

## **ADDENDUM COVER SHEET**

### **Addendum No. 1**

#### **Fishtown Hockey Rink RFP (1202 Montgomery Avenue)**

#### **Philadelphia Redevelopment Authority**

**Issue Date: July 20, 2022**

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#### Items:

The following items are to be issued as part of Addendum 01 for Fishtown Hockey Rink:

1. Responses to Contractor questions. See attachment for responses.
2. Specifications:
  - a. 004113 – Bid Form – updated to include permit allowance.
  - b. 012200 - Unit Price – updated to include unit price for unsuitable soils
  - c. 012300 - ADD Alternates – updated to include Add alternate #1 and #2 (updated on bid form).
  - d. 057300 – Decorative Metal Railing – new spec section to project. Base railing design on this spec section.
  - e. 099900 – Exterior Paint spec - includes updated paint schedule and sports line basis of design.
  - f. 100610 – Exterior signage – includes spec and drawing update of PPR signs.
  - g. 131816 – Dasherboard System – new spec section to project. Provides basis of design.
  - h. Attachment K - Submittal log
3. Drawings: (Entire construction set submitted in its entirety with addition of sheet V-1 Sheet)
  - a. C-1 – Cover sheet – updated drawing log and team information
  - b. C-2 – Code sheet - updated area of work
  - c. C001 – Existing Conditions – updated titleblock
  - d. V-1 Rodriguez – existing conditions plan – Reference document
  - e. C002 – New Grading Plan – updated titleblock
  - f. C003 – Site Details – updated titleblock
  - g. C004 - Site Details - Details updated with new drawing tags, updated titleblock
  - h. S100 – New (Work) plan -
  - i. S101 - Enlarged Sidewalk Plan – updated drawing tags
  - j. S102 – Ramp, stair Elevations – updated drawing tags, updated ramp detail
  - k. S103 – Foundation Plan – updates to lighting support and concrete ramp detail
  - l. PD-100 - Plumbing Demolition Site Plan
  - m. P100 – Plumbing New Work Site Plan
  - n. P102 – Plumbing Demolition Site Plan - details updated with new drawings tags
  - o. P103 – updated titleblock
  - p. E100 – elec plan notes and schedules – updated titleblock
  - q. E101- electrical specifications – updated titleblock
  - r. E102 – electrical specifications – updated titleblock

Bidders must acknowledge receipt of Addendum No 1. The signed acknowledgement must be included in your bid proposal. Please sign and date below:

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Acknowledgement of Addendum No.1

## Fishtown Recreation Center Drainage and Hockey Rink Upgrades RFP

### Questions/RFIs:

1. The concrete paving limits on the west side of the entrance walk shown on Sheet C002 do not match the limits shown on S100. Which one is correct? **Sheet C-002 has the correct concrete paving limits. See updated S-100 sheet attached.**
2. Sheet C001 shows a triangular shaped section of existing concrete to be removed just under the fill/stockpile area, which is coded on Sheet C002 to be replaced with asphalt (Key Note 5). There doesn't seem to be a reason for this so I wanted to confirm you want this piece of concrete removed and replaced with asphalt. **Concrete is to be removed and replace in kind. See referenced drawing C-002 for extent of asphalt, grass, curb and concrete removal and replacement.**
3. Sheet C001 shows another area just under the fill/stockpile area which is coded as concrete to be removed. This area is existing asphalt, not concrete. Then Sheet C002 calls for the area to be replaced with new concrete. Please confirm we are removing this existing asphalt and replacing it with new concrete. **See response #2 above**
4. Sheet C001 calls for 2 of the existing benches to be completely removed and salvaged (Key Note 4a), but Sheet C002 says they get refurbished with new slats. Are we replacing these benches completely or just refurbishing them with new slats? **All benches will be refurbished with new slats. Please see updated C-001 drawing**
5. There are different sidewalk details on Sheet C002 that show different strengths, reinforcing and subbase requirements. Please clarify which detail applies to the hockey court and which one applies to the walkways. **Incorrect sheet mentioned in question. See updated sheet C004 for 4000 psi concrete details for both hockey court and walkways.**
6. There is a note on Sheet S100 that says to provide new chain link fence around the existing play yard. The civil drawings not show this. Is it part of the scope of work, and if so, what is the limit of the new fence? **Refer to updated sheet C-002 for full extent of new chain linked mesh for the project. The extent of the new mesh fence work includes the entrance to the park, the entire perimeter of the hockey rink and the perimeter of the adjacent picnic area along Montgomery avenue.**
7. Note 4 on Sheet S100 mentions 2 fence options but only lists 1 option. Confirm there is no other option. **There will be only one option as per 4.1 on sheet S-100. Reference detail on sheet C-004 for fence installation notes.**
8. Sheet S100 identifies 2 locations as "Area of Refuge". What are these and do they have any implications on the contractor? **Area of refuge is for wheelchair bound spectators in case of emergency. Area designation will not impact contractors / construction.**
9. Please clarify what Construction Note 1 on Sheet P-101 means? The assumed quantities given do not match the work depicted on the drawings. The note also mentions an alternate but there are no alternates that I see on the project. **See updated construction note on P101.**
10. Construction Notes 4 through 14 on Sheet P-101 talk about porous paving but there is no porous paving on the plans. Are these note relevant to this project? **Notes are updated on sheet P101. There will be no porous paving.**
11. The existing dasher board was used as a form for the existing columns foundations. When we remove the boards, the side of the column will be irregular and unfinished. Will any work be required on the newly exposed column face? **Yes work will be required. See updated S100.**

## Fishtown Recreation Center Drainage and Hockey Rink Upgrades RFP

### Questions/RFIs:

12. Note 2 on Sheet PD-100 provides an assumed excavation quantity that far exceeds what is required to excavate the new concrete paving. Please clarify how this quantity was calculated and confirm whether the bidders should base their bids on this assumed quantity or use our own. **See updated P101 construction note 1.**
13. The scope of work listed on Page 4 of the RFP appears to be written for a different project. Please confirm there is no playground, fitness equipment or safety surface on the project. **The listed scope is not accurate. Please reference section 011100, Summary of Work 1.3-A**
14. Section 012100 calls for a 2% allowance to cover permit fees. There is no line item the bid for this allowance. Please clarify where this cost gets listed on the bid form. **Updated 012100 attached to include the 2% allowance.**
15. Note 8 on Sheet S100 calls for 3 BID1 and 3 RUL1 signs. Please provide details, locations and mounting instructions on these signs. **See updated spec section 100610 for signage information, and mounting details.**
16. Section 100610, 1.9, A call for a mockup of a PID-4 signs. What is this sign and how many are required. **There are no PID signs in project. See updated spec section 100610 attached.**
17. Section 100610, 3.8 A, lists 3 types of display cases. Are these required? If so, how many and where do they go? No Display cases in this job. **See updated spec section 100610 attached.**
18. Note 2 on Sheet S100 calls for the rink floor to be topped with a Sports floor Surface Stamina product which is typically used for indoor weight room floors and locker rooms. The floor comes in square tiles that are either locked together or glued down. Their web site does not show any outdoor applications and says room temperature needs to be maintained between 60 and 75 degrees Fahrenheit during installation and 72 hours after. This temperature range is not feasible for an outdoor installation. Please review the specified system and confirm the desired thickness and whether it is suitable for outdoor use. **Disregard note on S-100. There will be no sports surface Stamina product used for this project. Only painted sport markings. Reference paint spec section for details.**
19. Section 321816 calls for a poured in place rubber safety surface however this is not specified anywhere on the plans. Please clarify whether this specification section is applicable to the project. **This section is not applicable to this project.**
20. There are no specifications provided on the hockey dasher board system. Please specify the manufacturer and model of the dasher boards. **Dasher board Specified is by Iron Sleek. Chain link fence will have to be mounted to the new dasherboard. Please see updated note on sheet S-100 and specification section 131816 attached.**
21. Requesting a One (1) week extension for the bid on 7-22-22 @ 3pm to 7/29/22. **Bid date extended to Tuesday July 26 at 2PM.**
22. Looking through the drawings and Spec we cannot find any information on the approved material for the site drainage. If it needs to be cast iron it would be extremely expensive. The plumbing details drawing indicates it as both cast iron and SDR35 PVC. Please advise on approved drainage material. **PVC is preferred. Provide an alternate price for cast iron.**



## Fishtown Recreation Center Drainage and Hockey Rink Upgrades RFP

### Questions/RFIs:

23. 312000 3.01 G & 3.02 H specify unclassified excavation. All unsuitable material removed and replaced with imported fill per Owners Rep. **Unit price to be included in bid. Reference 012200.**
24. How are we to quantify and price unsuitable materials per 312000 3.01 & 3.02, without any information, such as an allowance, unit prices or boring reports? **Unit price to be included in bid. Reference 012200.**
25. Are we responsible for any specific scope of work outside of the construction limit lines shown on the drawings, such as on C001, C002, P101 & E100? If so please describe this work. **There should be a 100 cubic yard allowance.**
26. Are we responsible for any unforeseen hidden condition not shown on the drawings, such as rock, old foundations or other buried materials? C-1 General Notes #4 states the Arch/Engr are not responsible for any additional costs for “formerly hidden conditions uncovered during constructions”. Since we do not have a copy of V-1 noted on C001, or any specific subsurface information are we to assume we are responsible for all Unforeseen Conditions? If so, how much of an allowance would you like us to include in our bonded bid for Unknown Conditions not included in the plans or specs? **Unit price to be included in bid. Reference 012200.**
27. Are we responsible for any specific scope of work outside of the construction limit lines shown on the drawings, such as on C001, C002, P101 & E100? If so please describe this work. **Duplicate question, See answer 25**
28. Are we responsible for any unforeseen hidden condition not shown on the drawings, such as rock, old foundations or other buried materials? C-1 General Notes #4 states the Arch/Engr are not responsible for any additional costs for “formerly hidden conditions uncovered during constructions”. Since we do not have a copy of V-1 noted on C001, or any specific subsurface information are we to assume we are responsible for all Unforeseen Conditions? If so, how much of an allowance would you like us to include in our bid for Unknown Conditions, Haz Mat or other material removal requiring special handling that is not included in the plans or specs? **Duplicate question, See answer 26.**
29. Page 34 of 79 has contract time has no contract time, is it noted somewhere else? Liquidated damages to apply. Are we to include a schedule? **Contract time is 180 days.**
30. Since I did not see the existing building that is to remain, what modifications are necessary to do the new concrete work? Nothing is shown on the existing building except column locations. **The roof structure over hockey rink, columns and piers are to remain. No modifications are necessary to the existing roof canopy structure. See sheet S-001 for extent of new concrete and ramps that will go under the existing structure.**
31. Can new foundation work be done without any modifications to existing? **The intent is not to disturb the existing roof structure and associated structural framing and column footings. See detail 3 on sheet S-101 for new ramp installation that impacts the existing concrete knee wall at that location. Also see detail 4 on S-103.**
32. S100 General Note 4 has an option to paint existing framing and provide new chain link fencing Where is this alternate to be price on the bid form? **No alternate is necessary. Refer to answer 7 above.**

## Fishtown Recreation Center Drainage and Hockey Rink Upgrades RFP

### Questions/RFIs:

33. Where are the signs shown? The signage spec, specified SS, alum, wood, Plam, but I don't see any signs on drawings, just a line item on the pricing sheet? Refer to note 8 on S-100 and spec section 100610. Final locations of signs to be coordinated in the field by GC/Owner/Architect during construction.

**SECTION 004109**

**PRICING**

To the Procurement Commissioner:

I, the undersigned Seller, hereby propose to furnish all the labor, materials and equipment, perform the whole of the work, and submit to all conditions, as represented, intended and implied, both particularly and generally, by the Plans, Special Specifications, Standard Specifications, Standard Details, Standard Contract Requirements, Form of Agreement, the Ordinance authorizing the work and this bid at the prices herein stated, and agrees that each item bid shall be complete in itself, and the City may increase or diminish the amount of work thereunder, or omit the item without invalidating the unit price bid for it or any other item, on the following terms to wit:

**BID AMOUNT**

I will complete the Work in accordance with the Contract Documents for the following Bid Amount as defined in Section 007200, Standard Contract Requirements. (Insert Bid Amount in words as well as figures.)

TOTAL BASE BID AMOUNT            \$ \_\_\_\_\_ Dollars

Mobilization/Demobilization/General Conditions            \$ \_\_\_\_\_

Temporary Protection and Facilities            \$ \_\_\_\_\_

Site Demolition            \$ \_\_\_\_\_

Install new Grading and Sitework            \$ \_\_\_\_\_

Plumbing – Underground Utilities            \$ \_\_\_\_\_

Install of Bench retrofit            \$ \_\_\_\_\_

Furnish and Installation of Asphalt            \$ \_\_\_\_\_

Furnish and Install Concrete (sidewalks, rink, stairs, ramps)            \$ \_\_\_\_\_

Furnish and Installation of all Signage Types            \$ \_\_\_\_\_

Furnish and Install ChainLink Fencing            \$ \_\_\_\_\_

Furnish and Install Paint            \$ \_\_\_\_\_

Furnish and Install Turf, Grass, shrubs \$ \_\_\_\_\_

Furnish and Install dasherboard system, sport markings \$ \_\_\_\_\_

Add 2% Allowance for permitting \$ \_\_\_\_\_

**TOTAL BASE BID** \$ \_\_\_\_\_

Add Alternate #1 \$ \_\_\_\_\_

Add Alternate #2 \$ \_\_\_\_\_

**SECTION 004113 –  
BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)**

1.1 BID INFORMATION

- A. Bidder: \_\_\_\_\_.
- B. Project Name: Renovations to Fishtown Hockey Rink
- C. Project Location: 1202-32 E. Montgomery Avenue, Philadelphia PA 19125
- D. Owner: Philadelphia Parks and Recreation
- E. Owner Project Number: #16264E-03-03
- F. Architect: SRW Engineering and Architecture
- G. Architect Project Number: 2020-501

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by SRW Engineering and Architecture having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
  - 1. \_\_\_\_\_ Dollars (\$ \_\_\_\_\_).
  - 2. Bid Alternate #1: \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)
  - 3. Bid Alternate #2: \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)
  - 4. The above amount may be modified by amounts indicated by the Bidder on the attached Document 004322 "Unit Prices Form" and Document 004323 "Alternates Form."

1.3 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within [10] <Insert number> days after a written Notice of Award, if offered within [60] <Insert number> days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:
  - 1. \_\_\_\_\_ Dollars (\$ \_\_\_\_\_).

- B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 SUBCONTRACTORS AND SUPPLIERS

Delete this article if this information will instead be requested subsequent to receipt of bids.

- A. The following companies shall execute subcontracts for the portions of the Work indicated:

- 1. Concrete Work: \_\_\_\_\_.
- 2. Masonry Work: \_\_\_\_\_.
- 3. Plumbing Work: \_\_\_\_\_.
- 4. Electrical Work: \_\_\_\_\_.
- 5. Site Work: \_\_\_\_\_.

- B. PERMIT ALLOWANCE

- 1. Include 2% allowance for permit fees \_\_\_\_\_.

1.5 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within **<Insert number>** calendar days.

1.6 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

- 1. Addendum No. 1, dated \_\_\_\_\_.
- 2. Addendum No. 2, dated \_\_\_\_\_.
- 3. Addendum No. 3, dated \_\_\_\_\_.
- 4. Addendum No. 4, dated \_\_\_\_\_.

1.7 BID SUPPLEMENTS

- A. The following supplements are a part of this Bid Form and are attached hereto.

Revise list below to suit Project. Coordinate with related Bid Form supplements.

1. Bid Form Supplement - Alternates.
2. Bid Form Supplement - Unit Prices.
3. Bid Form Supplement - Allowances.
4. Bid Form Supplement - Bid Bond Form (AIA Document A310-2010).
5. **<Insert name of Bid Form supplement>**.

1.8 CONTRACTOR'S LICENSE

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the City of Philadelphia and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.9 SUBMISSION OF BID

- A. Respectfully submitted this \_\_\_\_ day of \_\_\_\_\_, **<Insert year>**.
- B. Submitted By: \_\_\_\_\_ (Name of bidding firm or corporation).
- C. Authorized Signature: \_\_\_\_\_ (Handwritten signature).
- D. Signed By: \_\_\_\_\_ (Type or print name).
- E. Title: \_\_\_\_\_ (Owner/Partner/President/Vice President).
- F. Witnessed By: \_\_\_\_\_ (Handwritten signature).
- G. Attest: \_\_\_\_\_ (Handwritten signature).
- H. By: \_\_\_\_\_ (Type or print name).
- I. Title: \_\_\_\_\_ (Corporate Secretary or Assistant Secretary).
- J. Street Address: \_\_\_\_\_.
- K. City, State, Zip: \_\_\_\_\_.
- L. Phone: \_\_\_\_\_.
- M. License No.: \_\_\_\_\_.
- N. Federal ID No.: \_\_\_\_\_ (Affix Corporate Seal Here).

END OF DOCUMENT 004113

**SECTION 012200**  
**UNIT PRICES**

*Unit Prices submitted with this bid will be utilized by the City for **additional work (change orders)** not otherwise specified in this bid due to unforeseen conditions not known at the time of contract award. The City reserves the right to negotiate or otherwise bid additional work items in the event the Unit Prices submitted with this bid are not competitive. Unit Prices shall include all associated costs such as material, delivery, installation, applicable permit fees, taxes, bonds, overhead and/or profit, etc.*

**PART 1 GENERAL**

1.1 DESCRIPTION OF WORK

- A. This Section identifies Unit Prices and describes the method of pricing the change in quantity of the item of work for which the price is stated. Unit prices may be used to price additions and subtractions to the contract amount.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Field Engineering - Division 1.
- C. Referenced Section of Specifications stipulate pertinent requirements for products and methods to achieve the work required for each Unit Price.

1.3 SUBMITTALS

- A. Submit completed Schedule of Unit Prices not later than 15 days after the Notice to Proceed.

1.4 SCHEDULE OF UNIT PRICES

- A. Payment for additional work and credit for deductions in work caused by modifications to the Contract, shall be computed in accordance with the following Schedule of Unit Prices, which schedule shall remain in effect until all Work of the Contract has been completed and accepted.
- B. The Unit Prices shall be firm lump sums all-inclusive cost of the materials, work, layout, drafting, balancing, testing, tools, sundries, scaffolding, trucking, transportation, cleaning, supervision, overhead, profit, and any and all other costs for each of the items listed.
- C. The calculations for determining the number of units of work shall be of actual surface, volume, length, hours or number of individual items listed for the class of work, complete in place and accepted or omitted. No allowance for waste, loss, breakage, damage, or difficulties shall be made.
- D. Determination of number of units of work for work performed under Division 2 specification sections is specified in Field Engineering.
- E. Number of units of work for all other work will be determined by Contractor. The City reserves the right to independently verify units of Work.



1.4 UNIT PRICE SCHEDULE

	PRODUCT	UNIT OF MEASURE	UNIT PRICE
1.	Concrete pathways, 6" depth	1/SF	
2.	Asphalt pathways, full depth	1/SF	
3.	Installation of bench and foundation	1/Each	
4	Installation of natural grass turf	1/SF	
5	Excavation and removal of unclassified soil conditions	1 cubic yard	
6			

**END OF SECTION 012200**

## SECTION 057300

### DECORATIVE METAL RAILINGS – WIRE MESH

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

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

##### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Component Aluminum railings
  - 2. Infill system for component aluminum railings

##### 1.3 PERFORMANCE REQUIREMENTS

- A. All railings shall be supplied to conform to applicable sections of the following codes:
  - 1. International Building Code
  - 2. ADAAG
- B. Structural Performance: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Handrails:
    - a. Uniform load of 50 lbf/ft. applied in any direction.
    - b. Concentrated load of 200 lbf. applied in any direction.
    - c. Uniform and concentrated loads need not be assumed to act concurrently.
  - 2. Top Rails of Guards:
    - a. Uniform load of 50 lbf/ft. applied in any direction.
    - b. Concentrated load of 200 lbf. applied in any direction.
    - c. Uniform and concentrated loads need not be assumed to act concurrently.
  - 3. Infill Area of Guards:
    - a. Horizontal concentrated load of 50 lbf. applied to 1 sq. ft. at any point in system, including panels, intermediate rails, balusters, or other elements composing infill area. Load on infill area need not be assumed to act concurrently with loads on top rails.
- C. Thermal Movements: Provide exterior railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120°F, ambient; 180°F, material surfaces.
- D. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

##### 1.4 SUBMITTALS

- A. Product Data: For the following:
  - 1. Manufacturer's product lines of mechanically connected railings.
  - 2. Grout, anchoring cement, and paint products.

- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
  - 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Initial Selection: For products involving selection of color, texture, or design.
- D. Design Calculations Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation
- E. Mill Certificates: Signed by manufacturers of stainless-steel products certifying that products furnished comply with requirements.
- F. Qualification Data: For professional engineer.
- G. Product Test Reports: Supplier shall submit calculations and test reports for complete system, including railing and infill panels. Calculations and test reports shall be stamped by a licensed PE. Test reports shall be in accordance with ASTM E 935.

## 1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of railing through one source from a single manufacturer.
- B. Mock-up Panel: one section of railing system for verification.
  - 1. Approximate Size: ¼ to ½ size using full size components.
  - 2. Approved mockups may become part of the completed Work if undamaged at time of Substantial Completion.
  - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents unless such deviations are specifically approved by architect in writing.

## 1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

## 1.7 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Railing Product: Subject to compliance with requirements, provide Interna-Rail® aluminum component railing as manufactured and assembled by Hollaender Manufacturing or an approved equivalent. Single source manufacturer is required. Welded railing will not be accepted.

## 2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

## 2.3 ALUMINUM

- A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of alloy and temper designated below for each aluminum form required.
- B. Extruded Bars and Tubing: ASTM B 221, Alloy 6063-T5/T52, 6005-T5  
Provide 1 ½ in IPS, (1.90 in OD) Standard Weight (Schedule 40) pipe for rails, Schedule 80 for posts, Schedule 10 for pickets, unless otherwise indicated
- C. Extruded Structural Pipe and Round Tubing: ASTM B 429, Alloy 6061-T6.  
Provide 1 ½ in IPS, (1.90 in OD) Standard Weight (Schedule 40) pipe for rails, Schedule 80 for posts, unless otherwise indicated
- D. Drawn Seamless Tubing: ASTM B 210, Alloy 6063-T832
- E. Plate and Sheet: ASTM B 209, Alloy 6061-T6
- F. Die and Hand Forgings: ASTM B 247, Alloy 6061-T6
- G. Base Flange Castings: ASTM B 26/B 26M, Alloy Almag 535
- H. Panel Clips and Structural Fasteners: Alloy 6063-T6.

## 2.4 STEEL

- A. Perforated Sheet: ASTM A1008.

## 2.5 FASTENERS

- A. General: Provide the following:
  - 1. Aluminum Railings: Alloy steel fasteners with JS-600 zinc plating.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Structural Fasteners for Interconnecting Railing Components:
  - 1. Rails shall be attached to posts by means of tee fittings equipped with anodized aluminum, tubular rivet nut and stainless steel socket head cap screw. All structural fasteners such as tee fittings shall be machined from 6063-T6 aluminum alloy. The fitting shall be internally connected to the rail by means of an internal dual tang that is expanded with a stainless steel, internal /external, reverse knurl, cup point socket head set screw. This combination shall prevent any loosening of the system due to changes in temperature or vibration. Systems using pop rivets or adhesives will not be accepted.

- D. Fasten infill panels to rails and posts with Hollaender model 145 panel clips, machined from 6063-T6 aluminum alloy. Secure the infill panels in the panel clips with reverse-knurl cup-point set screws. Fasten panel clips to rails and posts with ¼ - 20 sheet metal screws.
- E. Anchors: Provide concrete adhesive anchors where indicated or necessary.

## 2.6 INFILL FOR RAILINGS

- A. Panel:
  - 1. Welded Steel Wire Mesh infill panel: minimum .118 inch wire diameter steel
  - 2. Pattern: 2" square.
  - 3. Frame: steel U-channel, minimum 14 ga, corners welded and ground smooth. To assure minimum maintenance and maximum corrosion protection, bottom channel of frame shall be open, in order to evacuate all water.
  - 4. Corrosion Protection
    - a. Entire panel to be electro-coated. Electro-coating to be PPG Power cron 8000 or equivalent, and shall cover all exposed surfaces, especially interior of U channel. Electro-coating to be applied in four steps: pre-treatment, electro-coat, post rinse and bake oven.
    - b. Entire panel shall then be powder coated with Silver powder coat, or equivalent powder coat color of architect's choice. Powder to be TGIC Polyester, minimum AAMA 2604.
  - 5. Panels to be attached to railing using Hollaender #145 panel retainers and ¼ - 20 screws, with appropriate slot width for panel thickness, and set screw for final tightening of panel within retainer slot.

## 2.7 HANDRAIL FOR ADA APPLICATIONS OR STAIRS (AS REQUIRED)

- 1. Ramps that have a drop off of 30 inches or more on the side require guardrail, per above spec. Ramps with a rise greater than 6 inches shall have handrails on both sides.
- 2. Stairways shall have handrails on both sides.
- 3. Handrail will be attached to the guardrail sections using Hollaender model 85 adjustable brackets.
- 4. Handrail will be installed at a height of 34 – 38 inches above ramp surface or stair tread nosings.
- 5. Handrail will be anodized aluminum 6063 Sch. 40, 1 ½ in IPS nominal (1.90 in. OD) and shall have a continuous surface. Where necessary, lengths of the handrail will be spliced using Hollaender Model 70ES-8 internal locking splices.
- 6. Handrails shall return to a wall, guard or walking surface. If returning to the guard, Hollaender model 185 post return swivel shall be used to connect the end of the handrail to the guardrail post.

## 2.8 MISCELLANEOUS MATERIALS

- A. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

## 2.9 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.

- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items. Welding will not be accepted.
- G. Connections: Fabricate railings with non-welded connections, unless otherwise indicated. Welding will not be accepted.
- H. Non-welded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
  - 1. Fittings to be of the internal double tang type activated by a reverse knurl cup point set screw. Reverse knurl is required to ensure that screw does not come loose under vibration. Plain cup point screws will not be accepted. Fittings to be fastened to pipe by means of a 5/16 in. tubular rivet nut and socket head cap screw.
- I. Form changes in direction as follows:
  - 1. By flush bends or by inserting prefabricated flush-elbow fittings.
- J. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- K. Close exposed ends of railing members with prefabricated end fittings.
- L. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.
- M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated. Flanges to be sand cast from aluminum alloy 535 with anodized finish and fastened directly to the post by means of two reverse knurl cup point set screws.
- N. Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

## 2.10 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.
- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

## 2.11 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Unless indicated otherwise, provide aluminum pipe with the following finish:
  - 1. Anodized Finish: AA-M10C22A41 (Architectural class, .7 mil thickness or greater)

## 2.12 STEEL FINISHES

- A. Wire Mesh Infill Panel:
  - 1. Primer/Corrosion Protection – PPG Powercron 8000 or approved equal, applied in four-step process.
  - 2. Finish: Powder coat
    - a. Color: as selected by Architect from manufacturer's full line. Powder coat to be TGIC-Polyester, min. AAMA 2603.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for installer. Locate reinforcements and mark locations if not already done.

### 3.2 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
  - 1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
  - 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
  - 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- D. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

### 3.3 RAILING CONNECTIONS

- A. Non-welded Connections: Use mechanical joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings.
- B. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches beyond joint on either side, fasten internal sleeve securely to 1 side, and locate joint within 6 inches of post.

### 3.4 ANCHORING RAILING ENDS

- A. Anchor railing ends to concrete and masonry with round flanges connected to railing ends and anchored to wall construction with anchors and bolts.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and connected to railing ends using non-welded connections.

### 3.5 ATTACHING HANDRAILS TO WALLS

- A. Attach handrails to wall with wall brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.
- B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- C. Secure wall brackets to building construction as indicated, or if not indicated, as follows:
  - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
  - 2. For hollow masonry anchorage, use toggle bolts.
  - 3. Provide blocking between studs in stud wall construction.

### 3.6 ADJUSTING AND CLEANING

- A. Clean aluminum and stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.

### 3.7 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION - 057300 DECORATIVE METAL RAILINGS



SECTION 09 90 00  
INTERIOR, EXTERIOR AND HIGH PERFORMANCE PAINTS AND COATINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Exterior paint and coating systems including surface preparation.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 04 20 00 - Unit Masonry: Concrete Masonry Units (CMU) and brick.
- C. Section 05 12 16 - Fabricated Fireproofed Steel Columns.
- D. Section 05 50 00 - Metal Fabrications.
- E. Section 06 20 00 - Finish Carpentry.
- F. Section 06 40 00 - Architectural Woodwork.
- G. Section 08 11 13.16 - Custom Hollow Metal Doors and Frames.
- H. Section 09 21 16.23 - Gypsum Board Shaft Wall Assemblies.
- I. Section 23 05 00 - Common Work Results for HVAC.
- J. Section 26 05 00 - Common Work Results for Electrical.

1.3 REFERENCES

- A. Steel Structures Painting Council (SSPC):
  - 1. SSPC-SP 1 - Solvent Cleaning.
  - 2. SSPC-SP 2 - Hand Tool Cleaning.
  - 3. SSPC-SP 3 - Power Tool Cleaning.
  - 4. SSPC-SP5/NACE No. 1, White Metal Blast Cleaning.
  - 5. SSPC-SP6/NACE No. 3, Commercial Blast Cleaning.
  - 6. SSPC-SP7/NACE No. 4, Brush-Off Blast Cleaning.
  - 7. SSPC-SP10/NACE No. 2, Near-White Blast Cleaning.
  - 8. SSPC-SP11, Power Tool Cleaning to Bare Metal.
  - 9. SSPC-SP12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating.
  - 10. SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete.
- B. Material Safety Data Sheets / Environmental Data Sheets: Per manufacturer's MSDS/EDS for specific VOCs (calculated per 40 CFR 59.406). VOCs may vary by base and sheen.
- C. California Department of Public Health (CDPH):
  - 1. CDPH v1.1-2010 and V1.2-2017

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

- B. Product Data: For each paint system indicated, including.
  1. Product characteristics.
  2. Surface preparation instructions and recommendations.
  3. Primer requirements and finish specification.
  4. Storage and handling requirements and recommendations.
  5. Application methods.
  6. Cautions for storage, handling and installation.
- C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors and sheens available.
- D. Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.
- E. Only submit complying products based on project requirements (i.e. LEED). One must also comply with the regulations regarding VOCs (CARB, OTC, SCAQMD, LADCO). To ensure compliance with district regulations and other rules, businesses that perform coating activities should contact the local district in each area where the coating will be used.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Paint exposed surfaces. If a color of finish, or a surface is not specifically mentioned, Architect will select from standard products, colors and sheens available.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  1. Finish surfaces for verification of products, colors and sheens.
  2. Finish area designated by Architect.
  3. Provide samples that designate primer and finish coats.
  4. Do not proceed with remaining work until the Architect approves the mock-up.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
  1. Product name, and type (description).
  2. Application and use instructions.
  3. Surface preparation.
  4. VOC content.
  5. Environmental handling.
  6. Batch date.
  7. Color number.
- B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

## 1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

## 1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
- B. Furnish Owner with an additional one percent of each material and color, but not less than 1 gal (3.8 l) or 1 case, as appropriate.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Sherwin-Williams, which is located at: 101 Prospect Ave.; Cleveland, OH 44115; ASD Toll Free Tel: 800-524-5979; Tel: 216-566-2000; Fax: 440-826-1989; Email: request [infospecifications@sherwin.com](mailto:infospecifications@sherwin.com); Web: [www.swspecs.com](http://www.swspecs.com).
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

### 2.2 APPLICATIONS/SCOPE

- A. Exterior Paint and Coating Systems:
  - 1. Concrete: Non-vehicular concrete floors, patios, porches, steps and platforms.
  - 2. Metal: Aluminum, galvanized steel.
  - 3. Metal: Miscellaneous iron, ornamental iron, ferrous metal.
  - 4. Architectural PVC, plastic, fiberglass.

### 2.3 PAINT MATERIALS - GENERAL

- A. Paints and Coatings:
  - 1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
  - 2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.
- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.
- D. Color: Refer to Finish Schedule for paint colors, and as selected.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared; notify Architect of

unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

- B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
- C. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

### 3.2 SURFACE PREPARATION

- A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
  - 1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
  - 2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply solution and scrub the mildewed area. Allow solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
  - 3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
  - 4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.
  - 5. All Exterior exposed ferrous metal surfaces to be painted except for stainless steel items and unless noted otherwise. Anodized aluminum surfaces are not to be painted; and galvalume roofing materials to be supplied with manufacturer's finishes and are not to be painted. Follow the attached Philadelphia Parks and Rec Paint color guide. Use Sherwin – William anti-graffitti coating and low VOC paints.
  - 6. Direct to metal paint systems in the same number of coats by Sherwin Williams or Benjamin Moore can be used in lieu of Tnemec projects specified below Exterior Paint for applications not covered in the paint color guide shall conform to the following minimum standards:
    - a. Ferrous Metal – Unprimed:
      - 1) One coat of primer; Tnemec 90-97 @ 2.5 - 3.5 mil dry thickness.
      - 2) First finish coat; Tnemec 161 @ 3.0 - 5.0 mil dry thickness. Slightly tinted to another shade than the final finish coat.
      - 3) Second finish coat; Tnemec 75 @ 2.0 - 3.0 mil dry thickness.
    - b. Ferrous Metal - Shop Primed:
      - 1) First finish coat; Tnemec 161 @ 3.0 - 5.0 mil dry thickness. Slightly tinted to another shade than the final finish coat.
      - 2) Second finish coat; Tnemec 75 @ 2.0 - 3.0 mil dry thickness.Or
    - c. Galvanized/Ferrous Metal – previously painted: Existing chain link fence support and handrails
      - Primer: S-W ProIndustrial Pro-Cryl Primer
      - 2 coats of finish: S-W ProIndustrial WaterBased Alkyd Urethane, semi-gloss
    - d. Ferrous Metal – Galvanized:
      - 1) First finish coat; Tnemec 161 @ 3.0 - 5.0 mil dry thickness. Slightly tinted to another shade than the final finish coat.

- 2) Second finish coat; Tnemec 75 @ 2.0 - 3.0 mil dry thickness.
  - e. D. Non-Ferrous Metal - Unprimed (aluminum or copper):
    - 1) One coat: Vinyl acid wash; #760 line or Galva-Prep Phosphoric acid wash.
    - 2) One coat: DTM Acrylic primer; #073-189.
    - 3) Two coat: Alkyd gloss; #074. Slightly tinted to another shade than the final finish coat.
    - 4) One coat: GCP 1000. Color selected by the Architect.
  - f. Paint Schedule:
    - 1) Hockey Rink Game lines:
      - a) Basis of Design: Plush by Latex-ite or approved equal
      - b) All weather paint, 110% acrylic, non fading
      - c) Provide quantity of colors as shown on drawings.
    - 2) All Conduit, plumbing piping to match existing columns: provide color match at locations.
    - 3) Existing column piers - to be painted as needed due to removal of existing dashboards. Any exposed unpainted column pier faces to be painted to match existing conditions.
    - 4) Chainlink fence horizontal and vertical framing
    - 5) Chainlink fence standards at dasherboard.
- B. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.
- C. Block (Cinder and Concrete): Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75 degrees F (24 degrees C). The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound.
- D. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.
- E. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.
- F. Steel: Structural, Plate, And Similar Items: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.
1. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.
  2. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

3. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
  4. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
  5. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
  6. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.
  7. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
  8. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
  9. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials: SSPC-SP12 or NACE 5: This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.
  10. Water Blasting, SSPC-SP12/NACE No. 5: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.
- G. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

### 3.3 INSTALLATION

- A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.
- B. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

- C. Apply coatings using methods recommended by manufacturer.
- D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.
- F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.
- G. Inspection: The coated surface must be inspected and approved by the Architect just prior to the application of each coat.

#### 3.4 PROTECTION

- A. Protect finished coatings from damage until completion of project.
- B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION

## SECTION 100610

### EXTERIOR SIGNAGE

#### PART 1 REQUIRED SUBMITTALS

##### 1.1 QUALIFICATIONS

A. The awarded Fabricator will have provided their qualifications at or prior to the time of Bid. The Fabricator is required to submit as part of the submittal process additional qualifications for any subcontractors, including but not limited to, installers, electrician, specialty sub-contractor and/or project managers not included or accepted with the bid award of the project. The Owner reserves the right to accept or reject any sub-contractor and/or project manager submitted for review. Qualifications should include: a minimum of 5-10 years relevant experience and shall provide information that illustrates the following:

1. Firm/Personnel qualifications.
2. Projects of similar size and complexity.
3. Demonstration of high-quality craftsmanship.
4. Project management team and experience.

B. Regional Vendors:

1. Urban Sign and Crane  
527 E. Chestnut Avenue  
Voorhees, NJ 08360  
856.691.8388  
[www.urbansigncompany.com](http://www.urbansigncompany.com)
2. M.S. Signs, Inc.  
6 Morris Street  
Paterson, NJ 07501  
973.569.1111  
[www.mssign.com](http://www.mssign.com)
3. L&H Sign Company  
425 North 3<sup>rd</sup> Street  
Reading, PA 19601  
[www.lhsigns.com](http://www.lhsigns.com)
4. Compass Sign Co LLC  
1505 Ford Road  
Bensalem, PA 19020  
215.639.677  
[www.compass-sign.net](http://www.compass-sign.net)
5. Allied Environmental Signage  
69 Megill Road



Farmingdale, NJ 07727  
732.751.1818  
[www.allied-signs.com](http://www.allied-signs.com)

6. Or proposed qualified manufacturer, qualifications to be submitted to the owner for approval.

## 1.2 SHOP DRAWINGS

- A. Submit one **(1)** electronic set of shop drawings as outlined below: Include plans, elevations, sections and large-scale details of sign construction, wording, and lettering layout. Show anchorages and accessory items. Provide graphic layouts of each individual sign face and message for each sign location. Show fabrication and installation details, including all sign components such as: extrusions, brackets, bracing, hardware, internal framing, etc. Alphabet of each type style required by the contract documents; upper and lowercase, with numerals, punctuation and accents. Shop drawings **MUST** include all field verified conditions and dimensions. Show installation and mounting heights.

## 1.3 PRODUCT SPECS AND WARRANTY INFORMATION

- A. Provide documentation outlining all project warranties, including both product and manufacturing. Submit cut sheets for all specified products.

## 1.4 SAMPLES

- A. Samples shall be clearly labeled on the back (where possible), designating item number, name of manufacturer, sign type and location. Fabricator shall submit a minimum of two (2) samples of each color and finish applied on each material type as indicated in the drawing package. Samples should represent the final finish of each element and will be used as control samples for production approval. Samples should represent extreme variations in color and texture that might occur during fabrication. Please submit the following samples as specified in the drawing package, list project specific submittal requirements.

## 1.5 COLOR SAMPLES

- A. Color sample(s) for each specified color, process and finish. Color submittal(s) shall be submitted on each relevant substrate specified.

## 1.6 MATERIAL SAMPLES

- A. Material samples of each specified Material (M1, M2 etc.) in each color and finish specified. Submit manufacturer's standard color palette where required for color and finish selection.

## 1.7 CHPL SAMPLES

- A. Custom High Pressure Laminate (CHPL) manufacturer must supply project-specific electronic PDF proofs for content approval and minimum 8" x 10" x .060" actual material lab samples for color and finish approval from production-ready digital art work and

## 1.8 PAPER TEMPLATES

- A. Templates should be fully assembled or have complete registration marks for assembly. Fabricator shall provide for Designer approval, full-size paper templates for review and approval in the field of the following sign types:

1. BID1 and RUL1

## 1.9 SIGN SAMPLES

- A. Sign Contractor shall construct the following sign samples/mock-ups:

1. BID1 and RUL1 (only required by Fabricator on initial fabrication contract for this program)
2. Reference drawings for sign quantities.
3. Sign text to be have “FISHTOWN RECREATION CENTER AND HOCKEY RINK”. Final text to be reviewed and approved by Owner.

## 1.10 MOUNTING OPTIONS

- A. Provide fence mounted accessories for all signs.

## 1.11 REVIEW PROCESS

- A. Each reviewing party, i.e. Designer, Owner, Architect, etc. will each require a minimum of 10 business days to review all submittals. The process and sequence of submittal and review shall be discussed and agreed to during the project kickoff meeting. Designer reserves the right to reject any submittal (shop drawing, sample, etc.) that does not satisfy the requirements as outlined in this document including but not limited to: field conditions, construction, finish or color requirements. Submit additional drawings/samples as required to obtain final approval.

## **PART 2 PROJECT REQUIREMENTS**

### 2.1 WORK INCLUDED

- A. Site verification, fabrication, and delivery-of all sign types and quantities indicated in the final approved Copy List and Sign Location Plan. Installation of signs may be completed by the Fabricator or the General Contractor. Fabricator to verify the sign quantities from the Copy List and Sign Location Plans and if discrepancies exist, notify the Designer of any such discrepancies. Work shall include all support structures and fasteners required for installation. Work shall include all design engineering needed to produce the project to comply with all applicable municipal, state and federal code, and structural soundness. Fabricator is responsible for submitting engineered drawings signed and sealed by structural engineer. Fabricator to provide all services, subcontractors, labor, materials and equipment needed to complete the work described in this design drawings and specifications document. It is the Fabricator's responsibility to have all drawings signed and sealed by a Structural Engineer. Fabricator shall visit site before construction begins and inspect each proposed sign location. Any issues or concerns shall be communicated

to the Designer in writing within twenty-four (24) hours. Upon award of the bid, the selected Fabricator shall arrange a meeting with the Designer to review the scope of work. Fabricator will be responsible for generating evacuation maps at all programmed locations based on template provided by Designer. Fabricator will be responsible for providing the Designer and Owner a project schedule that outlines durations for all work including delivery dates for submittals and Designer and Owner review time. Sign Contractor shall update and reissue the schedule throughout the project and communicate all changes/impacts on the schedule to Designer and Owner. Prior to installation, the Fabricator shall conduct a pre-install walk through with the Designer and Owner to address any potential issues/questions. At the substantial completion of the project the Fabricator shall perform a walk-through with the Designer and Owner to inspect the installation and create a punch list of all unsatisfactory items. Fabricator is required to complete all punch list items within 3-4 weeks of receipt of punch list.

## 2.2 WORK QUALITY

- A. All work to be done in a professional manner and to the highest trade standards. Fabricator is responsible for insuring the quality standards above for all related professional and trade subcontracted work including: general carpentry, masonry, electrical, landscaping, or utilities required for the installation of all sign types as described, unless otherwise agreed to by Owner. All subcontracted work must meet the general accepted professional standards.

## 2.3 REFERENCE STANDARD

- A. The following materials reference standards will apply to the work materials (use most current version of reference standards):
1. ASTM A36 Structural Steel
  2. ASTM A123 Zinc (Hot Galvanized) coatings on products fabricated from rod, pressed, and forged steel shape, plates and bars.
  3. ASTM B221 Aluminum-alloy extruded bars, rods, wire, shapes and tubes.
  4. ASTM D822 Light and Water exposure apparatus (Carbon-arc type) for testing paint, varnish, lacquer, and related products.
  5. ASTM E84 Surface-burning characteristics of building materials, lacquer and related products.
  6. AWI Comply with applicable requirements of "Architectural Woodwork Quality Standards" published by the Architectural Woodwork Institute.
  7. CDA Copper Development Association, Inc.
  8. FS L-P-391 Plastic sheet, rods and tubing, rigid, cast materials
  9. FS L-P-387 Plastic sheet, laminated, thermosetting
  10. PS-1 Construction and industrial plywood
  11. PEI Porcelain Enamel Institute
  12. TM 8135 QQ-B-613 (Fed Spec) Brass, Muntz 280
  13. UL-943 Fluorescent lamp ballasts quality

## 2.4 WARRANTIES

- A. Warrant all products (including, but not limited to: materials, hardware and finishes) against any and all defects based on manufacturers' supplied warranties from date of

installation. All manufacturer warranties should be submitted to the Designer and Owner for review.

1. Vinyl die-cut letters: warranted against delimitation from substrate.
  2. Paint finishes: warranted against fading or chalking, corrosion developing beneath paint surfaces of the support systems (except for obvious vandalism or other external damage to the paint surfaces).
  3. Corrosion of the fastenings.
  4. The signs not remaining true and plumb on their supports during normal wear.
  5. Fading of the colors when matched against a sample of the original color and material.
  6. Discoloration of metal finishes.
  7. Adhesives, e.g. tape and epoxy
  8. Paneling not remaining true and plumb on their supports during normal wear.
- B. The Fabricator shall correct any and all material and/ or workmanship defects which may appear during the warranty period by restoring defective work to the standard of the contract documents at no cost to the Owner and to the Owner's satisfaction. Corrections include, but are not limited to: disfiguring of any surface due to chalking, rusting, bubbling, or other disintegration of the sign face or of the messages or of the edge finish of the sign inserts or panel.
- C. Manufacturer warrants that under normal wear and use the installation and sign posts will not crack or fail for a period of one (10) years from the date of substantial completion.
- D. Installer shall provide labor and material warranty for a period of (1) full year from the date of substantial completion.

## 2.5 CHPL SAMPLES

- A. Manufacturer warrants that under normal wear and use the workmanship and materials used in the CHPL product purchased from the Manufacturer will meet the standards set forth on the applicable specification materials and that the product will not delaminate, peel, blister, crack or fade for a period ten (10) full years from the date of purchase.
- B. In the event that the product does not perform as warranted:
1. Manufacturer shall be allowed to conduct an on-site inspection and investigation, or be provided digital images of defects
  2. Manufacturer shall work directly with the end-user to resolve any warranty matter,
  3. The sole remedy will be the repair or replacement of the defective product at the sole discretion of the Manufacturer, and/ or
  4. The repair or replacement by Manufacturer shall be limited to the re-manufacture and shipment of the replacement or repaired product to the site of the end-user's product.

- C. This warranty only applies to the manufacture and material used in the manufacture of the product. Manufacturer shall not be liable for any other costs, including but not limited to installation, labor or other costs or expenses. Any repair or replacement shall be warranted for a period up to the remaining life of the original warranty. Further the repair or replacement costs incurred by Manufacturer shall not exceed the purchase price paid for the product.

## 2.6 QUALITY ASSURANCE

- A. Work done and materials furnished shall meet the highest industry standards in every respect and, unless otherwise specified, materials and equipment shall be new and of the latest design.
- B. The Design Intent Package should provide everything necessary for a complete contract.
- C. In the event of conflict or omission, the Fabricator shall consult the Designer for resolution. All clarifications are to be made in writing in the form of an RFI from the Fabricator to the Designer.
- D. Use only personnel thoroughly skilled and experienced with the products and method for fabrication and installation of signage specified.
- E. The Owner shall reserve the right to reject any shop drawings, samples or other submittals, as well as any finished product or installation, that cannot meet the standard of quality established. Any such decision will be considered final and not subject to recourse.
- F. Materials and hardware not specified, but necessary to the complete functioning of the sign, shall conform to the quality level established.
- G. Substitutions of items specifically indicated in this specifications package that serve the same function with equal performance will be considered upon submission of substitution.

## 2.7 PROTECTION AND STORAGE

- A. Fabricator is responsible for storage of signs and assemblies and protection from damage at the shop, in transit and until erected in place, complete, inspected and accepted by Owner.
- B. Fabricator is responsible for the replacement pilferage both prior to and until inspection and acceptance of installation by the Owner.

## 2.8 INSPECTION

- A. All production materials, color samples and paints, fabricated or partially fabricated items shall be available for inspection, on-site or in the shop, by the Owner or Designer during the manufacturing process and until final delivery, installation and acceptance, to determine compliance with the requirements of these specifications. Shop inspection approvals do not guarantee final acceptance of installed work.

## 2.9 INSTALLATION

- A. Install sign units and components with concealed fasteners unless otherwise shown. Refer to drawings for general method of installation. Verify each surface in field to determine appropriate mounting hardware. Fabricator is responsible for determining

where below ground or in-wall structural tie-ins may be required. All elements should be installed true and plumb in accordance with the design intent of this document. Sign location drawings show approximate locations of signs. Fabricator, Designer and Owner shall conduct a pre-install mark out walk through to confirm all locations and identify areas of conflict. Fabricator is responsible for determining the location of underground structures and utilities on ground-mounted signs. Any conflicts should be brought to the attention of the Owner and Designer.

## 2.10 REGULATORY REQUIREMENTS

- A. All installation work shall comply with applicable municipal, state and federal codes, sign ordinances and ADA guidelines for handicapped and fire/life safety signing.
- B. All OSHA safety requirements will be implemented during fabrication and installation as needed or required to comply with safety regulations.
- C. All field/site work shall be conducted in compliance with the Owner/Construction Manager's requirements/ regulations for the site, particularly areas open and accessible to the public. Work area protection shall be required as needed and all site-specific rules should be reviewed and outlined during the project kick-off meeting.

## 2.11 CLEAN UP

- A. Daily and upon completion of installation remove all waste, dirt, wrappings and excess materials, tools and equipment, and thoroughly clean all surfaces to the satisfaction of the Owner.

## 2.12 REORDERING

- A. Reordering all items specified in this package shall be available to the Owner in additional quantities for a period of 10 years after completion of all work called for in this specification.

# PART 3 QUALITY OF MATERIALS

## 3.1 ALUMINIUM

- A. Aluminum shall be of best commercial quality and the various forms shall be straight and true. There shall be no scratches, scars or buckles. Size thickness and finish of aluminum shall be per NAAMM "Metal Finishes Manual". Comply with the following industry standards.
- B. Aluminum sheets shall conform to ASTM B209 6061-T6
- C. Aluminum extrusions shall conform to ASTM B241 6063 T6. Wall thickness shall be a minimum of 1/8" thick unless otherwise shown.
- D. Brushed Finishes-Brush with abrasive of increasing grit# in a linear directional pattern.
- E. Final surface shall have visible grain pattern to match sample approved by Designer. Spray with clear protective finish.

- F. Polished Finish-Brush with abrasive of increasing grit #. Buff to a mirror finish with no visible grain. Match sample approved by Designer. Spray with clear protective finish.
- G. Non-Directional Finish-Brush with abrasive mounted in a random orbital sander. Match sample approved by Designer. Spray with clear protective finish.

### 3.2 STAINLESS STEEL

- A. Structural Stainless steel shapes to be rolled or laser fused, as manufactured by Stainless Structural, LLC. (936-538- 7600, [www.stainless-structurals.com](http://www.stainless-structurals.com))
- B. Chromium stainless steel sheet. Use type 304 or type 316 stainless steel with 16% chromium and 10% nickel.
- C. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness. Stainless Steel Plate, Sheet and Strip: Provide stainless steel plate, sheet, or strip, AISI Type 302, complying with requirements of ASTM A 167.
- D. Stainless Steel Finishes: Finish designations prefixed by "AISI" conform to the system established by the American Iron and Steel Institute for designating finishes.
- E. Finish: Bead blasted & Pickled.

### 3.3 CUSTOM HIGH PRESSURE LAMINATE

- A. Provide Custom High pressure laminate as manufacturer by iZone or an approved equal.
- B. Custom High Pressure Laminate material composed of required layers of phenolic resin impregnated brown kraft filler paper to produce specified thicknesses, surfaced by a layers of melamine overlay, graphics imaged on saturation grade paper with UV resistant pigment based process color inks, and with an optically clear UV overlay that will resist no less that 99% of all sunlight and UV rays, as well as provide a graffiti resistant surface that allows for removal with standard cleaners.
- C. Layers of material are to be assembled, and heat/ pressure consolidated at approximately 1200 PSI at temperatures exceeding 275° Fahrenheit at manufacturer's prescribed time frames.
- D. All manufacturing processes of printing, pressing, machining, finishing and crating to be accomplished within a single standalone manufacturing facility to ensure consistent quality control and providing standard product delivery times of three weeks.

### 3.4 WOOD

- A. #1 grade black locust lumber. Sustainably harvested. Eased edges. Apply a UV clear coat to enhance the wood grain and provide additional protection.

### 3.5 REFLECTIVE GRAPHICS

- A. Provide 3M Scotchlite enclosed lens reflective sheeting or approved equal.

### 3.6 CONCRETE

- A. All concrete footers are to be poured in place.
- B. All concrete footers are to be poured from thoroughly mixed and agitated concrete in order prevent unreasonable voids in the finished casting.
- C. Concrete to meet specified "PSI Test" for strength: 3,500 psi minimum. Concrete to meet specified "Slump test" before pouring footing. All footings to extend past the frost line.
- D. Any footers or posts for signs will be placed in wet concrete and allowed to fully cure in place before any signage is attached or mounted to it in any way. All exposed faces of concrete shall receive a finish to match existing, adjacent surfaces.

### 3.7 VHB FOAM TAPES

- A. Provide 3M Scotch VHB 4930
- B. Adhesive shall be Acrylic VHB
- C. Carrier shall be closed cell foam

### 3.8 ACCESSORIES ANCHORS AND FASTENINGS

- A. Provide anchors and fasteners required to secure work in place. Do not expose fastenings on surface of sign panels unless specifically noted otherwise. Do not deform, distort or discolor sign face surfaces by attachment of concealed fastenings.
- B. All fastenings shall be non-corrosive and resistant to oxidation or other corrosive action, of the same composition completely through their cross sections, particularly when used below grade. Use highest quality stainless steel hardware and fasteners.
- C. Anchors, inserts or fasteners shall be compatible with sign materials, shall not result in galvanic action or chemical interaction of adhesives and shall have demonstrable and sufficient strength for intended use.
- D. Steel anchors and fastenings for exterior use shall be galvanized in accordance with ASTM A153.
- E. Fabricate and install signs with fastenings to withstand all actions imposed by use; 30 psf wind perpendicular to surfaces, water, ice, snow loads and similar forces.
- F. Anchor bolts in concrete shall be cast in place. Fabricator shall furnish instructions for the setting of anchors and bearing plates. Fabricator shall ascertain that the items are properly set during the process of the work.



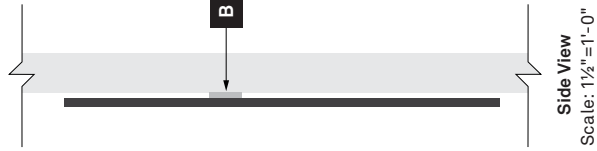
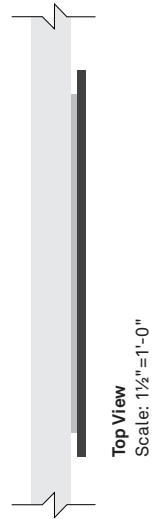
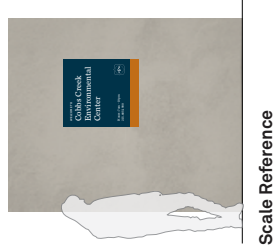
- G. Secure work with fastenings of same color and finish as the components they secure where they are exposed to view, unless noted otherwise. All exposed fasteners must be vandal resistant and have vandal-proof "spanner" type slots to be removed only with a special driver head.

**END OF SECTION 100610**

## Sign Type Description

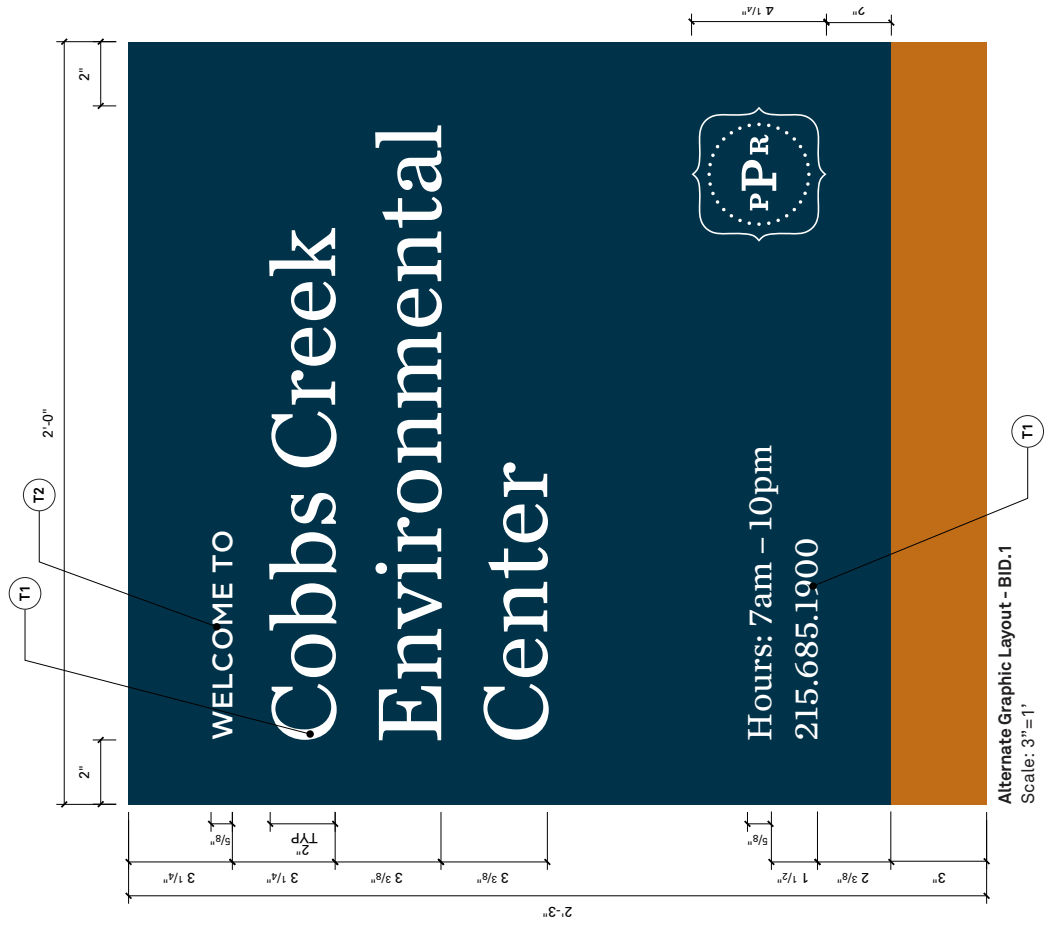
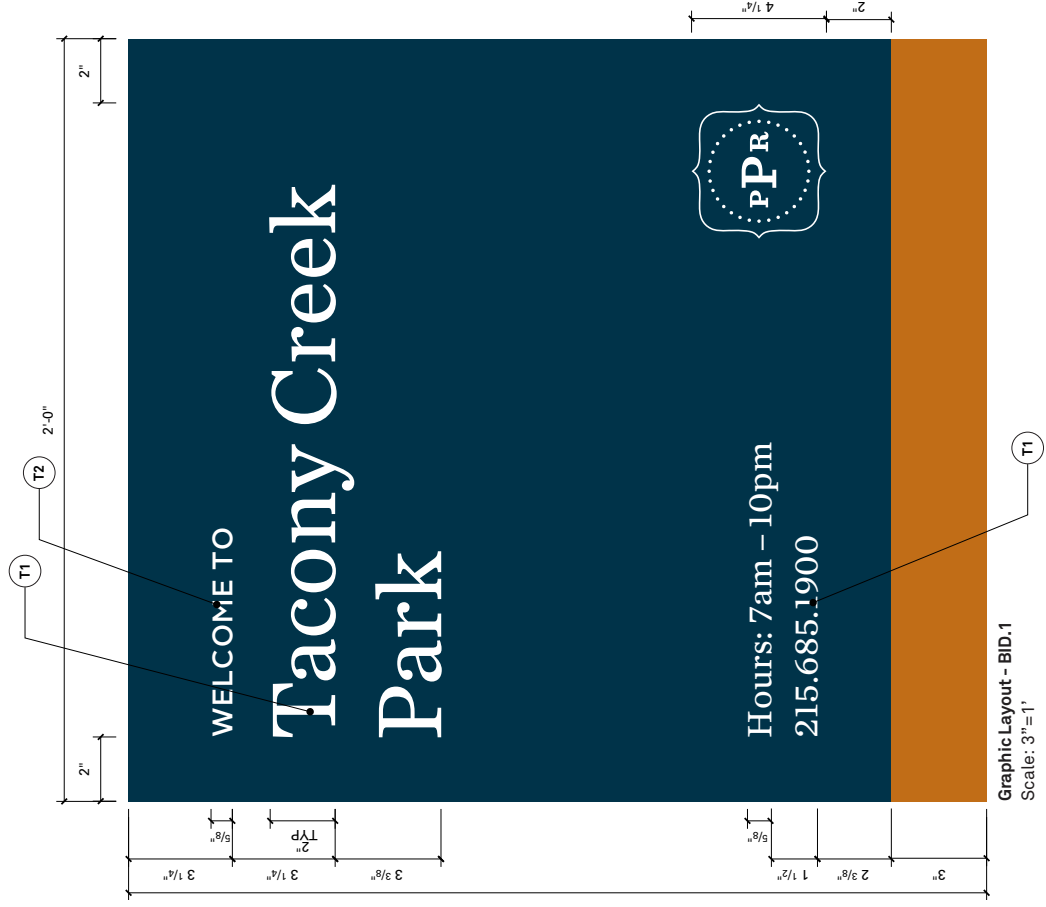
This sign type is to be used to identify buildings or structures owned by Philadelphia Parks & Recreation.

- A Sign Panel**  
 $\frac{1}{2}$ " thk custom high pressure laminate panel (CHPL). Printed messages and panel colors. Match colors as noted.
- B Z-Clip**  
 Aluminum panel clip. Not visible from face of sign. Minimize penetrations at mounting location.



**Construction Details**  
 Refer to Section 2C + 2D for construction drawings and mounting details and Section 2E for placement guidelines.

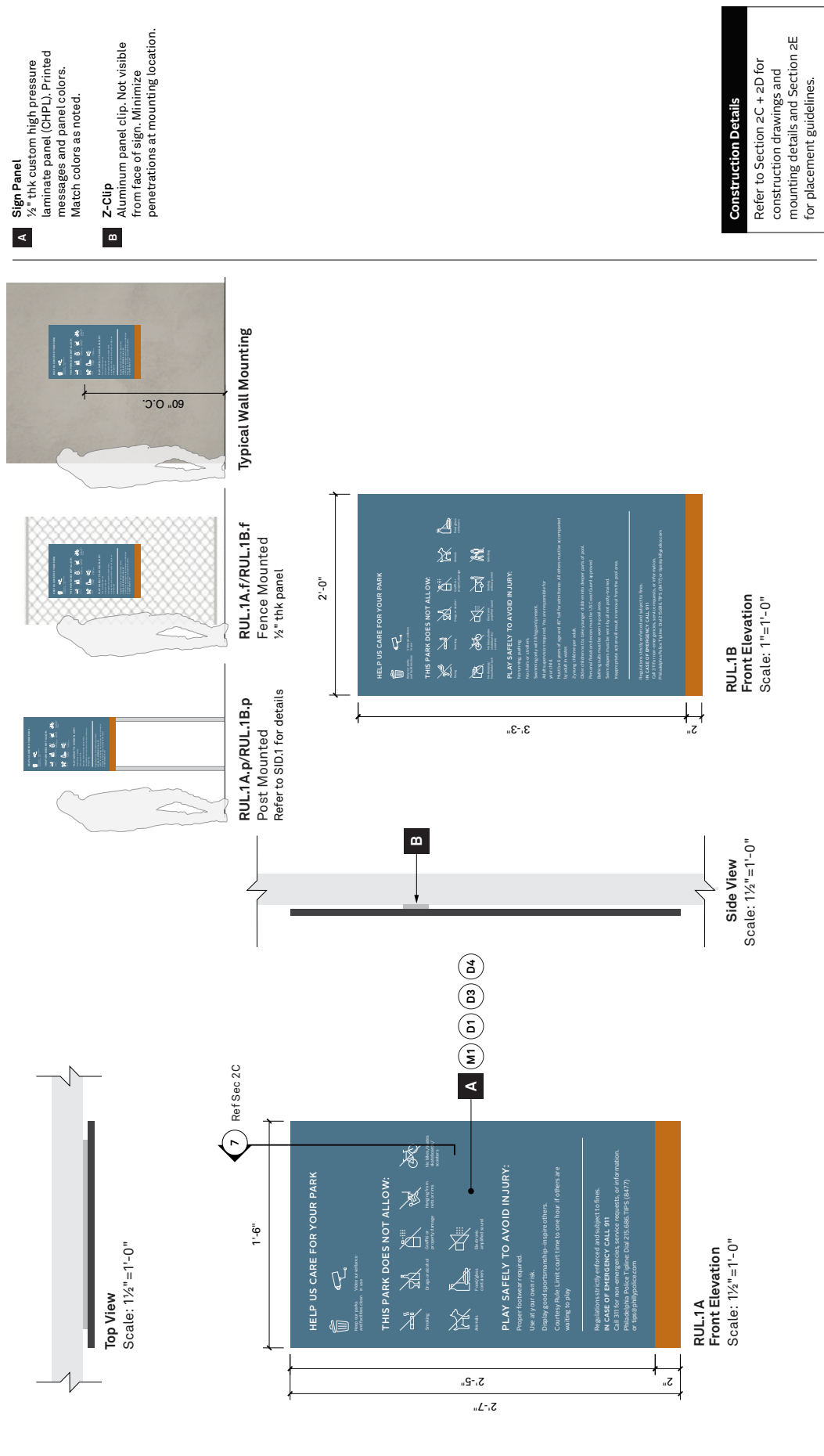
# BID.1



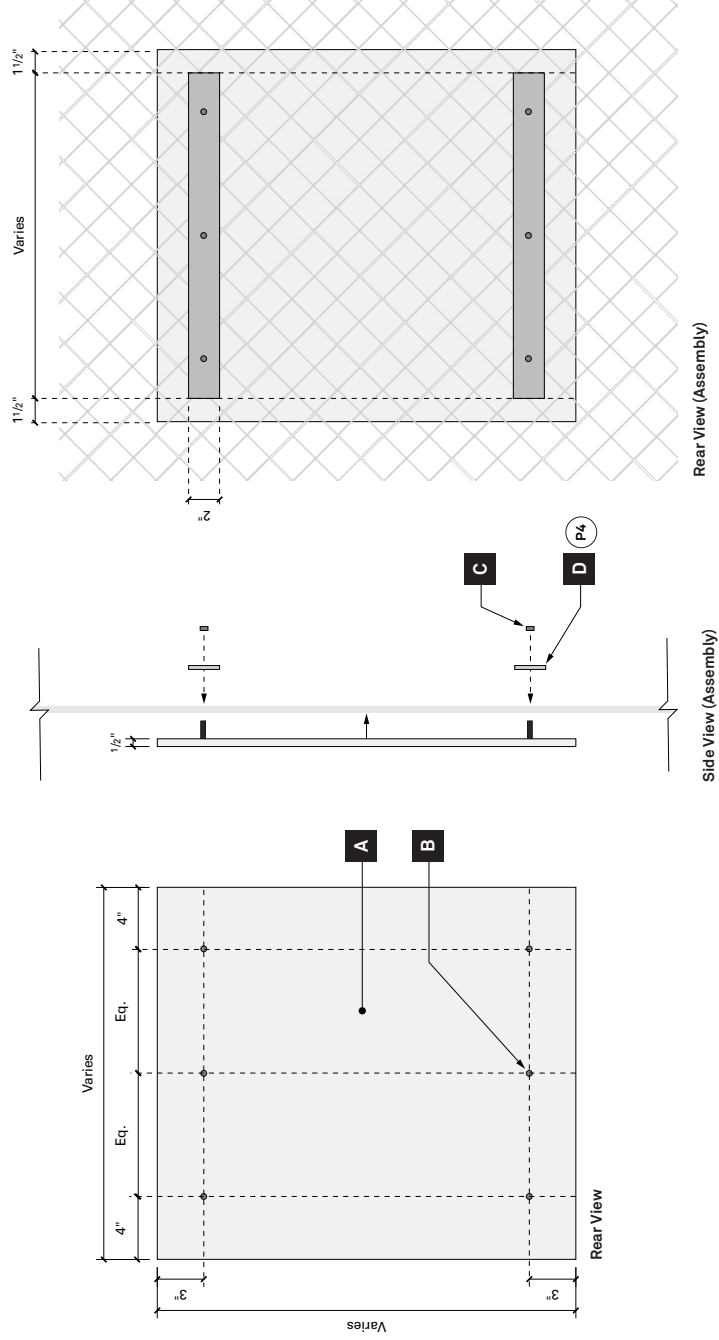
# RUL.1

## Sign Type Description

This sign type is used to post the rules and regulations of a park, field, court, picnic area, etc.



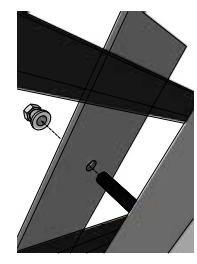
# CONSTRUCTION DETAILS | fence mount details



- A Sign Panel**  
Sizes vary. Custom high pressure laminate panels (CHPL). Printed messages and panel colors.
- B Threaded Stud**  
Fully threaded stainless steel stud. Diameter and length as required. Pass through fence with horizontal bracing and locknut installed at second surface.
- C Tamperproof Locknut**  
Bryce Fastener, Penta-Nut, 316 stainless steel. Size as required.
- D Mounting Plate / Horizontal Brace**  
1/4" thick aluminum plate. Sizes vary. Drill holes in locations as specified or required. Paint to match color as noted.



Recommended Locknut for fence attachment



Assembly Detail

8 Mounting Detail (Fence Mount, Concealed)

NTS

SECTION 13 1816 –  
STEEL FRAME DASHER BOARD SYSTEM

PART I – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY OF WORK

- A. Manufacturer shall furnish and install one complete set of steel framed dasher boards for an 86'-3" x 75'-5" x 14' radius rink.
- B. All materials will be per plans and specifications and constructed, manufactured and installed per plans and specifications. All equipment and materials supplied under these specifications shall be new and of the best grade material and construction.

1.3 RELATED WORK (Work by other Divisions)

- A. Supply and installation of floor surface or ice rink floor system. (where applicable)

1.4 DESIGN

- A. Basis of Design: Heavy Duty Poly Steel DasherBoard System
  - a. Manufacturer: Iron Sleek
  - b. Or Comparable approved equal.

1.5 QUALITY ASSURANCE

- A. Manufacturer will construct, fabricate and deliver all materials to job site per plans and specifications. All materials will be installed to result in a complete steel frame dasher system with all dashers and spectator shielding to be straight and true to line and properly braced. Installation shall be done under the direct supervision of a factory representative at all times. The use of sub-contractors without factory supervision is not acceptable.
- B. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected. Installation shall be in strict conformance with manufacturer requirements and instructions. Erect unit's rigid, straight, level, plumb, and true with horizontal and vertical lines level. No defective, scratched, marred or otherwise damaged equipment and materials shall be installed.

## 1.6 SUBMITTALS

- A. Manufacturer shall upon receipt of contract from owner or its representative, prepare shop drawings, which will itemize sizes and materials as well as construction details for installation. The manufacturer will submit shop drawings to the owner and/or its representative for approval before fabrication of materials.

## 1.7 MANUALS AND AS-BUILT DRAWINGS

- A. Provide three copies of operating and maintenance manuals for all dasher board system equipment covered under this contract, including as-built drawings.
- B. Manuals shall be bound in looseleaf binders containing the following:
  - 1. System operation and maintenance instructions.
  - 2. Safety bulletins and material safety data sheets.
  - 3. As-Built Drawings.

## 1.8 WARRANTY

- A. Manufacturer shall warrant all equipment from all defects in materials for a period of one year from completion of installation. Any misuse or abuse and/or accident not caused by normal conditions shall be the responsibility of the owner.

## PART 2 – PRODUCTS

### 2.1 DASHER BOARD SYSTEM

#### A. DASHER PANEL FRAMEWORK

Dasher panels shall be fabricated in demountable sections of nominal 8' lengths. The design of all panels, whether straight section, curved section, or section in which a gate is located shall be fundamentally similar. Each section shall be made of two horizontal 2" x 2" x 3/16" steel angles used at the top and intermediate locations and one horizontal 2" x 2" x 1/4" steel angle used at the base location. All angles will be welded to a specially designed 11 gauge x 6" deep steel end plates on each end of the panel. All vertical formed channels must have a minimum of 3/4" re-turn edges.

Each end plate will have three matching holes to accommodate 1/2" through bolts.

An additional 2" x 1-1/2" x 1/4" steel angle shall be welded to the back and bottom of each panel to form a continuous slot for anchoring panel to the floor.

An additional 1" x 2" steel channel shall be welded to the top and back of each panel to aid in the fastening of the top caprail to the panel.

In panels over 5' in length an additional 2" x 3" x .120 steel tube shall be welded at the center point of the panel (vertically) to add rigidity.

All steel angles and formed channels used to make up dasher panels and gates will be pre-punched with 3/4" long slotted holes to allow expansion and contraction in the fiberglass dasher facing due to changes in temperature. Round holes and self-tapping screws are not acceptable.

Each panel is to be a complete welded construction. After the construction of the framing each panel is to be hot dip galvanized. Zinc or nickel plating is not acceptable.

The use of steel tubing for horizontal framing members or end vertical framing members is not acceptable.

Systems that require separate support posts to support the dasher system are not acceptable.

Standard sizes of the steel frame dasher panels are to be 96" long by 41-1/4" high.

## B. GATES

Access gates (3'-0" wide standard) shall be built into 8' panels and shall be left or right-hand swing. Gate panel framing shall be of the same construction as standard panels. Gate insert shall be made of pre-punched 3/4" long slotted-formed channels both vertically and horizontally.

The gate latch shall be equipped with a 3/8" x 2" steel flat bar, easily opened with a gloved hand. Latches must be a solid welded construction designed for their intended use. Access gate latches on gates with shielding must be equipped with push button releases located on the cap rail on the ice side of shielding so that the gate can be opened from the ice side. The use of cables, chains or other similar devices to open these gates is not acceptable.

The hinges for all gates shall be two, lift off type, welded to the frame. All hinge assemblies shall have grease fittings for easy lubrication. Hinges that are bolted to gate framework are not acceptable.

All single swing access and player gates shall have one 3/8" thick x 3-1/2" wide x 4-1/2" long door stop welded to the gate frame.

## C. HARDWARE

All steel hardware shall be galvanized or zinc plated for rust resistance after welding. Hardware shall include hinges, latches, nuts, bolts, washers and miscellaneous fastening devices necessary for complete installation.

## D. ANCHORS



The dasher contractor shall install all new 5/8" drilled in epoxy anchors required for the installation of the dasher boards. Dasher contractor shall furnish 1/2" x 5" x 5" steel hold down plate. Plate to have two (2) 7/8" holes to accept a 5/8" bolt and flat washer for securing of dasher panel to anchors. Anchors to be drilled and epoxied into perimeter concrete (minimum thickness 5").

#### E. DASHER FACING

The dasher board facing will be 1/2" thick HDPE UV treated polysteel board with UV stabilizers and will be bright white color. Natural white is not acceptable. Whites must match.

On panels that require red or blue lines, the facing will be painted on the fiberglass panels.

The 1/4" fiberglass panels will be attached to the horizontal angles with 1/4" Phillips flat head machine screws, flat washers and 1/4" nylon insert lock nuts. Heads of screws to be painted to color match dasher facing and kick plate. Spacing of the 1/4" screws will not exceed 1'-0" on center. The use of self-tapping or sheet metal screws to attach dasher facing is not acceptable.

#### F. CAPRAIL

High-density white U.V. stabilized polyethylene cap rail 3/4" thick shall be fastened to the top horizontal-framing members. The caprail must have a textured finish. The front edge of the caprail shall be attached to the top angle using 1/4" Phillips flat head machine screws; flat washers and 1/4" nylon insert lock nuts. The back edge of caprail will be attached to the steel channel using 1/4" type F thread cutting screws. Heads of screws to be painted to color match caprail. The use of nylon rivets or sheet metal screws is unacceptable. The front and back edges of the caprail shall have smooth and radiused edges. Color of cap rail to be White, Dark Blue or Red. Custom colors available.

Caprail is to overhang backside of steel frame to match with any backer sheet (if applicable) to be installed after erection of the dasher system.

#### G. KICK PLATE

Kick plate (8" height) shall be constructed of 1/4" thick exterior grade compression molded fiberglass with UV stabilizers. The top edge of the kickplate shall have a 1/4" radius. The kickplate shall be fastened to the bottom of the dasher panel using 1/4" x 1-3/4" Phillips flat head machine screws, flat washers and nylon insert locking nuts. The heads of the screws are to be painted to color match the kickplate. The use of nylon rivets or sheet metal screws is not acceptable. Color of kick plate to be white or yellow.

#### H. THRESHOLDS

Access and player gates shall have 1" thick high-density polyethylene thresholds that can be removed and replaced when wearing occurs. Polyethylene thresholds less than 1" are not acceptable.

## I. CHAIN LINK FENCING IN LIEU OF ACRYLIC SHIELDING FOR PUCK CONTROL

Puck control chain link fencing shall be installed around the perimeter of the rink in lieu of the acrylic shielding.

4' high x 9 gauge galvanized chain link fence shall be install on four radius corners and two ends of the rink. Vertical supports will be installed 4' on center with 3 horizontal rails for support. On the radius corners the horizontal rails will be rolled to match the radius of the dasher board system.

2-6' high x 9 gauge galvanized chain link fence shall be install on the sides of the rink. Vertical supports will be installed 4' on center with 2 horizontal rails for support.

Complete with all required hardware for installation

## PART 3 – DELIVERY AND INSTALLATION

### 3.1 MANUFACTURER INSTALLATION

Manufacturer will construct, fabricate and deliver all materials to job site per plans and specifications. All materials will be installed to result in a complete hot dip galvanized steel frame dasher system with all dashers and spectator shielding to be straight and true to line and properly braced. Installation shall be done under the direct supervision of a factory representative at all times. Manufacturer shall furnish with submittals the name of the project site installation foreman for this project. Include with submittal shall be a list of a minimum of ten (10) project that the site foreman has been responsible for. This list shall include the names, addresses and telephone numbers of the contacts on these projects. Should it be necessary to change the onsite foreman for the installation dasher contractor shall notify the engineer and owner 30 days prior to the start of the installation and will submit the qualifications of the alternate onsite foreman.

The materials shall be delivered to the job site in an enclosed trailer for protection from road grime.

The contractor shall be responsible for all area clean up of construction debris.

Provide other materials, not specifically described but required for a complete and proper operational installation, as selected by the contractor subject to the approval of the owner.

Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected. Installation shall be in strict conformance with manufacturer requirements and instructions. Erect units' rigid, straight, level, plumb, and true with horizontal and vertical lines level. No defective, scratched, marred or otherwise damaged equipment and materials shall be installed.

END OF SECTION 131816

Philadelphia Redevelopment Authority Submittal Log  
SUBMITTAL LOG print date 7/21/2022  
Fishtown Hockey Rink, 1202 E. Montgomery Avenue, Philadelphia, PA 19125

Number	Section	Page	From Company	Submittal Description	Copy To	Planned Start of Trade Work	Planned Submittal Date	Actual Submittal Date	Submittal Return Date +14	Planned Resubmittal Date	Actual Resubmittal Date	Resubmittal Return Date +14	Action	Reviewed By
1	Division 1		PRA	Narrative- Monthly (for all projects over 4 weeks)	Rebuild/PRA/AE	Enter	Monthly							Rebuild/AE/PPR
15639			GC	Temporary Tree and Plant Protection - Shop dwgs	Rebuild/PRA/AE									
			GC	Temporary Tree and Plant Protection - Certs	Rebuild/PRA/AE									
			GC	Temporary Tree and Plant Protection - existing conditions photos	Rebuild/PRA/AE									
15800			GC	Project Identification and signs - draft and record cop	Rebuild/PRA/AE									
17123			GC	Field Engineering - survey work submittal	Rebuild/PRA/AE									
			GC	Field Engineering - project record documents	Rebuild/PRA/AE									
17419			GC	Construction waste management and disposal - waste management plan	Rebuild/PRA/AE									
17423			GC	Cleaning	Rebuild/PRA/AE									
17836			GC	Warranties	Rebuild/PRA/AE									
17839			GC	Project Record Documents	Rebuild/PRA/AE									
024119			GC	Selective Demolition	Rebuild/PRA/AE									
026100			GC	Specifications of permeable orange non-woven geotextile	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped on site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped off site	Rebuild/PRA/AE									AE/LA/PE
026113			GC	Information of proposed facility to receive fill	Rebuild/PRA/AE									AE/LA/PE
			GC	Contractors experience with remedial projects	Rebuild/PRA/AE									AE/LA/PE
			GC	Health and Safety Plan (HASP)	Rebuild/PRA/AE									AE/LA/PE
			GC	OSHA training certificates for all workers on the site	Rebuild/PRA/AE									AE/LA/PE
			GC	OSHA medial monitoring approval for all workers on the site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped on site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped off site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts for all clean fill delivered to site for backfilling	Rebuild/PRA/AE									AE/LA/PE
026500			GC	PADEP-Certified Installer Certificate for individual and company	Rebuild/PRA/AE									AE/LA/PE
			GC	All worker certifications associated with OSHA 40	Rebuild/PRA/AE									AE/LA/PE
			GC	Site specific Health and Safety Plan	Rebuild/PRA/AE									AE/LA/PE
			GC	Information of proposed facility to receive fill	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped off site	Rebuild/PRA/AE									AE/LA/PE
031030			GC	Maintenance of Cast in Place Concrete	Rebuild/PRA/AE									
033000			GC	Cast in Place Concrete	Rebuild/PRA/AE									
055000			GC	Metal Fabrications - Shop drawing - delegated design	Rebuild/PRA/AE									
090190.52			GC	Maintenance Repainting	Rebuild/PRA/AE									
099000			GC	Exterior Painting - product data	Rebuild/PRA/AE									
			GC	Exterior Painting - product data - hockey rink markings	Rebuild/PRA/AE									
			GC	Exterior painting - paint samples	Rebuild/PRA/AE									
			GC	Exterior painting - paint samples - hockey rink markings	Rebuild/PRA/AE									
221413			GC	Facility Storm Drainage Piping - Product Data	Rebuild/PRA/AE									
			GC	Facility Storm Drainage Piping - Quality control	Rebuild/PRA/AE									
			GC	Facility Storm Drainage Piping - Shop dwg/ Asbuilt	Rebuild/PRA/AE									
221423			GC	Storm Drainage Piping Specialties - Product Data	Rebuild/PRA/AE									
			GC	Storm Drainage Piping Specialties - Certification	Rebuild/PRA/AE									
311000			GC	Site Clearing & Tree Protection	Rebuild/PRA/AE									
311313			GC	Selective Landscape Preservation & Plant Removal - Product Data	Rebuild/PRA/AE									
			GC	Selective Landscape Preservation & Plant Removal - Certification	Rebuild/PRA/AE									

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312000			GC	Earth Moving - schedule of work	Rebuild/PRA/AE									
			GC	Earth Moving - Test data, certifications	Rebuild/PRA/AE									
312310			GC	Excavation, Backfill & Subgrade Preparation for Pavement - Shop drawing	Rebuild/PRA/AE									
			GC	Excavation, Backfill & Subgrade Preparation for Pavement - Soil sample or lab	Rebuild/PRA/AE									
312500			GC	Soil Erosion and Sedimentation Controls - silt controls	Rebuild/PRA/AE									
320116.7			GC	Milling of Asphalt Pavement	Rebuild/PRA/AE									
321216			GC	Asphalt Paving - Design mix	Rebuild/PRA/AE									
			GC	Asphalt Paving - Material certificates	Rebuild/PRA/AE									
321313			GC	Plain Cement Concrete Paving - Product data	Rebuild/PRA/AE									
			GC	Plain Cement Concrete Paving - Schedule of sealant usage	Rebuild/PRA/AE									
			GC	Plain Cement Concrete Paving - Warranty	Rebuild/PRA/AE									
321373			GC	Concrete Paving Joint Sealants - Product data	Rebuild/PRA/AE									
			GC	Concrete Paving Joint Sealants - Schedule of sealant usage	Rebuild/PRA/AE									
			GC	Concrete Paving Joint Sealants - Warranty	Rebuild/PRA/AE									
321600			GC	Concrete Curbing and Sidewalks - Specs	Rebuild/PRA/AE									
323113			GC	Chain-link Fencing and Gates - product data	Rebuild/PRA/AE									
			GC	Chain-link Fencing and Gates - shop drawing	Rebuild/PRA/AE									
323300				Site Furnishings - Product data, color chart	Rebuild/PRA/AE									
323343			GC	Site Seating and Tables - Product data	Rebuild/PRA/AE									
			GC	Site Seating and Tables - Shop drawings	Rebuild/PRA/AE									
			GC	Site Seating and Tables - Samples for verification	Rebuild/PRA/AE									
			GC	Site Seating and Tables - Maintenance data	Rebuild/PRA/AE									
329000			GC	Landscape Planting - Warranty	Rebuild/PRA/AE									
			GC	Landscape Planting - Maintenance services	Rebuild/PRA/AE									
329113			GC	Soil Preparation	Rebuild/PRA/AE									
329200			GC	Turf and Grasses / Landscape Planting	Rebuild/PRA/AE									
330110			GC	Protection of existing utilities	Rebuild/PRA/AE									



# FISHTOWN HOCKEY RINK

1302-32 E. MONTGOMERY AVENUE  
PHILADELPHIA, PA 19125

REBUILD PROJECT # 162674E-03-02



## LIST OF ABBREVIATIONS

Table with multiple columns listing abbreviations and their corresponding full names. Includes categories like Anchor Bolt, Above, Adjustable, etc., up to Furr.

## TENANT PROTECTION

OCCUPANCY: THE STRUCTURE WILL NOT BE OCCUPIED DURING THE COURSE OF THE WORK.

- 1. EGRESS: PROPOSED WORK SHALL NOT IMPACT EXISTING EGRESS FACILITIES FROM FLOOR OR SHALL CONSTRUCTION OPERATIONS BLOCK HALLWAYS OR MEANS OF EGRESS FOR TENANTS OF THE ADJACENT BUILDINGS...
- 2. FIRE SAFETY: ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS SHALL BE STRICTLY OBSERVED...
- 3. HEALTH REQUIREMENTS: CONSTRUCTION WORK WILL BE CONFINED TO THE OUTDOORS AND WILL NOT CREATE DUST, DIRT, OR OTHER SUCH INCONVENIENCE WITHIN THE BUILDING...
- 4. STRUCTURAL SAFETY: NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE USER.
- 5. CONSTRUCTION OPERATIONS WILL BE CONFINED TO NORMAL WORKING HOURS: 7 a.m. TO 3 p.m., MONDAY THROUGH FRIDAY, EXCEPT LEGAL HOLIDAYS.

## GENERAL NOTES

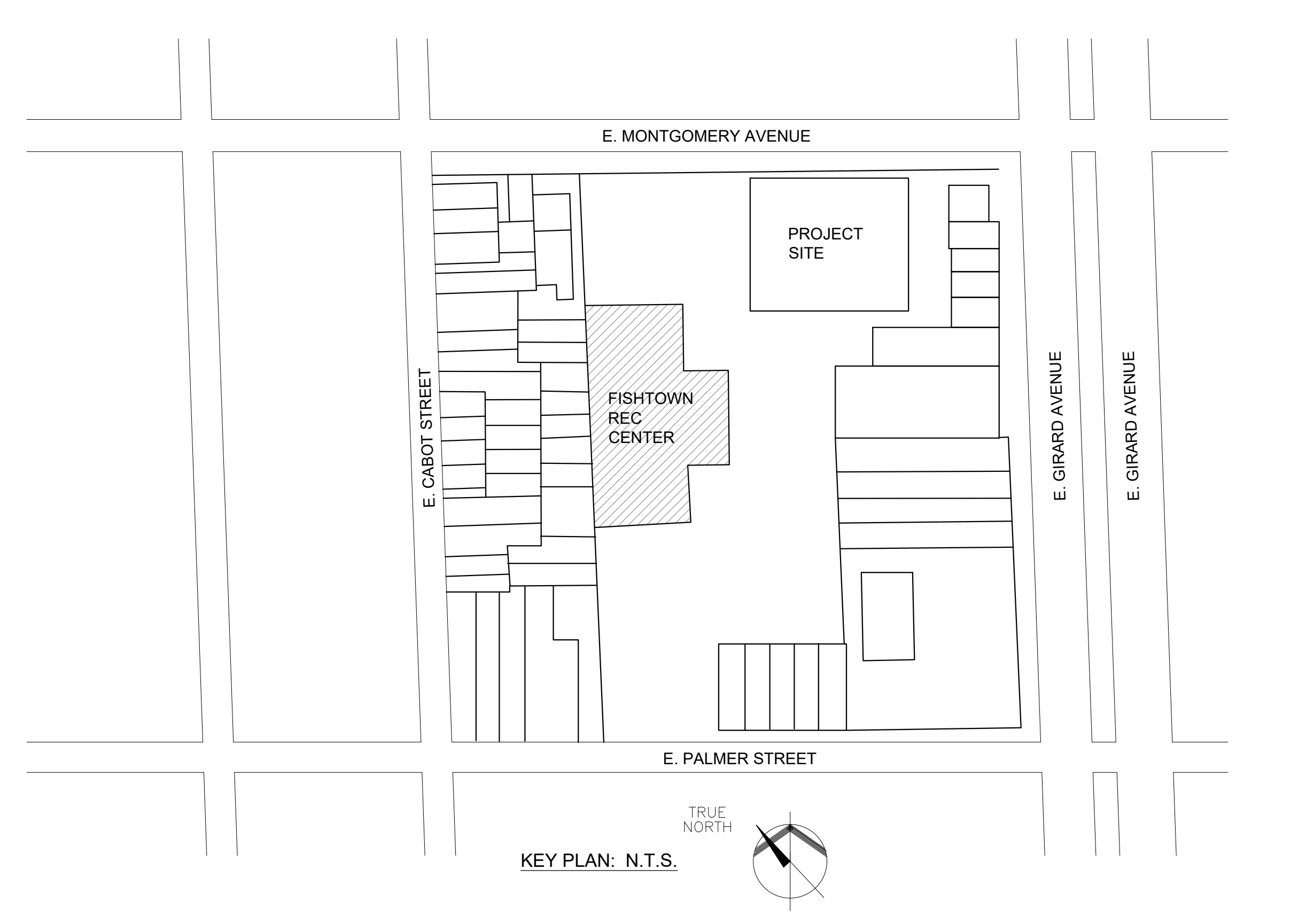
- 1. CONSTRUCTION SHOWN AND SPECIFIED SHALL CONFORM TO ALL CODES, REGULATIONS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT AND, IN THE EVENT OF CONFLICT, SHALL TAKE PRECEDENCE OVER ANYTHING SHOWN AND SPECIFIED ON THESE NOTES, SPECIFICATIONS AND/OR DRAWINGS.
- 2. ALL CONSTRUCTION SHALL BE OF GOOD QUALITY AND FREE FROM FAULTS AND DEFECTS. THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND SEQUENCES REQUIRED FOR THE PROPER EXECUTION OF THE WORK.
- 3. THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE PROCEEDING WITH ANY WORK. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL GOVERN. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND OBTAIN RESOLUTION IN WRITING OF ANY CONFLICTS, DISCREPANCIES OR DEVIATIONS BEFORE PROCEEDING WITH THE WORK IN QUESTION.

## CONSTRUCTION NOTES

- 1. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL AND MUNICIPAL BUILDING CODES, AS WELL AS ANY AND ALL REGULATORY AGENCIES, INCLUDING BUT NOT LIMITED TO OSHA, ETC. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS.
- 2. THE GENERAL CONTRACTOR SHALL VERIFY ALL JOB CONDITIONS, DIMENSIONS AND DETAILS PRIOR TO CONSTRUCTION AND AS ANTICIPATED OR INFERRED PRIOR TO PROCEEDING AND BEING. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE WORK, PRIOR TO THE START OF ALL WORK.
- 3. ALL WORK WHETHER SHOWN OR IMPLIED, UNLESS SPECIFICALLY QUESTIONED, SHALL BE CONSIDERED FULLY UNDERSTOOD IN ALL RESPECTS BY THE GENERAL CONTRACTOR AND HE WILL BE RESPONSIBLE FOR ANY MISTAKEN REPERATIONS OR CONSEQUENCES THEREOF FOR ALL WORK ON DRAWINGS.
- 4. DRAWINGS ARE NOT TO BE SCALED; DIMENSIONS GOVERN.
- 5. ALL WORK IS TO CONFORM TO THE DRAWINGS AND SPECIFICATIONS AND SHALL BE NEW AND BEST QUALITY OF THE KINDS SPECIFIED.
- 6. OWNER RESERVES THE RIGHT TO HIRE OTHER CONTRACTS IN CONNECTION WITH THE WORK OF THE PROJECT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK AND ESTABLISHING SCHEDULES FOR ALL TRADES. HE SHALL AFFORD OTHER CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND THE EXECUTION OF THEIR WORK.
- 7. ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE SUPPLIED, INSTALLED, CONNECTED, DIRECTED, USED, CLEANED, AND CONDITIONED AS DIRECTED BY THE MANUFACTURERS INSTRUCTIONS, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- 8. EACH SUBTRADE WILL BE RESPONSIBLE FOR REVIEWING THE ENTIRE SET OF DRAWINGS AND NOTING HIS WORK AS APPLICABLE. WORK INDICATED OR INFERRED FROM THE DRAWINGS WILL BE DEEMED AND INCLUDED IN SUBCONTRACTORS COSTS. SAME SHALL APPLY TO GENERAL CONTRACTOR.
- 9. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ALL PROPOSALS FOR ADDITIONAL WORK TO OWNER FOR REVIEW AND APPROVAL. NO WORK SHALL PROCEED UNTIL A SIGNED PROPOSAL IS RETURNED TO THE GENERAL CONTRACTOR.
- 10. ALL WORKMEN PERFORMING UNDER THIS WORK SHALL BE SKILLED WORKMEN IN THEIR RESPECTIVE TRADES.
- 11. UPON COMPLETION OF THE JOB, THE GENERAL CONTRACTOR SHALL SUBMIT CERTIFICATES OF INSPECTION AND A CERTIFICATE OF SUBSTANTIAL COMPLETION. (NA DOCUMENT 607/84)
- 12. GENERAL CONTRACTOR IS RESPONSIBLE TO CLEAN UP AND REMOVE FROM THE PREMISES ALL WASTE MATERIALS, RUBBISH, WRAPPINGS, AND SALVAGES AS GENERATED BY THE CONSTRUCTION, DEMOLITION AND/OR THE DELIVERY AND INSTALLATION OF CARPET, WOODWORK, FURNITURE, EQUIPMENT, OR OTHER TRADES EMPLOYED BY THE OWNER.
- 13. THE GENERAL CONTRACTOR SHALL MAINTAIN AN OPERATING CELL PHONE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION.
- 14. GENERAL CONTRACTOR MUST PROVIDE AND ASSUME ALL COST ASSOCIATED WITH SCHEDULING INSPECTIONS FROM ALL JURISDICTIONS HAVING AUTHORITY AND CORRECTING ANY DISCOVERED CONSTRUCTION ERRORS.
- 15. GENERAL CONTRACTOR MUST PROVIDE AND ASSUME ALL COST INCLUDING ANY OVERTIME, TO MEET THE REQUIREMENTS OF THE SCHEDULE WHICH IS SUBMITTED AND PART OF THE CONTRACT DOCUMENTS.
- 16. G.C. SHALL BE RESPONSIBLE TO PICK UP THE BUILDING PERMIT AT THE PLANNING/DODGING OFFICES AND PAY ALL OUTSTANDING FEES.
- 17. FIRE EXTINGUISHERS MUST BE KEPT AT THE JOB SITE DURING CONSTRUCTION.
- 18. G.C. SHALL BE RESPONSIBLE FOR ALL COST INCURRED FOR DAMAGES BY HIS CONTRACTORS.
- 19. G.C. SHALL HAVE A COMPETENT SUPERINTENDENT ON THE PREMISES AT ALL TIMES WHEN WORK IS IN PROGRESS.

## APPLICABLE CODES:

REFERENCE CODE INFORMATION SHEET ON SHEET C-2



Drawing List table with columns for Drawing Type and Description. Includes entries for Cover Sheet, Code Sheet, Survey, Existing Conditions Plan, Site Architectural, and Site Plumbing.

APPROVALS

\*THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.\*

PROJECT ARCHITECT: SRW, SURVEYOR: RODRIGUEZ, SITE MEP: SRW, COST ESTIMATOR: PROJECT COST

Table for REVISIONS with columns for NO, DATE, COPIES, and DESCRIPTION. Includes entries for Addendum 1 and response to comments.

Site Architect / Site MEP: SABIR, RICHARDSON & WEISBERG ENGINEERING & ARCHITECTURE. Includes contact information for New York, New Jersey, and Pennsylvania offices.

Surveyors: rodriguez ENGINEERS \* SURVEYORS \* GIS. Includes contact information for Philadelphia office.

Clients: Rebuild Philadelphia and Philadelphia Parks & Recreation logos and contact information.

Project: FISHTOWN HOCKEY RINK, 1202-32 E. MONTGOMERY AVENUE, PHILADELPHIA, PA 19125

Table for PROJECT INFORMATION including Project Number (2020-501), Scale (NO SCALE), Date (08/14/2020), Project Manager (Municipal Design), Project Architect (CS), Drawn By (MM), Checked By (CS), and CADD File.

C-1

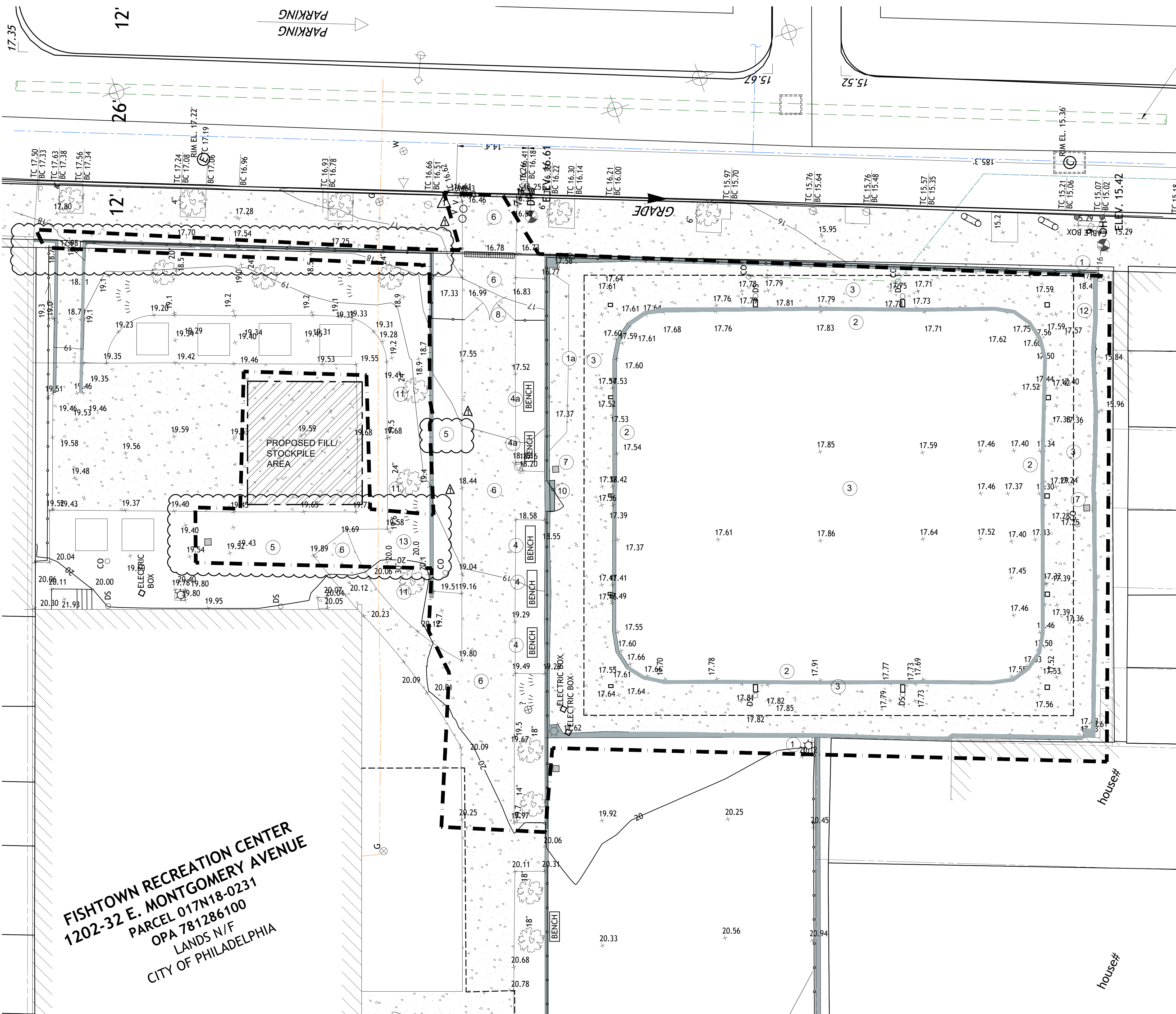












**DEMOLITION KEY NOTES**

- 1 REMOVE CHAINLINK FENCE AND POST WHERE INDICATED FOR STAIR/RAMP OPENING.
- 1a REMOVE CHAINLINK AND POSTS FOR CONSTRUCTION SITE ACCESS FOR EQUIPMENT. LOCATION TBD.
- 2 REMOVE EXISTING DASHERBOARDS. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.
- 3 CONCRETE SLAB TO BE EXCAVATED. CUT CONCRETE TO EXPOSE COLUMN FOOTINGS AND EXISTING PIPING.
- 4 INSTALL NEW SLATS TO REFURBISH EXISTING BENCHES.
- 5 REMOVE SIDEWALK ASPHALT WHERE INDICATED. REMOVAL TO BE TO THE ADJACENT EXISTING CONCRETE BREAK. COORDINATE IN FIELD.
- 6 REMOVE CONCRETE. AND EXCAVATE THIS AREA TO EXISTING PIPING.
- 7 REMOVE EXISTING STORM DRAINS. REFER TO PLUMBING DRAWINGS.
- 8 REMOVE ENTRANCE GATE.
- 9 REMOVE TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.
- 10 REMOVE CONCRETE STEP.
- 11 PROTECT EXISTING TREE.
- 12 REMOVE CONCRETE, EXCAVATE TO PREPARE FOR NEW RAMP THIS AREA.
- 13 REMOVE GRASS AND ASSOCIATED CURB FOR FOR PLUMBING EXCAVATION. REFER TO PLUMBING DRAWINGS.

**LEGEND**

- X DEMOLITION MARKER
- 17.61 EXISTING SPOT ELEVATION
- BENCH EXISTING BENCH
- EXTENT OF PROJECT WORK
- DESIGNATED STOCK PILE AREA FOR RINK EXCAVATION

- DEMOLITION NOTES**
- IT IS THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO COORDINATE ALL WORK WITHIN THIS PROJECT SCOPE WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO WORK. CONTRACTOR IS TO BECOME FAMILIAR WITH THE LOCATIONS OF ALL UNDERGROUND SERVICES AND IMPROVEMENTS.
  - CONTRACTOR SHALL BE ADDITIONALLY RESPONSIBLE FOR STOCKPILING MATERIALS WHERE NOTED AND REMOVING ALL OTHER OFF SITE. SEE PLUMBING AND CIVIL ENGINEERING PLANS FOR ADDITIONAL INFORMATION.
  - CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS BEFORE CONSTRUCTION.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GRADES AS ESTABLISHED BY THE PROJECT ENGINEER. RUNOFF AND DRAINAGE FLOWS SHALL NOT BE ALTERED OR IMPEDED. SEE CIVIL PLANS IN THIS SET.
  - RESTORE ALL EXISTING LANDSCAPE AREAS OR SITE FEATURES TO REMAIN WHICH ARE DISTURBED BY ANY CONSTRUCTION ACTIVITY UNDER THIS CONTRACT. INCLUDE ALL LANDSCAPE AREAS OR FEATURES DISTURBED AS A RESULT OF GRADING, UTILITY TRAFFIC OR OTHER DISTURBANCE OR ACTIVITY OCCURRING AS A RESULT OF ANY CONSTRUCTION ACTIVITY UNDER THIS CONTRACT.
  - RESTORATION SHALL INCLUDE BUT IS NOT LIMITED TO THE COMPLETE RESTORATION OF ALL DISTURBED LANDSCAPE SURFACES, INCLUDING INSTALLATION OF NEW OR REPLACEMENT IRRIGATION SYSTEMS AND PLANTS AS WELL AS ALL FINISH GRADING AND ROCK GROUND COVER TO MATCH ADJACENT UNDISTURBED LANDSCAPE AREAS.
  - LIMIT OF RESTORATION SHALL BE DETERMINED BY THE LIMIT OF DISTURBANCE OR EXTENT OF WORK NECESSARY TO COMPLETE THE REQUIRED RESTORATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY PROTECTIVE DEVICES TO PREVENT OR RESTRICT ENCROACHMENT OF OPERATIONS OR TRAFFIC FROM ACCESS AND DISTURBANCE OF ANY ADJACENT AREAS NOT SHOWN TO BE DISTURBED AS A RESULT OF WORK UNDER THIS CONTRACT.
  - ANY AND ALL PLANTS, NOT DESIGNATED TO BE REMOVED, WHICH ARE DISTURBED OR DAMAGED AS A RESULT OF WORK UNDER THIS CONTRACT SHALL BE REPLACED WITH A PLANT OF EQUAL OR BETTER QUALITY AND OF THE SAME SIZE AND SPECIES AS THE ORIGINAL EXISTING PLANT UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE.
  - DAMAGE TO EXISTING TURF CAUSED BY THE CONTRACTOR SHALL BE REPAIRED. (RUTS FILLED WITH CLEAN SOIL COMPACTED TO MATCH ADJACENT GRADES, AND SOODED)
  - ALL EXISTING FEATURES NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR DURING CONSTRUCTION.
  - THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR'S CONSTRUCTION ACTIVITY AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE CITY.

**EXISTING TREE NOTE**  
 CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE HEALTH OF ALL TREES THAT ARE TO REMAIN DURING CONSTRUCTION. CONTRACTOR SHALL PHOTO INVENTORY ALL TREES TO REMAIN ON SITE AND PROVIDE DIGITAL PHOTOS TO THE C.O.T. FOR REFERENCE AT THE BEGINNING OF THE CONTRACT. PHOTOS SHALL BE KEPT IN A BINDER IN THE ON-SITE CONSTRUCTION TRAILER. THESE PHOTOS WILL ACT AS THE BENCHMARK FOR THE HEALTH AT THE END OF THE CONSTRUCTION PERIOD. CONTRACTOR SHALL USE ALL MEANS POSSIBLE TO MAINTAIN THE TREES IN A HEALTHY CONDITION INCLUDING (BUT NOT LIMITED TO) WATERING, SPRAYING AND SUPPLEMENTAL FERTILIZER. ADDITIONALLY THE CONTRACTOR SHALL INSTALL A 6" HIGH CHAINLINK FENCE AROUND THE ENTIRE PERIMETER AT THE DRIFLINE. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR AND CITY SHALL REEVALUATE THE TREES AND DETERMINE IF ANY WILL NEED REPLACING, AND TREES THAT REQUIRE REPLACEMENT WILL BE SAME LIKE AND KIND.

**PATH NOTES**  
 1. GRADES ON ADA PATH (AS NOTED ON PLANS) SHALL NOT EXCEED 4.5% LONGITUDINAL SLOPES AND 1.5% CROSS SLOPE. 2. ALL GARTHER SIDE SLOPES SHALL BE AT 4:1 MAX UNLESS OTHERWISE STATED. 3. CAULK ALL EXPANSION JOINTS.

**PAVING NOTES**  
 CONTRACTOR SHALL PROVIDE A 5' X 5' SAMPLE OF ALL FLAT WORK. ALL WORK SHALL BE REVIEWED BY ARCHITECT/OWNER. THAT SAMPLE WILL REMAIN ON SITE AND ACT AS A BENCHMARK FOR ALL SIMILAR WORK INCLUDED BUT NOT LIMITED TO FINISH, BROOM FINISHES, HEAVY SANDBLAST, TOOL JOINTING, SAWCUT JOINTS AND DECORATIVE PAVING.

**UTILITY NOTES**  
 GENERAL

**FISHTOWN RECREATION CENTER**  
 1202-32 E. MONTGOMERY AVENUE  
 PARCEL 017N18-0231  
 OPA 781286100  
 LANDS N/F  
 CITY OF PHILADELPHIA

"THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES."

ALL EXISTING SITE CONDITIONS ARE OBTAINED BY LAND SURVEY PRODUCED BY RODRIGUEZ. DRAWING REFERENCE: V-1. EXISTING CONDITIONS PLAN, DATED 3/06/2020.

APPROVALS

ISSUE			
REVISIONS			
NO.	DATE	COPIES	DESCRIPTION

ALL EXISTING CONDITIONS, DIMENSIONS AND SPOT ELEVATIONS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OR DEMOLITION.

WRITTEN DIMENSION ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED IN WRITING OF ANY VARIATIONS FROM THESE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

THESE DRAWINGS ARE THE INSTRUMENTS OF THE DESIGNER AND ARE NOT TO BE REPRODUCED WITHOUT THE DESIGNER'S CONSENT

**SITE ARCHITECT / SITE MEP:**

**SABIR, RICHARDSON & WEISBERG**  
 ENGINEERING & ARCHITECTURE

NEW YORK: 37 WEST 39TH STREET, SUITE 1005, NEW YORK, NY 10018, PHONE: 646-863-6160

NEW JERSEY: 531 MILLINGTON, SPKLEAVILLE, NJ 08881, PHONE: 908-310-5000

PENNSYLVANIA: 417 N. 48th STREET, SUITE 204, PHILADELPHIA, PA 19122, PHONE: 267-385-2812

Copy: E.A. Sabir PA #RA609091, E.A. Sabir PA #PE071034, Certification of Authorization #A0013475

**SURVEYORS:**

**rodriquez**  
 ENGINEERS \* SURVEYORS \* GIS

1301 N 2nd Street  
 Philadelphia, PA 19122  
 Phone: (215) 639-8087  
 Fax: (877) 639-6975  
 www.rodriquez.biz

**CLIENTS:**

**PHILADELPHIA PARKS & RECREATION**

**PROJECT:**

**FISHTOWN HOCKEY RINK**  
 1202-32 E. MONTGOMERY AVENUE  
 PHILADELPHIA, PA 19125

PROJECT NUMBER 2020-501	EXISTING GRADING PLAN
SCALE 1" = 10'-0"	FISHTOWN HOCKEY RINK
DATE 08/14/2020	1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125
PROJECT MANAGER	Manuel Blum
PROJECT ARCHITECT CS	C-001
DRAWN BY MM	
CHECKED BY CS	
CADD FILE	







### SOIL EROSION CONTROL NOTES

- 1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
- 2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ONE THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL MANUAL.
- 3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLAN UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
- 4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
- 5. ALL DISTURBED AREAS SHALL BE LIMED OR FERTILIZED IN ACCORDANCE WITH HORTICULTURAL PRACTICES PRIOR TO EITHER TEMPORARY OR PERMANENT SEEDING.
- 6. STABILIZATION MATERIALS:
  - 1. TEMPORARY SEEDING:
    - 1. THE SURFACES OF EXPOSED EARTH AREAS NOT SUBJECT TO CONSTRUCTION SHALL BE TEMPORARILY SEEDED AND MULCHED.
    - 2. SEEDING SHALL OCCUR IMMEDIATELY AFTER THE ESTABLISHMENT OF ROUGH GRADED AREAS. THE FOLLOWING SEED SHALL BE PLANTED RYEGRASS, BLUE TAG CERTIFIED - 100% - 4-5 LBS PER 1000 SQ.FT., ANNUAL TYPE - TYPICAL, PERENNIAL TYPE - NOT APPLICABLE.
    - 3. PREPARE ALL AREAS TO BE SEEDED AS FOLLOWS:
      - 3.1. REMOVE ALL DEBRIS, INCLUDE LARGE STONES, TILL SOIL TO A DEPTH OF SIX INCHES. APPLY LIME AT A RATE RECOMMENDED BY APPROVED SOIL TEST.
      - 3.2. BEFORE AUGUST, SEPTEMBER, OR OCTOBER SEEDING, APPLY 20-25 LBS OF 5-10-10 FERTILIZER PER 1000 SQ.FT. BEFORE FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY OR NOVEMBER SEEDING, APPLY 40LBS OF 10-20-10 FERTILIZER PER 1000 SQ.FT. WORK INTO THE TOP INCH OF SOIL.
  - 7. ALL CRITICAL AREA SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE.
  - 8. THE SITE SHALL BE ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORM WATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
  - 9. ALL SEDIMENT ATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
  - 10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
  - 11. PAVED ROADWAYS MUST BE KEPT CLEAN AND CLEAR AT ALL TIMES.
  - 12. ALL CATCH BASIN INLETS WILL BE PROTECTED.
  - 13. ALL STORM STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
  - 14. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
  - 15. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES.
  - 16. IF AT ANY TIME PRIOR TO STABILIZATION ANY E&S PROBLEMS OCCUR WHICH REQUIRE ADDITIONAL MEASURES, IMMEDIATE ACTION MUST BE TAKEN TO CORRECT THE PROBLEM.
  - 17. PENNSYLVANIA ONE CALL SYSTEM, INC. MUST BE NOTIFIED PRIOR TO ANY EARTHMOVING.
  - 18. A SEPARATE PLAN SHOULD BE PREPARED BY THE CONTRACTOR REGARDING WASTE AND BORROW AREAS, AND SHOULD BE APPROVED BY THE PHILADELPHIA WATER DEPARTMENT.
  - 19. ALL MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ, AND 287.1 ET SEQ.

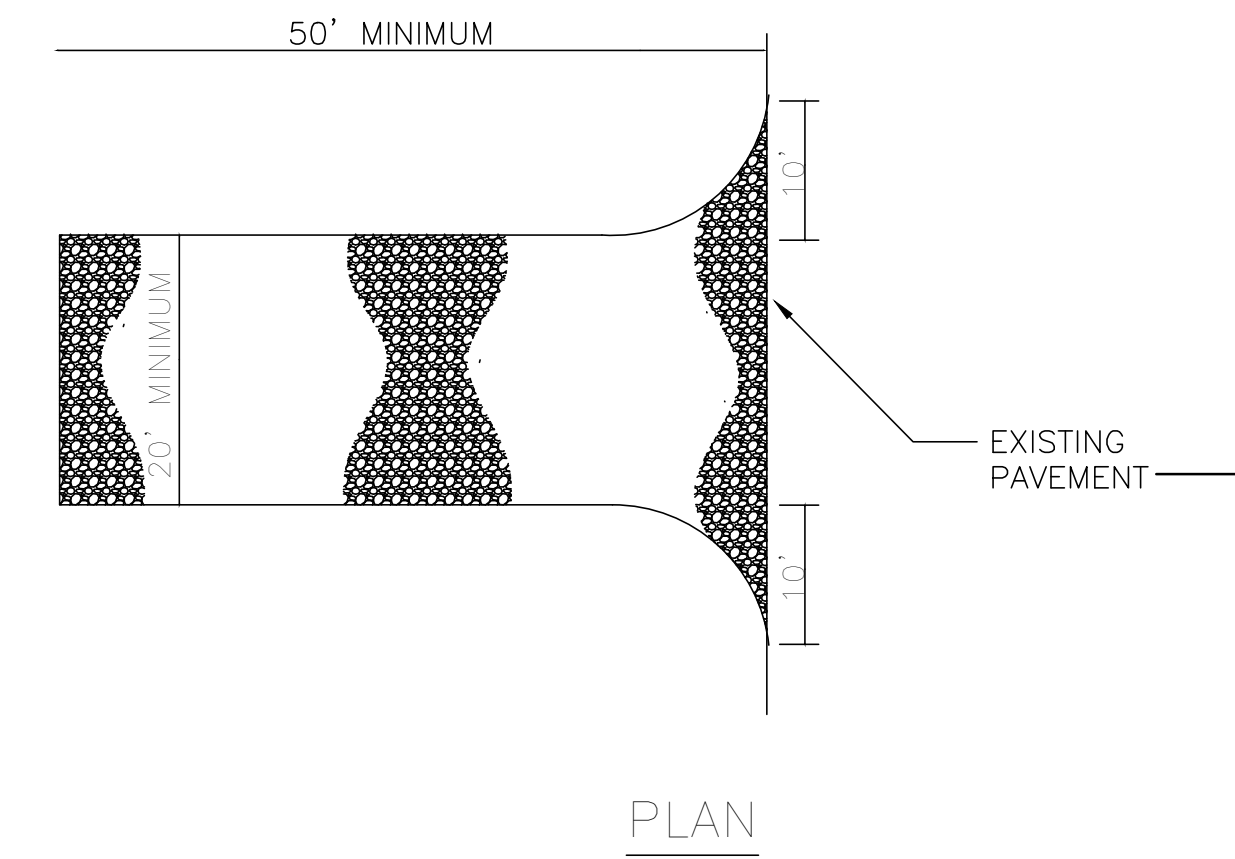
### CONSTRUCTION SCHEDULE AND PROCEDURE FOR IMPLEMENTATION OF SOIL EROSION AND SEDIMENT CONTROL MEASURES

- 1. ALL EARTH DISTURBANCE SHALL PROCEED IN ACCORDANCE SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED.
- 2. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE OWNER, ALL APPLICABLE MUNICIPAL OFFICIALS, THE E & S CONTROL PLAN PREPARER AND REPRESENTATION OF PWD TO SCHEDULE AND ON SITE PRE CONSTRUCTION MEETING.
- 3. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR THE LOCATION EXISTING UNDERGROUND UTILITIES.
- 4. LIMITS OF DISTURBANCE ARE TO BE MARKED IN THE FIELD ALONG THE PERIMETER DESCRIBED IN THE PLANS.
- 5. INSTALL CONSTRUCTION ENTRANCES/ACCESS. KEEP ENTRANCE SWEEP ON A REGULAR/WEEKLY BASIS.
- 6. INSTALL FILER FABRIC FENCE AND CONSTRUCTION FENCE AS SHOWN. PRIOR TO ANY EARTH DISTURBANCE.
- 7. INSTALL INLET PROTECTION AS NOTED. INSTALL TREE PROTECTION AS NOTED. PROTECT ANY ROOF STRUCTURE AND COLUMN ELEMENTS NOT IMPACTED BY THIS SCOPE OR WORK.
- 8. DEMO ANY ON SITE FEATURE AS NOTED. DEMOLITION DEBRIS SHALL BE DISPOSED OF OFF SITE ACCORDING TO ALL APPLICABLE, LOCAL, STATE AND FEDERAL REQUIREMENTS. THE WORK SHOULD BE PERFORMED IN CONFORMANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND SPECIFICATIONS PREPARED FOR THE PROJECT.
- 9. REMOVE EXISTING CONCRETE AT RINK. STOCKPILE SUITABLE EXISTING FILL AT STOCKPILE LOCATION IDENTIFIED FOR SITE.
- 10. REMOVE EXISTING CURBING, ASPHALT, AND CONCRETE TO BEGIN TRENCHING/EXCAVATION FOR PLUMBING UTILITY LINES.
- 11. INSTALL SUB-BASE AND FINAL GRADE FOR ALL PAVING AREA AND RINK.
- 12. CLEAR SITE OF EXTRANEIOUS DEBRIS AND STRUCTURAL MATERIAL.
- 13. RESTORE FINISH GRADES. PREPARE SEED AREAS IN CONFORMANCE WITH SPECIFICATIONS.
- 14. SEED GRASS AREA.
- 15. REPAIR AND RESTORE ACCESS PATHS AND DAMAGED AREAS TO CONDITIONS NOTED ON PLANS.
- 16. REMOVE REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WHEN ALL DRAINAGE AREAS BECOME STABILIZED. ANY AREA DISTURBED DURING THE REMOVAL OF THESE FACILITIES SHALL BE STABILIZED IMMEDIATELY.

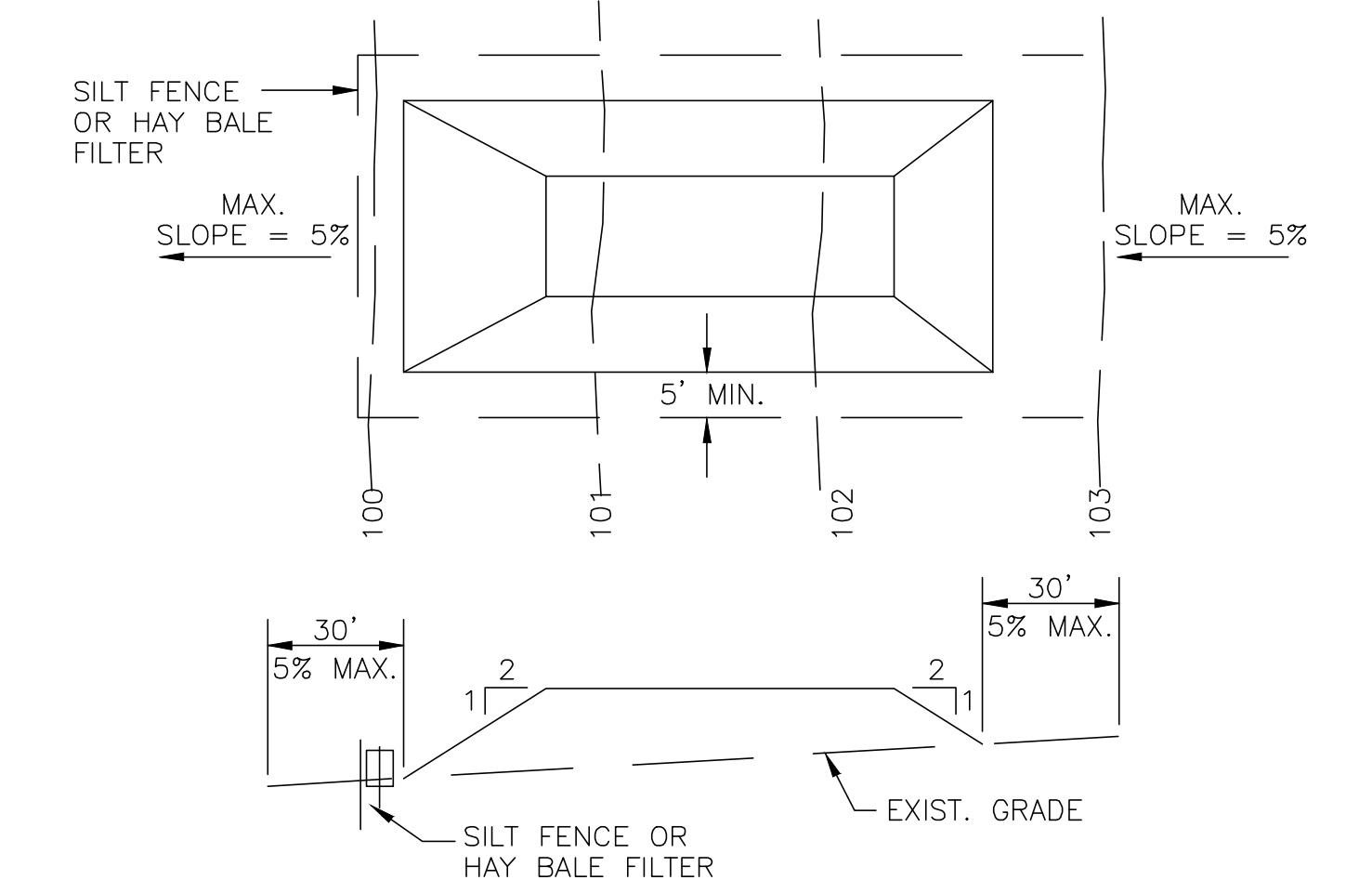
### SEEDING SCHEDULE

- 1. TEMPORARY SEEDING SHALL CONSIST OF SPRING OATS APPLIED AT A RATE OF 2.0 LBS. PER 1,000 S.F. OR GRAIN RYE APPLIED AT A RATE OF 2.4 LBS. PER 1,000 S.F.. TEMPORARY SEEDING TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING. IF ANY SERIOUS EROSION PROBLEM OCCURS, THE ERODED AREAS SHALL BE REPAIRED AND STABILIZED WITH A MULCH AS INDICATED IN NOTE 6.
- 2. PERMANENT SEEDING SHALL CONSIST OF MIXTURE NO. 15 AS SPECIFIED IN THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN PA OR APPROVED EQUAL - OPTIMUM SEEDING DATES ARE BETWEEN AUGUST 15 AND NOVEMBER 15:
  - HARD FESCUE @ 2.7#/1000 S.F. PERENNIAL
  - RYEGRASS @ 0.7#/1000 S.F. KENTUCKY
  - BLUEGRASS (BLEND) @ 0.9#/1000 S.F.
- 3. PERMANENT SEEDING TO BE APPLIED BY HYDROSEEDING AT A RATE OF 1500 LBS. PER ACRE, SLOPED AREAS TO BE COVERED WITH MULCH AS INDICATED IN NOTE 6.
- 4. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE 10-20-20 APPLIED AT A RATE OF 11 LBS. PER 1,000 S.F., OR AS DETERMINED BY SOIL TEST. LIME STONE FOR TEMPORARY SEEDING SHALL BE APPLIED AT A RATE OF 90 LBS. PER 1,000 S.F. LIME STONE FOR PERMANENT SEEDING SHALL BE APPLIED AT A RATE OF 135 LBS. PER 1,000 S.F..
- 5. IF SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY OR PERMANENT SEEDING, EXPOSED AREAS TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 6.
- 6. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL.
- 7. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 6.
- 8. ALL SEEDED AREAS SHALL BE MULCHED. MULCH SHALL CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBRE MULCH BINDER, LIQUID MULCH BINDER, OR AN APPROVED EQUAL AT A RATE OF 70-90 LBS. PER 1000 SF.

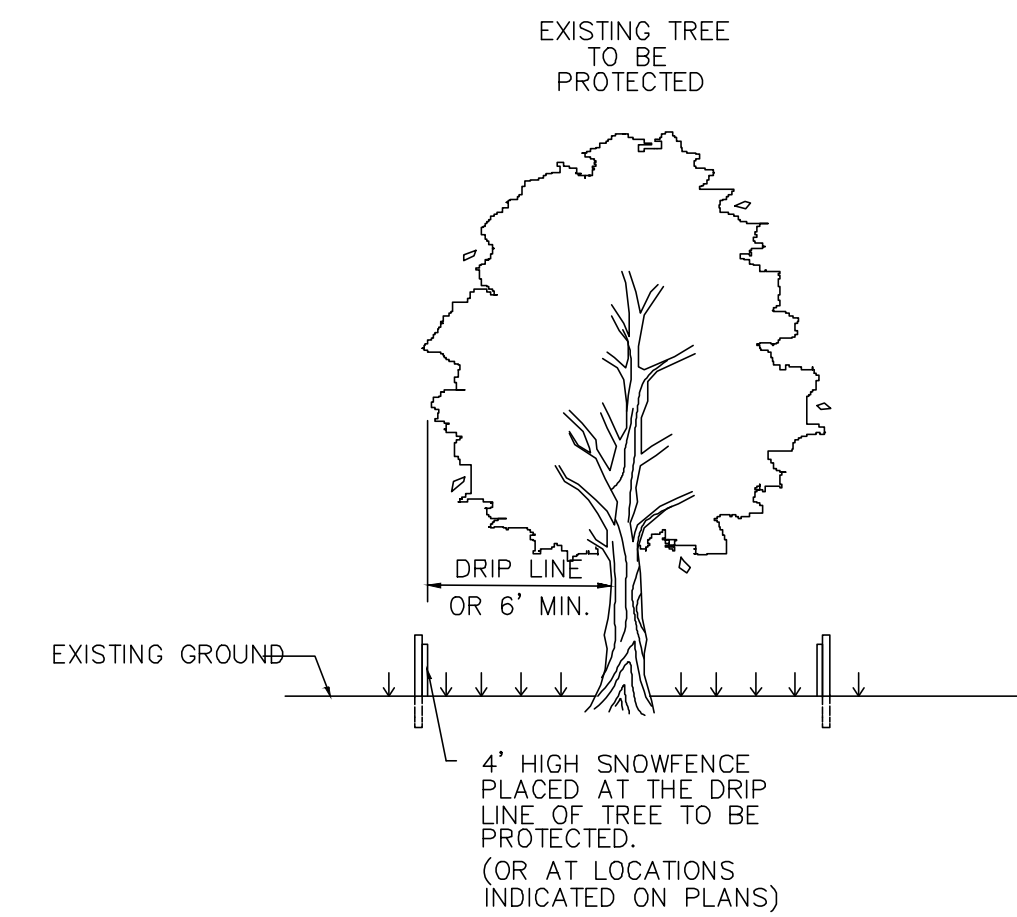
- NOTE:
- 1. STONE SIZE: USE AASHTO 1 ROCK
  - 2. LENGTH: AS REQUIRED BUT NOT LESS THAN 50 FEET.
  - 3. THICKNESS: NOT LESS THAN 8 INCHES.
  - 4. WIDTH: TEN (10) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINT WHERE INGRESS AND/OR EGRESS OCCURS.
  - 5. FILTER CLOTH: WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONES.
  - 6. SURFACE WATER: ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM IS 51 SLOPES WILL BE PERMITTED.
  - 7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOWING OF SEDIMENT INTO PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONES AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DRIPPED, WASHED OR TRACKED INTO PUBLIC WAY MUST BE REMOVED IMMEDIATELY.
  - 8. WASHING: WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONES AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
  - 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



STABILIZED CONSTRUCTION ENTRANCE  
N.T.S.

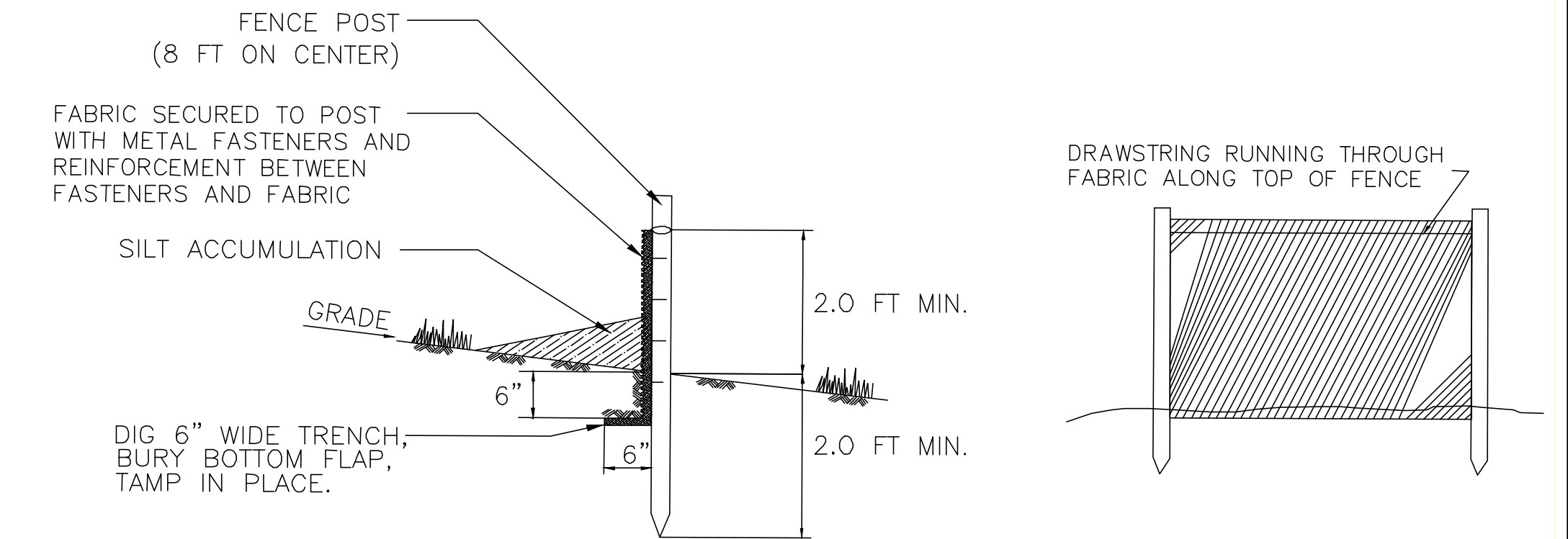


TOPSOIL STOCKPILE  
N.T.S.

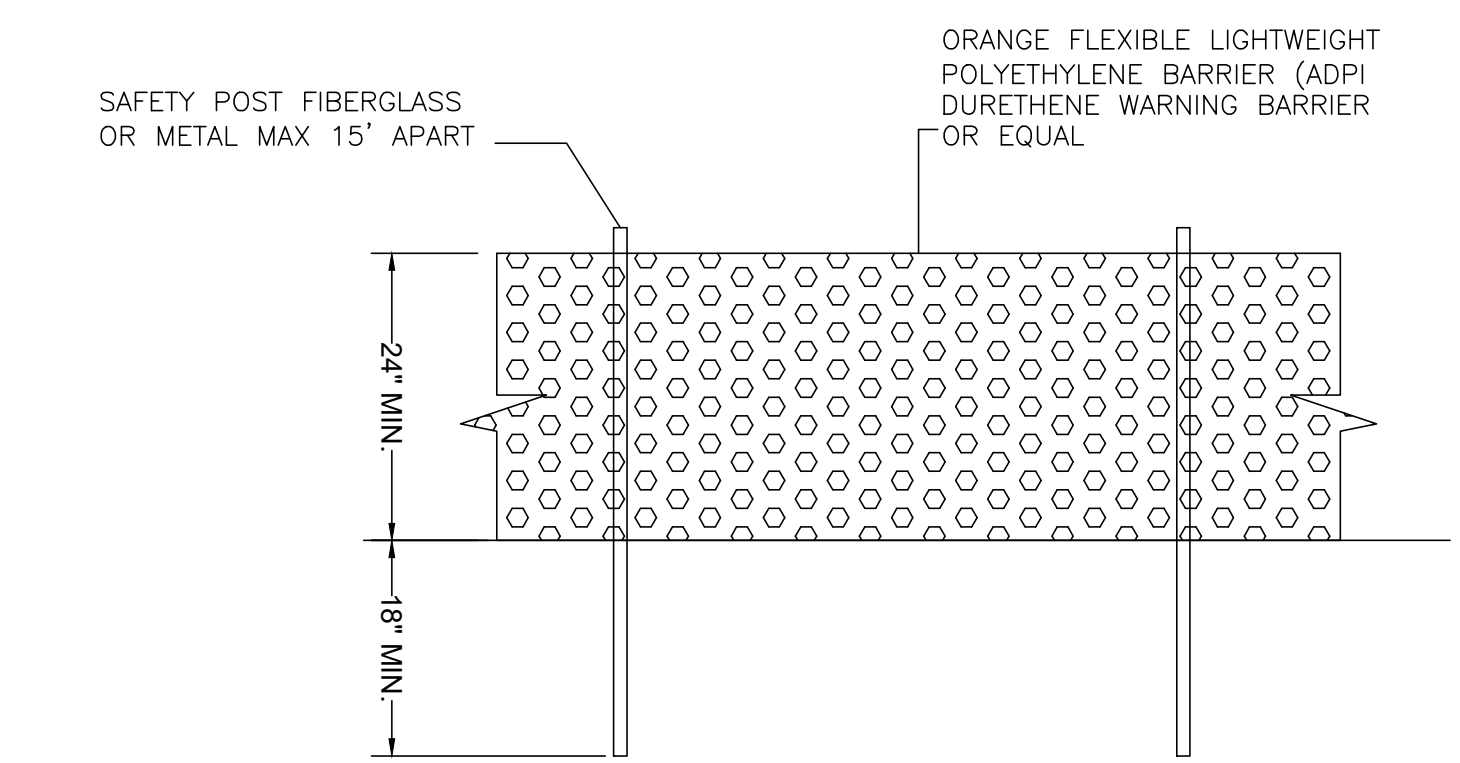


- NOTES:
- 1. NO CONSTRUCTION, GRADING, TRENCHING, STORING, OR STOCKPILING OF MATERIALS, DUMPING, VEHICULAR TRAFFIC OR PARKING OF ANY KIND WITHIN FENCED AREA.
  - 2. NO WORK SHALL BE PERFORMED WITHIN THE DRIPLENE, OR WITHIN 6 FEET OF THE TREE TRUNK, WHICHEVER IS GREATER.
  - 3. ANY WORK PERMITTED WITHIN THE DRIPLENE OF ANY TREE MUST BE PERFORMED BY HAND.
  - 4. TREE PROTECTION SHALL BE PROVIDED FOR ANY AND ALL TREES TO BE PRESERVED DURING AND AFTER CONSTRUCTION THE CONTRACTOR SHALL TAKE WHATEVER ADDITIONAL MEASURES NECESSARY TO PROTECT EXISTING TREES TO REMAIN AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS BY SKINNING AND BRUISING OF BARK, SMOOTHING OF ROOTS BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIAL WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE.
  - 5. 4 FOOT HIGH SNOW FENCE SHALL BE PLACED AT THE DRIP LINE OF THE INDIVIDUAL TREE TO BE PRESERVED AND SHALL ENCIRCLE THE ENTIRE TREE. THE TREE PROTECTION FENCE SHALL BE ERRECTED PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
  - 6. BOARDS OR FENCING SHALL NOT BE NAILED TO TREES DURING CONSTRUCTION NOR SHALL TREES BE USED FOR ROPING OR CABLES.
  - 7. ROOTS EXPOSED AND/OR DAMAGED DURING GRADING AND CONSTRUCTION OPERATIONS SHALL BE TREATED IMMEDIATELY BY A QUALIFIED TREE SURGEON. ANY DAMAGE DONE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY. FEEDER ROOTS SHALL NOT BE CUT CLOSER THAN 25 FEET FROM THE TREE TRUNK.
  - 8. TREE LIMB REMOVAL, WHERE NECESSARY, SHALL BE DONE IN SUCH AS TO PRESERVE THE BRANCH COLLAR. ALL PRUNING SHALL BE DONE IN ACCORDANCE WITH GOOD NURSERY PRACTICE. AN APPROVED TREE DRESSING SHALL BE APPLIED TO ALL THE CUTS WHERE THE TREE WAS PRUNED. TREES MAY BE PRUNED FOR AESTHETICS, SAFETY REASONS, OR TO IMPROVE THE HEALTH OF AN EXISTING TREE.
  - 9. TREES WITHIN THE LIMITS OF THE CONTRACT WORK SHALL BE WATERED AS REQUIRED TO MAINTAIN THEIR HEALTH. TREES SHALL BE PROVIDED WITH AN APPLICATION OF A SLOW RELEASE, LOW NITROGEN, ALL PURPOSE FERTILIZER. SUCH APPLICATION SHALL BE MADE ACCORDING TO THE APPROPRIATE RATES.

EXISTING TREE PROTECTION DETAIL  
N.T.S.



SILT FENCE  
N.T.S.



TREE PROTECTION FENCE DETAIL  
N.T.S.

APPROVALS

"THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES."

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<b>REVISIONS</b> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COPIES</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			NO.	DATE	COPIES	DESCRIPTION																																									<b>srw</b> <b>SABIR, RICHARDSON &amp; WEISBERG</b> ENGINEERING & ARCHITECTURE NEW YORK: 37 WEST 39TH STREET, SUITE 1002, NEW YORK, NY 10018 NEW JERSEY: 533 WILLIAMSTOWN ROAD, SUITE 1002, SUDBURY, NJ 08861 PENNSYLVANIA: 417 N. 8th STREET, PHILADELPHIA, PA 19123 PHONE: (212) 839-8087 FAX: (212) 839-6975 EMAIL: INFO@SRW-ENG.COM WWW.SRW-ENG.COM		<b>rodriguez</b> ENGINEERS • SURVEYORS • GIS 1301 N 2nd Street, Philadelphia, PA 19122 Phone: (215) 839-8087 Fax: (215) 839-6975 www.rodriguez.biz		<b>Rebuild PHILADELPHIA</b> <b>PHILADELPHIA PARKS &amp; RECREATION</b>		FISHTOWN HOCKEY RINK 1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125		PROJECT NUMBER: 2020-501 SCALE: DATE: 08/14/2020 PROJECT MANAGER: PROJECT ARCHITECT: CS DRAWN BY: MM CHECKED BY: CS CADD FILE:		SITE DETAILS: FISHTOWN HOCKEY RINK 1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125 City of Philadelphia	
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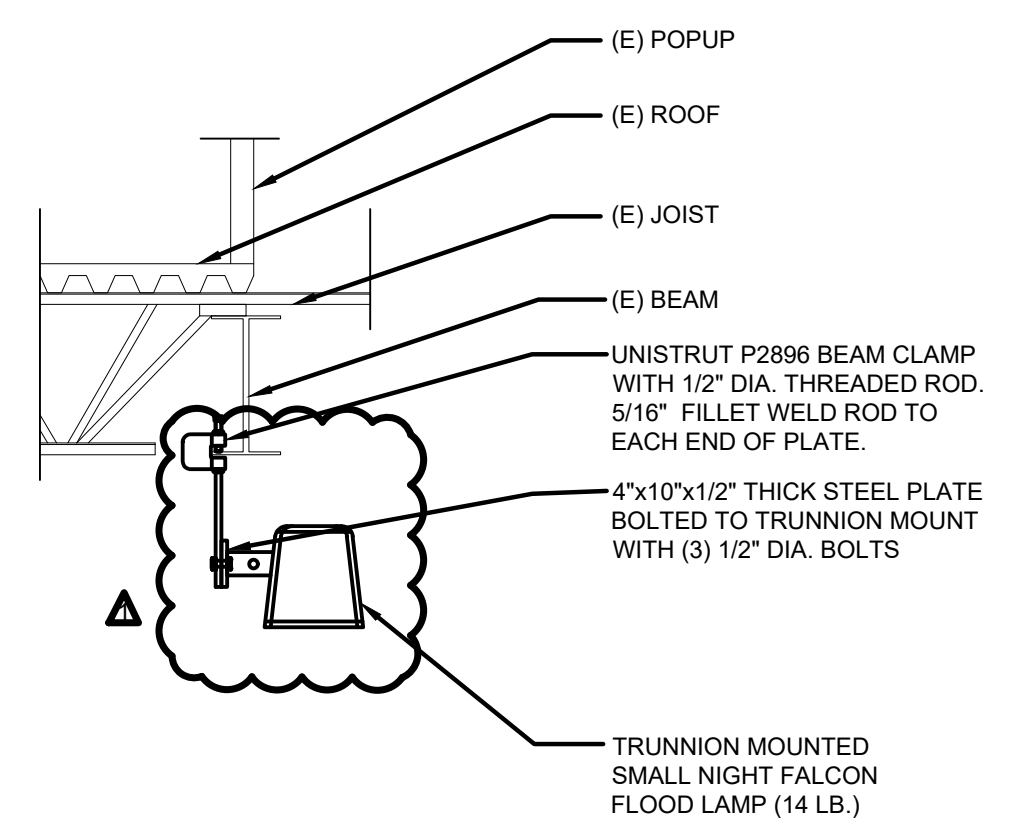
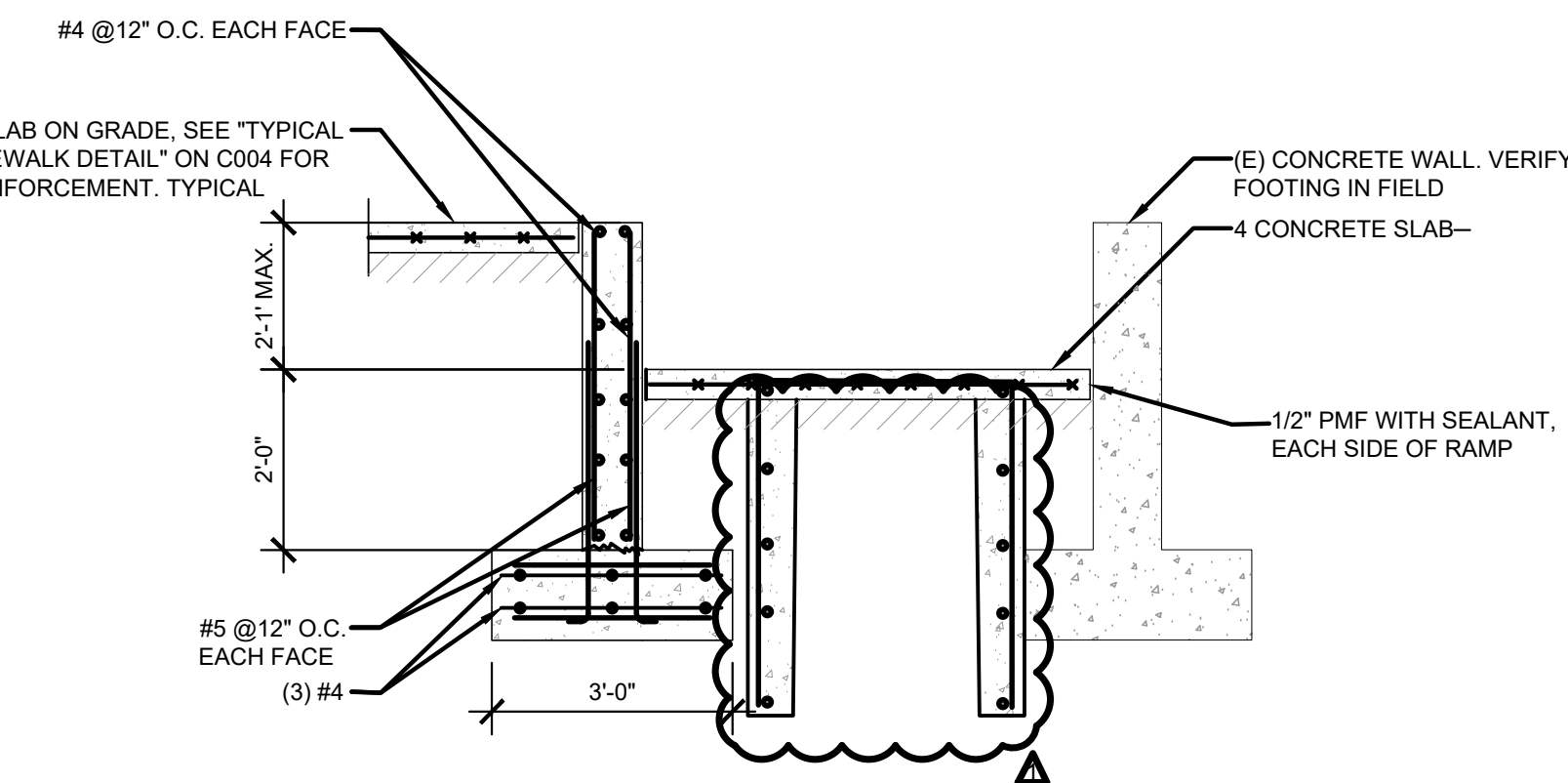
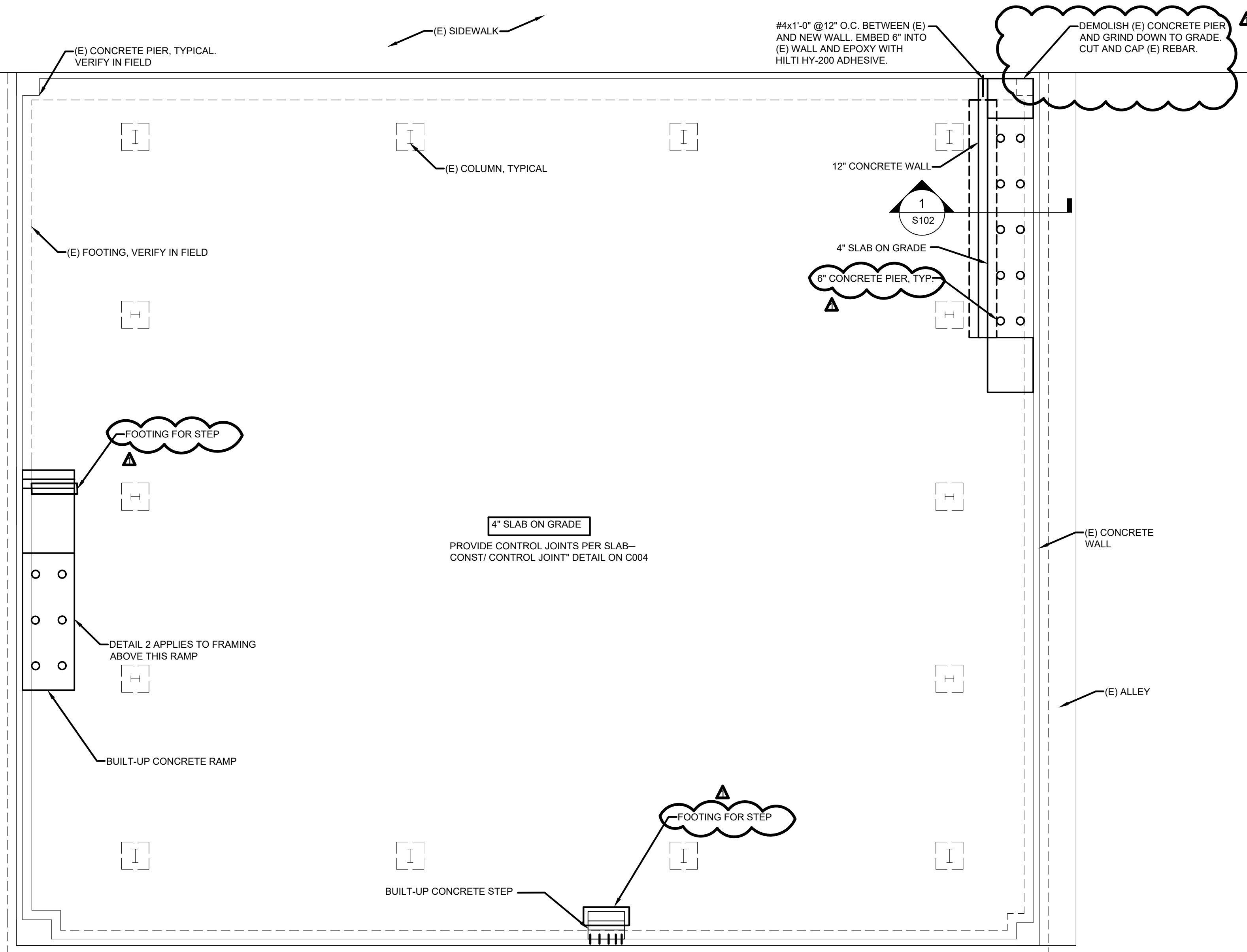








MONTGOMERY AVE.



21 RAMP DETAIL  
SCALE: 1/2" = 1'-0"

21 HUNG FLOOD LAMP TYPICAL DETAIL  
SCALE: 7/8" = 1'-0"

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## STRUCTURAL NOTES

### FOUNDATIONS

1. REFERENCE GEOTECHNICAL REPORT.
- 1.1. THE STRUCTURAL DOCUMENTS HAS BEEN PREPARED BASED ON THE DESIGN CRITERIA SHOWN BELOW. A GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED BY THE OWNER FOR THE DESIGN OF THIS PROJECT.
- 1.2. ALL FOUNDATIONS SHALL BEAR ON SOIL CAPABLE OF SAFELY SUPPORTING THE FOUNDATION DESIGN DATA INDICATED BELOW.
- 1.3. A QUALIFIED GEOTECHNICAL ENGINEER SHALL PROVIDE APPROVAL IN WRITING THAT THE SOIL IS ADEQUATE TO SAFELY SUSTAIN THE SPECIFIED SOIL BEARING CAPACITY PRIOR TO THE PLACEMENT OF FOUNDATIONS. THE GEOTECHNICAL ENGINEER SHALL ALSO PROVIDE IN WRITING ANY SOIL OR FOUNDATION CONCERNS, SUCH AS, BUT NOT LIMITED TO, SINK HOLES, SOFT LAYERS, AND UNACCEPTABLE BEARING MATERIAL PRIOR TO THE PLACEMENT OF FOUNDATIONS. ANY CONCERN SHALL BE BROUGHT TO THE OWNER, ARCHITECT, AND ENGINEER'S ATTENTION IMMEDIATELY. THE WRITTEN APPROVALS AND CONCERNS SHALL BE ASSEMBLED INTO A FINAL PROJECT REPORT.
- 1.4. THE OWNER SHALL HIRE THE GEOTECHNICAL ENGINEER.
- 1.5. THE CONTRACTOR SHALL ASSUME A SUB-BASE BELOW ALL SLABS ON GRADE EQUAL IN THICKNESS TO THE SLAB THICKNESS AND CONSISTING OF COARSE OPEN-GRADED GRAVEL OR CRUSHED STONE THAT IS WELL GRADED BETWEEN THE NO. 4 AND THE NO. 10 SIEVE SIZE, PENNDOT TYPE #57, DGS, OR 21 COARSE AGGREGATE IS SUITABLE. SUBGRADE SHALL BE PROFFROLLED AND COMPACTED. A GEOTECHNICAL ENGINEER SHALL PROVIDE FINAL RECOMMENDATIONS AND CRITERIA FOR ALL SUB-BASE MATERIAL, COMPACTION CRITERIA, AND SHALL APPROVE ALL SUB-BASES.
- 1.6. **CONTRACTOR TO PROVIDE ALLOWANCE FOR EXCAVATION OF 36 CUBIC YARDS OF SOIL TO LAY GRAVEL AND 36 CUBIC YARDS OF COARSE OPEN-GRADED GRAVEL OF CRUSHED STONE.**
2. FOUNDATION DESIGN DATA
  - FROST DEPTH: 3'-0"
  - SLAB-ON-GRADE MODULUS OF SUBGRADE, UNFACTORED: 150 PCI
  - NET ALLOWABLE BEARING PRESSURE: 2 KSF
  - SLIDING COEFFICIENT: 0.30
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING.
4. ALL FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. PRIOR TO PLACING FOUNDATIONS, A QUALIFIED GEOTECHNICAL ENGINEER SHALL DETERMINE THE FINAL BEARING ELEVATION AND FIELD VERIFY THE ALLOWABLE BEARING CAPACITY.
5. ALL FOUNDATIONS SHALL BEAR AT OR BELOW THE FROST DEPTH.
6. FOUNDATION CONCRETE SHALL BE POURED DURING THE SAME BUSINESS DAY THAT THE GEOTECHNICAL ENGINEER PROVIDES SUBGRADE APPROVAL.
7. PROVIDE CONTINUOUS WATERSTOPS AT ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN ALL EXTERIOR WALLS.
8. NEW FOUNDATIONS POURED ADJACENT TO EXISTING FOUNDATIONS SHOULD MATCH THE TOP OF FOOTING OF THE EXISTING FOUNDATION. NOTIFY ENGINEER IF THERE ARE CONFLICTS WITH THE TOP OF FOOTING REQUIREMENTS.
9. DOWELS FROM FOUNDATIONS TO WALLS SHALL MATCH THE SIZE AND SPACING OF THE WALL REBAR.
10. BACKFILL AND STRUCTURAL FILL.
- 10.1. THE CONTRACTOR SHALL BACKFILL PER THE REQUIREMENTS IN THE SPECIFICATIONS AND GEOTECHNICAL REPORT. A QUALIFIED GEOTECHNICAL ENGINEER SHALL APPROVE ALL BACKFILL MATERIAL PRIOR TO INSTALLATION.
- 10.2. SLAB ON GRADE BACKFILL SHALL BE COMPACTED TO HIGH DENSITY EQUIVALENT TO A MINIMUM OF 58% MAXIMUM DENSITY AT OPTIMUM MOISTURE AS DETERMINED BY A SOIL COMPACTION TEST (ASTM D998).
- 10.3. A COMPACTED GRANULAR LAYER SHALL BE PLACED UNDER ALL GRADE SLABS AS RECOMMENDED BY THE GEOTECHNICAL REPORT. A FINE GRANULAR LAYER SHALL BE PLACED OVER THIS LAYER AS SPECIFIED IN THE STRUCTURAL DOCUMENTS.
- 10.4. A QUALIFIED GEOTECHNICAL ENGINEER SHALL INSPECT THE PLACEMENT OF ALL COMPACTED STRUCTURAL FILL.
11. RETAINING WALLS
  - 11.1. THE SOIL BEHIND ALL RETAINING WALLS SHALL BE DRAINED TO ELIMINATE HYDROSTATIC PRESSURE IMPOSED ON THE WALL.
  - 11.2. BACKFILL RETAINING WALLS TO THE ELEVATION SPECIFIED ON THE STRUCTURAL DOCUMENTS.
  - 11.3. SUBGRADE WALLS AND ATTACHED SLABS SHALL HAVE ATTAINED THEIR FULL CONCRETE STRENGTH BEFORE PLACING ANY BACKFILL UNLESS SPECIFICALLY NOTED OTHERWISE.

### CAST-IN-PLACE CONCRETE

1. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4 KSI.
2. ALL REINFORCEMENT BAR SHALL HAVE A YIELD STRENGTH OF 60 KSI.
3. CONCRETE CLEAR COVER DIMENSIONS FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
  - CONCRETE CAST AGAINST SOIL 3"
  - CONCRETE EXPOSED TO SOIL OR WEATHER 1 1/2"
  - TOP COVER FOR TOP BARS OR SINGLE LAYER BAR IN SOG 1 1/2"
4. ALL SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES.
5. DOWELS FROM FOUNDATIONS TO WALLS SHALL MATCH THE CORRESPONDING REINFORCING OF THE WALL.
6. ALL FOUNDATION DOWELS SHALL BE FULLY DEVELOPED IN TENSION.
7. ALL BARS AT NON-CONTINUOUS ENDS SHALL HAVE A STIRRUP HOOK.
8. WELDED WIRE REINFORCEMENT (WWR) SHALL BE INSTALLED IN FLAT SHEETS. MINIMUM LAP SHALL BE TWO FULL MESH LENGTHS AND WIRE TIED TOGETHER.
9. WELDING REINFORCING STEEL IS NOT PERMITTED.
10. ALL REINFORCING STEEL SHALL BE SECURED IN ORDER TO MAINTAIN ITS POSITION WHILE CONCRETE IS POURED.
11. EPOXY COAT REINFORCING STEEL AT ALL SLABS EXPOSED TO DE-ICING SALTS, WHERE EPOXY COATING IS SPECIFIED, ALL THE WIRE AND ACCESSORIES SHALL BE EPOXY COATED OR PLASTIC COATED.
12. POST-INSTALLED ANCHORS SHALL BE INSTALLED PER THE ANCHOR MANUFACTURER'S REQUIREMENTS. REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING HOLES.
13. CONSTRUCT SLABS FLAT, LEVEL, AND WITHIN TOLERANCE TO THE ELEVATIONS INDICATED.
14. ALL CONSTRUCTION JOINTS OR STOPS IN CONCRETE WORK SHALL BE MADE WITH DOWELS OR KEYS, AND ALL REINFORCING SHALL BE CONTINUOUS THROUGH THE JOINT. IN MILD-REINFORCED CONCRETE, CONSTRUCTION JOINTS SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE MEMBER SPAN. ALL CONSTRUCTION JOINTS SHALL BE SHOWN ON THE PLACING DRAWINGS OR SUBMITTED AS A SEPARATE SUBMITTAL ALONG WITH THE REINFORCEMENT PLACEMENT DRAWINGS.
15. AIR ENTRAIN ALL CONCRETE THAT WILL BE EXPOSED TO A FREEZE-THAW CYCLE DURING CONSTRUCTION OR ITS SERVICE LIFE CYCLE.

### STRUCTURAL STEEL

1. GENERAL
  - 1.1. ALL PLATES SHALL BE A36 GRADE.
  - 1.2. ALL RODS, BOLTS, NUTS, AND WASHERS SHALL BE A325 GRADE.
  - 1.3. ALL WORK SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION. SHOP DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE DESIGN TEAM PRIOR TO FABRICATION.
  - 1.4. WELDING REQUIREMENTS OF AWS STRUCTURAL WELDING CODE - STEEL - ANSI A5S D1.1-2008 AND AISC SHALL BE MAINTAINED.
  - 1.5. GAS CUTTING STRUCTURAL STEEL FABRICATION ERRORS IS NOT PERMITTED WITHOUT REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER.
2. CONNECTIONS
  - 2.1. CONTRACTOR SHALL PROVIDE THE DESIGN FOR ALL STRUCTURAL STEEL CONNECTIONS NOT COMPLETELY DESIGNED IN THE DRAWINGS. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT'S LOCATION TO DESIGN ALL CONNECTIONS.
  - 2.2. ALL NUTS AND WASHERS SHALL BEAR MATERIAL DESIGNATIONS.
  - 2.3. HANGER CONNECTIONS SHALL BE DESIGNED FOR A CAPACITY OF 133% OF THE FACTORED HANGER TENSION FORCE INDICATED. FOR BIDDING PURPOSES, WHERE NO AXIAL LOAD IS INDICATED ON DRAWINGS, DESIGN CONNECTIONS FOR 75% OF THE FULL TENSILE YIELD CAPACITY OF THE MEMBER.
3. FINISHING
  - 3.1. ALL FRAMING LOCATED IN WEATHER PROTECTED, UNHEATED SPACES SHALL BE PAINTED WITH ONE COAT OF EPOXY PRIMER.
  - 3.2. WHERE A STEEL MEMBER PASSES FROM ONE FINISH TYPE SPACE TO ANOTHER FINISH TYPE SPACE, THE WHOLE MEMBER SHALL BE FINISHED IN THE MORE STRINGENT TYPE.
  - 3.3. ALL NUTS, WASHERS, HARDWARE, AND ACCESSORIES SHALL BE FINISHED TO MATCH THE STRUCTURAL STEEL THEY ARE CONNECTING OR CONNECTED TO.

APPROVALS

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ALL EXISTING CONDITIONS, DIMENSIONS AND SPOT ELEVATIONS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OR DEMOLITION.

WRITTEN DIMENSION ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED IN WRITING OF ANY VARIATIONS FROM THESE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.

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**Rebuild PHILADELPHIA**

**PHILADELPHIA PARKS & RECREATION**

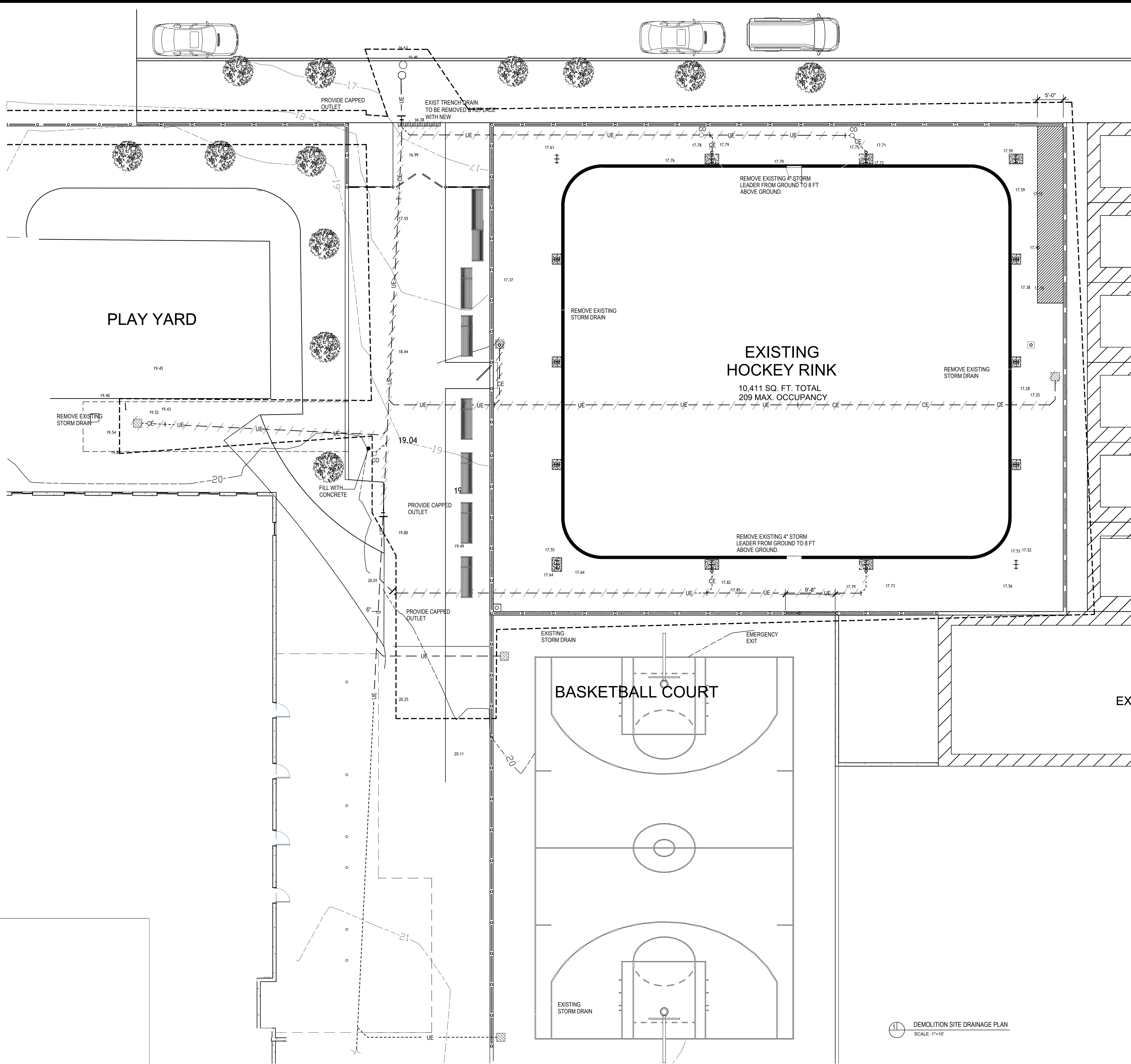
**FISHTOWN HOCKEY RINK**

1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125

PROJECT NUMBER 2020-501	FOUNDATION PLAN
SCALE AS NOTED	FISHTOWN HOCKEY RINK
DATE 07/21/2022	1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125
PROJECT MANAGER	
PROJECT ARCHITECT CS	
DRAWN BY CW	
CHECKED BY CS	
CADD FILE	

S103





**SYMBOL LIST:**

- CONFIRMED EXISTING UNDERGROUND DRAIN PIPING — CE —
- UNCONFIRMED EXISTING UNDERGROUND DRAIN PIPING — UE —
- EXISTING DRAIN PIPING TO BE REMOVED ~~--- CE ---~~
- CONNECTION UNCONFIRMED AND CONFIRMED PIPING — UE — CE —
- CLEAN OUT ○ CO
- EXISTING STORM DRAIN □

**GENERAL NOTES:**

REMOVE ENTIRE HOCKEY RINK SURFACE TO EXPOSE EXISTING STORM WATER DRAINAGE PIPING. REMOVE ALL PIPING AND REPLACE WITH NEW.

**DRAWING NOTES:**

1. REMOVAL AND DISCARDING OF EXISTING HOCKEY RINK BARRIER SYSTEM
2. CHOP AND EXCAVATE ALL OF THE HOCKEY RINK SLAB FOR COMPLETE REMOVAL OF ALL UNDERGROUND DRAINAGE PIPING. ASSUMPTION OF APPROX. RANGE OF 785 TO 1160 CUBIC YARDS OF EXCAVATION. ALL ROOF COLUMN FOOTING SUPPORTS WILL REMAIN.
3. REMOVAL OF ALL UNDERGROUND DRAINAGE PIPING WITHIN HOCKEY RINK AND SEWER LINE PRIOR TO STREET CONNECTION.
4. CONTRACTOR SHALL VISIT SITE BEFORE BID TO BECOME FAMILIAR WITH AND VERIFY EXISTING CONDITIONS. LOCATION OF EXISTING EQUIPMENT AND PIPE ROUTING MAY DEVIATE FROM WHAT IS SHOWN ON THE DRAWINGS.
5. WHERE EQUIPMENT, PIPES, CONTROL DEVICES, CONDUITS, CABLES, AND WIRING ARE DISCONNECTED FOR THE REMOVAL, OR BECAUSE OF ALTERATIONS, THEY SHALL BE RECONNECTED, TESTED AND MADE OPERATIONAL.
6. THE CONTRACTOR SHALL REMOVE ALL SUPPORTING FACILITIES NO LONGER NEEDED OR MADE OBSOLETE BY THE NEW EQUIPMENT AND MATERIALS FURNISHED UNDER THIS CONTRACT. SUCH REMOVAL INCLUDES, BUT IS NOT LIMITED TO, EXPOSED WIRING, EXPOSED CONDUIT RUNS WITH WIRING AND SUPPORT BRACKETS AND ATTACHMENTS, ABANDONED PIPING SUPPORT BRACKETS AND ATTACHMENTS, FRAMES AND BASES. REMOVAL OF PIPING SHALL INCLUDE ASSOCIATED PIPING, WELDED SUPPORTS SHALL BE REMOVED FLUSH WITH SURFACE.
7. PIPING AND EQUIPMENT SIZES SHOWN ARE BASED ON THE ENGINEER'S BEST ESTIMATE. SIZES, LOCATIONS, AND ROUTING MAY DEVIATE FROM WHAT IS SHOWN. FIELD VERIFY.
8. EXISTING PLUMBING FIXTURES INDICATED TO BE REMOVED WITH RELATED TRIM, EQUIPMENT AND PIPING. CAP AND/OR PLUG ALL BRANCH PLUMBING PIPING FOR WHEN NEW PLUMBING PIPING ARE INSTALLED.
9. REMOVE PLUMBING TRIM, PIPING, ETC. AND DISCARD AS PER THE DIRECTION OF PARK MANAGEMENT. REMOVE PIPING CAP PIPING.
10. ALL PIPING WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF ALL LOCAL AUTHORITIES.
11. THE SCOPE OF DEMOLITION WORK HAS BEEN INDICATED FOR THE CONTRACTOR'S GENERAL INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE FULL SCOPE, EXTENT, NATURE, AND MANNER OF DEMOLITION REQUIRED.
12. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOB CONDITIONS PRIOR TO SUBMITTING BIDS AND SHALL REPORT TO THE OWNER'S REPRESENTATIVE ANY DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH SATISFACTORY COMPLETION OF THE WORK. ALL BUILDING DEPARTMENT PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORK.
13. THE CONTRACTOR SHALL REMOVE ALL PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN. THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS NECESSARY.

APPROVALS

Blank area for approvals and signatures.

ISSUE			
REVISIONS			
NO.	DATE	COPIES	DESCRIPTION

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**SITE ARCHITECT SITE MEP/A**

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**CLIENTS:**

**PHILADELPHIA PARKS & RECREATION**

**PROJECT:**

**FISHTOWN HOCKEY RINK**

1202-32 E. MONTGOMERY AVENUE, PHILADELPHIA, PA 19125

<b>PROJECT NUMBER</b>	2020-501	<b>PLUMBING DEMOLITION SITE PLAN</b>
<b>SCALE</b>	1" = 10'-0"	
<b>DATE</b>	07/20/2022	FISHTOWN HOCKEY RINK 1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125
<b>PROJECT MANAGER</b>		<p><b>PD-100</b></p>
<b>PROJECT ARCHITECT</b>	CS	
<b>DRAWN BY</b>	TF	
<b>CHECKED BY</b>	CS	
<b>CADD FILE</b>		

"THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES."















**GENERAL ELECTRICAL NOTES:**

1. ALL WORK SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, PENNSYLVANIA CODES, NFPA 70, THE LATEST ENERGY CONSERVATION CONSTRUCTION CODE, AND ALL OTHER GOVERNING AGENCIES HAVING JURISDICTION. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR AND FIELD WILL ALL AUTHORITIES HAVING JURISDICTION.
2. THE ELECTRICAL CONTRACTOR SHALL VISIT AND CAREFULLY EXAMINE THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. CONTRACTOR SHALL PROVIDE THIS PRIOR TO SUBMITTING HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
3. SUBSEQUENT TO AWARD OF THE CONTRACT, THE ELECTRICAL CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE OF WORK TO THE ARCHITECT. THE SCHEDULE SHALL BE MODIFIED AS NECESSARY AND RE-ISSUED WHEN ANY CHANGES THERETO ARE REQUIRED.
4. THE DRAWINGS INDICATE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. THE EXACT LOCATIONS AND ELEVATIONS OF ALL LIGHTING FIXTURES, ETC., SHALL BE DETERMINED BY THE ARCHITECT AND OWNER.
5. CIRCUIT NUMBERS INDICATED ON PLANS ARE FOR GROUPING PURPOSES ONLY. WHERE DRAWINGS CALL FOR SEPARATE NEUTRAL WIRES OR DEDICATED CIRCUITS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUITS WITH PROPER PHASE SEQUENCING FOR EVERY SHARED NEUTRAL WIRE.
6. BRANCH CIRCUITS SHALL BE ARRANGED TO BALANCE LOADS TO THE EXTENT POSSIBLE. LOADS IMBALANCES BETWEEN PHASES SHALL NOT EXCEED 10%.
7. ALL PANELS SHALL HAVE COMPLETE DIRECTORIES INDICATING LOADS SERVED AS WELL AS SPARES AND SPACES.
8. ELECTRIC PANEL COVERS SHALL NOT BE LEFT OFF AT ANY TIME UNLESS CONTRACTOR'S PERSONNEL ARE WORKING ON SAME. COVERS SHALL BE REPLACED AT THE END OF THE WORK DAY.
9. PROVIDE GROUND WIRE IN ALL FEEDERS TO MOTORIZED EQUIPMENT.
10. PROVIDE ARC FAULT CIRCUIT BREAKERS OR RECEPTACLES WHERE INDICATED OR WHERE REQUIRED BY CODE.
11. PROVIDE GROUND FAULT CIRCUIT BREAKERS OR RECEPTACLES WHERE INDICATED OR WHERE REQUIRED BY CODE.
12. ALL DEVICE COLORS AND FINISHES, AND MOUNTING HEIGHTS OF ELECTRICAL DEVICES SHALL BE IN ACCORDANCE TO ARCHITECTURAL DRAWINGS.
13. 1/2" CONDUIT SHALL BE THE MINIMUM SIZE CONDUIT INSTALLED.
14. ARMOR CLAD (AC) OR METAL-CLAD CABLE (MC) MAY BE USED AS PERMITTED BY CODE. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED WITH SET SCREW TYPE FITTINGS.
15. FLEXIBLE METALLIC CONDUIT (FMC) (GREENFIELD) SHALL BE USED FOR FINAL CONNECTION TO MOTORS AND TO RECESSED MOUNTED LIGHTING FIXTURES. LENGTH SHALL NOT EXCEED 6 FEET.
16. WHERE MORE THAN ONE SWITCH IS INSTALLED IN THE SAME LOCATION, THEY SHALL BE INSTALLED IN A MULTI-GANG BOX UNDER ONE COVER PLATE.
17. ALL MATERIALS SHALL BE NEW AND SHALL CONFORM WITH THE STANDARDS OF THE UNDERWRITERS LABORATORIES, INC. (UL) WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR TYPE OF MATERIAL IN QUESTION, UNLESS OTHERWISE NOTED.
18. THE CONTRACTOR SHALL SUBMIT CATALOG CUTS AND SHOP DRAWINGS OF ALL DEVICES, EQUIPMENT AND MATERIAL PROPOSED TO BE USED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL. A SHOP DRAWING LOG SHALL BE MAINTAINED BY THE CONTRACTOR AND STATUS OF SUBMISSIONS SHALL BE UPDATED AT LEAST BI-WEEKLY.
19. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AND CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION.
20. BEFORE INSTALLING ANY WORK, THE CONTRACTOR SHALL CONFIRM THAT IT DOES NOT INTERFERE WITH CLEARANCES REQUIRED FOR FINISHED COLUMNS, HUNG CEILINGS PLASTER, PARTITIONS, WALLS, ETC., AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND DETAILS. IF ANY WORK IS SO INSTALLED AND IT LATER DEVELOPS THAT SUCH DETAILS OR DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR AT HIS OWN EXPENSE SHALL MAKE SUCH CHANGES IN THE WORK AS NECESSARY AND AS DIRECTED BY THE ARCHITECT, TO PERMIT THE INSTALLATION OF THE ARCHITECTURAL WORK AS SHOWN ON THE PLANS AND DETAILS.
21. DURING THE PROJECT DURATION, THE ARCHITECT AND ENGINEER WILL INSPECT THE WORK PROGRESS. ANY WORK WHICH IS JUDGED UNSATISFACTORY FOR ANY REASON OR NOT IN COMPLIANCE WITH THE CONTRACT, CODE OR STANDARDS SHALL BE REMOVED AND REPLACED AS DIRECTED AND AT THE EXPENSE OF THE CONTRACTOR.
22. CHOPPING OR CHASING OF MASONRY MUST BE COORDINATED WITH THE ENGINEER AND ARCHITECT PRIOR TO COMMENCING WORK.
23. UPON COMPLETION OF THE WORK, A SET OF "AS-BUILT" DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE. FINAL AS-BUILTS SHALL BE SUBMITTED TO THE OWNER PRIOR TO PROJECT CLOSEOUT.
24. THE ENERGIZATION OF THE ELECTRICAL INSTALLATION DOES NOT CONSTITUTE AN ACCEPTANCE OF THE WORK BY THE OWNER. FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS AND HAS FURNISHED ALL REQUIRED CERTIFICATES OF APPROVAL FROM THE STATE AUTHORITIES, MUNICIPAL AUTHORITIES AND

**UNDERWRITERS:**

25. ELECTRICAL CONTRACTOR SHALL FILE FOR NECESSARY INSPECTIONS AND SHALL PROVIDE AN ELECTRICAL INSPECTION APPROVAL CERTIFICATE TO THE ARCHITECT UPON COMPLETION OF THE WORK.
26. ALL ELECTRICAL WORK TO CONFORM TO NEC AND LOCAL ELECTRICAL CODES.
27. THE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC REQUIREMENTS. ALL NON-CURRENT METAL PARTS SHALL BE CONNECTED TO THE GROUNDING SYSTEM. PROVIDE GROUND ROD IN FIRST BOX & BOND TO CONDUIT.
28. ALL UNDERGROUND CONDUIT SHALL BE HOT DIPPED GALVANIZED STEEL WITH WARNING TAPE ABOVE IT.
29. MINIMUM SIZE WIRING SHALL BE #12. ELECTRICAL CONTRACTOR SHALL INCREASE WIRE SIZE AND CONDUIT AS NECESSARY TO MEET ALL VOLTAGE DROP LIMITATIONS.

**TRENCHING NOTES:**

1. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO DIGGING.
2. ALL EXCAVATION IN THE AREA OF THE EXISTING UNDERGROUND EQUIPMENT, PIPES AND CONDUITS SHALL BE PERFORMED BY HAND.
3. ANY AREA PLANTS OR LANDSCAPING OR PAVEMENT DISTURBED DURING THE EXCAVATION SHALL BE RESTORED OR REPLACED TO MATCH EXISTING CONDITIONS BY THE CONTRACTOR AT NO COST TO THE OWNER.
4. ANY EXISTING BURIED CONDUITS, DRAINAGE, SPRINKLER PIPING, ETC. THAT IS DISTURBED AND/OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
5. CONTRACTOR SHALL VERIFY AND COORDINATE FOR EXISTING UNDERGROUND UTILITIES AND UTILITIES OF ALL OTHER TRADES TO BE INSTALLED AS PART OF THIS CONTRACT TO LOCATE FEEDERS SHOWN ON THESE DRAWINGS. THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH UTILITY PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY OR MAY NOT BE SHOWN OR EXACTLY DEPICTED ON THE PLANS. IT IS RESPONSIBILITY OF THIS CONTRACTOR TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK.

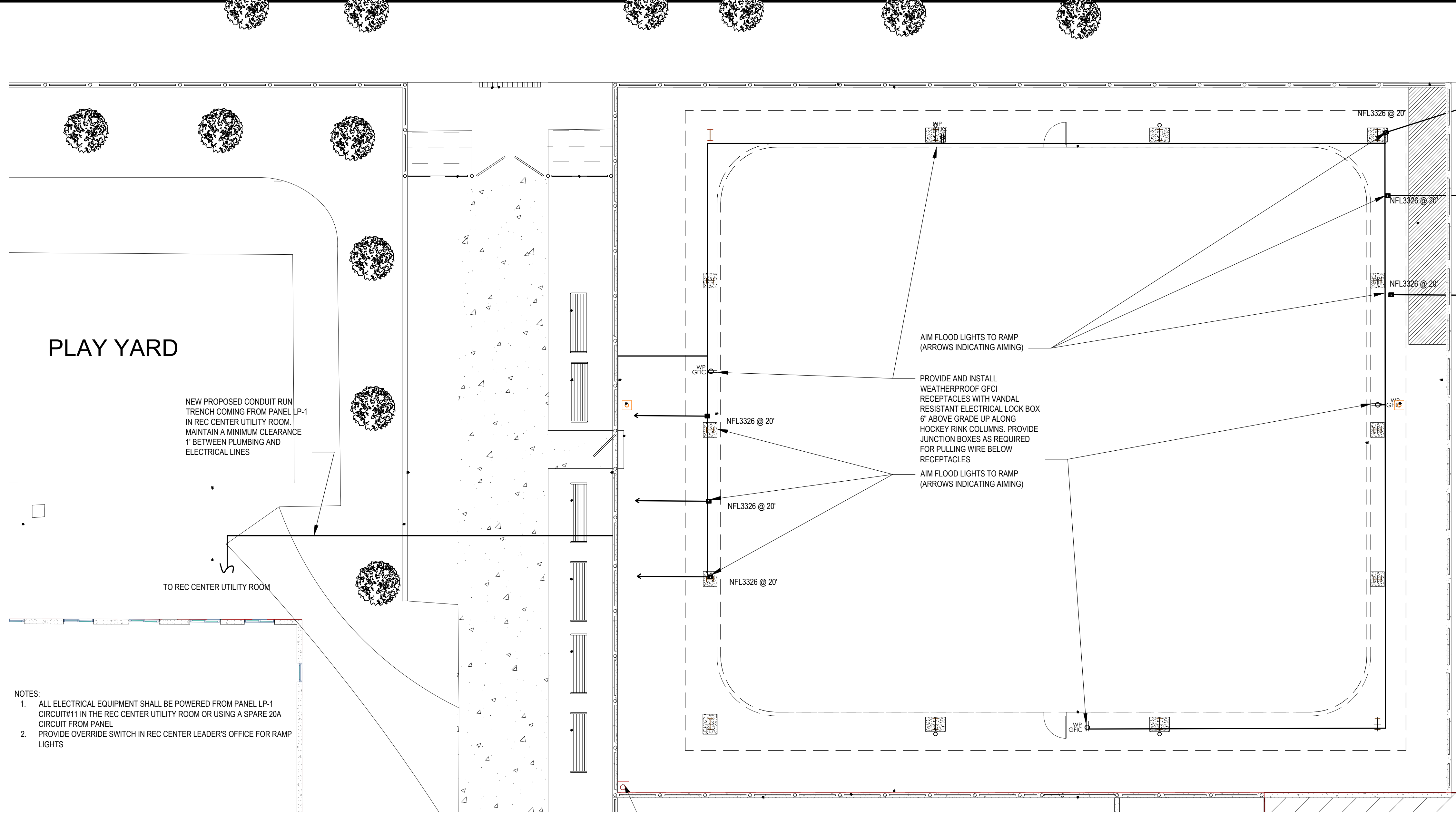
DRAWING LIST	
E-100	ELECTRICAL PLAN, NOTES AND SCHEDULES
E-101	ELECTRICAL SPECIFICATIONS
E-102	ELECTRICAL SPECIFICATIONS

**ELECTRIC LEGEND:**

- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE W/ GROUND FAULT INTERRUPTER
- DISCONNECT SWITCH
- NEW ELECTRIC PANEL FLUSH MOUNTED U.O.N.
- HOMERUN
- WALL OR CEILING MOUNT JUNCTION BOX
- HOSE AIR
- FIXTURE MOUNTED OUTDOOR OCCUPANCY SENSOR SENSOR TO BE LEVITON OSF30 OR AS ACCEPTABLE. (FIXTURES DENOTED WITH 'AM' ARE EQUIPPED WITH AISLE MASK)

**ELECTRICAL ABBREVIATIONS (NOT ALL ABBREVIATIONS COULD BE USED):**

A	AMPERES	HZ	HERTZ
ACT	ABOVE COUNTER TOP	JB	JUNCTION BOX
AF	ABOVE FINISH FLOOR	KVA	KILOVOLT AMPERES
AWG	AMERICAN WIRE GAUGE	KW	KILOWATTS
BLDG	BUILDING	KW	KILOWATTS
C	CONDUIT	LP	PANEL DESIGNATION
CAT	CATALOG	LTC	LIGHTING
CAM	CAMERA	MAX	MAXIMUM
CB	CIRCUIT BREAKER	MCB	MAIN CIRCUIT BREAKER
CDT	CIRCUIT	MECH	MECHANICAL
CLG	CEILING	MECH	MECHANICAL
DGP	DATA GATHERING PANEL	MER	MECHANICAL EQUIPMENT ROOM
DISC	DISCONNECT	MFS	MAIN FUSED SWITCH
DN	DOWN	MIN	MINIMUM
DR	DOOR RELEASE	MLO	MAIN LUGS ONLY
DWG	DRAWING	MTD	MOUNTED
		MW	MICROWAVE
ELEC	ELECTRICAL	N	NEUTRAL
EM	EMERGENCY	NC	NORMALLY CLOSED
EQUIP	EQUIPMENT	NC	NOT IN CONTRACT
FACP	FIRE ALARM CONTROL PANEL	No.	NUMBER
FBO	FURNISH BY OTHER DIVISION OF WORK	NL	NIGHT LIGHT
FIXT	FIXTURE	NTS	NOT TO SCALE
FL	FLOOR	P	POLE
FLEX	FLEXIBLE	PL	PROPERTY LINE BOX
FT	FEET OR FOOT	PC	PERSONAL COMPUTER (COMPUTER CIRCUIT)
GA	GAUGE	PAN	PANEL
G, GRD, GND	GROUND	P	PHASE
GC	GENERAL CONTRACTOR	SW	SWITCH
GI	GROUND FAULT INTERRUPTER	SWBD	SWITCHBOARD
HD	HAND DRYER	SEL	SERVICE END BOX
HP	HORSEPOWER	TEL	TELEPHONE
HVAC	HEATING VENTILATING AND AIR CONDITIONING DIVISION OF WORK	TYP	TYPICAL
		U.O.N.	UNLESS OTHERWISE NOTED
		UL	UNDERWRITERS LABORATORIES
		V	VOLTAGE
		WP	WEATHERPROOF



**1 ELECTRICAL SITE PLAN**  
 1/8" = 1'-0"  
 NORTH

- NOTES:**
1. ALL ELECTRICAL EQUIPMENT SHALL BE POWERED FROM PANEL LP-1 IN REC CENTER UTILITY ROOM OR USING A SPARE 20A CIRCUIT FROM PANEL.
  2. PROVIDE OVERRIDE SWITCH IN REC CENTER LEADER'S OFFICE FOR RAMP LIGHTS.

Branch Circuit		Conductor	Conduit	KW		MLO: 225A		Branch Circuit		Conductor	Conduit	KW			
Circuit Breaker	Load Designation	No.	AWG/MCM	No.	Size	A	B	C	Circuit Breaker	Load Designation	No.	AWG/MCM	No.	Size	KW
1 2P	HOCKEY RINK LIGHTS (EX)					•	•	•	2 2P	HOCKEY RINK LIGHTS (EX)					
3 20						•	•	•	4 20						
5 2P	HOCKEY RINK LIGHTS (EX)					•	•	•	6 2P	HOCKEY RINK LIGHTS (EX)					
7 20						•	•	•	8 20						
9 2P	FUTURE POLE #1 (EX)					•	•	•	10 2P	FUTURE VANDAL LIGHT POLES					
11 20						•	•	•	12 20						
13 20	RAMP LIGHT SOUTLETS	2	#12	1	3/4"	•	•	•	14 2P	SPARE (EX)					
15 20	RAMP LIGHT SOUTLETS	2	#12	1	3/4"	•	•	•	16 20						
17 2P	TEMP RECEPT PRINTERS & ROOFERS (EX)					•	•	•	18 2P	SPARE (EX)					
19 20						•	•	•	20 20						
21 2P	HOCKEY RINK LIGHTS (EX)					•	•	•	22 2P	SPARE (EX)					
23 20						•	•	•	24 20						
25 3P	ROOF TOP EXHAUST FAN FOR RTU AC UNIT (EX)					•	•	•	26 3P						
27 30						•	•	•	28 30						
29 30						•	•	•	30 30						

NOTE: ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NEW 20A BREAKER FOR NEW RAMP LIGHTS. EXISTING 2P-20A SPARE TO BE REUSED FOR NEW LIGHTS AND OUTLETS WHERE PRACTICAL.  
 NEW LOAD: 1.2KW  
 NEW LOAD: 6A

CODE	SPECIFICATION	MANUFACTURER/ CATALOG NO.	QUANTITY	LAMP TYPE	WATTS	NOTES
FL	NIGHT FALCON SMALL FLOODLIGHT C70 3X3	LUMARK NFFLD-S-C70-D-UNV-33-X-X	6	LED	26	0-10V DIMMING PHOTOCELL INTEGRATED FINISH/COLOR TBD

- NOTES:**
1. FIXTURES ARE CONTROLLED BY PHOTOCELL.
  2. PROVIDE OVERRIDE KEY SWITCH IN REC CENTER LEADER'S OFFICE FOR NEW LIGHTS.

APPROVALS

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NO.	DATE	COPIES	DESCRIPTION
7/25/22			ADDENDUM 1
8/1/22			100% CD SET ISSUED TO REBUILD/PRA
7/12/21			ISSUED TO REBUILD FOR REVIEW
4/21/21			RESPONSE TO REBUILD COMMENTS
3/23/20			ISSUED TO OWNER FOR REVIEW/PRICING

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**CLIENTS:**

Rebuild PHILADELPHIA

PHILADELPHIA PARKS & RECREATION

**PROJECT:**

**FISHTOWN HOCKEY RINK**

1202-32 E. MONTGOMERY AVENUE  
PHILADELPHIA, PA 19125

PROJECT NUMBER	2020-501
SCALE AS NOTED	
DATE	08/14/2020
PROJECT MANAGER	
PROJECT ARCHITECT	CS
DRAWN BY	MM
CHECKED BY	CS
CADD FILE	

MANIPULATED

**E100**



GENERAL SPECIFICATIONS	GENERAL SPECIFICATIONS (CONTINUED)	GENERAL SPECIFICATIONS (CONTINUED)	GENERAL SPECIFICATIONS (CONTINUED)
<p><b>BID / PROPOSAL</b></p> <p>1. THESE GENERAL SPECIFICATIONS ARE TO BE READ AND ADHERED TO BY THE ELECTRICAL CONTRACTOR. ITEMS ARE LOOSELY CATEGORIZED BY TRADE, BUT THIS DOES NOT LIMIT THE RESPONSIBILITY OF THE CONTRACTOR TO ANY SINGLE CATEGORY.</p> <p>2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS.</p> <p>THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIAL WHICH VIOLATES ANY OF THE ABOVE LAWS AND REGULATIONS.</p> <p>ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.</p> <p>3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. DRAWINGS DO NOT NECESSARILY INDICATE THE ACTUAL LOCATION OR ROUTING OF EQUIPMENT, CONDUIT, PIPING, RACEWAY OR DUCTWORK. DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS CONDITIONS ALLOW TO COMPLETE THE INTENT OF THE CONTRACT. MAINTAIN HEADROOM AND SPACE CONDITIONS.</p> <p>4. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE BASED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN DIRECTED, HOWEVER, THE CONTRACTORS SHALL INSTALL WORK DURING OVERTIME HOURS AND AT THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THOSE WAGES PAID.</p> <p>5. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC. WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK.</p> <p>6. "FURNISH AND INSTALL" OR "PROVIDE" MEANS TO SUPPLY, ERECT, INSTALL AND CONNECT UP TO COMPLETE FOR READINESS FOR REGULAR OPERATION, THE PARTICULAR WORK REFERRED TO.</p> <p><b>CONTRACT / ADMINISTRATIVE</b></p> <p>1. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.</p> <p>2. ALL APPLICABLE ITEMS SHALL BEAR THE UNDERWRITERS LABORATORIES (UL) LABEL, AND/OR BE FACTORY MUTUAL APPROVED.</p> <p>3. ALL MATERIAL, EQUIPMENT AND WORKMANSHIP SHALL BE NEW, U.O.N. AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.</p> <p>4. INSURANCE: IN ACCORDANCE WITH OWNER REQUIREMENT AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.</p> <p>5. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, TRANSPORTATION, FACILITIES, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION.</p> <p>6. MANUFACTURERS NAMES GIVEN FOR EQUIPMENT ARE USED FOR THE BASIS OF SELECTION, NOT WITH INTENT TO LIMIT COMPETITION. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS WILL BE CONSIDERED BASED ON SUBSTITUTION SECTION OF SPECIFICATION. NO SUBSTITUTIONS ARE ALLOWED WHERE NEW EQUIPMENT MUST MATCH EXISTING.</p> <p><b>EXISTING CONDITIONS</b></p> <p>1. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTORS SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.</p> <p>2. CONNECTIONS TO EXISTING WORK, INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF SERVICE SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED.</p> <p>3. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.</p> <p>4. WORK WILL BE CONDUCTED IN A LIVE WORKING ENVIRONMENT. PROVIDE TWO WEEK LOOK AHEAD SCHEDULE TO OWNER THROUGHOUT THE PROJECT. COORDINATE AND OBTAIN APPROVAL FROM OWNER FOR ANY WORK THAT WILL AFFECT LIVE PORTIONS OF THE WORKING ENVIRONMENT PRIOR TO STARTING WORK.</p> <p><b>DEMOLITION</b></p> <p>1. DISCONNECT, REMOVE AND / OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.</p> <p>2. THE CONTRACTOR SHALL REMOVE ANY AND ALL OBSOLETE, UNUSED OR UNNECESSARY ITEMS AS CALLED OUT ON DRAWINGS OR HEREIN SPECIFIED. ANY SUCH ITEMS INTENDED FOR SUCH REMOVAL SHALL BE COMPLETELY VERIFIED AND APPROVED BY THE OWNER AND ENGINEER.</p> <p>3. ANY EXISTING EQUIPMENT THAT MAY BE RELOCATED TO ACCOMMODATE NEW WORK MAY BE ACCOMPLISHED BY THE CONTRACTOR, PROVIDED IT IS DONE SO AT NO ADDITIONAL EXPENSE TO THE OWNER AND WRITTEN PERMISSION HAS BEEN OBTAINED FROM THE OWNER AND ENGINEER.</p> <p>4. ALL ITEMS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER, BUT SHALL BE DISPOSED OF, IF SO DIRECTED BY THE OWNER AND ENGINEER. ITEMS SO DIRECTED SHALL BE REMOVED FROM THE PREMISES BY THE CONTRACTOR AT HIS EXPENSE.</p> <p>5. ANY ITEM INDICATED FOR DEMOLITION SHALL BE REMOVED, INCLUSIVE OF ANY RACEWAY, BOXES, WIRING, ETC., BACK TO ITS ORIGINAL SOURCE. IF ENTIRE CIRCUITS ARE REMOVED, PANEL SCHEDULES SHALL BE UPDATED AND BREAKERS PLACED IN "OFF" POSITION.</p> <p><b>DELIVERY / HANDLING</b></p> <p>1. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.</p> <p>2. PROTECT ALL EQUIPMENT FROM THE WEATHER AND DAMAGE AT ALL TIMES DURING SHIPMENT, STORAGE AND CONSTRUCTION.</p> <p><b>INSTALLATION</b></p> <p>1. PROPER FIRE PROTECTION MEASURES, SATISFACTORY TO THE LOCAL FIRE</p>	<p>DEPARTMENT, SHALL BE TAKEN WHEN WELDING OR CUTTING WITH TORQUES OR ELECTRIC ARC. CONTRACTOR TO PROVIDE OPEN FLAME PERMIT IF REQUIRED.</p> <p>2. ALL WORK SHALL BE DONE IN A NEAT WORKMANLIKE MANNER, LEFT CLEAN AND FREE FROM DEFECTS, AND COMPLETELY OPERABLE. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AS SCHEDULED ON THE DRAWINGS.</p> <p>3. ALL WORK SHALL BE CAREFULLY COORDINATED WITH ALL TRADES INVOLVED, AND THE CONTRACTOR SHALL PROVIDE PROPER CONNECTIONS, FITTINGS, VALVES, PIPING, ETC. FOR ALL EQUIPMENT FURNISHED BY THE OWNER OR THE TRADES INVOLVED IN THIS CONTRACT.</p> <p>4. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.</p> <p>5. COORDINATE WITH OTHER TRADES AND OWNER FOR EQUIPMENT LOCATIONS AND CLEARANCES REQUIRED FOR EQUIPMENT. CONTRACTOR TO COORDINATE AND MODIFY LAYOUT ACCORDINGLY.</p> <p><b>CUTTING AND PATCHING</b></p> <p>1. THE ELECTRICAL CONTRACTORS SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR THEIR RESPECTIVE WORK, EXCEPT THAT STRUCTURALLY FRAMED OPENINGS SHALL BE CUT AND FRAMED BY THE GENERAL CONTRACTOR. ALL HOLES IN MASONRY FLOORS AND WALLS SHALL BE CORE DRILLED, PATCH AND PAINT TO MATCH ADJACENT SURFACES.</p> <p>2. ALL PENETRATIONS OF FLOORS (WHETHER OR NOT FIRE RESISTANCE RATED) AND ALL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE PROVIDED WITH A THROUGH PENETRATION PROTECTION SYSTEM (FIRESTOPPING). EACH THROUGH PENETRATION PROTECTION SYSTEM SHALL BE TESTED IN ACCORDANCE WITH ASTM E814 AND BE LISTED FOR THE TYPE OF FLOOR OR WALL ASSEMBLY PENETRATED AND THE TYPE OF PROTECTION SYSTEM.</p> <p><b>SUPPORT SYSTEMS</b></p> <p>1. ALL SUPPORT SYSTEMS (SUPPORTS, HANGERS, ANCHORS, GUIDES, BRACING, FASTENERS, WELDS, ETC.) FOR EQUIPMENT AND SYSTEMS INSTALLED OR REVISED AS PART OF THIS CONTRACT SHALL BE DESIGNED, SELECTED AND INSTALLED BY THE CONTRACTOR TO RESIST ALL SEISMIC, WIND AND GRAVITY LOADS.</p> <p>A. THE CODES LISTED UNDER THE APPLICABLE CODES AND REFERENCE SECTION OF THESE DOCUMENTS HAVE SPECIFIC REQUIREMENTS CONCERNING THE APPLICATION OF THESE LOADS AS WELL AS OTHER DESIGN REQUIREMENTS.</p> <p>2. UNDER CERTAIN CONDITIONS, THE APPLICABLE CODES REQUIRE THESE LOADS, OR A COMBINATION OF THESE LOADS, BE CONSIDERED AS "COINCIDENTAL". THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONFIRMING THAT THE COMPONENT OF THE BUILDING STRUCTURE WHERE THESE SUPPORT SYSTEMS ARE ATTACHED IS ABLE TO RESIST THE DESIGN LOADS TRANSFERRED TO THIS BUILDING COMPONENT.</p> <p>3. CONTRACTOR SHALL PROVIDE ALL NECESSARY MISCELLANEOUS STEEL FOR THE SUPPORT OF ALL EQUIPMENT, PIPING, CONDUIT AND DUCTWORK SUSPENDED FROM SLAB, STEEL, WALL, TRUSSWORK, AND ROOF OPENINGS.</p> <p><b>CLOSEOUT</b></p> <p>1. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTIONS AND APPROVAL.</p> <p>2. PROVIDE THE OWNER WITH AN EQUIPMENT AND MAINTENANCE BINDER INCLUDING EACH SYSTEM MANUFACTURER'S INSTRUCTIONS, MAINTENANCE REQUIREMENTS, GUARANTEES AND WARRANTY INFORMATION.</p> <p>3. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR:</p> <p>A. ALL EXPENSES INCLUDED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE COORDINATED WITH THE OWNER.</p> <p>B. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING WORK AND OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.</p> <p><b>CONSTRUCTION ADMINISTRATION</b></p> <p><b>GENERAL</b></p> <p>1. THIS SECTION CONTAINS REQUIREMENTS FOR CONSTRUCTION ADMINISTRATION OF MEPPF WORK. THESE REQUIREMENTS ARE IN ADDITION TO ANY REQUIREMENTS LISTED ELSEWHERE IN THE CONTRACT DOCUMENTS. WHERE CONFLICTS EXIST BETWEEN THIS SECTION AND OTHER SECTIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.</p> <p><b>REQUEST FOR INFORMATION</b></p> <p>1. REQUESTS FOR INFORMATION (RFI) ARE QUESTIONS POSED BY THE CONTRACTOR INTENDED TO RESOLVE VAGUENESS AND CONFLICTS DURING CONSTRUCTION.</p> <p>2. TO SUBMIT A RFI, THE CONTRACTOR MUST FILL OUT A REQUEST FOR INFORMATION FORM, ONLY A WRITTEN RFI FORM WILL BE ACKNOWLEDGED.</p> <p>3. PRIOR TO SUBMITTING A RFI, THE CONTRACTOR MUST THOROUGHLY REVIEW THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS AND FORWARD THE RFI ONLY IF THE ISSUE IN QUESTION CANNOT BE RESOLVED. IF A RFI QUESTIONS A CLEARLY NOTED ITEM OR STANDARD CONSTRUCTION METHOD WHICH SHOULD BE KNOWN BY THE CONTRACTOR, THE ENGINEER MAY BACK CHARGE THE CONTRACTOR FOR TIME SPENT RESPONDING TO THE RFI.</p> <p><b>SUBSTITUTIONS</b></p> <p>1. SUBSTITUTIONS FOR SPECIFIED EQUIPMENT MUST INCLUDE A DETAILED COMPARISON CHECKLIST IDENTIFYING ALL PERTINENT SIMILARITIES AND DIFFERENCES BETWEEN THE TWO ITEMS. SUBSTITUTED ITEMS WITHOUT A COMPARISON CHECKLIST WILL NOT BE CONSIDERED.</p> <p>A. WHERE SUBSTITUTED ITEMS AFFECT OTHER TRADES, THIS CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE INSTALLATION AS REQUIRED TO ACCOMMODATE THE SUBSTITUTION. THIS INCLUDES, BUT IS NOT LIMITED TO, CHANGES IN ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION SYSTEMS. THIS CONTRACTOR WILL PAY FOR</p>	<p>ALL ASSOCIATED COSTS FOR FIELD CHANGES AND PROFESSIONAL SERVICES.</p> <p>2. INCOMPLETE SUBMITTALS WILL BE RETURNED REJECTED.</p> <p><b>SUBMITTALS</b></p> <p>1. SCHEDULES AND LISTS</p> <p>A. SCHEDULE OF VALUES</p> <p>1) PRIOR TO INITIATING ANY WORK, THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF VALUES ON AN AIA G-703 CONTINUATION SHEET OUTLINING MATERIAL AND LABOR COSTS FOR EACH ITEM. THIS SCHEDULE OF VALUES SHALL BE SUBMITTED AS THE FIRST SHOP DRAWING.</p> <p>2) INCLUDE IN THE SCHEDULE OF VALUES A LINE ITEM FOR RESOLVING PUNCHLIST ISSUES EQUAL TO 5% OF THE TOTAL CONTRACT VALUE.</p> <p>3) NO PAYMENT APPLICATIONS WILL BE PROCESSED UNTIL THE SCHEDULE OF VALUES FORM HAS BEEN APPROVED BY THE ENGINEER.</p> <p>B. EQUIPMENT MANUFACTURER LIST</p> <p>1) WITHIN TEN (10) BUSINESS DAYS OF THE CONTRACT AWARD DATE, THE CONTRACTOR SHALL SUBMIT A LIST OF EQUIPMENT MANUFACTURERS, FOR THE ENGINEER TO REVIEW AND APPROVAL, THAT HE INTENDS TO USE ON THIS PROJECT.</p> <p>C. SHOP DRAWING SUBMISSION SCHEDULE</p> <p>1) PRIOR TO SUBMITTING ANY SHOP DRAWINGS, THE CONTRACTOR SHALL ISSUE A SHOP DRAWING SUBMISSION SCHEDULE. THE PURPOSE OF THIS SCHEDULE IS TO IDENTIFY WHICH ITEMS REQUIRE SHOP DRAWINGS AND WHEN THESE SHOP DRAWINGS WILL BE SUBMITTED TO THE ENGINEER.</p> <p>A. BY AGREEING TO THIS SCHEDULE AT THE BEGINNING OF THE PROJECT, SHOP DRAWINGS WILL BE REVIEWED IN A TIMELY FASHION AND LONG LEAD ITEMS CAN BE PRIORITIZED AND REVIEWED FIRST.</p> <p>2) THE CONTRACTOR SHALL LIST ALL THE ITEMS THAT REQUIRE SUBMITTALS PER THE CONTRACT DOCUMENTS AND SPECIFICATIONS. THE CONTRACTOR SHALL FILL OUT THE SUBMITTAL DATE COLUMN FOR EACH ITEM AND RETURN THE COMPLETED FORM TO THE ENGINEER FOR REVIEW. THE CONTRACTOR MAY USE A DIFFERENT FORM OF HIS CHOOSING PROVIDED THE REQUIRED INFORMATION IS PROVIDED.</p> <p>3) NO SHOP DRAWINGS WILL BE REVIEWED UNTIL THE SHOP DRAWING SUBMISSION SCHEDULE IS APPROVED BY THE ENGINEER.</p> <p>D. SERVICE INTERRUPTION SCHEDULE</p> <p>1) WITHIN TEN (10) BUSINESS DAYS OF THE CONTRACT AWARD DATE, THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHUTDOWNS OF EQUIPMENT AND/OR SYSTEMS FOR OWNER AND ENGINEER REVIEW.</p> <p>2) THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO EACH EQUIPMENT AND/OR SYSTEM SHUTDOWN.</p> <p>2. SHOP DRAWINGS</p> <p>A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.</p> <p>B. SHOP DRAWINGS WILL NOT BE REVIEWED UNTIL THE EQUIPMENT MANUFACTURER LIST AND SHOP DRAWING SUBMISSION SCHEDULE HAVE BEEN SUBMITTED TO, AND APPROVED BY, THE ENGINEER.</p> <p>C. SHOP DRAWINGS MUST INCLUDE A COMPLETED COPY OF THE SHOP DRAWING SUBMITTAL FORM.</p> <p>1) THE CONTRACTOR MUST REVIEW AND STAMP ALL SHOP DRAWINGS PRIOR TO SUBMISSION. SPACE HAS BEEN PROVIDED FOR THE CONTRACTOR'S APPROVAL STAMP ON THE SHOP DRAWING SUBMITTAL FORM. SUBMITTALS WITHOUT THE CONTRACTOR'S APPROVAL STAMP WILL BE RETURNED UNCHECKED.</p> <p>D. THE CONTRACTOR SHALL PROVIDE A MAXIMUM OF SIX (6) COPIES OF SUBMITTALS TO THE ENGINEER FOR REVIEW. ADDITIONAL SHOP DRAWINGS MAY BE MARKED-UP AND PROCESSED FOR AN ADDITIONAL FEE TO THE CONTRACTOR.</p> <p>1) SUBMITTED ITEMS SHALL BE CLEARLY IDENTIFIED ON ALL COPIES OF THE SHOP DRAWINGS. THE ENGINEER WILL RETURN ANY SHOP DRAWINGS THAT ARE NOT CLEARLY MARKED.</p> <p>E. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE EVERY ATTEMPT TO ENSURE THOROUGHNESS AND ACCURACY OF HIS SUBMITTALS. IF SHOP DRAWINGS ARE NOT APPROVED FOLLOWING A MAXIMUM OF TWO (2) REVIEWS, THE CONTRACTOR WILL BE BACKCHARGED FOR THE ENGINEER'S EFFORT.</p> <p>F. SUBMISSIONS</p> <p>1) SUBMISSIONS 11" X 17" OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN CONTRACTOR SHALL SUBMIT FOUR COPIES. THE ARCHITECT WILL FORWARD THREE COPIES TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.</p> <p>2) SUBMISSIONS LARGER THAN 11" X 17": SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.</p> <p>3) ALL SUBMISSIONS SHALL BE CLEARLY LEGIBLE. IF MULTIPLE PRODUCTS ARE ON THE SAME CATALOG CUT, THE PRODUCT THAT WILL BE UTILIZED ON THIS PROJECT SHALL BE CLEARLY INDICATED.</p> <p>3. AS-BUILT DRAWINGS AND EQUIPMENT OPERATION INSTRUCTIONS</p> <p>A. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.</p> <p>B. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH TYPE-WRITTEN UPDATED PANEL SCHEDULES FOR ANY PANEL IN WHICH WORK WAS DONE. PROVIDE A HARD AND SOFT COPY TO THE OWNER.</p> <p>4. OPERATION AND MAINTENANCE MANUALS</p> <p>A. FURNISH THREE COPIES OF COMPLETE OPERATIONS AND MAINTENANCE MANUALS TO THE ARCHITECT-ENGINEER, FOR APPROVAL AND FOR THE OWNER, ON ALL EQUIPMENT AND SYSTEMS. THE MANUALS SHALL BE BOUND IN HARDBACK, THREE RING LOOSE-LEAF BINDERS. THE FOLLOWING SHALL BE INCLUDED:</p> <p>1) NON-TECHNICAL CONTENT</p>	<p>a. TITLE SHEET WITH JOB NAME, AND THE NAMES, ADDRESSES AND PHONE NUMBERS OF THE CONTRACTOR, SUBCONTRACTOR, CONTROL SUBCONTRACTOR, RELATED CONTRACTORS AND MATERIAL AND EQUIPMENT SUPPLIERS.</p> <p>b. INCLUDE A COMPREHENSIVE TABLE OF CONTENTS FOR ALL SECTIONS.</p> <p>c. GUARANTEES, INCLUDING EXTENDED GUARANTEES (WHERE APPLICABLE), ALL MATERIALS SHALL BE NEW AND ALL WORK AND MATERIALS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE BY THE OWNER.</p> <p>2) TECHNICAL CONTENT</p> <p>a. A COPY OF ACKNOWLEDGMENT OF INSTRUCTION TO THE OWNERS OPERATING PERSONNEL IN THE OPERATION OF ALL MECHANICAL EQUIPMENT AND SYSTEMS, SIGNED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE.</p> <p>b. TYPEWRITTEN OPERATING INSTRUCTIONS FOR THE OWNERS PERSONNEL DESCRIBING HOW TO OPERATE (START, STOP AND PERFORM NORMAL AND EMERGENCY OPERATING PROCEDURES) EACH PIECE OF EQUIPMENT. HOW TO SET THE TEMPERATURE CONTROL SYSTEM FOR NORMAL OPERATION AND NORMAL RESTARTING PROCEDURES, CAUTION AND WARNING NOTICES.</p> <p>c. APPROVED SHOP DRAWINGS, PRODUCT DATA AND PARTS AND MAINTENANCE BOOKLET FOR EACH ITEM OF MATERIAL AND EQUIPMENT FURNISHED UNDER MEPPF SCOPE OF WORK.</p> <p>d. RECORD DRAWINGS OF ALL SYSTEMS INCLUDED IN THE PROJECT.</p> <p>e. TEST AND BALANCE REPORT.</p> <p>f. COPIES OF CERTIFICATES OF INSPECTION.</p> <p>B. DELIVER THE MANUALS TO THE OWNER PRIOR TO SUBMITTING APPLICATION FOR FINAL PAYMENT.</p> <p>5. LETTERS</p> <p>A. SUBSTANTIAL COMPLETION LETTER</p> <p>1) THE PURPOSE OF THIS LETTER IS TO INFORM THE ENGINEER THAT THE CONTRACTOR HAS REACHED SUBSTANTIAL COMPLETION.</p> <p>2) UPON SUBSTANTIAL COMPLETION, THE CONTRACTOR SHALL CREATE A SUBSTANTIAL COMPLETION LETTER ON COMPANY LETTERHEAD, COMPLETE THE LETTER AND SEND IT TO THE ENGINEER.</p> <p>3) THIS LETTER SHALL BE RECEIVED AT THE ENGINEER'S OFFICE NO LATER THAN FOUR (4) WEEKS BEFORE THE PROJECT COMPLETION DATE. UPON RECEIVING THE LETTER, THE ENGINEER WILL PERFORM A PUNCH LIST. THE CONTRACTOR SHALL HAVE TWO (2) WEEKS TO COMPLETE THE PUNCH LIST ITEMS UPON RECEIVING THE PUNCH LIST.</p> <p>B. PUNCHLIST COMPLETION LETTER</p> <p>1) THE PURPOSE OF THIS LETTER IS TO INFORM THE ENGINEER THAT THE CONTRACTOR HAS COMPLETED ALL PUNCHLIST ITEMS. THE CONTRACTOR MUST ENSURE THAT ALL PUNCHLIST ITEMS ARE INDEED COMPLETE PRIOR TO SUBMITTING THIS LETTER.</p> <p>2) UPON COMPLETION OF PUNCHLIST ITEMS, THE CONTRACTOR SHALL CREATE A PUNCHLIST COMPLETION LETTER ON COMPANY LETTERHEAD, COMPLETE THE LETTER AND SEND IT TO THE ENGINEER.</p> <p>3) THIS LETTER SHALL BE RECEIVED AT THE ENGINEER'S OFFICE NO LATER THAN ONE (1) WEEK BEFORE THE PROJECT COMPLETION DATE. UPON RECEIVING THIS LETTER, THE ENGINEER WILL PERFORM A FINAL WALKTHROUGH.</p> <p>4) SHOULD THE ENGINEER DISCOVER DURING THE FINAL WALKTHROUGH THAT ALL OF THE PUNCHLIST ITEMS HAVE NOT BEEN COMPLETED, THE TIME AND EXPENSES ASSOCIATED WITH A RETURN VISIT BY THE ENGINEER SHALL BE CHARGEABLE TO THE CONTRACTOR.</p>

"THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES."

APPROVALS

<b>ISSUE</b> <b>REVISIONS</b> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COPIES</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>70992</td> <td></td> <td></td> <td>ADDENDUM 1</td> </tr> <tr> <td>61122</td> <td></td> <td></td> <td>100% CD SET ISSUED TO REBUILD / PRA</td> </tr> <tr> <td>71221</td> <td></td> <td></td> <td>ISSUED TO REBUILD FOR REVIEW</td> </tr> <tr> <td>42121</td> <td></td> <td></td> <td>RESPONSE TO REBUILD COMMENTS</td> </tr> <tr> <td>92920</td> <td></td> <td></td> <td>REBUILT TO OWNER FOR REVIEW/PRICING</td> </tr> </tbody> </table>	NO.	DATE	COPIES	DESCRIPTION	70992			ADDENDUM 1	61122			100% CD SET ISSUED TO REBUILD / PRA	71221			ISSUED TO REBUILD FOR REVIEW	42121			RESPONSE TO REBUILD COMMENTS	92920			REBUILT TO OWNER FOR REVIEW/PRICING	<p>ALL EXISTING CONDITIONS, DIMENSIONS AND SPOT ELEVATIONS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OR DEMOLITION.</p> <p>WRITTEN DIMENSION ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED IN WRITING OF ANY VARIATIONS FROM THESE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.</p> <p>THESE DRAWINGS ARE THE INSTRUMENTS OF THE DESIGNER &amp; ARE NOT TO BE REPRODUCED WITHOUT THE DESIGNER'S CONSENT</p>	<p><b>SITE ARCHITECT / SITE MEP:</b></p>  <p><b>SABIR, RICHARDSON &amp; WEISBERG</b> ENGINEERING &amp; ARCHITECTURE</p> <p>NEW YORK: 37 WEST 37TH STREET, SUITE 1005, NEW YORK, NY 10018, PHONE: 646-963-6160</p> <p>NEW JERSEY: 417 N. 4th STREET, SPKALERVILLE, NJ 08881, PHONE: 908-336-3300</p> <p>PENNSYLVANIA: 417 N. 4th STREET, SUITE 204, PHILADELPHIA, PA 19122, PHONE: 267-385-2812</p> <p>EMAIL: INFO@SRW-ENG.COM, WWW.SRW-ENG.COM</p> <p>License Information:          Cecy E.A. Sabir PA SA #PA6028061          Cecy E.A. Sabir PA PE #PE0710394          PA Certification of Authorization #A0131475</p>	<p><b>SURVEYORS:</b></p>  <p><b>rodriquez</b> ENGINEERS • SURVEYORS • GIS</p> <p>1301 N 2nd Street          Philadelphia, PA 19122          Phone: (215) 639-8087          Fax: (877) 839-6975          www.rodriquez.biz</p>	<p><b>CLIENTS:</b></p>  	<p><b>PROJECT:</b></p> <p><b>FISHTOWN HOCKEY RINK</b>          1202-32 E. MONTGOMERY AVENUE          PHILADELPHIA, PA 19125</p>	<p>PROJECT NUMBER: 2020-501</p> <p>SCALE: AS NOTED</p> <p>DATE: 08/14/2020</p> <p>PROJECT MANAGER: [Blank]</p> <p>PROJECT ARCHITECT: CS</p> <p>DRAWN BY: MM</p> <p>CHECKED BY: CS</p> <p>CADD FILE: [Blank]</p>	<p><b>ELECTRICAL SPECIFICATIONS</b></p> <p>FISHTOWN HOCKEY RINK          1202-32 E. MONTGOMERY AVENUE          PHILADELPHIA, PA 19125</p> <p>Manoel Blum</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 2em; font-weight: bold;">E101</p>
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ELECTRICAL SPECIFICATIONS

GENERAL LANGUAGE USED, VOLTAGE CHARACTERISTICS, LABELING, AND FINAL LOCATIONS

- 1. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES, WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL," HAVE BEEN OMITTED FOR BREVITY.
2. VOLTAGE CHARACTERISTICS:
A. SERVICE: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.
B. DISTRIBUTION: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.
3. LABELING / IDENTIFICATION
A. EACH RECEPTACLE SHALL BE LABELED. FORMAT SHALL BE "PANEL ID-CIRCUIT NUMBER".
B. PROVIDE ELECTRICAL IDENTIFICATION MATERIALS AND DEVICES REQUIRED TO COMPLY WITH ANSI C2, NFPA 70, OSHA STANDARDS, AND AUTHORITIES HAVING JURISDICTION. LABEL EACH PIECE OF EQUIPMENT, ALL CONDUITS, CONDUCTORS, BOXES, AND OUTLETS.
C. COLOR CODE EACH CONDUCTOR AS FOLLOWS:
1) 208/120 VOLT SYSTEMS: BLACK FOR A PHASE, RED FOR B PHASE, BLUE FOR C PHASE
2) 480/277 VOLT SYSTEMS: BROWN FOR A PHASE, ORANGE FOR B PHASE, YELLOW FOR C PHASE
4. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

QUALITY ASSURANCE, TESTING, AND PHASE BALANCING:

- 1. QUALITY ASSURANCE
A. QUALITY AND GAUGE OF MATERIALS, NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED BY UNDERWRITERS LABORATORIES, INC. OR OTHER NATIONALLY APPROVED TESTING AGENCY AND BEARING THEIR LABEL. MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURE, EXCEPT AS NOTED.
B. ALL FIXTURES, DEVICES AND EQUIPMENT SHOWN, NOTED OR REQUIRED ON THE DRAWINGS, AND/OR CONTAINED HEREIN SHALL BE CONNECTED FROM THE SOURCE OF ELECTRIC POWER TO THE FINAL CONNECTION, TESTED AND MADE READY FOR SATISFACTORY OPERATION.
2. TESTING
A. PROVIDE ALL NECESSARY METERS, INSTRUMENTS, TEMPORARY WIRING AND LABOR. ALL MEASURING INSTRUMENTS MUST BE PROPERLY CALIBRATED.
B. TEST AND ADJUST ALL EQUIPMENT AND WIRING INSTALLED AND /OR CONNECTED UNDER THIS CONTRACT. INCLUDE ELECTRICAL EQUIPMENT FURNISHED BY OTHERS. TESTS INCLUDE: PROPER POLARITY, PHASING, FREEDOM FROM GROUNDS AND SHORTS AND OPERATION OF EQUIPMENT.
C. WHENEVER ANY AUTHORITIES HAVING JURISDICTION REQUIRE THAT WORK BE TESTED OR APPROVED, CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR ACCESS AND INSPECTION.
D. CHECK ALL LIGHTING FIXTURES AND RECEPTACLES FOR PROPER OPERATION.
E. ELECTRICAL CONTRACTOR SHALL PERFORM ELECTRONIC CIRCUIT TRACING PRIOR TO DEMOLITION FOR ALL RECEPTACLE DEVICES IN SCOPE OF WORK AREAS. REFER TO FLOOR PLANS.
F. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS. PERFORM TEST PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORTS OF RESULTS. CORRECT OR REPLACE CABLE BELOW MANUFACTURER'S STANDARDS.
3. PHASE BALANCING:
A. BALANCE LOADS ON EACH PHASE SO THAT PHASE CURRENTS ARE WITHIN 10% OF EACH OTHER. AT THE COMPLETION OF THE WORK, CHECK THE LOAD CURRENT IN EACH PHASE OF EACH FEEDER AND MAKE SUCH ADJUSTMENTS AS ARE NECESSARY TO CORRECT LOAD IMBALANCE. MAXIMUM IMBALANCE SHALL NOT EXCEED 10%.

RACEWAYS

- 1. MATERIALS
A. CONDUIT OR TUBING SIZES REFERRED TO IN SPECIFICATIONS AND ON DRAWINGS ARE NOMINAL DIAMETERS. MINIMUM DIAMETER SHALL BE 3/4 IN. THREADED.
B. ELECTRICAL METALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADED.
C. FLEXIBLE METALLIC CONDUIT: GALVANIZED OR ZINC METALIZED STEEL, SINGLE STRIP INTERLOCKED CONSTRUCTION.
D. FITTINGS AND ACCESSORIES
1) ELECTRICAL METALLIC TUBING: COMPRESSION TYPE
2) FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.
3) BUSHINGS: METALLIC INSULATED TYPE.
E. INSTALLATION
1) PROVIDE RACEWAYS COMPLETE WITH BOXES, FITTINGS AND ACCESSORIES.
2) CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTORS SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS REQUIRED.
3) VERIFY EXISTING CONDUIT SIZES, CLEARANCES, AND CONDITIONS.
4) ANY EXPOSED RACEWAYS SHALL BE TRUE, PLUMB AND RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.

ELECTRICAL SPECIFICATIONS (CONTINUED)

5) PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS).

6) CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAY WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING. ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS.

BOXES

- 1. MATERIALS
A. EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE, OR OCTAGON FOR FIXTURES.
B. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED, WITHOUT FIXTURE OR DEVICE. FURNISH BLANK COVER.
C. LOCATIONS: BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION. SURFACE MOUNTED BOXES: STAMPED STEEL QUAD RECEPTACLE BOXES.
2. INSTALLATION
A. WALL AND SWITCH OUTLETS
1) VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES.
2) INSTALL OUTLET BOXES IN ADVANCE OF FURRING AND FIREPROOFING.
3) OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH.
4) SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY.
5) PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.
6) FOR ABOVE FLOOR FITTINGS, TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTINGS TO RESTORE FIRE RATING OF FLOOR.
3. PANEL, JUNCTION AND PULL BOXES
A. LOCATE CLEAR OF OTHER TRADES.
B. CONCEAL JUNCTION AND PULL BOXES IN FINISHED SPACES, WHERE NECESSARY. REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
C. BOXES SHALL BE ACCESSIBLE. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE.
D. SUPPORT BOXES FROM BUILDING'S STRUCTURE, INDEPENDENT OF CONDUIT. PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION.

WIRE, CABLE & TERMINATIONS

- 1. MATERIAL
A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.
B. CONDUCTOR MATERIAL & SIZES
1) CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) AND STRANDED (NO. 8 AND LARGER).
2) GENERAL USE CABLEING SHALL BE NO. 12 MINIMUM.
3) CONTROL AND ALARM CABLEING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM.
4) AT 120 VOLTS AND OVER 90 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 208 VOLTS (OR GREATER) AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.
5) OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP.
6) INCREASE RACEWAYS SIZES FOR LARGER WIRE AS REQUIRED.
C. INSULATION SHALL BE THERMOPLASTIC MEETING ASTM AND IPCA STANDARDS. TYPE THIN-THIN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS INDOORS. FOR UNDERGROUND CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION, TYPE XHHW.
D. WIRING TO RECESSED FIXTURE AND WITHIN FIXTURE RACEWAYS SHALL BE TYPE THIN, #12 AWG MINIMUM.
E. METAL CLAD CABLE: TYPE MC, COPPER CONDUCTOR, 600 VOLT THERMOPLASTIC INSULATION, 90 DEG. C, INTERLOCKED STEEL TAPE ARMOR.
F. ELECTRICAL TERMINATIONS (LUGS, TERMINALS, ETC.) ON ALL EQUIPMENT SHALL BE RATED FOR USE WITH 75°C CONDUCTORS, UNLESS OTHERWISE NOTED.
2. INSTALLATION
A. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.
B. CONDUCTORS SHALL BE CONTINUOUS FROM ORIGIN TO PANEL OR EQUIPMENT WITHOUT SPLICES, WHERE TAP SPLICES ARE NECESSARY AND APPROVED. THEY SHALL BE MADE WITH SUITABLE CONNECTORS IN JUNCTION BOXES.
C. ALL CABLE INSTALLED IN SPACES USED FOR MOVEMENT OF ENVIRONMENTAL AIR SHALL BE APPROVED FOR USE IN A PLENUM.
3. WIRING METHODS

ELECTRICAL SPECIFICATIONS (CONTINUED)

A. CONCEAL ALL WIRING WITHIN BUILDING WALLS, FLOORS, AND ABOVE FINISHED CEILINGS, EXCEPT IN MECHANICAL ROOMS, ELECTRICAL EQUIPMENT ROOMS, AND UTILITY ROOMS.

B. FINAL CONNECTIONS TO MECHANICAL EQUIPMENT, LIGHTING FIXTURES, MOTORS, TRANSFORMERS, INSTRUMENTS, AND CONTROL DEVICES SHALL BE FLEXIBLE CONDUIT.

C. INDOORS (UNCLASSIFIED)

- 1) EXPOSED EMT TUBING / RGS CONDUIT
2) IN DRY WALLS ABOVE CEILING: EMT CONDUIT (MC METAL CLAD CABLE MAY BE USED ON 15 AND 20 AMP, 1 POLE BRANCH CIRCUITS)
3) IN CONCRETE WALLS/FLOORS: RGS CONDUIT
4) FINAL CONNECTIONS: FLEXIBLE METAL CONDUIT (LIQUID-TIGHT FLEXIBLE CONDUIT IN DAMP OR WET AREAS)

4. ENCLOSURES

A. ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE PROVIDED AS FOLLOWS UNLESS NOTED OTHERWISE: INDOORS UNCLASSIFIED AREAS: NEMA 1, INDOORS CLASSIFIED "DAMP": NEMA 2, INDOORS CLASSIFIED "WET": NEMA 4

GROUNDING

- 1. ALL GROUNDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND THE LOCAL UTILITY COMPANY.
2. MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS.
3. INSULATED (GREEN) EQUIPMENT GROUND WIRES SHALL BE PROVIDED IN ALL FEEDERS AND BRANCH CIRCUITS. UTILIZING THE CONDUIT AS THE EQUIPMENT GROUNDING CONDUCTOR OR AS THE GROUNDING ELECTRODE CONDUCTOR PATH IS NOT PERMISSIBLE.
4. PROVIDE AN ADDITIONAL SEPARATE INSULATED (GREEN WITH YELLOW STRIPE) GROUND CONDUCTOR(S) FOR ISOLATED GROUND (IG) WHERE INDICATED.

WALL SWITCHES AND RECEPTACLES:

- 1. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED, MANUFACTURED BY LEVITON, HUBBELL, OR EQUAL.
2. LOCAL WALL SWITCHES SHALL BE SPECIFICATION GRADE, TOGGLE, QUIET TYPE, RATED 20 AMP, 120/127 VOLT, AC. ALL SWITCHES SHALL BE GANGED WITH MULTI DEVICE PLATES. SWITCHES DO NOT MATCH EXISTING STYLE ON ALL FLOORS.
3. CONVENIENCE RECEPTACLES, 125V, 20A: COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.
4. TAMPER-RESISTANT CONVENIENCE RECEPTACLES, 125V, 20A: COMPLY WITH NEMA WD 1, NEMA WD 6, CONFIGURATION 5-20R, UL 498 SUPPLEMENT SD, AND FS W-C-596.
5. GFCI CONVENIENCE RECEPTACLES, 125V, 20A: STRAIGHT BLADE, NON-FEED-THROUGH TYPE. COMPLY WITH NEMA WD 1, NEMA WD 6, UL 498, UL 943 CLASS A, AND FS W-C-596. INCLUDE INDICATOR LIGHT THAT SHOWS THAT THE GFCI HAS MALFUNCTIONED AND NO LONGER PROVIDES PROPER GFCI PROTECTION.
6. DEVICE PLATE COLORS, STYLES, AND MOUNTING ORIENTATION (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

LIGHTING FIXTURES

- 1. GENERAL
A. PROVIDE FIXTURES (LUMINAIRES), COMPONENTS AND LAMPS. FIXTURES SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO ARCHITECTURAL DRAWINGS FOR LIGHTING FIXTURE SCHEDULE.
B. FIXTURES SHALL BE AS INDICATED ON PLANS AND SHALL BEAR THE LABEL OF A NATIONALLY RECOGNIZED TEST LAB (NRTL) MEETING NEC REQUIRED UL STANDARD, (OR SIMILAR).
C. FURNISH ALL FLUORESCENT, INCANDESCENT, HID AND TUNGSTEN HALOGEN LAMPS AS INDICATED ON LIGHTING FIXTURE SCHEDULE AND AS REQUIRED FOR EACH FIXTURE. ALL FLUORESCENT LAMPS SHALL BE TS OR TS R (MIN. CR 80+) UNLESS OTHERWISE NOTED. ALL HID LAMPS SHALL BE COLOR CORRECTED.
D. FOR RELOCATION OF EXISTING FLUORESCENT FIXTURES, REMOVE EXISTING FIXTURE, CLEAN AND RE-LAMP AND FURNISH NEW ELECTRONIC BALLAST TO MATCH CHARACTERISTICS OF OTHERS IN THAT AREA.
2. COORDINATION
A. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF FIXTURES & CEILING TYPES AND FIXTURES AND REQUIRED VOLTAGES.
B. THE ELECTRICAL CONTRACTOR SHALL COORDINATE CEILING TYPES WITH CEILING CONTRACTOR OR EXISTING CEILING TYPE PRIOR TO INSTALLATION OF LIGHTING FIXTURES, SPEAKERS, SMOKE AND HEAT DETECTORS, EXIT LIGHTS ETC., AND HE SHALL ALSO COORDINATE LOCATION OF ELECTRICAL COMPONENTS IN RELATION TO DIFFUSERS AND SPRINKLERS WITH MECHANICAL CONTRACTORS.
3. SUPPORT & MOUNTING
A. FIXTURE SHALL BE SUPPORTED INDEPENDENTLY FROM BLACK IRON AND IN NO CASE SHALL BE SUPPORTED FROM CEILING GRID.
B. LIGHTING FIXTURES SHALL BE FURNISHED AND COMPLETE WITH NECESSARY MOUNTING OR HANGING HARDWARE AND WITH PLASTER FRAMES WHERE REQUIRED. REFER TO FIXTURE SCHEDULE ON PLANS FOR FIXTURE TYPE.
4. EMERGENCY BALLAST
A. PROVIDE SELF CONTAINED BATTERY BACKUP BALLAST FOR OPERATING ONE LAMP TO MINIMUM OUTPUT OF 200, 300, 475, 265, 425, OR 500 LUMENS RESPECTIVELY - BODINE MODEL 6413 OR 650 INCLUDING TEST SWITCH WHERE FIXTURE IS INDICATED. TO HAVE THIS FEATURE CONTRACTOR SHALL INSTALL EQUIPMENT AND SHALL PROVIDE AN UN-SWITCHED POWER CONDUCTOR IN BRANCH CIRCUIT IN ADDITION TO THE SWITCH CONDUCTOR AND NEUTRAL.
5. TIME SWITCHES

ELECTRICAL SPECIFICATIONS (CONTINUED)

A. SOLID STATE, PROGRAMMABLE, WITH ALPHANUMERIC DISPLAY, COMPLYING WITH UL 917.

B. LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

C. CONTACT RATING: 20 AMP BALLAST LOAD, 120-240 V AC.

D. PROGRAMS: TWO ON-OFF SET POINTS ON A 24-HR SCHEDULE, ALLOWING DIFFERENT SET POINTS FOR EACH DAY OF THE WEEK AND AN ANNUAL HOLIDAY SCHEDULE THAT OVERRIDES THE WEEKLY OPERATION ON HOLIDAYS. AUTOMATED DAYLIGHT SAVINGS TIME-CHANGE OVER.

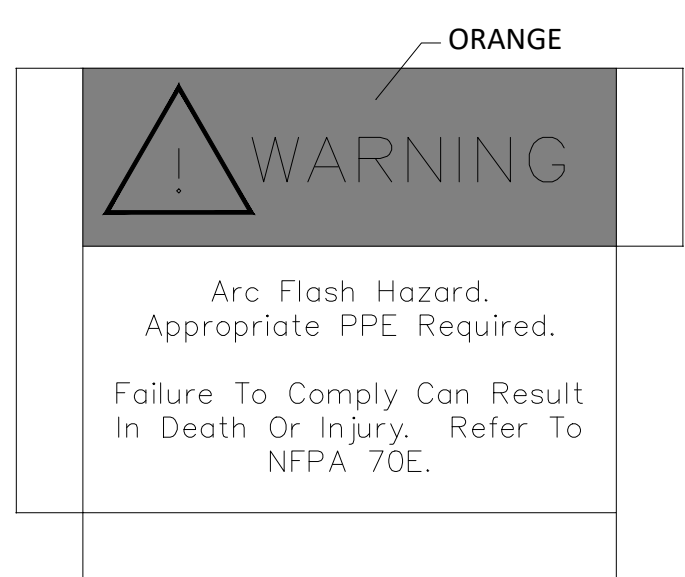
E. BASIS OF DESIGN IS TORK ELCT4 WITH TORK LCS115M OR EQUAL MOMENTARY SWITCHES (1 PER ZONE), SWITCH STYLE SHALL BE COORDINATED WITH ARCHITECT.

6. VACANCY SENSORS

- A. VACANCY SENSORS SHALL BE LUTRON MAESTRO OR APPROVED EQUAL THAT PROVIDES SAME FUNCTIONALITY.
B. VACANCY SENSORS SHALL BE MANUAL ON / AUTO-OFF. AUTO-OFF SHALL HAVE ADJUSTABLE TIME DELAY WITH INITIAL PROGRAMMING PROVIDING FOR LIGHTS TO BE TURNED OFF WITHIN 30 MINUTES OF A ROOM BEING VACATED.
C. WALL-MOUNTED VACANCY SENSOR SWITCHES INDICATED ON DRAWING SHALL BE DUAL TECHNOLOGY COMBINATION VACANCY SENSOR AND SWITCH.
D. CEILING MOUNTED VACANCY SENSORS INDICATED ON DRAWING SHALL BE DUAL TECHNOLOGY WITH LOW-VOLTAGE, MOMENTARY SWITCH INPUT FOR MANUAL ON OPERATION.

ARC FLASH WARNING LABEL

- 1. PROVIDE ARC FLASH WARNING LABEL SHOWN BELOW IN ACCORDANCE WITH THE 2008 NEC ARTICLE 110.16 ARC-FLASH HAZARD WARNING.
2. ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKETS, ENCLOSURES, AND MOTOR CONTROL CENTERS THAT ARE IN OTHER THAN DWELLING UNITS AND ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS.
3. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE OF THE EQUIPMENT.



APPROVALS

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Table with columns: NO., DATE, COPIES, DESCRIPTION. Includes a REVISIONS section and a table with 4 columns: NO., DATE, COPIES, DESCRIPTION.

ALL EXISTING CONDITIONS, DIMENSIONS AND SPOT ELEVATIONS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OR DEMOLITION. WRITTEN DIMENSION ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED IN WRITING OF ANY VARIATIONS FROM THESE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS. THESE DRAWINGS ARE THE INSTRUMENTS OF THE DESIGNER & ARE NOT TO BE REPRODUCED WITHOUT THE DESIGNER'S CONSENT

SABIR, RICHARDSON & WEISBERG ENGINEERING & ARCHITECTURE. Includes contact information for New York, New Jersey, and Pennsylvania offices.

rodriquez ENGINEERS \* SURVEYORS \* GIS. Includes contact information for Philadelphia office.

Rebuild PHILADELPHIA and PHILADELPHIA PARKS & RECREATION logos.

FISHTOWN HOCKEY RINK. 1202-32 E. MONTGOMERY AVENUE PHILADELPHIA, PA 19125.

Table with project details: PROJECT NUMBER 2020-501, SCALE AS NOTED, DATE 08/14/2020, PROJECT MANAGER, PROJECT ARCHITECT CS, DRAWN BY MM, CHECKED BY CS, CADD FILE. Includes a vertical label E102.



Philadelphia Redevelopment Authority Submittal Log  
SUBMITTAL LOG print date 7/20/2022  
Fishtown Hockey Rink, 1202 E. Montgomery Avenue, Philadelphia, PA 19125

Number	Section	Page	From Company	Submittal Description	Copy To	Planned Start of Trade Work	Planned Submittal Date	Actual Submittal Date	Submittal Return Date +14	Planned Resubmittal Date	Actual Resubmittal Date	Resubmittal Return Date +14	Action	Reviewed By
1	Division 1		PRA	Narrative- Monthly (for all projects over 4 weeks)	Rebuild/PRA/AE	Enter	Monthly							Rebuild/AE/PPR
15639			GC	Temporary Tree and Plant Protection - Shop dwgs	Rebuild/PRA/AE									
			GC	Temporary Tree and Plant Protection - Certs	Rebuild/PRA/AE									
			GC	Temporary Tree and Plant Protection - existing conditions photos	Rebuild/PRA/AE									
15800			GC	Project Identification and signs - draft and record cop	Rebuild/PRA/AE									
17123			GC	Field Engineering - survey work submittal	Rebuild/PRA/AE									
			GC	Field Engineering - project record documents	Rebuild/PRA/AE									
17419			GC	Construction waste management and disposal - waste management plan	Rebuild/PRA/AE									
17423			GC	Cleaning	Rebuild/PRA/AE									
17836			GC	Warranties	Rebuild/PRA/AE									
17839			GC	Project Record Documents	Rebuild/PRA/AE									
024119			GC	Selective Demolition	Rebuild/PRA/AE									
026100			GC	Specifications of permeable orange non-woven geotextile	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped on site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped off site	Rebuild/PRA/AE									AE/LA/PE
026113			GC	Information of proposed facility to receive fill	Rebuild/PRA/AE									AE/LA/PE
			GC	Contractors experience with remedial projects	Rebuild/PRA/AE									AE/LA/PE
			GC	Health and Safety Plan (HASP)	Rebuild/PRA/AE									AE/LA/PE
			GC	OSHA training certificates for all workers on the site	Rebuild/PRA/AE									AE/LA/PE
			GC	OSHA medial monitoring approval for all workers on the site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped on site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped off site	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts for all clean fill delivered to site for backfilling	Rebuild/PRA/AE									AE/LA/PE
026500			GC	PADEP-Certified Installer Certificate for individual and company	Rebuild/PRA/AE									AE/LA/PE
			GC	All worker certifications associated with OSHA 40	Rebuild/PRA/AE									AE/LA/PE
			GC	Site specific Health and Safety Plan	Rebuild/PRA/AE									AE/LA/PE
			GC	Information of proposed facility to receive fill	Rebuild/PRA/AE									AE/LA/PE
			GC	Tickets/receipts of any material shipped off site	Rebuild/PRA/AE									AE/LA/PE
031030			GC	Maintenance of Cast in Place Concrete	Rebuild/PRA/AE									
033000			GC	Cast in Place Concrete	Rebuild/PRA/AE									
057300			GC	Metal Fabrications - Shop drawing and delegated design (engineer sealed dwg)	Rebuild/PRA/AE									
			GC	Metal Fabrications - color samples	Rebuild/PRA/AE									
			GC											
090190.52			GC	Maintenance Repainting	Rebuild/PRA/AE									
099000			GC	Exterior Painting - product data	Rebuild/PRA/AE									
			GC	Exterior Painting - product data - hockey rink markings	Rebuild/PRA/AE									
			GC	Exterior painting - paint samples	Rebuild/PRA/AE									
			GC	Exterior painting - paint samples - hockey rink markings	Rebuild/PRA/AE									
221413			GC	Facility Storm Drainage Piping - Product Data	Rebuild/PRA/AE									
			GC	Facility Storm Drainage Piping - Quality control	Rebuild/PRA/AE									
			GC	Facility Storm Drainage Piping - Shop dwg/ Asbuilt	Rebuild/PRA/AE									
221423			GC	Storm Drainage Piping Specialties - Product Data	Rebuild/PRA/AE									
			GC	Storm Drainage Piping Specialties - Certification	Rebuild/PRA/AE									
311000			GC	Site Clearing & Tree Protection	Rebuild/PRA/AE									



Philadelphia Redevelopment Authority Submittal Log  
SUBMITTAL LOG print date 7/20/2022  
Fishtown Hockey Rink, 1202 E. Montgomery Avenue, Philadelphia, PA 19125

Number	Section	Page	From Company	Submittal Description	Copy To	Planned Start of Trade Work	Planned Submittal Date	Actual Submittal Date	Submittal Return Date +14	Planned Resubmittal Date	Actual Resubmittal Date	Resubmittal Return Date +14	Action	Reviewed By
311313			GC	Selective Landscape Preservation & Plant Removal - Product Data	Rebuild/PRA/AE									
			GC	Selective Landscape Preservation & Plant Removal - Certification	Rebuild/PRA/AE									
312000			GC	Earth Moving - schedule of work	Rebuild/PRA/AE									
			GC	Earth Moving - Test data, certifications	Rebuild/PRA/AE									
312310			GC	Excavation, Backfill & Subgrade Preparation for Pavement - Shop drawing	Rebuild/PRA/AE									
			GC	Excavation, Backfill & Subgrade Preparation for Pavement - Soil sample or lab	Rebuild/PRA/AE									
312500			GC	Soil Erosion and Sedimentation Controls - silt controls	Rebuild/PRA/AE									
320116.7			GC	Milling of Asphalt Pavement	Rebuild/PRA/AE									
321216			GC	Asphalt Paving - Design mix	Rebuild/PRA/AE									
			GC	Asphalt Paving - Material certificates	Rebuild/PRA/AE									
321313			GC	Plain Cement Concrete Paving - Product data	Rebuild/PRA/AE									
			GC	Plain Cement Concrete Paving - Schedule of sealant usage	Rebuild/PRA/AE									
			GC	Plain Cement Concrete Paving - Warranty	Rebuild/PRA/AE									
321373			GC	Concrete Paving Joint Sealants - Product data	Rebuild/PRA/AE									
			GC	Concrete Paving Joint Sealants - Schedule of sealant usage	Rebuild/PRA/AE									
			GC	Concrete Paving Joint Sealants - Warranty	Rebuild/PRA/AE									
321600			GC	Concrete Curbing and Sidewalks - Specs	Rebuild/PRA/AE									
323113			GC	Chain-link Fencing and Gates - product data	Rebuild/PRA/AE									
			GC	Chain-link Fencing and Gates - shop drawing	Rebuild/PRA/AE									
323300				Site Furnishings - Product data, color chart	Rebuild/PRA/AE									
323343			GC	Site Seating and Tables - Product data	Rebuild/PRA/AE									
			GC	Site Seating and Tables - Shop drawings	Rebuild/PRA/AE									
			GC	Site Seating and Tables - Samples for verification	Rebuild/PRA/AE									
			GC	Site Seating and Tables - Maintenance data	Rebuild/PRA/AE									
329000			GC	Landscape Planting - Warranty	Rebuild/PRA/AE									
			GC	Landscape Planting - Maintenance services	Rebuild/PRA/AE									
329113			GC	Soil Preparation	Rebuild/PRA/AE									
329200			GC	Turf and Grasses / Landscape Planting	Rebuild/PRA/AE									
330110			GC	Protection of existing utilities	Rebuild/PRA/AE									