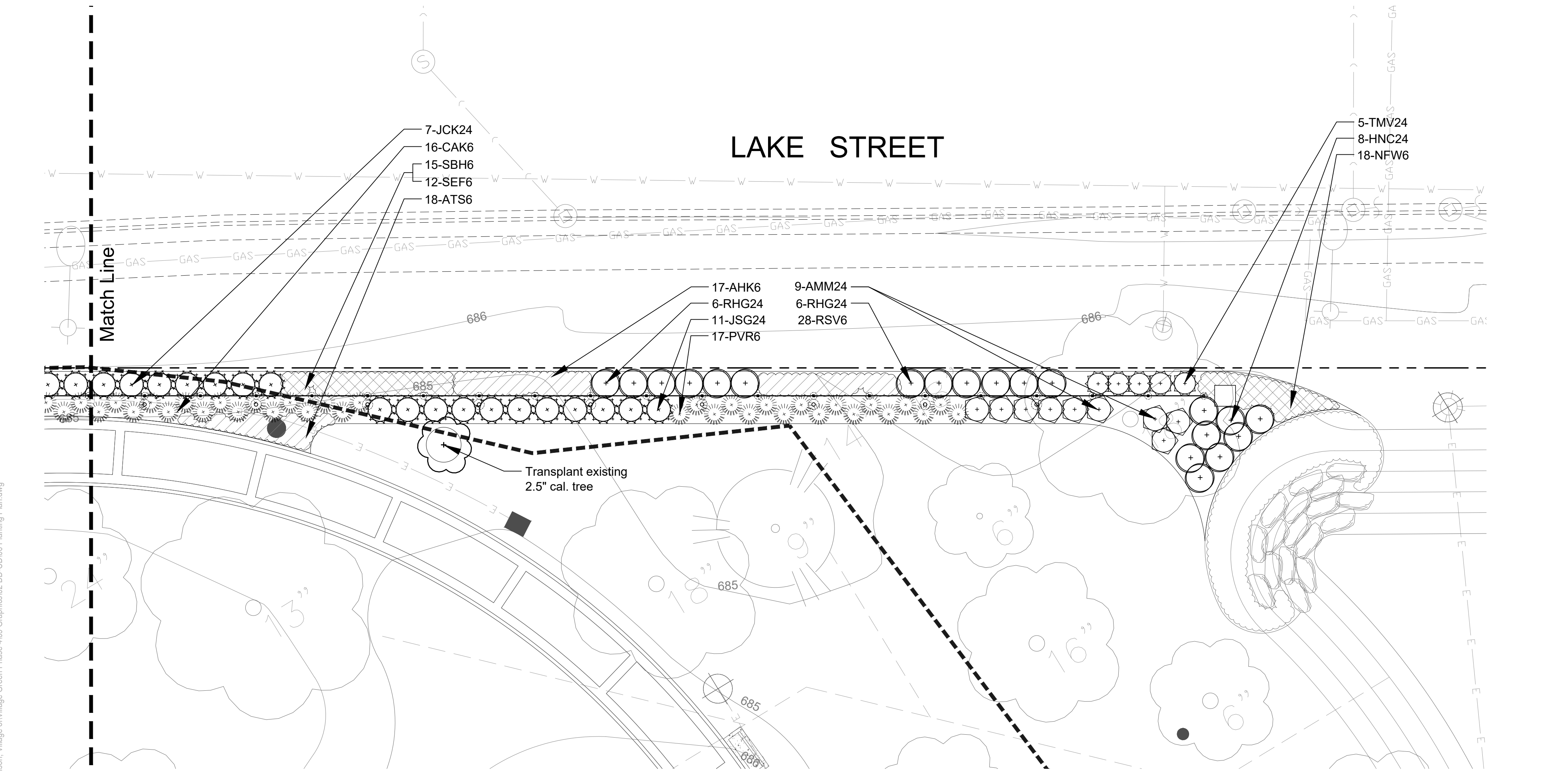
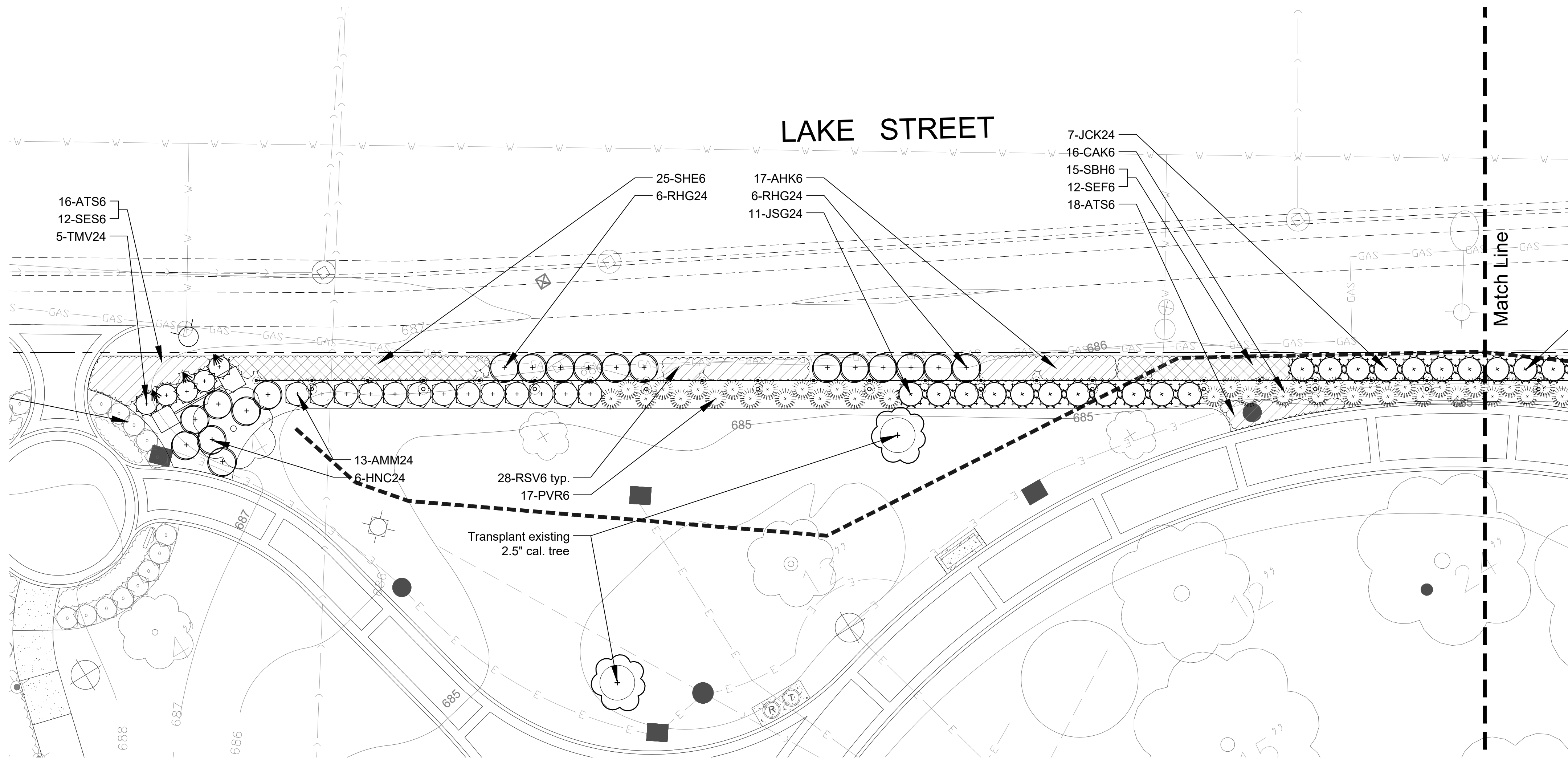
No	Date	Issue

LANDSCAPE NOTES

- Contractor responsible for restoration of any unauthorized disruption outside of designated construction area. Restore turf with sod as needed due to irrigation, lighting, fence, and masonry construction
- Protect existing improvements.
- Plant/turf removal where plantings are proposed is incidental to bed preparation. Remove existing shrubs and turf where new plantings are to be installed, as shown on plan.
- Contractor responsible for erosion control in all sodded areas.
- Install topsoil as required to fill in low areas and achieve positive drainage. Install 2" of soil conditioner in all planting areas, till to a 6" depth.
- Tree mulch rings in turf areas are 5 foot diameter, typical. Contractor shall provide a mulch ring around all existing trees within the limit of work. Remove all existing grass from area to be mulched and provide a typical v-trench edge.
- Bedlines are to be spade cut to a minimum depth of 3 inches unless otherwise shown on the plans. Curved bedlines are to be smooth and not segmented.
- Provide 3" mulch depth for tree and shrub planting. Provide 2" mulch depth in all perennial plant beds.
- Do not locate plants within 10' of utility structures, or within 5' horizontally of underground utility lines unless otherwise shown on the plans. Consult with Landscape Architect if these conditions exist.
- Plants and other materials are quantified and summarized for the convenience of the Owner and jurisdictional agencies only. Confirm and install sufficient quantities to complete the work as drawn and specified. No additional payments will be made for materials required to complete the work as drawn and specified.
- Refer to specifications for additional conditions, standards and notes.

LANDSCAPE LEGEND

-  Existing Tree
-  Existing Shrubs
-  Relocate existing 2.5" cal. tree,
Locate in field with Owners Representative
-  Shrub, typical.
See detail for installation.
-  Perennial, gallon pot, typical
-  Ornamental grasses, gallon pot



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SHEET TITLE
**Planting Plan and
Details**

SCALE IN FEET
1" = 10'



NORTH



SHEET NUMBER

06



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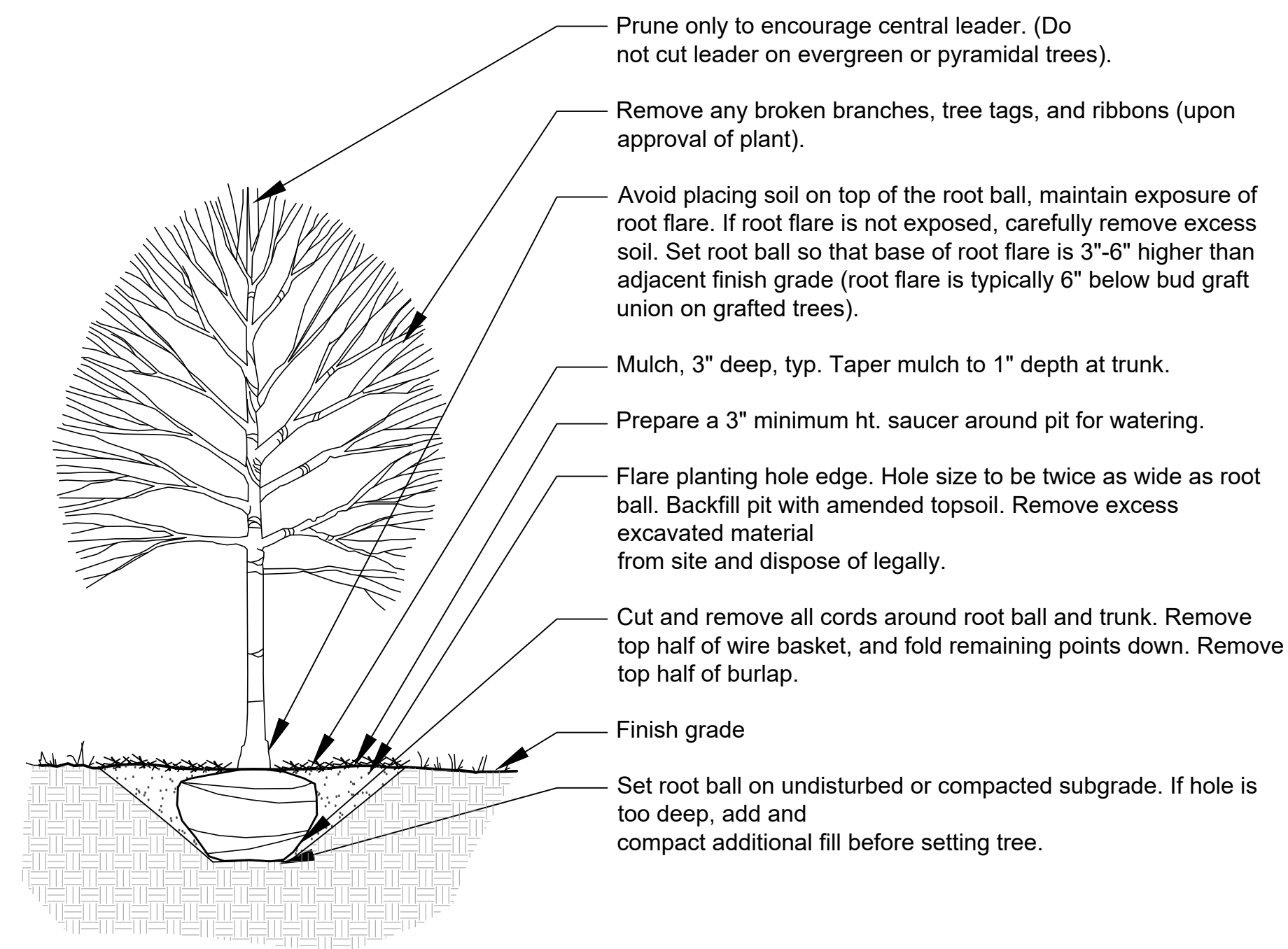
Village of Addison

1 Friendship Plaza
Addison, IL 60101

PROJECT

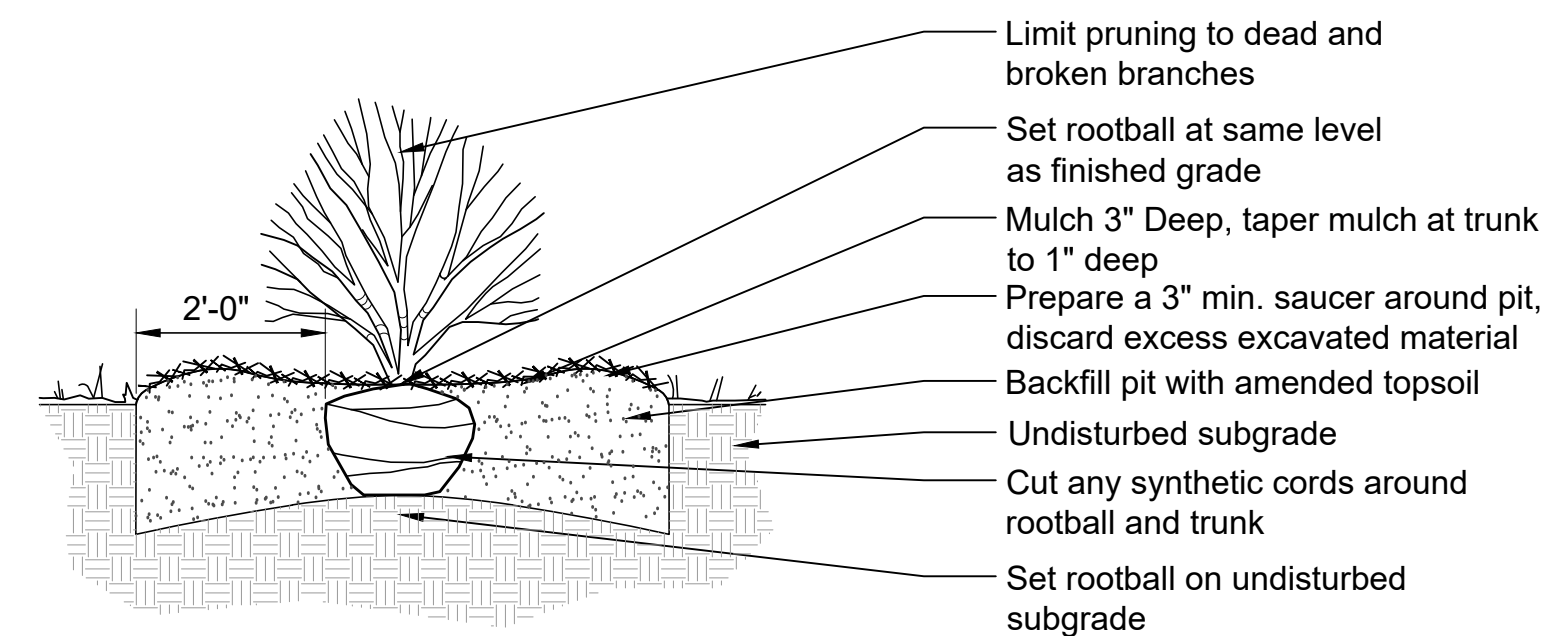
Village Green
Phase 4

1 Friendship Plaza
Addison, IL 60101



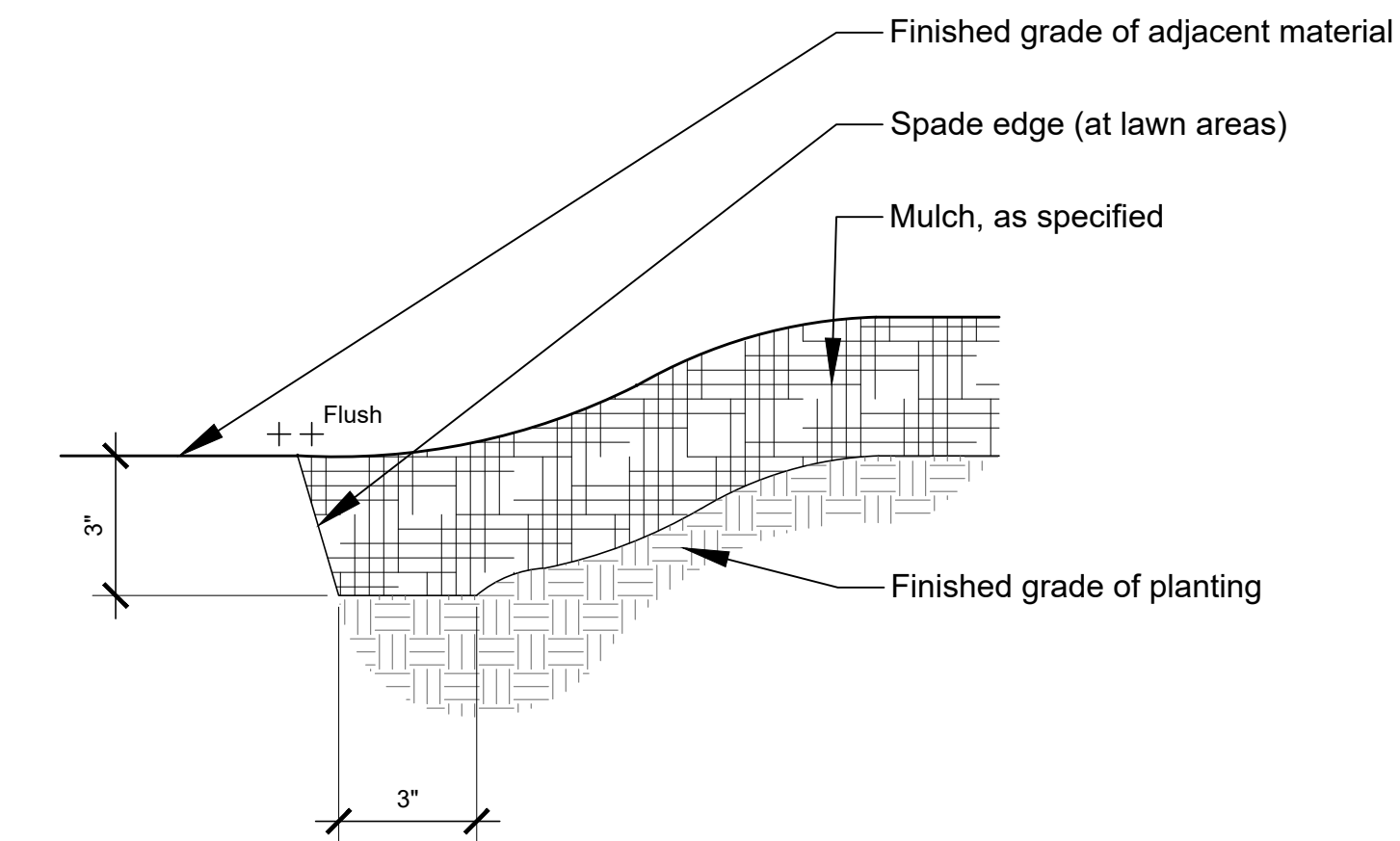
1 Deciduous Tree Planting

d-tree-dec
1/2" = 1'-0"



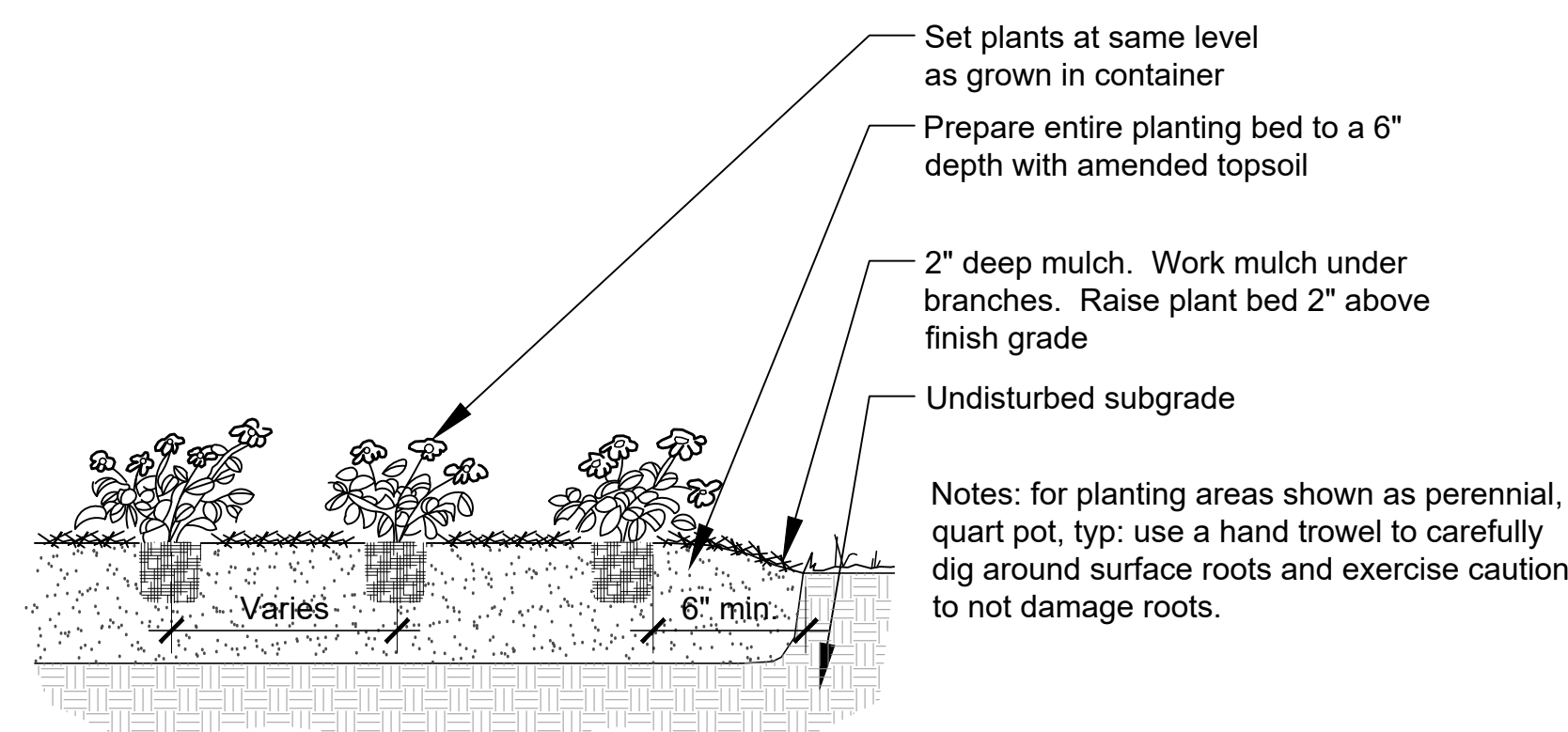
2 Shrub Planting

d-shrub
1/2" = 1'-0"



4 Planting Bed / Mulch Ring

SCALE: 3" = 1'-0" d-mulch trench



3 Annual and Perennial Planting

d-annual-perennial
1/2" = 1'-0"

PLANT MATERIAL LIST

Code	Botanical Name	Common Name	Size	Qty	Notes
Deciduous Shrubs					
AMM24	Aronia melanocarpa 'Morton'	Iroquois Beauty™ Black Chokeberry*	24" HT	22	
HNC24	Hydrangea arborescens 'NCHA1'	Invincebelle Spirit Hydrangea	24" HT	15	
RHG24	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	24" HT	24	
Evergreen Shrubs					
JCK24	Juniperus chinensis 'Kallay Compact'	Kallay Compact Chinese Juniper	24" HT	14	
JSG24	Juniperus chinensis 'Sea Green'	Sea Green Chinese Juniper	24" HT	22	
TMV24	Taxus x media 'Everlow'	Everlow Anglojap Yew	24" HT	10	
Perennials					
ATS6	Allium tanguticum 'Summer Beauty'	Summer Beauty Ornamental Chive	1 GAL	52	18" O.C.
AHK6	Amsonia hubrichtii 'Halfway to Arkansas'	'Halfway to Arkansas' Narrow Leaf Blue Star	1 GAL	34	24" O.C.
CAK6	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 GAL	32	1 GAL
NFW6	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	1 GAL	18	1 GAL
PVR6	Panicum virgatum 'Rostrahibusch'	Red Switch Grass	1 GAL	34	1 GAL
RSV6	Rudbeckia speciosa 'Viette's Little Suzy'	Viette's Little Suzy Black-eyed Susan	1 GAL	56	18" O.C.
SBH6	Salvia x sylvestris 'Blue Hill'	Blue Hill Salvia	1 GAL	30	18" O.C.
SEF6	Salvia x sylvestris 'Ostfriesland'	East Friesland Salvia	1 GAL	30	18" O.C.
SES6	Sesleria autumnalis	Autumn Moor Grass	1 GAL	12	18" O.C.
SHE6	Sporobolus heterolepis	Prairie Dropseed	1 GAL	25	1 GAL

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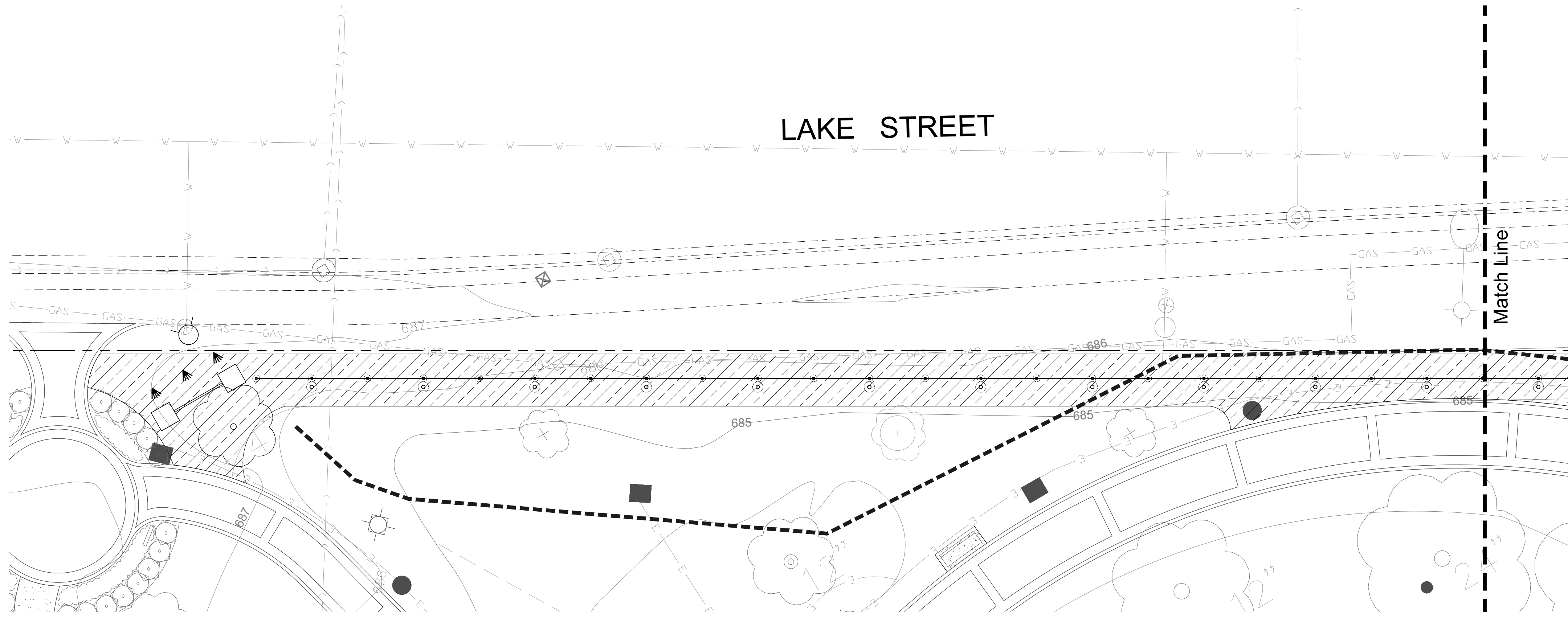
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SHEET TITLE
Planting Details

SCALE IN FEET
as noted

NORTH SHEET NUMBER

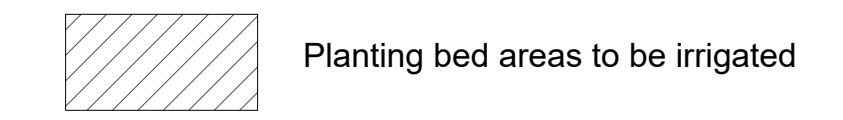
07



IRRIGATION NOTES

1. Submit shop drawings for a complete and functional irrigation system. System to provide head to head spacing with 100% coverage within areas shown on the irrigation plan.
2. Tie into existing irrigation system. Verify existing controller is expandable to accommodate additional valves. Coordinate electrical requirements and plumbing requirements with Owner's representative.
3. Locate all valves and quick couplers on the inside edge of all shrub beds where practical. Install valve boxes for both quick couplers and valves. Fill all Valve Boxes with pea gravel.
4. Obtain owner representative's approval of pipe trench and line layout prior to installation.
5. Confirm all quantities. Supply sufficient quantities to provide complete and functional irrigation.
6. All irrigation pipe shall be 1" min. diameter. All irrigation laterals to be class 160 PVC.
7. Irrigate lawn with HUNTER PROS-6-PRS40-CV 6" MP Nozzels, 40 psi, as applicable.
Irrigate planting beds with HUNTER PROS-12-PRS30-CV 12" Spray head with spray nozzle, 30 psi, as applicable.
8. Ensure that sprinkler heads do not spray walls, fences, sidewalks or streets.
9. Coordinate with other trades.
10. Provide sleeving as required.
11. Provide Owner as-built drawings of installed system.

IRRIGATION LEGEND



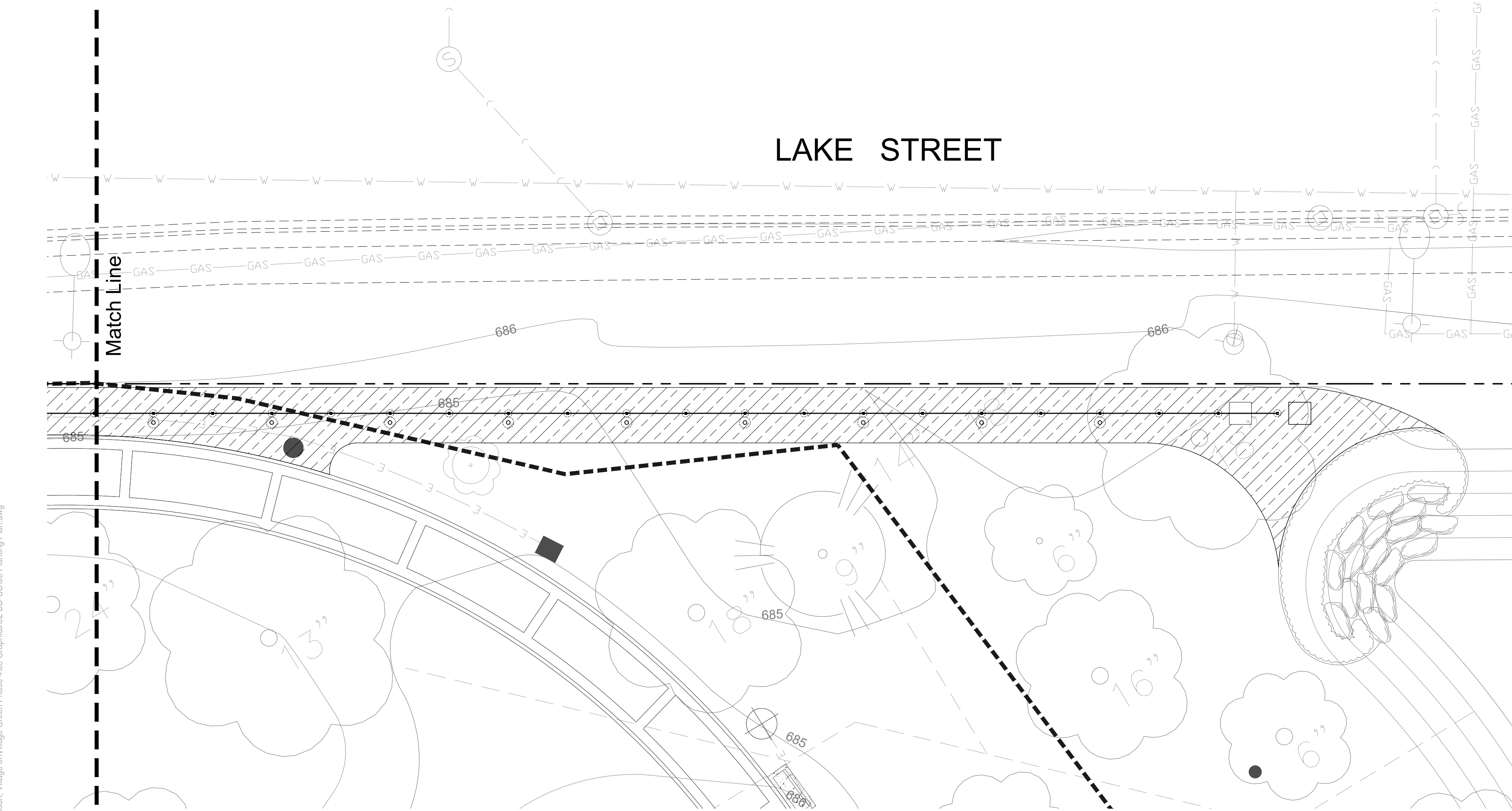
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**Village Green
Phase 4**

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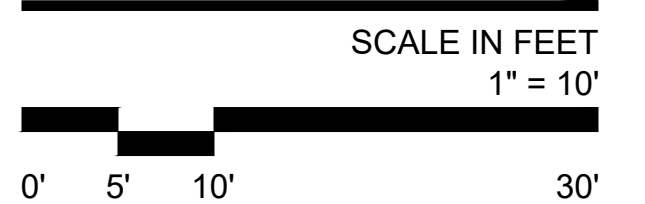
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SHEET TITLE
Irrigation Plan



SHEET NUMBER

08

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**Phase 3
Electrical Plans
for Reference
Only**


No	Date	Issue
1	8-18-2016	Addenda 1

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SHEET TITLE
**Electrical
Site Plan**

SCALE IN FEET
1" = 10'



NORTH



SHEET NUMBER

E1.0

GENERAL NOTES

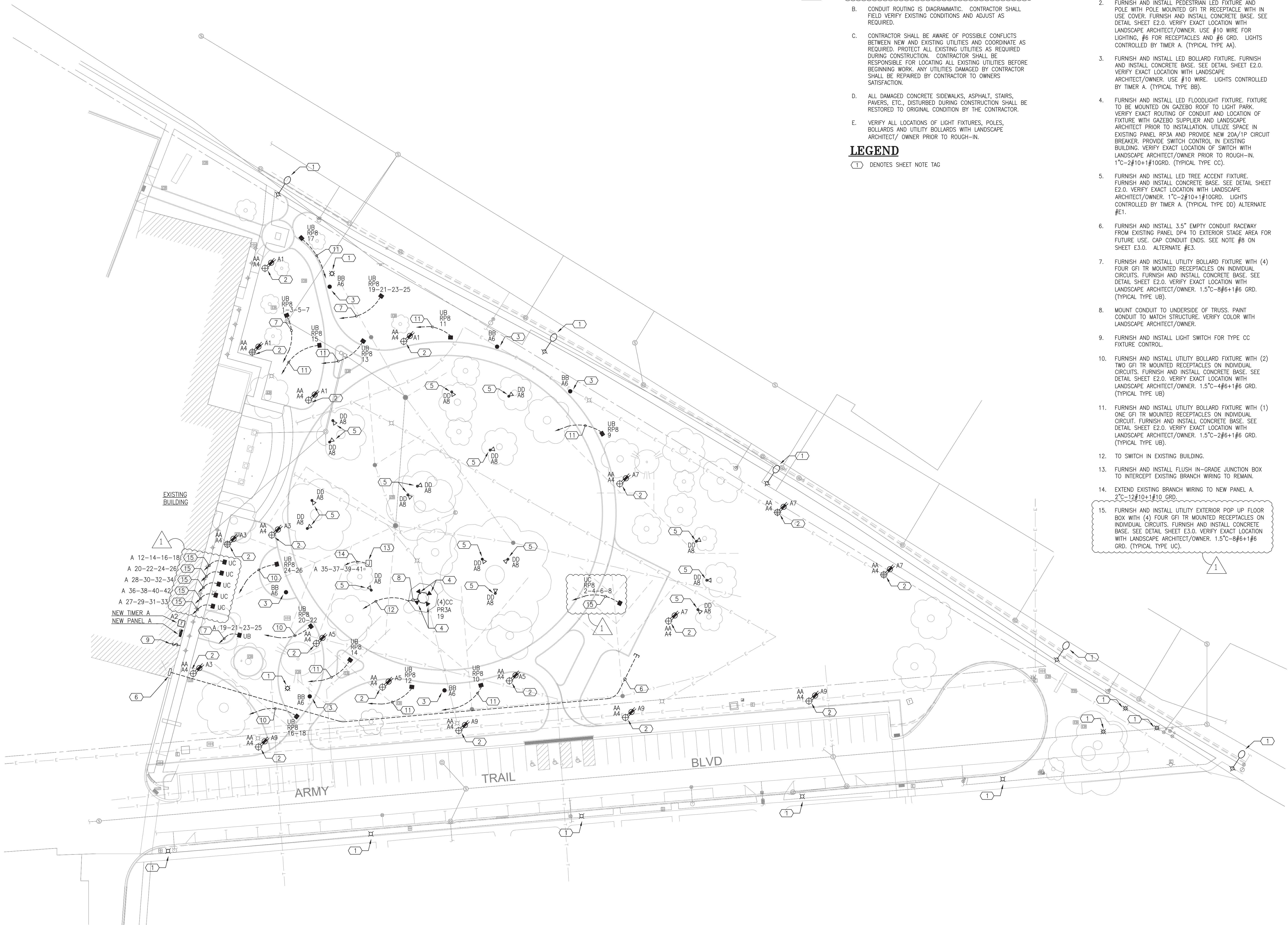
- A. DRAWINGS WERE DEVELOPED FOLLOWING THE 2011 NEC AND 2015 INTERNATIONAL ENERGY CONSERVATION CODE.
- B. CONDUIT ROUTING IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND ADJUST AS REQUIRED.
- C. CONTRACTOR SHALL BE AWARE OF POSSIBLE CONFLICTS BETWEEN NEW AND EXISTING UTILITIES AND COORDINATE AS REQUIRED. PROTECT ALL EXISTING UTILITIES AS REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES BEFORE BEGINNING WORK. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO OWNERS SATISFACTION.
- D. ALL DAMAGED CONCRETE SIDEWALKS, ASPHALT, STAIRS, PAVERS, ETC., DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR.
- E. VERIFY ALL LOCATIONS OF LIGHT FIXTURES, POLES, BOLLARDS AND UTILITY BOLLARDS WITH LANDSCAPE ARCHITECT/ OWNER PRIOR TO ROUGH-IN.

LEGEND

① DENOTES SHEET NOTE TAG

SHEET NOTES

1. EXISTING LIGHT TO REMAIN.
2. FURNISH AND INSTALL PEDESTRIAN LED FIXTURE AND POLE WITH POLE MOUNTED GFI TR RECEPTACLE WITH IN USE COVER. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E2.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. USE #10 WIRE FOR LIGHTING, #6 FOR RECEPTACLES AND #6 GRD. LIGHTS CONTROLLED BY TIMER A. (TYPICAL TYPE AA).
3. FURNISH AND INSTALL LED BOLLARD FIXTURE. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E2.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. USE #10 WIRE. LIGHTS CONTROLLED BY TIMER A. (TYPICAL TYPE BB).
4. FURNISH AND INSTALL LED FLOODLIGHT FIXTURE. FIXTURE TO BE MOUNTED ON GAZEBO ROOF TO LIGHT PARK. VERIFY EXACT ROUTING OF CONDUIT AND LOCATION OF FIXTURE WITH GAZEBO SUPPLIER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. UTILIZE SPACE IN EXISTING PANEL RP3A AND PROVIDE NEW 20A/1P CIRCUIT BREAKER. PROVIDE SWITCH CONTROL IN EXISTING BUILDING. VERIFY EXACT LOCATION OF SWITCH WITH LANDSCAPE ARCHITECT/OWNER PRIOR TO ROUGH-IN. 1" C-2#10+1#10GRD. (TYPICAL TYPE CC).
5. FURNISH AND INSTALL LED TREE ACCENT FIXTURE. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E2.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. 1" C-2#10+1#10GRD. LIGHTS CONTROLLED BY TIMER A. (TYPICAL TYPE DD) ALTERNATE #E1.
6. FURNISH AND INSTALL 3.5" EMPTY CONDUIT RACEWAY FROM EXISTING PANEL DP4 TO EXTERIOR STAGE AREA FOR FUTURE USE. CAP CONDUIT ENDS. SEE NOTE #6 ON SHEET E3.0. ALTERNATE #E3.
7. FURNISH AND INSTALL UTILITY BOLLARD FIXTURE WITH (4) FOUR GFI TR MOUNTED RECEPTACLES ON INDIVIDUAL CIRCUITS. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E2.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. 1.5" C-8#6+1#6 GRD. (TYPICAL TYPE UB).
8. MOUNT CONDUIT TO UNDERSIDE OF TRUSS. PAINT CONDUIT TO MATCH STRUCTURE. VERIFY COLOR WITH LANDSCAPE ARCHITECT/OWNER.
9. FURNISH AND INSTALL LIGHT SWITCH FOR TYPE CC FIXTURE CONTROL.
10. FURNISH AND INSTALL UTILITY BOLLARD FIXTURE WITH (2) TWO GFI TR MOUNTED RECEPTACLES ON INDIVIDUAL CIRCUITS. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E2.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. 1.5" C-4#6+1#6 GRD. (TYPICAL TYPE UB).
11. FURNISH AND INSTALL UTILITY BOLLARD FIXTURE WITH (1) ONE GFI TR MOUNTED RECEPTACLES ON INDIVIDUAL CIRCUIT. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E2.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. 1.5" C-2#6+1#6 GRD. (TYPICAL TYPE UB).
12. TO SWITCH IN EXISTING BUILDING.
13. FURNISH AND INSTALL FLUSH IN-GRADE JUNCTION BOX TO INTERCEPT EXISTING BRANCH WIRING TO REMAIN.
14. EXTEND EXISTING BRANCH WIRING TO NEW PANEL A. 2" C-12#10+1#10 GRD.
15. FURNISH AND INSTALL UTILITY EXTERIOR POP UP FLOOR BOX WITH (4) FOUR GFI TR MOUNTED RECEPTACLES ON INDIVIDUAL CIRCUITS. FURNISH AND INSTALL CONCRETE BASE. SEE DETAIL SHEET E3.0. VERIFY EXACT LOCATION WITH LANDSCAPE ARCHITECT/OWNER. 1.5" C-8#6+1#6 GRD. (TYPICAL TYPE UC).



SITE ELECTRICAL SPECIFICATIONS

GENERAL

1. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS NECESSARY TO PROVIDE A COMPLETE INSTALLATION OF THE SYSTEMS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
 2. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER AND COMPLY WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES AND ORDINANCES AND THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY. ALL EQUIPMENT SHALL BE UL, (OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY) LISTED. ALL DRAWINGS ARE DIAGRAMATIC IN NATURE. CONTRACTOR SHALL INSTALL SYSTEMS TO MEET FIELD CONDITIONS. CONTRACTOR SHALL COORDINATE ALL WORK WITH RESPECTIVE TRADES, AND VERIFY LOCATIONS FROM THE ARCHITECTURAL DRAWINGS, SUPPLIER DRAWINGS, AND FIELD DIMENSIONS.
 3. CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF THE WORK AND THE WORKING CONDITIONS.
 4. THE DRAWINGS AND SPECIFICATIONS HAVE BEEN DEVELOPED FOR ONE (1) PRIME CONTRACTOR. THEY ARE NOT INTENDED TO DIVIDE THE WORK BETWEEN CONTRACTORS. COORDINATE INTERFACES WITH GENERAL CONTRACTOR.
 5. CONTRACTOR SHALL VERIFY ALL ELECTRICAL REQUIREMENTS FOR THE FOLLOWING EQUIPMENT WITH THE ASSOCIATED VENDOR AND/OR CONTRACTOR AND THE AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN:
- A. LIGHTS
B. UTILITY BOLLARDS

PERMITS

OBTAIN AND PAY FOR ALL LICENSES, PERMITS AND INSPECTIONS FOR ALL WORK COVERED BY THIS CONTRACT. ALL CERTIFICATES OF INSPECTION SHALL BE DELIVERED TO THE OWNER.

CONSTRUCTION POWER

PROVIDE TEMPORARY POWER AND LIGHTING FOR THE JOB SITE DURING CONSTRUCTION.

ELECTRICAL TIE-INS

COORDINATE WITH THE BUILDING OWNER FOR THE FURNISHING OF ELECTRICAL POWER FOR THE PROJECT

OPENINGS

1. PROVIDE ALL REQUIRED OPENINGS THROUGH WALLS, CEILINGS AND FLOORS. ALL DISTURBED SURFACES OR FINISHES MUST BE REPLACED OR REPAIRED TO THE ARCHITECT'S SATISFACTION.
2. FIRE SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS.

CONDUIT

1. ALL ELECTRICAL WORK SHALL BE INSTALLED IN A METAL CONDUIT SYSTEM, INCLUDING LOW VOLTAGE WIRING.
2. SERVICE CONDUIT AND CONDUIT EXPOSED TO WEATHER SHALL BE RIGID GALVANIZED STEEL.
3. UNDERGROUND FEEDER AND UNDERGROUND BRANCH CONDUITS SHALL BE RIGID GALVANIZED STEEL OR SCHEDULE 40 PVC AS PERMITTED BY CODE. RIGID GALVANIZED STEEL CONDUIT SHALL BE USED FOR MAKING FINAL TURNS OUT OF EQUIPMENT PADS AND FINISHED FLOOR. UNDERGROUND CONDUITS SHALL BE INSTALLED 36" BELOW GRADE.
4. ALL CONDUIT IN DRY LOCATIONS SHALL BE EMT. ALL CONDUIT IN WET LOCATIONS SHALL BE RIGID GALVANIZED STEEL.
5. MINIMUM SIZE CONDUIT ABOVE GRADE SHALL BE 1/2". MINIMUM SIZE CONDUIT BELOW GRADE SHALL BE 3/4".
6. ALL CONDUITS SHALL BE INDEPENDENTLY SUPPORTED. CONDUITS SHALL NOT BE SUPPORTED FROM MECHANICAL SYSTEMS OR CEILING SUSPENSION WIRES.
7. ALL CONDUITS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE. WHERE EXPOSED, CONDUITS SHALL BE RUN IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO BUILDING CONSTRUCTION.
8. END OF CONDUIT SHALL BE CAPPED FOR SPARE CONDUITS.

WIRE (120V AND ABOVE):

1. ALL WIRE SHALL BE COPPER WITH 600V INSULATION. CONDUCTORS SHALL BE STRANDED FOR SIZES NO. 8 AWG AND LARGER, SOLID FOR SIZES NO. 10 AWG AND SMALLER.
2. TYPE THWN SHALL BE USED INDOORS NOT INCLUDING SERVICES.
3. TYPE XHHW SHALL BE USED BELOW SLABS, SERVICE ENTRANCES AND EXTERIOR UNDERGROUND WORK, INCLUDING SITE LIGHTING.
4. MINIMUM SIZE SHALL BE #12. RUNS OVER 75' SHALL BE MINIMUM #10 UNLESS NOTED OTHERWISE.

SPLICES AND TERMINATIONS

1. ALL SPLICES AND PIGTAIL CONNECTIONS FOR INDOOR AND DRY LOCATIONS FOR CABLE SIZES NUMBER 10 AWG AND SMALLER SHALL BE MADE UP WITH PREINSULATED SPRING CONNECTORS, 3M COMPANY "SCOTCHLOCK," IDEAL INDUSTRIES, INC., WIRENTS, OR APPROVED EQUAL. SPLICES FOR CABLE SIZES NUMBER 8 AWG AND LARGER SHALL BE BUILT SPLICE TYPE CONSISTING OF LONG BARREL COPPER ONLY TYPE COMPRESSION CONNECTOR. SPLICE SHALL BE COVERED WITH EITHER A COLD SHRINK CONNECTOR INSULATOR OR HEAT SHRINK CONNECTOR INSULATOR.
2. ALL SPLICES OUTDOORS, ABOVE GRADE, SUCH AS IN LIGHT POLES, SHALL BE A WATERPROOF TWIST CONNECTOR. IDEAL WEATHERPROOF OR EQUAL.
3. ALL SPLICES OUTDOORS BELOW GRADE, SUCH AS IN UNDERGROUND PULL BOXES, SHALL BE MADE USING MOISTURE RESISTANT GEL ENCAPSULATED SPLICE KIT. ACCEPTABLE MANUFACTURERS SHALL BE RAYCHEM, BURNDY OR 3M.

BRANCH WIRING:

1. CONDUITS AND BOXES SHALL BE CONCEALED WHEREVER POSSIBLE.
2. CONNECT EQUIPMENT AND DEVICES TO THE CIRCUITS AND SWITCH LEGS SHOWN.
3. ARCS SHOWN ON DRAWINGS REPRESENT SWITCH ARRANGEMENT ONLY, AND ARE NOT INTENDED TO SHOW CONDUIT ROUTINGS.
4. EACH CIRCUIT SHALL HAVE AN INDEPENDENT NEUTRAL.
5. AMPACITIES OF CONDUCTORS WHEN MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS ARE PLACED IN A RACEWAY SHALL BE DERATED PER CODE.
6. WHERE WIRE SIZES MUST BE INCREASED TO LIMIT VOLTAGE DROP, CONTRACTOR SHALL COORDINATE TERMINAL SIZES AT TERMINATIONS.

WIRING DEVICES:

1. WIRING DEVICES SHALL BE 20 AMPERE, UL/FED SPEC LISTED, BACK AND SIDE WIRED, WITH COLOR AS SELECTED AND APPROVED BY THE ARCHITECT.
2. COVER PLATES IN FINISHED AREAS SHALL BE NYLON WITH COLOR AS SELECTED AND APPROVED BY THE ARCHITECT. PROVIDE COMMON COVER PLATE FOR GANGED DEVICES. COVERS FOR SURFACE MOUNTED BOXES SHALL BE APPROPRIATE FOR THE BOX TYPE.
3. CONDUCTORS SHALL BE ATTACHED TO DEVICES BY MEANS OF SCREW TERMINALS OR SCREW CLAMPS.
4. WIRING DEVICES SHALL BE HUBBELL OR PASS & SEYMOUR CONSTRUCTION SERIES.

LIGHTING FIXTURES:

1. FURNISH FIXTURES AND LAMPS AS SPECIFIED IN THE FIXTURE SCHEDULE. LAMPS SHALL BE 4000 DEG K WITH A MINIMUM CRI OF 82.

SITE LIGHTING

1. FUSE HOLDERS AND FUSES SHALL BE PROVIDED FOR ALL UNGROUNDED CONDUCTORS IN THE BASE OF EACH EXTERIOR SITE LIGHTING POLE. THE ASSEMBLY SHALL BE PROVIDED WITH INSULATING BOOTS.
2. FUSE HOLDERS USED IN MULTI-POLE APPLICATIONS, SUCH AS A 480 VOLT PHASE-TO-PHASE FEED TO A 480 VOLT LOAD, SHALL BE OF THE MULTI-POLE TYPE SO THAT ALL PHASE CONDUCTORS ARE DISCONNECTED AT THE SAME TIME.
3. FUSE HOLDERS FOR NEUTRAL CONDUCTORS SHALL HAVE A PERMANENTLY-INSTALLED SOLID NEUTRAL CONDUCTOR AND A WHITE PLASTIC COUPLING NUT AND SCREW SECTION.
4. THE TERMINALS AND THE CONTACTS IN THE FUSEHOLDER SHALL BE MADE OF ANNEALED COPPER. THE CONTACTS SHALL BE SPRING LOADED TO EXERT CONTACT PRESSURE ON MATING PARTS. THE UNIT SHALL HAVE AN "O" RING WHICH SHALL PROVIDE A WATER AND VAPORTIGHT SEAL WHEN THE SECTIONS ARE JOINED.

5. FUSES SHALL BE RATED FOR 600 VOLTS, AC SMALL-DIMENSION CYLINDRICAL FUSES OF THE FAST-ACTING TYPE WITH CURRENT LIMITING CHARACTERISTICS. FUSES SHALL BE 10 AMPERE.

TIMER A:

1. TIMER SHALL BE ELECTRONIC ASTRONOMIC, FULL YEAR, WITH NUMBER OF CHANNELS AND VOLTAGE RATINGS AS INDICATED ON THE DRAWINGS.
2. TIMER SHALL BE ENCLOSED IN A LOCKABLE NEMA 1 ENCLASURE FOR INDOOR APPLICATIONS AND NEMA 3R ENCLASURE FOR OUTDOOR APPLICATIONS.
3. TIMER SHALL BE TORX ELC SERIES OR EQUAL.

DISCONNECT SWITCHES:

1. DISCONNECT SWITCHES SHALL BE UL LISTED, HEAVY DUTY, HORSEPOWER RATED, FUSIBLE OR NON-FUSIBLE AS INDICATED ON THE DRAWINGS.
2. DISCONNECT SWITCHES SHALL BE RATED AT 600 VOLTS FOR 480 VOLTS AC CIRCUITS AND 240 VOLTS AC FOR 208 VOLTS AC AND 120 VOLTS AC CIRCUITS.
3. DISCONNECT SWITCHES SHALL HAVE A SHORT-CIRCUIT RATING OF 100,000 AMPERES RMS.
4. DISCONNECT SWITCHES SHALL HAVE THE PROPER NEMA RATING FOR THE AREA IN WHICH THEY ARE INSTALLED.
5. EACH DISCONNECT SWITCH SHALL HAVE AN EXTERNAL HANDLE THAT CAN BE PADLOCKABLE IN THE "OFF" POSITION. THE HANDLE OPERATION SHALL BE NON-TEASIBLE, QUICK MAKE-QUICK BREAK.
6. ALL CURRENT CARRYING PARTS SHALL BE COPPER. LUGS SHALL BE UL LISTED, MECHANICAL WITH SADDLES, CAST COPPER.
7. MANUFACTURED BY GE "TH" SERIES, SQUARE D "H" SERIES, OR SIEMENS "VB-2" SERIES.

PANELBOARDS:

1. ALL BUSSES SHALL BE COPPER.
2. BRANCH BREAKERS SHALL BE PLUG-IN TYPE, OR BOLT-ON IF REQUIRED BY LOCAL CODES.
3. PROVIDE NAMEPLATE FOR PANEL AND TYPEWRITTEN DIRECTORY FOR EACH PANELBOARD.
4. PANELBOARDS SHALL BE MANUFACTURED BY SQUARE D. LOAD CENTERS ARE NOT ACCEPTABLE.

GROUNDING:

1. GROUNDING SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITY, WITH CONDUIT AND CABLE CONNECTION TO BUILDING STEEL, METAL PIPING SYSTEMS AND GROUND ROD.
2. INTERIOR METAL WATER PIPING MORE THAN 5 FEET FROM POINT OF BUILDING ENTRANCE SHALL NOT BE USED AS PART OF THE GROUNDING ELECTRODE SYSTEM OR AS A CONDUCTOR TO INTERCONNECT ELECTRODES THAT ARE PART OF GROUNDING SYSTEM.
3. PROVIDE A SEPARATE, INSULATED GROUNDING CONDUCTOR IN EACH FEEDER AND BRANCH CONDUIT, BONDED AT EACH TERMINATION.

RENOVATION/DEMOLITION:

1. EXISTING GROUNDING SYSTEM SHALL BE TESTED AND THE NECESSARY CORRECTIONS SHALL BE MADE TO BRING THE GROUNDING SYSTEM INTO CODE COMPLIANCE.
2. ALL EXISTING ELECTRICAL EQUIPMENT, DEVICES AND JUNCTION BOXES BEING REMOVED MUST BE DEACTIVATED AND THE WIRING SHALL BE REMOVED BACK TO THE NEAREST DEVICE THAT IS CONNECTED TO THE SAME CIRCUIT THAT IS TO REMAIN.
3. ALL EXISTING CONDUIT MUST BE REMOVED FROM THE DEVICE BEING REMOVED TO THE NEAREST DEVICE NOT BEING REMOVED OR BACK TO A POINT WHERE THE CONDUIT ENTERS A WALL, FLOOR OR CEILING NOT BEING REMOVED.
4. REMOVE INDICATED EXISTING ELECTRICAL DEVICES AS SHOWN AND PROVIDE COVER PLATES.
5. THE EXISTING EQUIPMENT MUST REMAIN IN OPERATION DURING CONSTRUCTION. RECONNECT OR TEMPORARILY FEED EXISTING EQUIPMENT.
6. THE OWNER MUST APPROVE ANY REQUIRED OUTAGES TO UPGRADE SERVICE OR TO INSTALL EQUIPMENT.

IDENTIFICATION

1. THE CONTRACTOR SHALL LABEL EQUIPMENT WITH 1/2" DYMO TAPE.
2. ALL MAJOR ELECTRICAL EQUIPMENT SHALL BE IDENTIFIED WHICH SHALL INCLUDE MDP, PANELBOARDS, MOTOR STARTERS, DISCONNECT SWITCHES, SWITCHES, ETC.
3. PROTECTIVE DEVICES IN MDP'S SHALL BE LABELED WITH THE LOAD SERVED.
4. PROVIDE PANEL AND CIRCUIT NUMBER IDENTIFICATION ON ALL JUNCTION AND PULL BOXES.
5. APPLY THE FACTORY SUPPLIED ARC FLASH WARNING LABELS TO ALL SWITCHBOARDS AND PANELS AS REQUIRED PER NEC 110.16.
6. PROVIDE CIRCUIT IDENTIFICATION ON COVER PLATES.
7. PROVIDE NEW TYPEWRITTEN SCHEDULES FOR PANELBOARDS.

AS-BUILT DRAWINGS:

1. PROVIDE AS-BUILT DRAWINGS

TESTS:

1. UPON COMPLETION OF WORK, TEST EACH SYSTEM TO BE FREE OF GROUNDS AND/OR FAULTS. TEST FOR PROPER OPERATION. IF ANY DEFECTS ARE FOUND, TAKE IMMEDIATE ACTION TO REMEDY.
2. CHECK ALL FIXTURES FOR BURNT OUT OR DAMAGED LAMPS AND REPLACE.

GUARANTEE:

CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WIRING TO BE FREE FROM MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE.

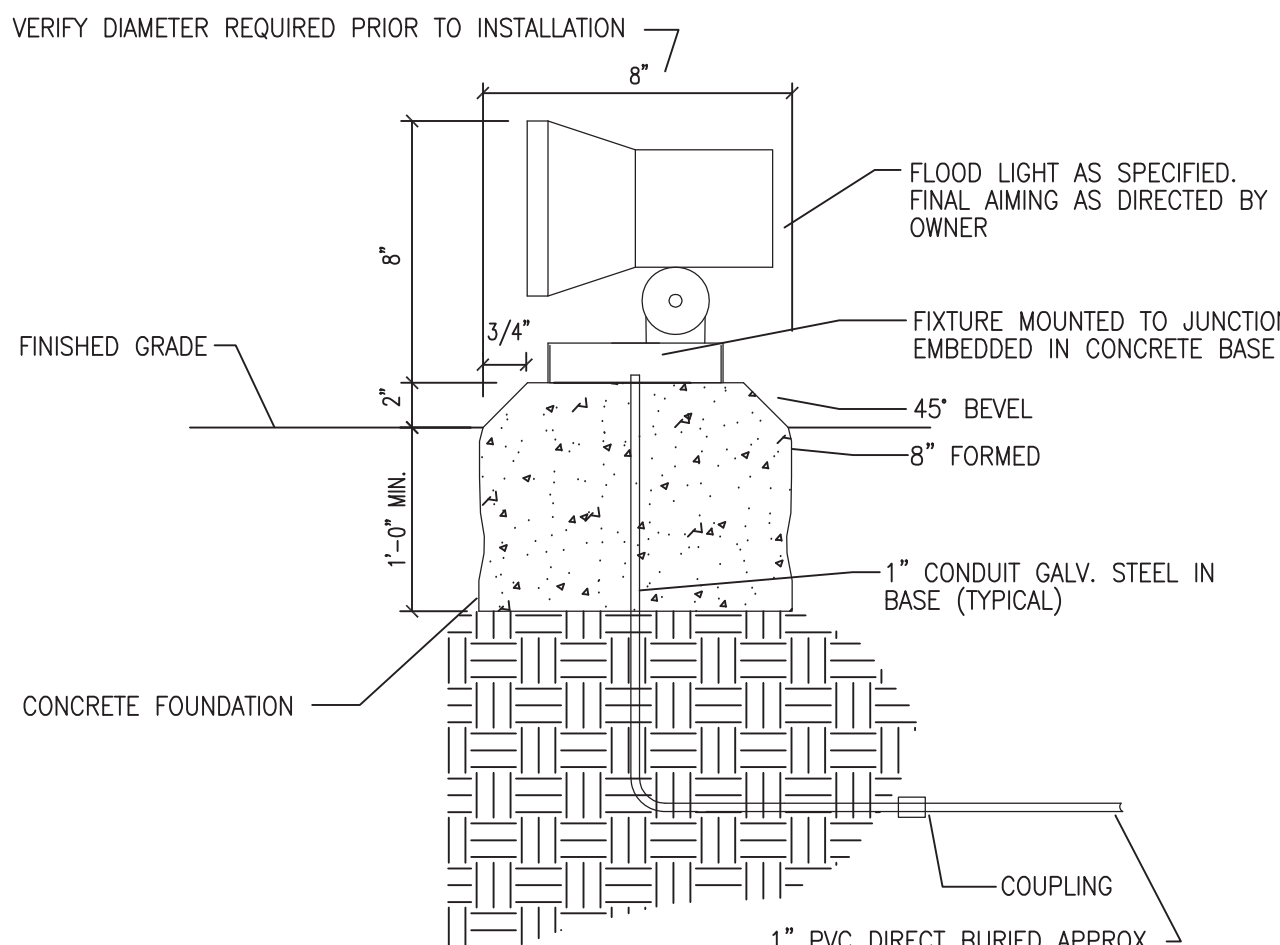
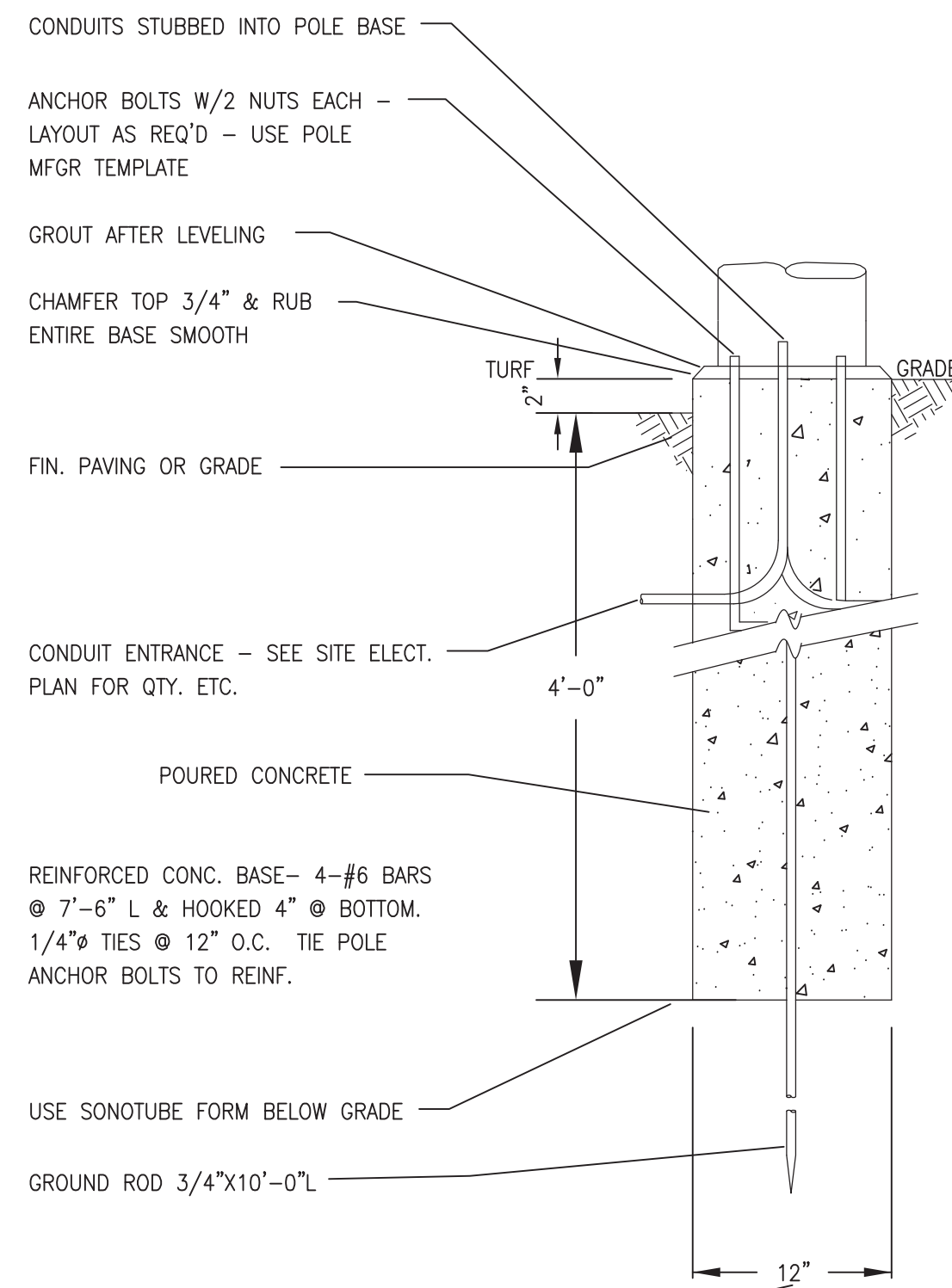
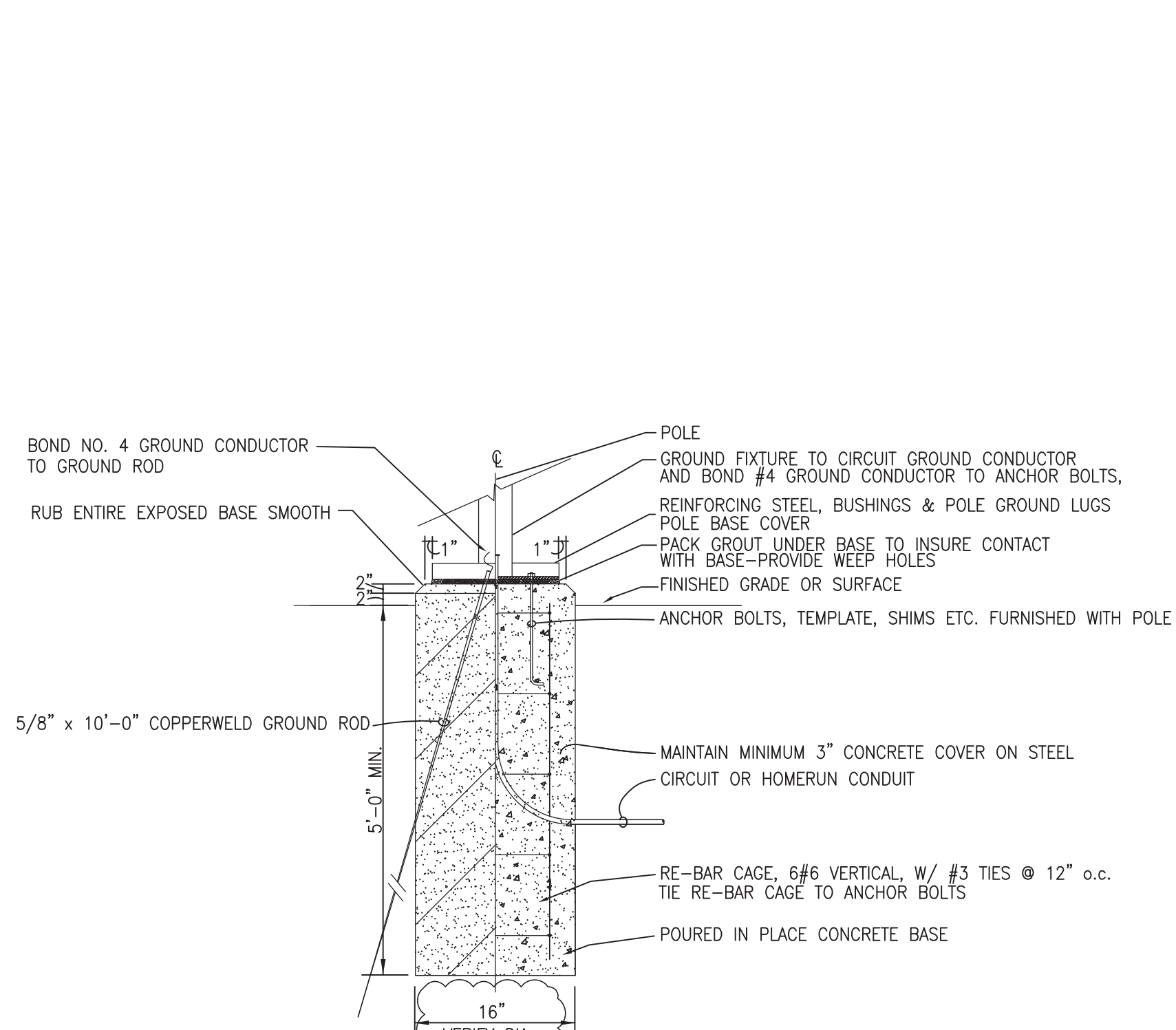
SHOP DRAWINGS

SUBMIT SHOP DRAWINGS FOR THE FOLLOWING EQUIPMENT FOR APPROVAL BY THE ENGINEER:

1. PANELBOARDS
2. WIRING DEVICES
3. LIGHT FIXTURES
4. AUTOMATIC TRANSFER SWITCH
5. EXTERIOR LIGHT FIXTURES AND POLES
6. RECEPTACLE WEATHERPROOF COVERS
7. TIMER

AUTOMATIC TRANSFER SWITCH FOR GENERATOR:

1. AUTOMATIC TRANSFER SWITCH SHALL BE 600A, 600V (MIN) 3 POLE, SOLID NEUTRAL, ELECTRICALLY OPERATED AND MECHANICALLY HELD.
2. WEEKLY EXERCISER.
3. INDICATING LIGHTS FOR SWITCH POSITION - NORMAL, EMERGENCY AND STANDBY OPERATING
4. NEMA 1 ENCLASURE
5. PROVIDE AUXILIARY CONTACTS TO INDICATE SWITCH POSITION. TWO CONTACTS FOR NORMAL POSITION AND TWO CONTACTS FOR EMERGENCY POSITION.
6. THREE-POSITION SWITCH - FAST TEST, AUTO, NORMAL TEST
7. SYSTEM SHALL BE INSTALLED PER MFR'S RECOMMENDATIONS.
8. ASCO, CUMMINS, OR GENERAC.



FIXTURE SCHEDULE

ALL FIXTURE FINISHES SHALL BE SELECTED BY OWNER/ ARCHITECT.

TYPE AA
LED PEDESTRIAN FIXTURE AND POLE. 72W LED LAMP, COLOR 4000K, 4510 LUMENS, BASE COVER, CONCRETE BASE SEE DETAIL, * FINISH AS SELECTED BY ARCHITECT.
FIXTURE: AMERICAN ELECTRIC LIGHTING (AEL) AMERICAN REVOLUTION #247L ZOLEDE10 MOLT 4K 83 AY * NR
POLE: VILLAGE OF ADDISON STANDARD 12 FOOT HIGH DECORATIVE POLE W/ HIGH MOUNTED GFI RECEPTACLE - GE #AR1A12355.OASNX * T W/ TRANSFORMER BASE (VERIFY EXACT MANUFACTURER, STYLE AND POLE HEIGHT WITH VILLAGE OF ADDISON PRIOR TO CONSTRUCTION)

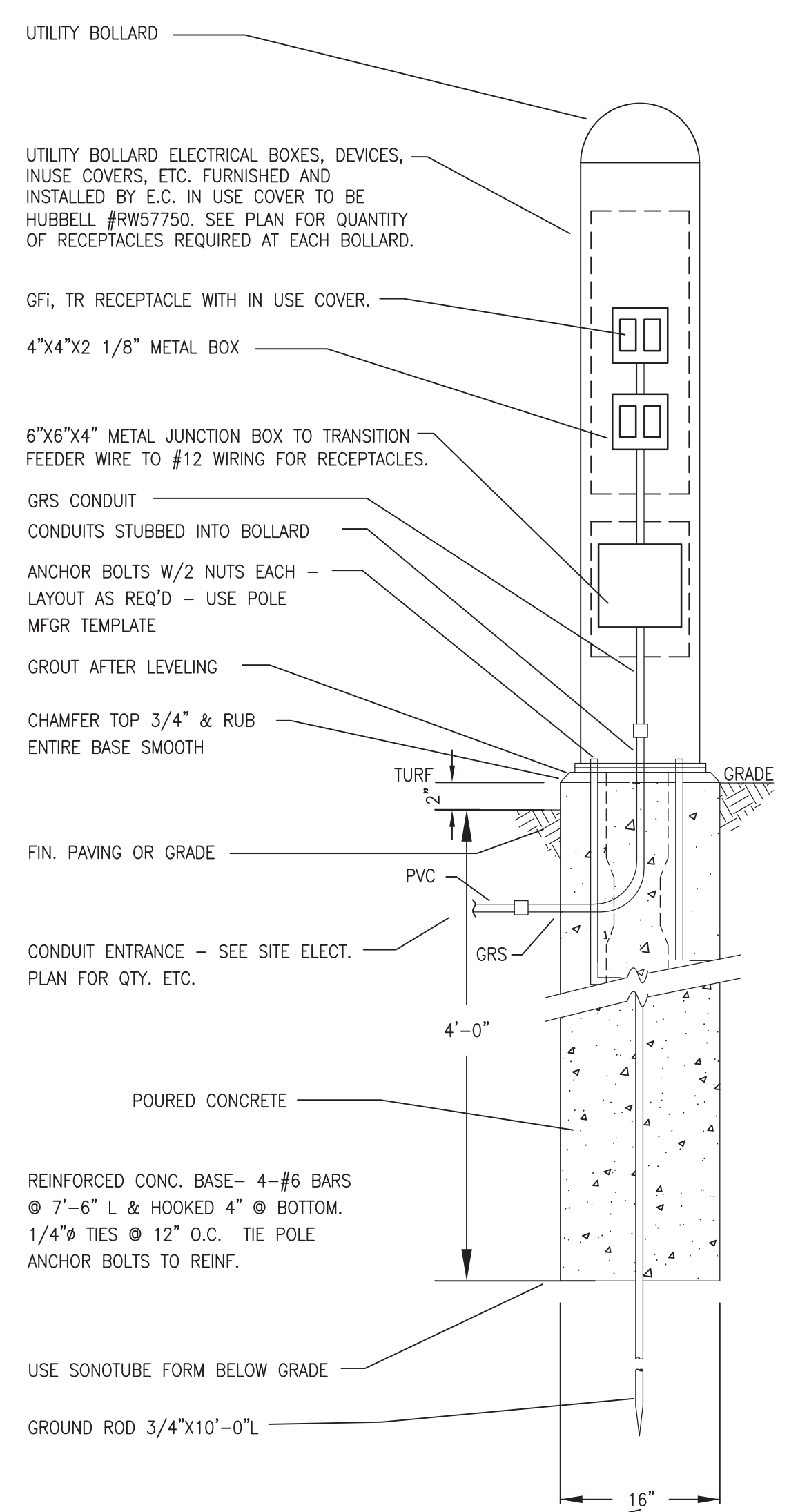
TYPE BB
LED BOLLARD FIXTURE, 37W LED LAMP, COLOR 4000K, 1634 LUMENS, CONCRETE BASE SEE DETAIL. * FINISH AS SELECTED BY ARCHITECT.
HESSAMERICA - MONTEGO #MT1100 LED NW UNV D *

TYPE CC
1 - HEAD SECURITY LED FLOOD FIXTURE, 75.6W LED LAMP, COLOR 4000K, 7442 LUMENS, * FINISH AS SELECTED BY ARCHITECT.
BEGA #77434 LED 120V * GLARE SHIELD - #19593 SURFACE MOUNTED CONDUIT WIRING BOX

TYPE DD
1 - HEAD TREE ACCENT LED FLOOD FIXTURE, 19.6W LED LAMP, COLOR 4000K, 1117 LUMENS, CONCRETE BASE SEE DETAIL, * FINISH AS SELECTED BY ARCHITECT.
BEGA #77681 LED 120V * GLARE SHIELD

UTILITY BOLLARD
UTILITY BOLLARD - PROVIDE FREE STANDING PEDESTAL MOUNT WHILE IN USE UTILITY BOLLARD WITH EACH GFI TR RECEPTACLE (QUANTITY AS NOTED) ON INDIVIDUAL CIRCUITS, CAST ALUMINUM, PEDESTAL MOUNT, AND WEATHERPROOF LOCKABLE ENCLOSURE. PROVIDE CONCRETE BASE SEE DETAIL. VERIFY EXACT LOCATION AND * FINISH WITH LANDSCAPE ARCHITECT.
HESSAMERICA - TOLEDO #TOL250 250 GS PB *

TYPE UB
UTILITY BOX - PROVIDE EXTERIOR FLUSH MOUNT PULL-UP FLOOR BOX WITH (4) FOUR GFI TR RECEPTACLES WITH WEATHERPROOF COVERS, 120V (QUANTITY AS NOTED) ON INDIVIDUAL CIRCUITS, STAINLESS STEEL, 12" DIA COVER 8" DIA BOX X 20" DEEP, GASKETED WEATHERPROOF LOCKABLE ENCLOSURE. PROVIDE CONCRETE BASE 18" DIAMETER 48" DEEP. EXTEND 1.5" PERFORATED DRAIN OUTSIDE BASE INTO GRAVEL. VERIFY EXACT LOCATION AND * FINISH WITH LANDSCAPE ARCHITECT.
COMBINED UTILITIES BOX SYSTEMS #CUB-PU-(4)20-SS EXTERIOR POP UP FB *



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Phase 3
Electrical Plans
for Reference
Only

August 18, 2016

REVISIONS

No	Date	Issue
1	8-18-2016	Addenda 1

CHECKED BY MZ DRAWN BY RB

SHEET TITLE
Electrical Schedules & Details

SCALE IN FEET

NORTH
SHEET NUMBER

E2.0

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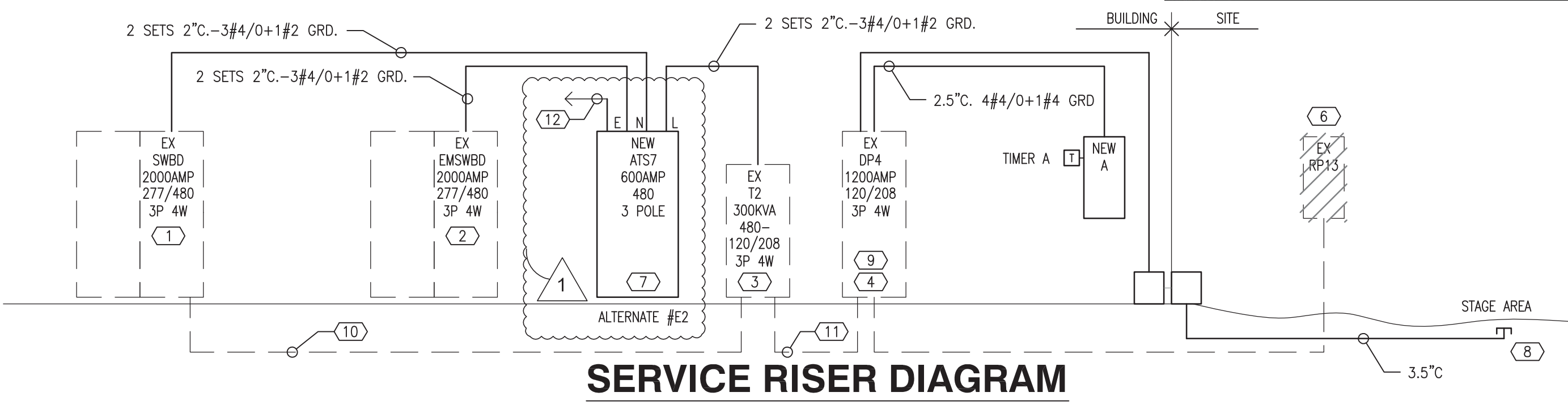
PANELBOARD EXISTING RP-8						
VOLTAGE: 208/120V, 3 PHASE, 4 WIRE						
MAIN: 200A MCB						
MOUNTING: SURFACE						
CKT NO.	LOAD DESCRIPTION EXISTING USE	LOAD DESCRIPTION NEW USE	C/B	LOAD VA		
				A	B	C
1	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
3	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
5	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
7	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
9	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
11	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
13	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
15	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
17	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
19	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
21	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
23	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
25	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
27	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
29	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
31	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
33	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
35	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
37	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
39	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
41	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
2	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
4	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
6	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
8	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
10	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
12	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
14	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
16	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
18	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
20	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
22	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P		180	
24	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P			180
26	EXISTING CUBE RECEPTACLES	UTILITY BOLLARD	20A1P	180		
28	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
30	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
32	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
34	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
36	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
38	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
40	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
42	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			

PANELBOARD EXISTING RP-9						
VOLTAGE: 208/120V, 3 PHASE, 4 WIRE						
MAIN: 200A MCB						
MOUNTING: SURFACE						
CKT NO.	LOAD DESCRIPTION EXISTING USE	LOAD DESCRIPTION NEW USE	C/B	LOAD VA		
				A	B	C
1	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
3	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
5	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
7	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
9	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
11	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
13	EXISTING CUBE RECEPTACLES	SPARE	20A1P			
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17	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
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35	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
37	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
39	SPARE	SPARE	20A1P			
41	SPARE	SPARE	20A1P			
2	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
4	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
6	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
8	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
10	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
12	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
14	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
16	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
18	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
20	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
22	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
24	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
26	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
28	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
30	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
32	EXISTING CUBE RECEPTACLES	EXISTING CUBE RECEPTACLES	20A1P			
34	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
36	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
38	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
40	EXISTING EXTERIOR RECEPTACLES	EXISTING EXTERIOR RECEPTACLES	20A1P			
42	SPARE	SPARE	20A1P			

PANELBOARD A					
VOLTAGE: 208/120V, 3 PHASE, 4 WIRE					
MAIN: 225A MCB					
MOUNTING: SURFACE					
CKT NO.	LOAD DESCRIPTION	C/B	LOAD VA		
			A	B	C
1	TYPE AA RECEPTACLES	20A1P	720		
3	TYPE AA RECEPTACLES	20A1P		540	
5	TYPE AA RECEPTACLES	20A1P			720
7	TYPE AA RECEPTACLES	20A1P	540		
9	TYPE AA RECEPTACLES	20A1P		360	
11	SPARE	20A1P			
13	SPARE	20A1P			
15	RELOCATED RP13 CIRCUIT	20A1P		500	
17	RELOCATED RP13 CIRCUIT	20A1P			500
19	RELOCATED RP13 CIRCUIT	20A1P	180		
21	UTILITY BOLLARD	20A1P		180	
23	UTILITY BOLLARD	20A1P			180
25	UTILITY BOLLARD	20A1P	180		
27	UTILITY BOLLARD	20A1P		180	
29	UTILITY BOLLARD	20A1P			180
31	UTILITY BOLLARD	20A1P	180		
33	UTILITY BOLLARD	20A1P		180	
35	RELOCATED RP13 CIRCUIT	20A1P			500
37	RELOCATED RP13 CIRCUIT	20A1P		500	
39	RELOCATED RP13 CIRCUIT	20A1P			500
41	RELOCATED RP13 CIRCUIT	20A1P			500
2	TIMER	20A1P	200		
4	TYPE AA PEDESTRIAN LIGHTS	20A1P		1288	
6	TYPE BB BOLLARD LIGHTS	20A1P			222
8	TREE DD TREE ACCENT LIGHTS	20A1P	320		
10	SPARE	20A1P			
12	UTILITY BOLLARD	20A1P			180
14	UTILITY BOLLARD	20A1P	180		
16	UTILITY BOLLARD	20A1P		180	
18	UTILITY BOLLARD	20A1P			180
20	UTILITY BOLLARD	20A1P	180		
22	UTILITY BOLLARD	20A1P		180	
24	UTILITY BOLLARD	20A1P			180
26	UTILITY BOLLARD	20A1P	180		
28	UTILITY BOLLARD	20A1P		180	
30	UTILITY BOLLARD	20A1P			180
32	UTILITY BOLLARD	20A1P	180		
34	UTILITY BOLLARD	20A1P		180	
36	UTILITY BOLLARD	20A1P			180
38	UTILITY BOLLARD	20A1P	180		
40	UTILITY BOLLARD	20A1P		180	
42	UTILITY BOLLARD	20A1P			180
TOTALS PER PHASE			3720	4626	3882
TOTAL KVA				12.2	
MAXAMPS				39	

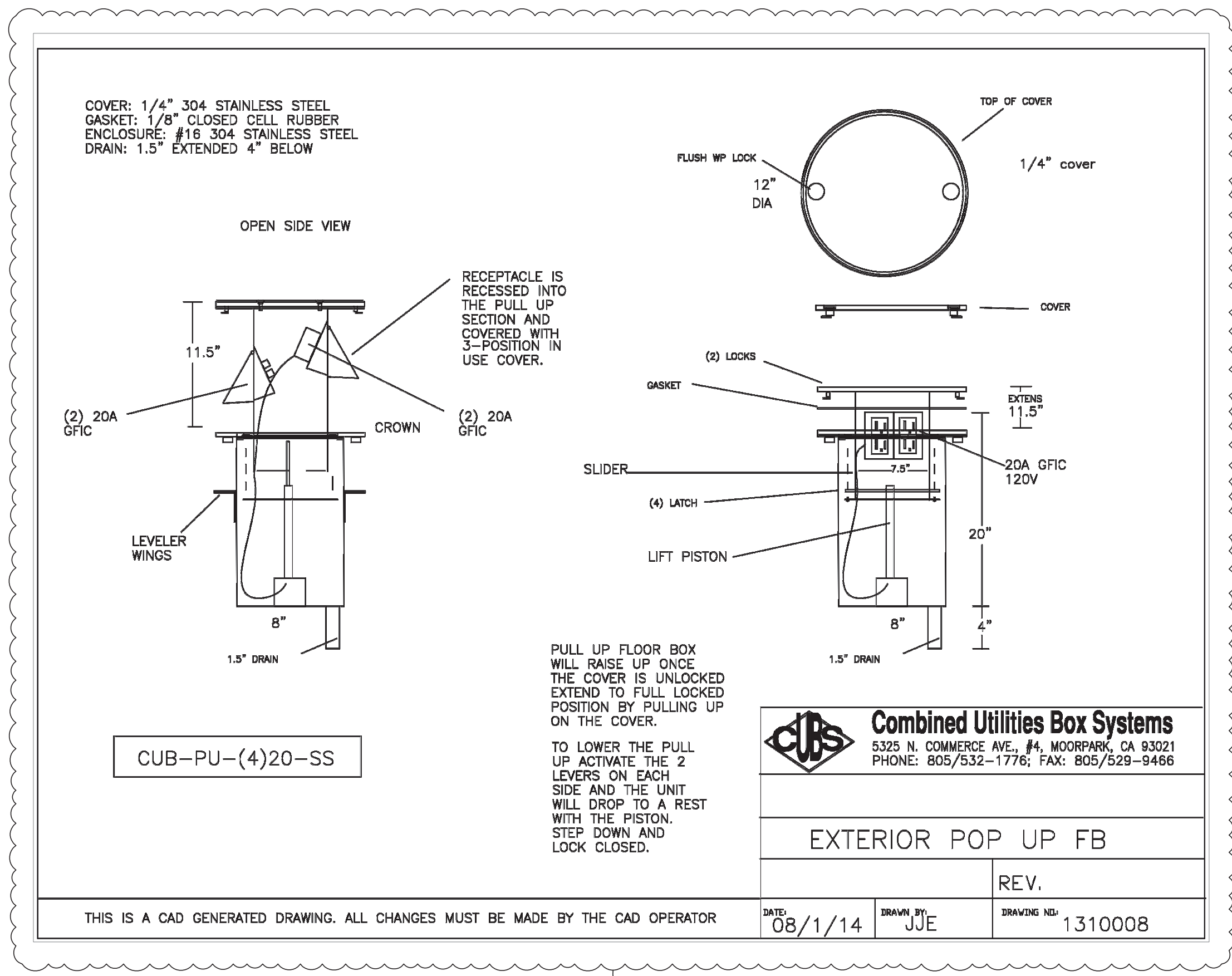
- ### SHEET NOTES (X)
- EXISTING SWBD TO REMAIN.
 - EXISTING EMSWBD TO REMAIN.
 - EXISTING TRANSFORMER TO REMAIN.
 - EXISTING DISTRIBUTION PANELBOARD TO REMAIN.
 - EXISTING ELECTRICAL EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
 - EXISTING EXTERIOR PANEL RP13 TO BE REMOVED AND EXISTING CIRCUITS TO REMAIN SHALL BE TRANSFERRED TO NEW INTERIOR PANEL A COMPLETE AS REQUIRED. REMOVE FEEDER CONDUIT AND WIRE BACK TO EXISTING PANEL DP4
 - NEW AUTOMATIC TRANSFER SWITCH (ATS7) - PROVIDE NEW 450A/3P CIRCUIT BREAKER IN EXISTING EMSWBD TO FEED NEW ATS7 (EMERGENCY). BREAKER SHALL HAVE THE SAME FAULT RATING AS EXISTING BREAKERS. PROVIDE 450A/3P BREAKER IN EXISTING SWBD TO FEED NEW ATS7 (NORMAL). PROVIDE NEW FEED FROM EXISTING TRANSFORMER (T2) TO FEED NEW ATS7 (LOAD). ALTERNATE #2
 - PROVIDE 3.5" EMPTY CONDUIT RACEWAY FROM DP4 TO EXTERIOR STAGE AREA FOR FUTURE USE. CAP CONDUIT ENDS. SEE NOTE #6 ON SHEET E1.0. ALTERNATE #E3.
 - PROVIDE NEW 225 AMP CIRCUIT BREAKER IN EXISTING DP4 FOR NEW PANEL A. BREAKER SHALL HAVE THE SAME FAULT RATING AS EXISTING BREAKERS.
 - EXISTING WIRE TO BE REMOVED, ABANDONED UNDERGROUND CONDUIT.
 - EXISTING FEEDER FROM EXISTING T2 TO EXISTING DP4 TO REMAIN.
 - PROVIDE CONTROL WIRING TO EXISTING GENERATOR FOR GENERATOR START SIGNAL.

CKT NO.	TIMER A		LOADS
	ON	OFF	
2	TIMER POWER		PEDESTRIAN LITE POLES (AA)
4	CHANNEL 1	DUSK	BOLLARDS (BB)
6	CHANNEL 2	DUSK	TREE ACCENT LIGHTS (DD)
8	CHANNEL 3	DUSK	PEDESTRIAN POLE RECEPTACLES
1	CHANNEL 4	DUSK	PEDESTRIAN POLE RECEPTACLES
3	CHANNEL 5	DUSK	PEDESTRIAN POLE RECEPTACLES
5	CHANNEL 6	DUSK	PEDESTRIAN POLE RECEPTACLES
7	CHANNEL 7	DUSK	PEDESTRIAN POLE RECEPTACLES
9	CHANNEL 8	DUSK	PEDESTRIAN POLE RECEPTACLES
-	CHANNEL 9	-	SPARE
-	CHANNEL 10	-	SPARE
-	CHANNEL 11	-	SPARE
-	CHANNEL 12	-	SPARE



TIMER DIAGRAM

SERVICE RISER DIAGRAM



Combined Utilities Box Systems
 5325 N. COMMERCE AVE., #1, MCORPARK, GA 33021
 PHONE: 805/532-1776; FAX: 805/529-9466

EXTERIOR POP UP FB	
REV.	
DATE	DRAWN BY
08/1/14	JJE
DRAWING NO.	1310008

THIS IS A CAD GENERATED DRAWING. ALL CHANGES MUST BE MADE BY THE CAD OPERATOR

ELECTRICAL SYMBOL LIST	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE OUTLET - 20A, 120V "A" DENOTES PANELBOARD, "2" DENOTES CIRCUIT NUMBER OTHER ABBREVIATIONS: WP = WEATHERPROOF WHILE IN USE TR = TAMPER AND WEATHER RESISTANT
	GFI RECEPTACLE
	LIGHTING FIXTURE "A" DENOTES LIGHT FIXTURE TYPE "D" DENOTES PANELBOARD "1" DENOTES CIRCUIT NUMBER "G" DENOTES SWITCH LEG
	EXISTING PANELBOARD
	GROUNDING ELECTRODE CONDUCTOR TO BLDG STEEL, WATER SERVICE, AND GROUND ROD
	SINGLE POLE SWITCH - 20A, 120V, "G" DENOTES SWITCH LEG D=DIMMER, K=KEYED SWITCH, P=PILOT LIGHT T-TIMER

1 | ELECTRICAL PARTIAL BUILDING PLAN
1/8" = 1'-0"

2 | KEY PLAN
NTS



225 W. Jefferson Avenue
Naperville, IL 60540
T 630.961.1787
F 630.961.9925
hitchcockdesigngroup.com

PREPARED FOR
Village of Addison

1 Friendship Plaza
Addison, IL 60101

PROJECT
Addison
Village Green
1 Friendship Plaza
Addison, IL 60101

CONSULTANTS
Electrical Engineer
Nova Engineering
Scherverville, IN 46375
T 219.865.3352

Phase 3
Electrical Plans
for Reference
Only

August 18, 2016

No	Date	Issue
1	8-18-2016	Addenda 1

CHECKED BY: MZ
DRAWN BY: RB

SHEET TITLE
Electrical
Details

SCALE IN FEET
1/8" = 1'-0"

NORTH
SHEET NUMBER
E3.0

©2016 Hitchcock Design Group

**Phase 3
Electrical
Record
Drawings for
Reference**

**Prepared by
Jasco Electric**

No	Date	Issue
1	8-18-2016	Addenda 1

CHECKED BY: MZ DRAWN BY: RB

SHEET TITLE
**Electrical
Site Plan**

SCALE IN FEET
1" = 10'



NORTH SHEET NUMBER

E1.0

GENERAL NOTES

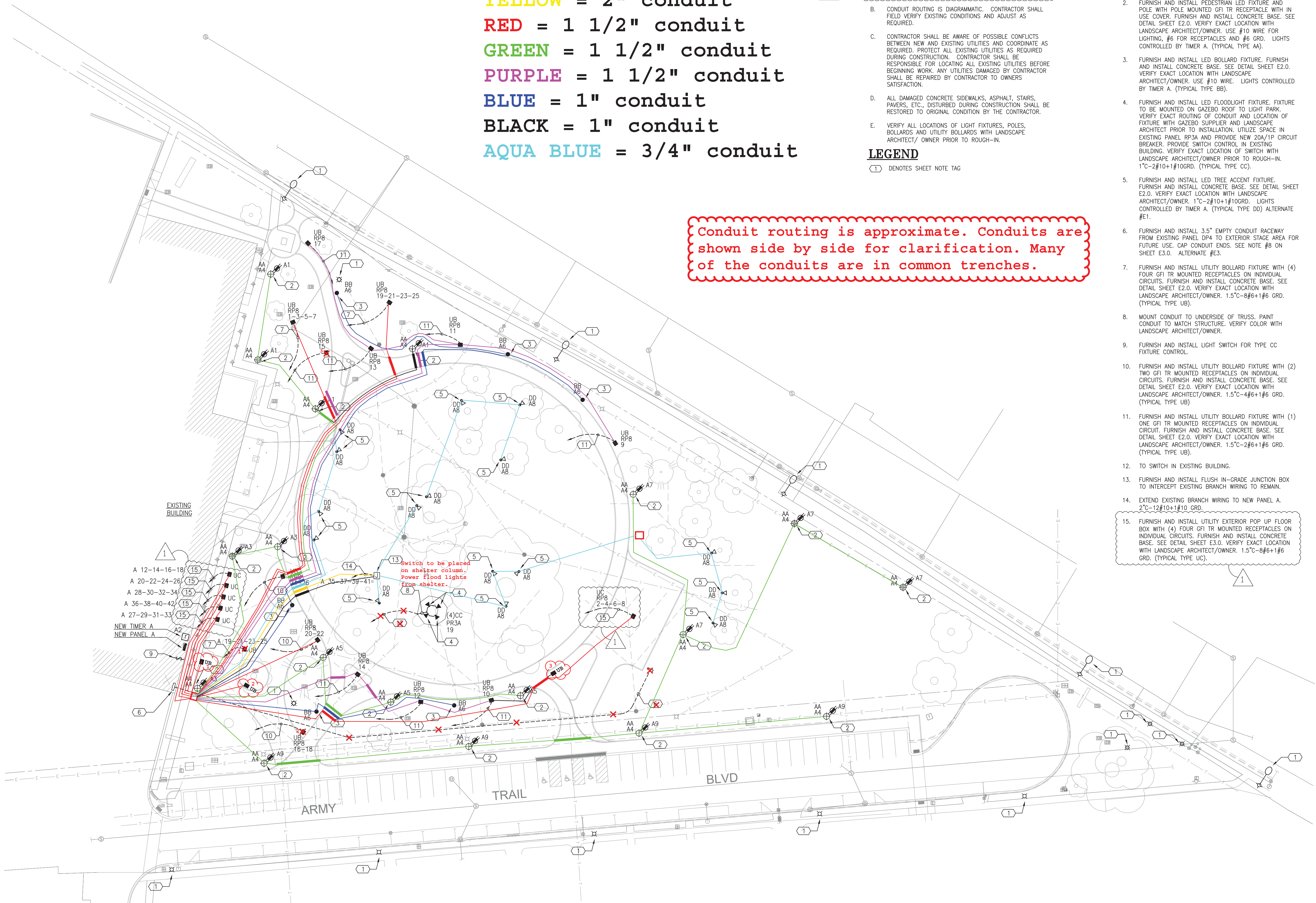
- A. DRAWINGS WERE DEVELOPED FOLLOWING THE 2011 NEC AND 2015 INTERNATIONAL ENERGY CONSERVATION CODE.
- B. CONDUIT ROUTING IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND ADJUST AS REQUIRED.
- C. CONTRACTOR SHALL BE AWARE OF POSSIBLE CONFLICTS BETWEEN NEW AND EXISTING UTILITIES AND COORDINATE AS REQUIRED. PROTECT ALL EXISTING UTILITIES AS REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES BEFORE BEGINNING WORK. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO OWNERS SATISFACTION.
- D. ALL DAMAGED CONCRETE SIDEWALKS, ASPHALT, STAIRS, PAVERS, ETC., DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR.
- E. VERIFY ALL LOCATIONS OF LIGHT FIXTURES, POLES, BOLLARDS AND UTILITY BOLLARDS WITH LANDSCAPE ARCHITECT/ OWNER PRIOR TO ROUGH-IN.

LEGEND

1 DENOTES SHEET NOTE TAG

YELLOW = 2" conduit
RED = 1 1/2" conduit
GREEN = 1 1/2" conduit
PURPLE = 1 1/2" conduit
BLUE = 1" conduit
BLACK = 1" conduit
AQUA BLUE = 3/4" conduit

Conduit routing is approximate. Conduits are shown side by side for clarification. Many of the conduits are in common trenches.



RECORD DRAWINGS
Prepared by:
Jasco Electric
7/6/17

**Phase 3
Irrigation Plans
For Reference
Only**

ISSUED
February 7, 2018
REVISIONS

No	Date	Issue
1	2018.04.04	revised per village permit review comments

CHECKED BY: DPF
DRAWN BY: DPF

SHEET TITLE
IRRIGATION PLAN

SCALE IN FEET

NORTH
SHEET NUMBER
11.12

GENERAL IRRIGATION NOTES

- CONTACT ALL UTILITIES AND GENERAL CONTRACTOR AT LEAST 5 DAYS PRIOR TO THE START OF CONSTRUCTION.
- MAINTAIN ALL CODES REQUIRED BY LOCAL AUTHORITIES.
- COORDINATE ELECTRICAL HOOKUP WITH GENERAL CONTRACTOR, ELECTRICIAN AND OWNER
- COORDINATE ALL SLEEVES AND PENETRATIONS WITH GENERAL CONTRACTOR
- IRRIGATION CONTRACTOR IS RESPONSIBLE FOR BORES, SLEEVES OR PENETRATIONS RELATED TO THE IRRIGATION
- IRRIGATION HEADS AND LINES ARE SCHEMATIC - FIELD ADJUSTMENTS MAY BE REQUIRED
- CAP OR PLUG ALL OPENINGS AS SOON AS LINES ARE INSTALLED TO PREVENT DEBRIS IN THE LINE.
- INSTALL ALL PIPING AND FITTINGS USING GLUE METHODS CONSISTENT WITH MANUFACTURER'S RECOMMENDATIONS
- MAINLINE PIPING SHALL BE INSTALLED AT MINIMUM OF 18" TO THE TOP OF PIPE. LATERAL LINES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18".
- THOROUGHLY FLUSH ALL LINES PRIOR TO THE OPERATION OF SPRINKLER HEADS.
- INSTALL WIRES A MIN. OF 8" BELOW GRADE. -SPICES ARE NOT ALLOWED IN THE TRENCH. -PROVIDE 24" EXPANSION LOOP AT EACH CHANGE IN DIRECTION. -5 FEET OF EXCESS DECODER WIRE IS TO BE AT EACH DECODER LOCATION FOR EASE OF ACCESS.
- THE IRRIGATION SYSTEM SHALL BE TESTED AT OPERATING PRESSURE FOR A MINIMUM OF 4 HOURS. REPAIR ALL LEAKS AND RETEST AFTER CURING.
- UPON COMPLETION OF TEST, COMPLETE ASSEMBLY OF ALL EQUIPMENT AND SPRINKLERS FOR PROPER DISTRIBUTION.
- PROVIDE "AS BUILT" DRAWINGS SHOWING ALL COMPONENTS OF THE SYSTEM PRIOR TO FINAL PAYMENT. PROVIDE FINAL GPM OF ZONES, WIRE RUNS, HEADS, VALVES, PIPE SIZES ETC...
- SLEEVE UNDER ROAD, WALLS, PAVERS, AND DRIVES -SLEEVE WIRE AND PIPING SEPARATELY, SEE PLAN FOR SIZING -ALL WIRING TO BE SLEEVED IN A MINIMUM 2" SLEEVE
- ALL GASKETED PRESSURE PIPE AND FITTINGS SHALL BE THRUST BLOCKED. NO CONCRETE PREFORMED BLOCKS WILL BE ALLOWED.
- ALL EXISTING UTILITIES WHICH ARE NOT SHOWN ON THESE DOCUMENTS WHICH NEED TO BE REMOVED, RELOCATED AND/OR ADJUSTED SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
- ALL BIDDERS SHALL VISIT AND REVIEW THE SITE AND FAMILIAR THEMSELVES WITH THE SITE THE SITE PRIOR TO SUBMITTING A BID.
- CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AND ACQUIRING ALL PERMITS
- COORDINATE IRRIGATION WITH LANDSCAPE PLANS AND LANDSCAPE CONTRACTOR FOR CORRECT SYSTEMS PLACEMENTS.
- STATIC PRESSURE WAS PROVIDED BY OTHERS, VERIFY THAT THE STATIC PSI IS 72 PSI. NOTIFY OWNER IF IT IS LESS THAN THAT.

LOCATE MAINLINE AND ALL IRRIGATION WITHIN PROPERTY LIMITS. MAINLINE IS SHOWN OUTSIDE OF LIMITS FOR GRAPHICS PURPOSES ONLY

IRRIGATION COMPONENTS ARE NOT TO BE LOCATED BEYOND THE PROPERTY LINE. ADJUST THROWS TO THROW OUT BEYOND THE PROPERTY LINE, DO NOT THROW ON WALKS.

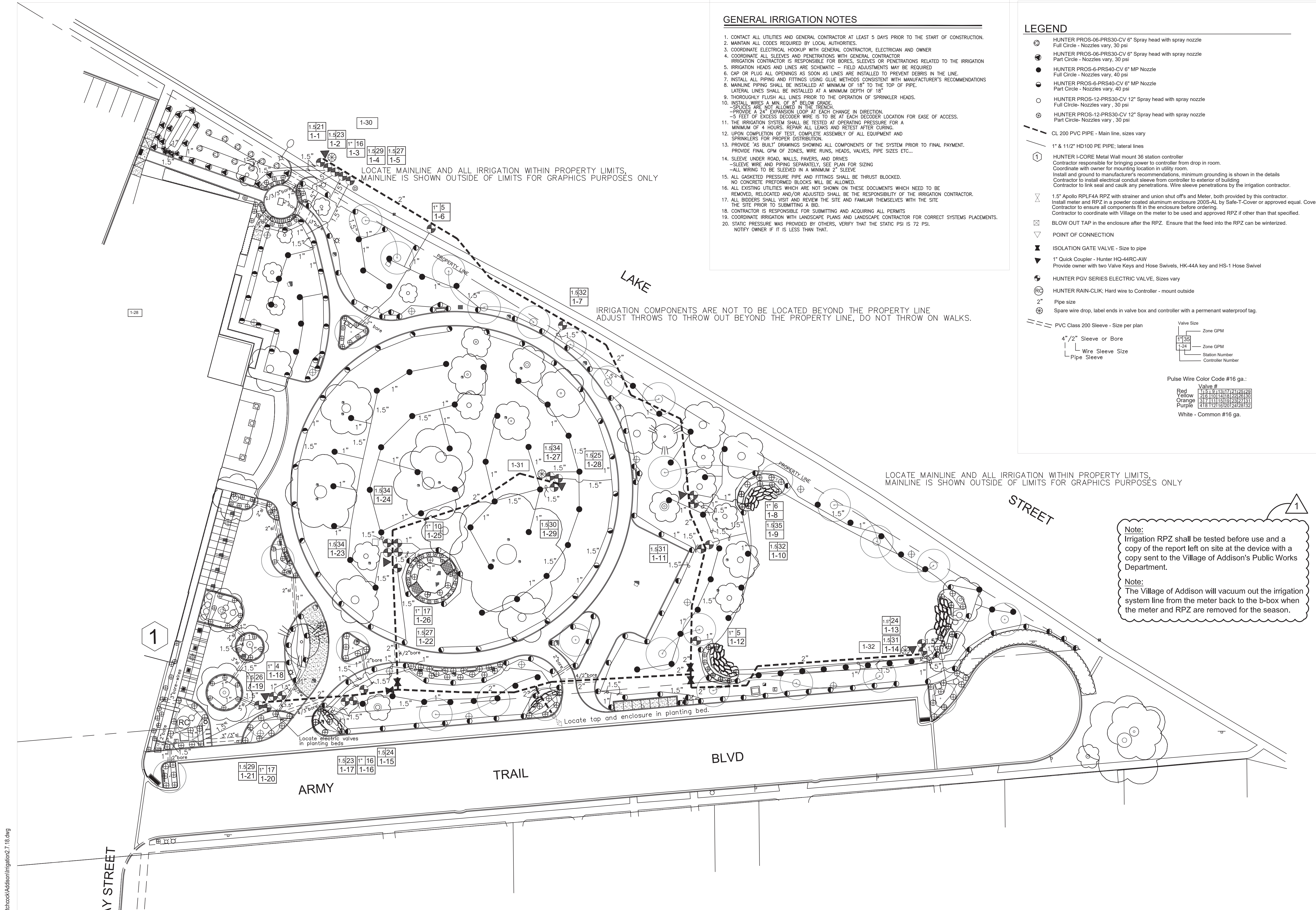
LOCATE MAINLINE AND ALL IRRIGATION WITHIN PROPERTY LIMITS. MAINLINE IS SHOWN OUTSIDE OF LIMITS FOR GRAPHICS PURPOSES ONLY

Note:
Irrigation RPZ shall be tested before use and a copy of the report left on site at the device with a copy sent to the Village of Addison's Public Works Department.

Note:
The Village of Addison will vacuum out the irrigation system line from the meter back to the b-box when the meter and RPZ are removed for the season.

LEGEND

- ⊙ HUNTER PROS-06-PRS30-CV 6" Spray head with spray nozzle Full Circle - Nozzles vary, 30 psi
 - ⊙ HUNTER PROS-06-PRS30-CV 6" Spray head with spray nozzle Part Circle - Nozzles vary, 30 psi
 - HUNTER PROS-6-PRS40-CV 6" MP Nozzle Full Circle - Nozzles vary, 40 psi
 - HUNTER PROS-6-PRS40-CV 6" MP Nozzle Part Circle - Nozzles vary, 40 psi
 - HUNTER PROS-12-PRS30-CV 12" Spray head with spray nozzle Full Circle - Nozzles vary, 30 psi
 - HUNTER PROS-12-PRS30-CV 12" Spray head with spray nozzle Part Circle - Nozzles vary, 30 psi
 - CL 200 PVC PIPE - Main line, sizes vary
 - - - 1" & 1 1/2" HD100 PE PIPE; lateral lines
 - ① HUNTER I-CORE Metal Wall mount 36 station controller Contractor responsible for bringing power to controller from drop in room. Coordinate with owner for mounting location in utility room. Install and ground to manufacturer's recommendations, minimum grounding is shown in the details Contractor to install electrical conduit sleeve from controller to exterior of building Contractor to link seal and caulk any penetrations. Wire sleeve penetrations by the irrigation contractor.
 - ⊗ 1 1/2" Apollo RPL44 RPZ with strainer and union shut off and Meter, both provided by this contractor. Install meter and RPZ in a powder coated aluminum enclosure 200S-AL by Safe-T-Cover or approved equal. Cover to be Contractor to ensure all components fit in the enclosure before ordering. Contractor to coordinate with Village on the meter to be used and approved RPZ if other than that specified.
 - ⊗ BLOW OUT TAP in the enclosure after the RPZ. Ensure that the feed into the RPZ can be winterized.
 - ▽ POINT OF CONNECTION
 - ⊗ ISOLATION GATE VALVE - Size to pipe
 - ▽ 1" Quick Coupler - Hunter HQ-44RC-AW Provide owner with two Valve Keys and Hose Swivels, HK-44A key and HS-1 Hose Swivel
 - ⊗ HUNTER PGV SERIES ELECTRIC VALVE, Sizes vary
 - ⊗ HUNTER RAIN-CLIK; Hard wire to Controller - mount outside
 - 2" Pipe size
 - ⊗ Spare wire drop, label ends in valve box and controller with a permanent waterproof tag.
 - PVC Class 200 Sleeve - Size per plan
 - 4"/2" Sleeve or Bore
 - └ Wire Sleeve Size
 - └ Pipe Sleeve
- | Valve Size | Zone GPM |
|------------|----------|
| 1-13 | 1-13 |
| 1-24 | 1-24 |
- | Valve # | Station Number | Controller Number |
|---------|----------------|-------------------|
| 1-13 | 1-13 | 1-13 |
| 1-24 | 1-24 | 1-24 |
- Pulse Wire Color Code #16 ga.:
- | Color | Valve # | Station Number | Controller Number |
|--------|---------|----------------|-------------------|
| Red | 1-13 | 1-13 | 1-13 |
| Yellow | 1-24 | 1-24 | 1-24 |
| Orange | 1-13 | 1-13 | 1-13 |
| Purple | 1-24 | 1-24 | 1-24 |
- White - Common #16 ga.



**Phase 3
Irrigation Plans
For Reference
Only**


ISSUED
February 7, 2018
REVISIONS

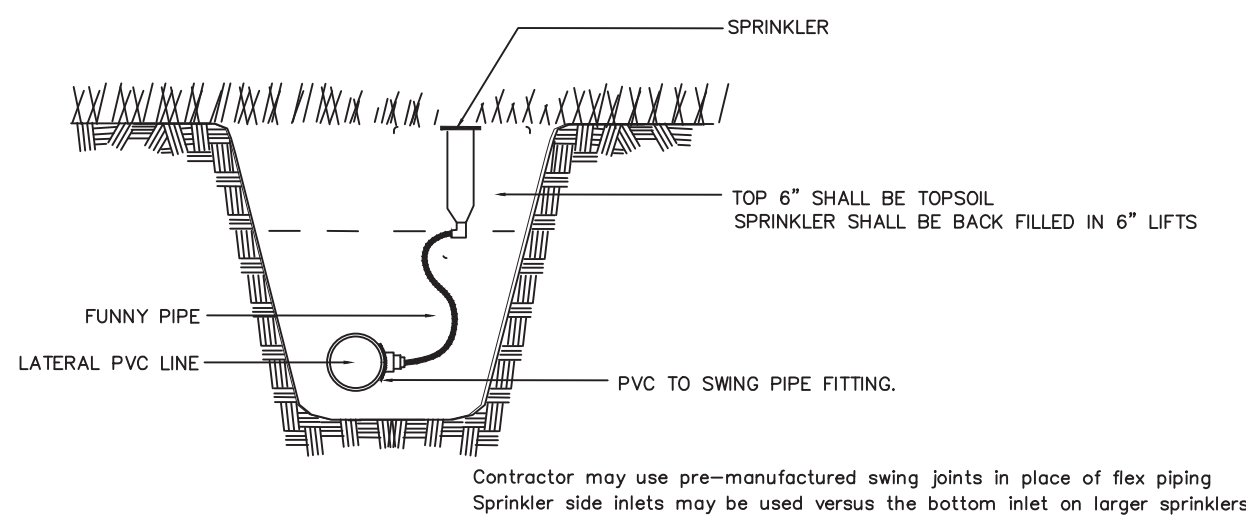
No	Date	Issue
Δ	2018.04.04	revised per village permit review comments

CHECKED BY: DPF DRAWN BY: DPF

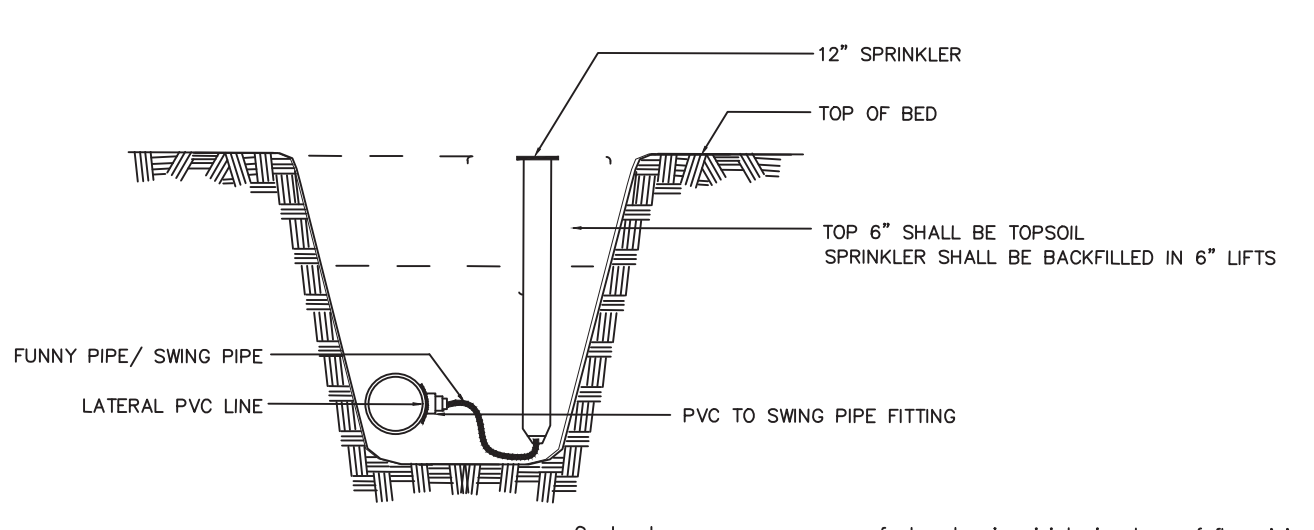
SHEET TITLE
**IRRIGATION
DETAILS**

SCALE IN FEET

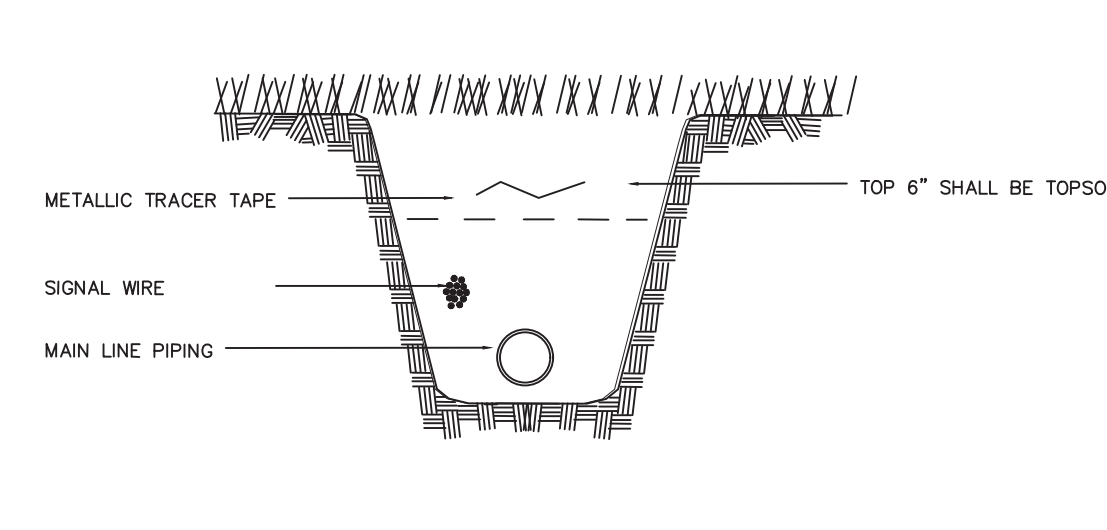
NORTH  SHEET NUMBER
11.13



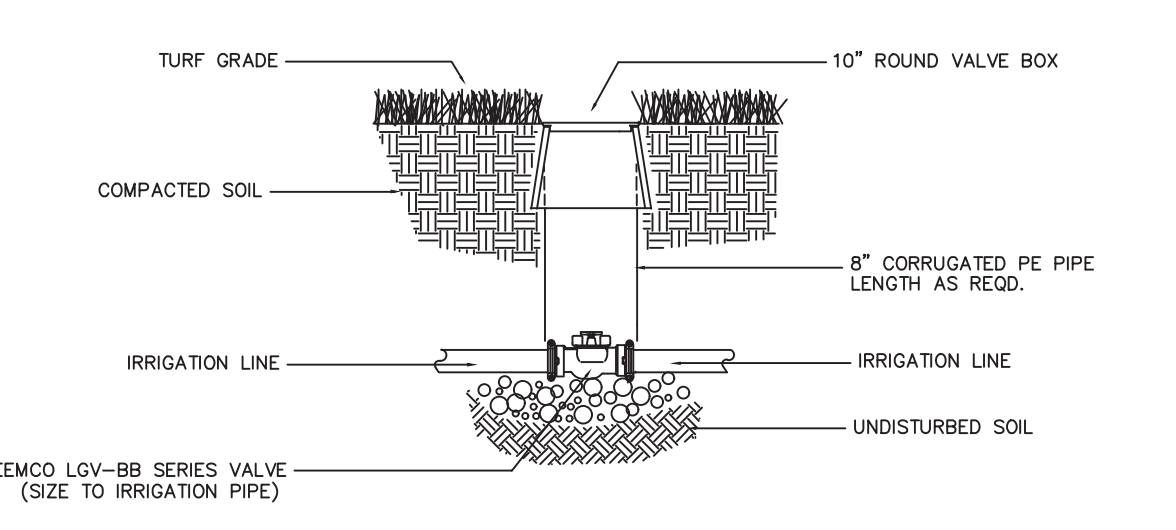
1 4" SPRAY HEAD NO SCALE



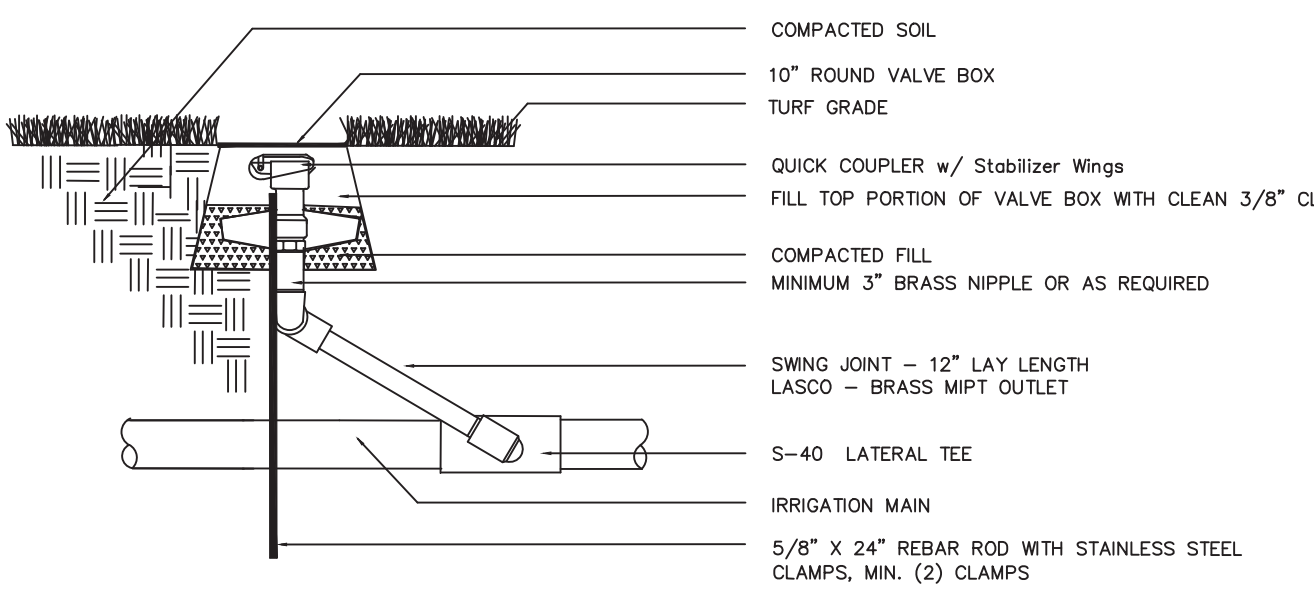
2 12" SPRAY HEAD NO SCALE



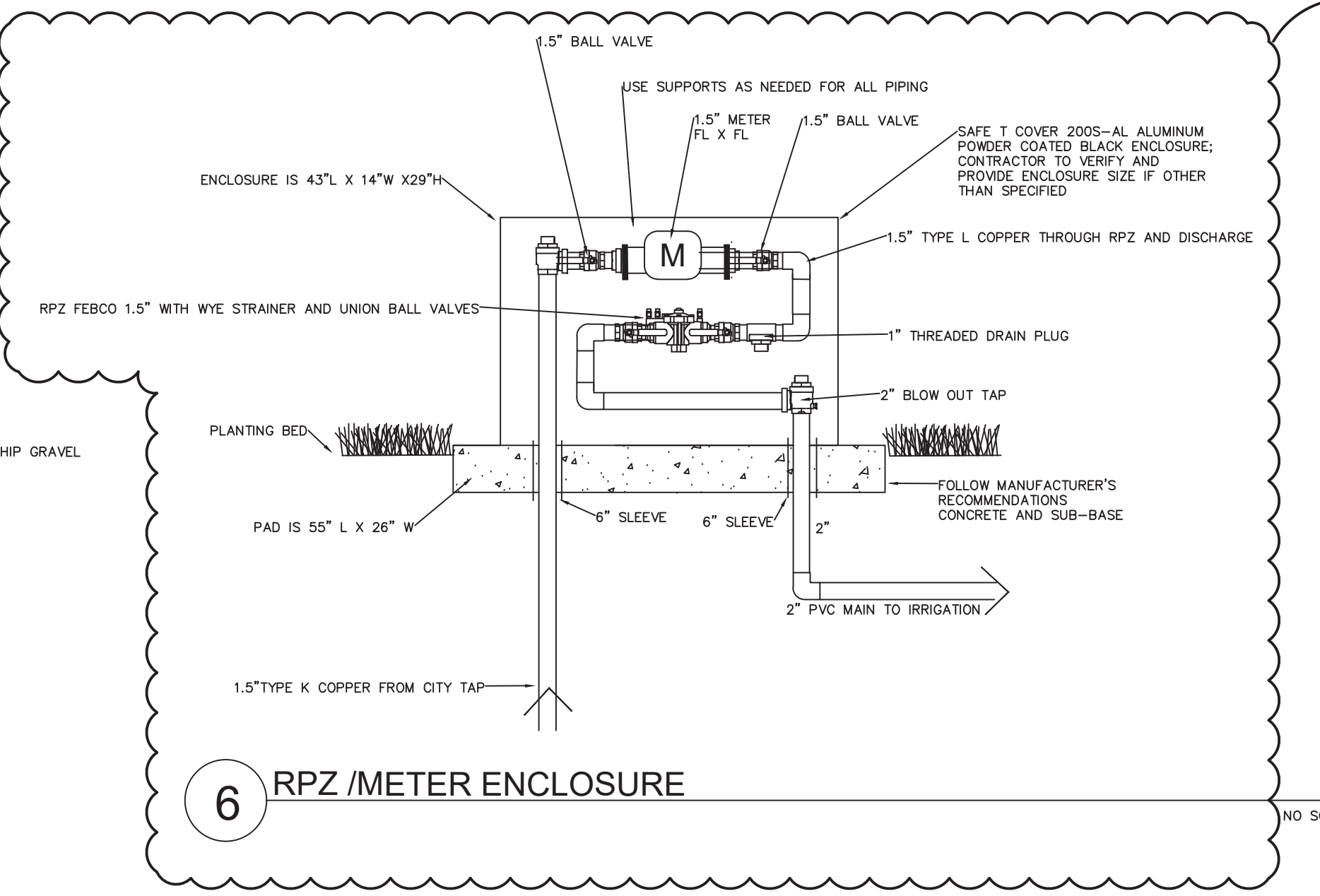
3 WIRE TRENCH NO SCALE



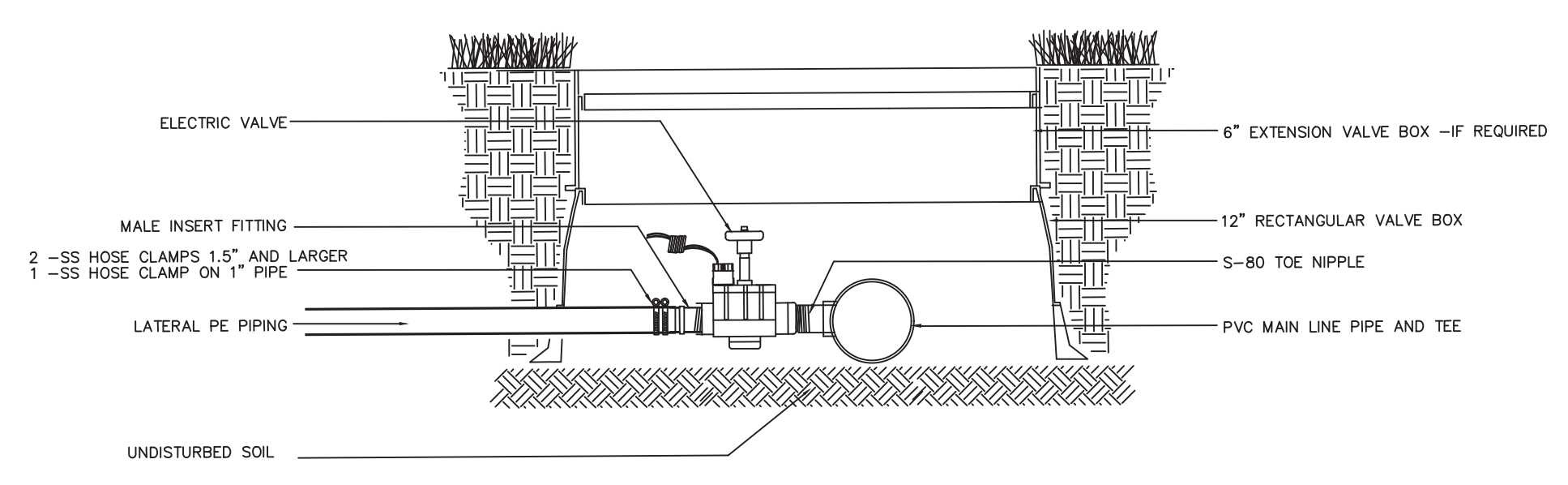
4 ISOLATION VALVE 2" and LARGER NO SCALE



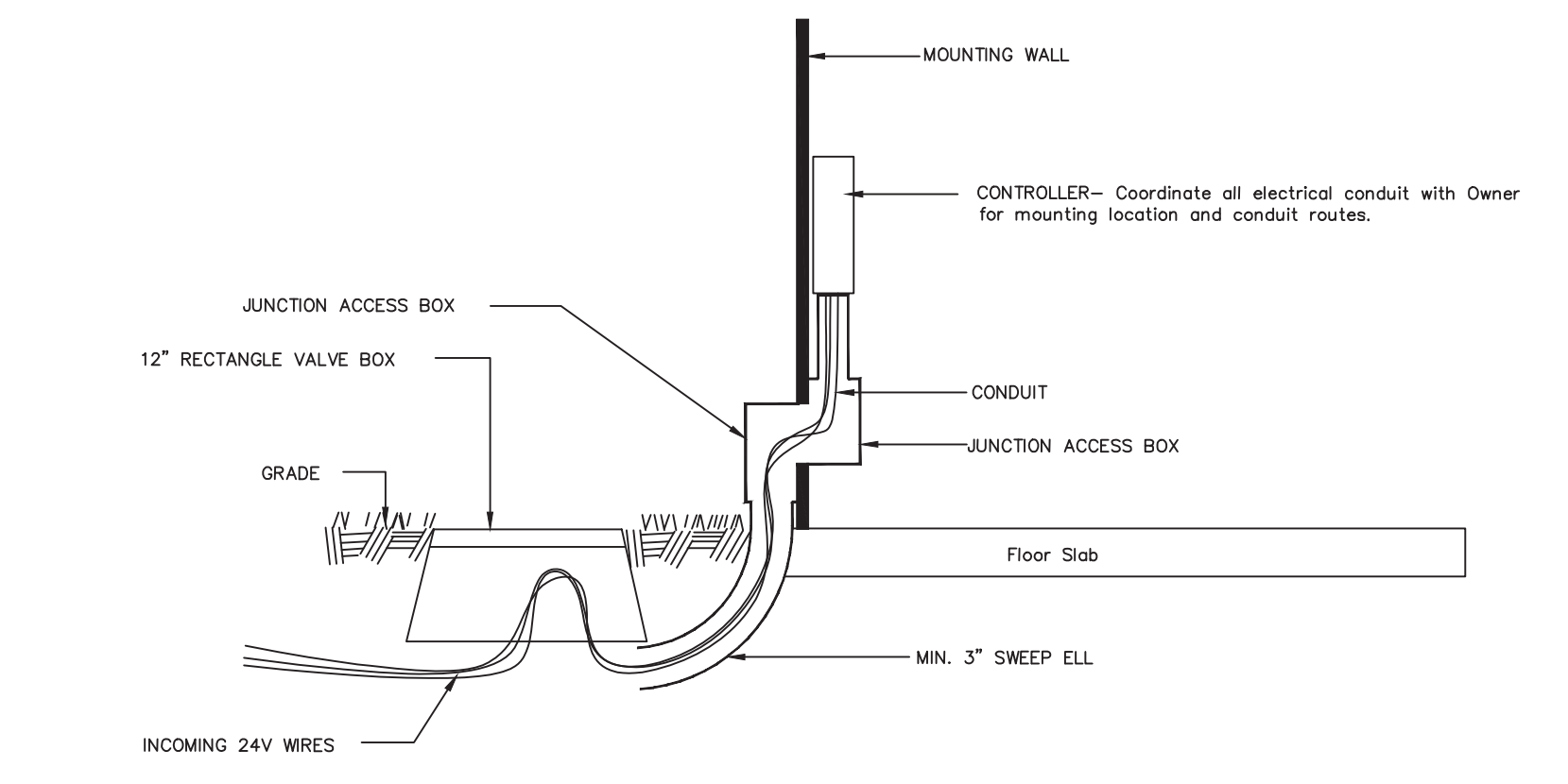
5 QUICK COUPLER VALVE NO SCALE



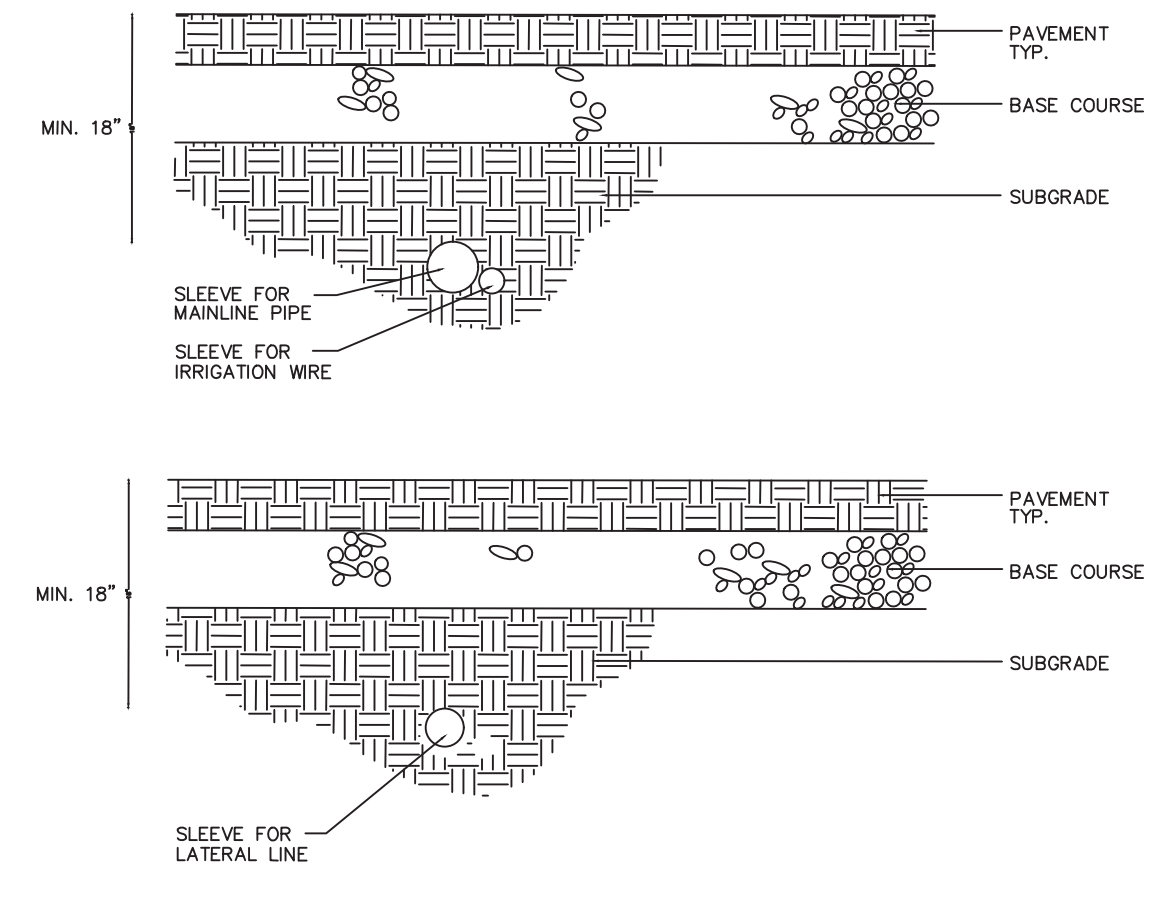
6 RPZ/METER ENCLOSURE NO SCALE



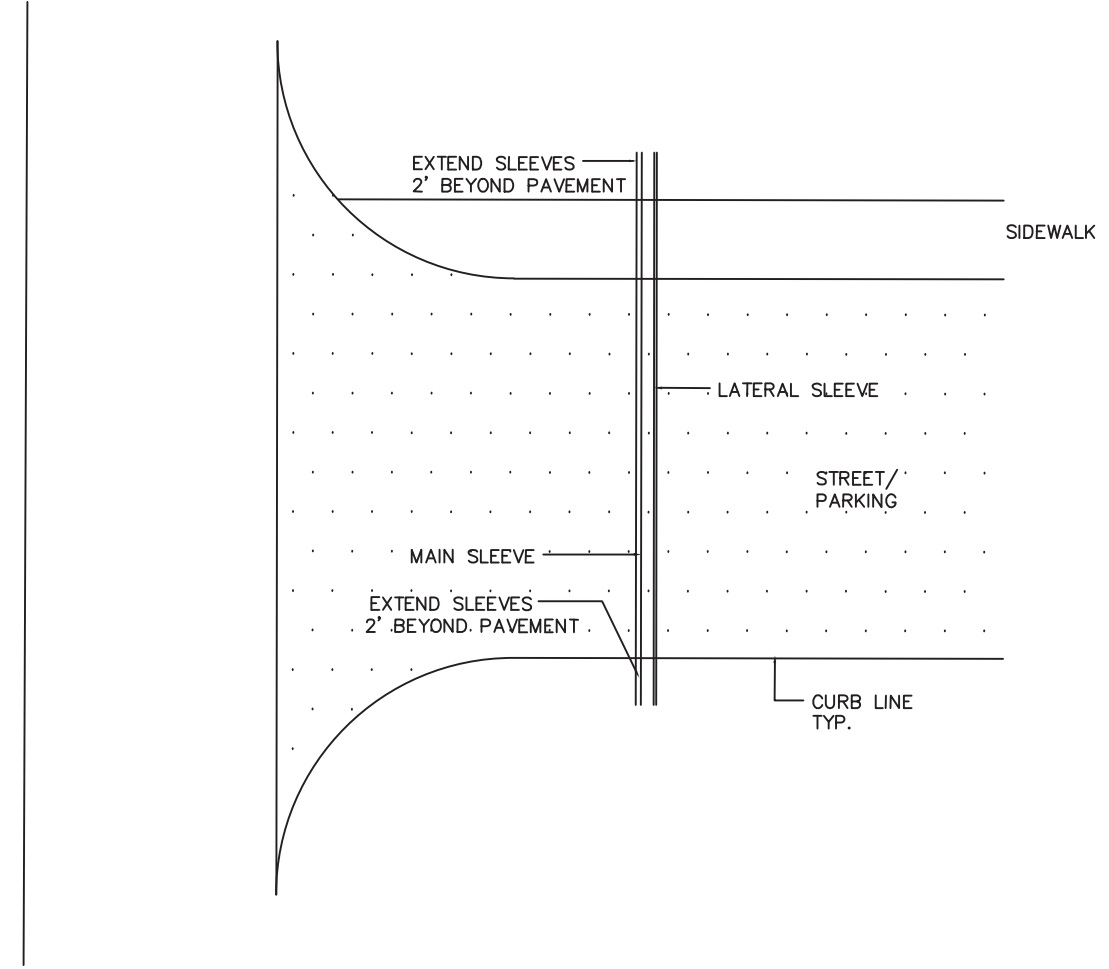
7 ELECTRIC VALVE NO SCALE



8 CONTROLLER MOUNTING NO SCALE



9 SLEEVING NO SCALE



NO SCALE

WARNING
LAYOUT OWNED BY
MUELLERMIST IRRIGATION COMPANY
OBTAIN PERMISSION BEFORE USING



2612 S. Ninth Ave.
Broadview, IL, 60155
Service (708) 344-8680
Fax (708) 450-1403

Muellermist
Irrigation Co.

Revised

As-Built 8/7/18-RJ

Drawn By: R. Jones

Checked By:

P.S.I.	Service	Meter
72	1.5"	1.5"

Main Pipe: PVC

Lateral Pipe: 100# Poly

Type: Hunter

Section	Valves
29	PGV

Serial No: Solar Sync H.W.

I-Core 36 Sta. Metal

Job No. 18-504

Project:
Addison Village Green
1 Friendship Plaza
Addison, Illinois

Scale

1"=30'

Plan No.

18-005-D

Equipment Locations

Zone Valves	Location Measurements
#1	14' North 53' East of Corner "A"
#2	3' North 34' East of Corner "AA"
#3	13' North 57' East of Corner "A"
#4	1' North 38' East of Corner "AA"
#5	12' North 58' East of Corner "A"
#6	6' North 39' East of Corner "AA"
#7	11' 6" North 59' East of Corner "A"
#8	1' South 40' 5" East of Corner "AA"
#9	10' North 60' East of Corner "A"
#10	2' South 41' 6" East of Corner "AA"
#11	14' South 100' East of Corner "A"
#12	24' South 81' East of Corner "AA"
#13	9' South 1' West of Light Post #1
#14	4' North 30' West of Light Post #2
#15	27' North 9' West of Corner "B"
#16	61' North 14' West of Light Post #3
#17	26' North 7' West of Corner "B"
#18	59' North 9' West of Light Post #3
#19	7' North 3' East of Corner Light Post #3
#20	4' North 9' East of Corner "B"
#21	36' North 1' 6" East of Light Post #3
#22	10' North 22' East of Corner "I"
#23	2' North 19' West of Corner "J"
#24	7' North 21' 6" West of Corner "JJ"
#25	1' North 20' West of Corner "J"
#26	6' North 23' West of Corner "JJ"
#27	18' North 94' East of Corner "K"
#28	38' North 41' East of Corner "KK"
#29	17' North 92' East of Corner "K"
#30	36' North 39' East of Corner "KK"
#31	16' 6" North 90' East of Corner "K"
#32	36' North 38' East of Corner "KK"
#33	11' North 70' East of Corner "K"
#34	28' North 20' East of Corner "KK"
#35	11' North 71' East of Corner "K"
#36	29' North 21' East of Corner "KK"
#37	1' South 50' East of Corner "K"
#38	12' North 2' East of Corner "KK"
#39	6' South 48' 6" East of Corner "K"
#40	12' 6" North 6" East of Corner "KK"
#41	3' North 11' West of Corner "G"
#42	36' North 41' East of Corner "GG"
#43	9' North 14' West of Corner "G"
#44	41' North 37' East of Corner "GG"
#45	16' North 17' West of Corner "G"
#46	49' North 34' East of Corner "GG"
#47	14' North 14' West of Corner "G"
#48	46' North 36' East of Corner "GG"
#49	7' North 12' West of Corner "G"
#50	39' North 39' East of Corner "GG"
#51	40' South 47' West of Corner "F"
#52	82' South 16' 6" East of Light Post #2
#53	34' South 19' East of Light Post #2
#54	38' South 44' West of Corner "F"
#55	81' South 18' East of Light Post #2

Spare Wires

#30	13' North 56' East of Corner "A"
#31	1' North 37' East of Corner "AA"
#32	42' South 48' West of Corner "F"
#33	83' South 14' East of Light Post #2
#34	5' North 26' West of Corner "J"
#35	6' North 38' West of Corner "JJ"

Isolation Gate Valves

#1	21' North 6" West of Corner "I"
#2	11' South 26' East of Corner "II"
#3	18' North 6' East of Corner "I"
#4	14' South 26' East of Corner "II"
#5	9' South 5' West of Corner "H"
#6	8' South 11' 6" West of Corner "HH"
#7	11' South 7' West of Corner "H"
#8	10' South 14' West of Corner "HH"

Wire Splice Box

#1	10' South 5' West of Corner "H"
#2	10' South 12' West of Corner "HH"

Quick Coupling Valves

#1	14' North 55' East of Corner "A"
#2	3' North 36' 9" East of Corner "AA"
#3	29' North 11' 6" West of Corner "B"
#4	62' North 16' 6" West of Light Post #3
#5	4' North 22' 3" West of Corner "J"
#6	5' North 25' 6" West of Corner "JJ"
#7	29' South 41' West of Corner "F"
#8	76' South 22' East of Light Post #2
#9	3' North 13' West of Corner "G"
#10	36' North 39' East of Corner "GG"
#11	41' North 52' East of Corner "K"
#12	18' North 3' East of Corner "KK"

Valve Wires are 16 Gauge.

Colors	Zones
Red	1 5 9 13 17 21 25 29
Yellow	2 6 10 14 18 22 26 30
Orange	3 7 11 15 19 23 27 31
Purple	4 8 12 16 20 24 28 32

Common Wire is White

Irrigation

Quantity	Symbol	Description
	●	Hunter PROS-06-PRS30-CV 6" Spray Head with Part Circle Nozzles
	⊙	Hunter PROS-06-PRS30-CV 6" Spray Head with Full Circle Nozzles
	⊗	Hunter PROS-12-PRS30-CV 12" Spray Heads with Part Circle Nozzles
	○	Hunter PROS-12-PRS30-CV 12" Spray Heads with Full Circle Nozzles
	⊖	Hunter PROS-06-PRS40-CV 6" Spray Heads with Part Circle MP Rotator Nozzles
	●	Hunter PROS-06-PRS40-CV 6" Spray Heads with Full Circle MP Rotator Nozzles
1	⊗	Febco 825YA 2" RPZ in Safe-T-Cover Enclosure
9	⊙	Hunter PGV-101G 1" Zone Valve
20	⊙	Hunter PGV-151 1.5" Zone Valve
1	▲	Hunter I-Core Controller
6	⊖	Hunter HQ-44RC-AW Quick Coupling Vavles
4	⊖	Isolation Gate Valve 2"
1	▲	Hunter Solar Sync
1200 ft.	---	2" PVC SDR-21 Main Pipe
1950 ft.	---	1 1/2" 100# Poly Lateral Pipe
5420 ft.	---	1" 100# Poly Lateral Pipe
3	⊗	Spare Wire In Valve Box

