Issued: 6/20/18

Addendum No. 1
Bid #17/18-30, Omega Park Improvements

DUE DATE: Monday, June 25, 2018, 4:00 p.m.
OPEN DATE: Tuesday, June 26, 2018, 1:00 p.m.

The items of this Addendum shall modify and become part of the contractual documents for this project as of this date. Receipt of and incorporation of this Addendum must be acknowledged in the bid on page 17. Failure to acknowledge this addendum will be grounds for rejection of proposal.

1. Do you have a budget for this project?

Response: We do not release budget estimates.

2. Does this job require the FDOT pre-qualification?

Response: FDOT Pre-Qualifications will not apply.

3. Plan shows 18" pipe running from the new S-9 Structure into the S-10 U Type Headwall. The existing pipe run coming in from the south looks to be 24" HDPE. Please confirm 18" Pipe from S-9 into the S-10 Structure.

Response: Sheet 5 changes 12 LF of 18" RCP to 12 LF of 24" RCP and 18" Endwall to 24" Endwall. Deleted "See Details" in "Regrade Ditch" note. See plans and utilize revised schedule of values for the changes.

4. Will the county require Laser Profile testing of the new RCP Storm System?

Response: Laser Profile testing will be required.

5. There are notes on the Civil print for Omega Park Improvements "see details". In particular, the crushcrete drive area and the swale on the east side of the property, have this note. There are no details on the Detail Sheet, Sheet No. 12 is mostly blank.

Response: See attached Revised Sheet 12, Construction Details.

6. See attached Revised Sheet 6: adding area and swale re-grade areas and adding 12" depth specification to note crushcrete parking area reconstruction note.

7. See attached Revised Sheet 8: adding specification of Tifway sod/sprigs to be planted in re-grading area.

8. See attached Revised Sheet 9: adding proposed swale to plan.

9. The plumbing fixture schedule on P201 lists ‘F-7 Mop Sink Basin’ however, there is no F-7 shown on the plumbing floor plan on P101. Please advise if one is required and if so, where.

Response: See attached revised sheet P101 showing location of F-7 Mop Sink Basin.

10. Will concrete sealer be required?

Response: Yes, all exposed concrete floors within the building shall be sealed. All exterior concrete shall be broom finished.

11. What is the requirements and type of waterproofing for concrete?

Response: Exterior surface is painted split face block, including bond beams and lintels. There are no exposed concrete walls or beams.

12. What type of frames, doors, and hardware will be required? Can you provide a hardware schedule?

Response: All doors and frames shall be hollow metal. See attached specifications for Hollow Metal Doors and Frames – section 081113, and Door Hardware – section 087100.

13. Please provide information on the roll up concession door, or info on model number and manufacture of concession door.

Response: Basis of design for Overhead Rolling Counter Doors is ‘Overhead Door – Model 650’, galvanized steel curtain door.

14. Please provide details on the metal roofing; metal components manufacture – roof panels.

Response: Basis of design for standing seam metal roof is ‘Peterson – Snap-Clad panel roofing. See Standing Seam Metal Roof Specification attached. Follow manufacturer’s recommended details for installation of metal roof.

15. Please provide painting materials specifications – approved manufactures for the painting materials?

Response: Refer to attached painting specification section 099123.

16. In regard to the ceramic tile, is there an approved manufacture of tile approved?

Response: ‘Crossville’ – ‘Structure’ is an approved manufacturer and style for floor tile in the restrooms.

REVISED SCHEDULE OF VALUES: Bid #17/18-30, OMEGA PARK IMPROVEMENTS						
	ITEM NUMBER	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Cost
BASE BID	1	Mobilization	1	LS		
	2	Site Preparation	1	LS		
	3	Erosion Control	1	LS		
	4	Demolish Restroom/Concession Building	1	LS		
	5	Remove Concrete Sidewalk/Pavement	130	SY		
	6	Remove Drainage Inlet/Manhole	5	EA		
	7	Remove Drainage Pipe	925	LF		
	8	New Restroom/Concession Building	1	LS		
	9	Construct Sidewalk (5")	184	SY		
	10	Reconstruct Crushcrete Stabilized Parking Area	770	SY		
	11	Area & Swale Re-grading	2212	SY		
	12	Ditch Re-grading	1190	SY		
	13	12" PVC (DR18)	132	LF		
	14	15" RCP	791	LF		
	15	18" RCP	348	LF		
	16	24" RCP	12	LF		
	17	Inlet Type "C"	5	EA		
	18	Inlet Type "E"	3	EA		
	19	MES (12")	6	EA		
	20	U-type Endwall (12")	2	EA		
	21	U-type Endwall (15")	3	EA		
	22	U-type Endwall (24")	1	EA		
	23	Plug Existing Drainage Structure	1	EA		
	24	Bahia Sod	3587	SY		
	25	Tifway Sod/Sprig	1106	SY		
	26	Reconnect Building Water Service (2" PVC)	1	LS		
	27	Bldg. San. Sewer Service (4" PVC w/ cleanouts)	1	LS		
					Total Base Bid Items =	

Total Base Bid written in words: _____

Bids require a (5%) bid bond based on total above and may not be withdrawn after the scheduled opening time for a period of thirty (30) days.

COMPANY NAME: _____

SECTION 07 4100- STANDING SEAM METAL ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section covers the, pre-finished, pre-fabricated Architectural standing seam roof system. All metal trim, accessories, fasteners, insulation, and sealants indicated on the drawings as part of this section.

B. Related Sections include the following:

1. Section 05 3100 – Steel Decking.

2. Section 06 1000 – Rough Carpentry

1.2 QUALITY ASSURANCE

A. Manufacturer and erector shall demonstrate experience, of a minimum of ten (10) years in this type of project.

1.3 SUBSTITUTIONS

A. The material, products and equipment specified in this section establish a standard for required function, dimension, appearance and quality to be met by any proposed substitution.

1.4 ROOF SYSTEM PERFORMANCE TESTING

A. Water Penetration: When tested per ASTM E-283/1680 and ASTM E-331/1646 there shall be no uncontrolled water penetration or air infiltration through the panel joints.

B. Roof System shall be designed to meet Florida Building Code wind load requirements

C. Roof System shall be designed to meet a UL Class 90 wind uplift in accordance with UL standard 580 and panel system shall be Miami-Dade NOA® Tested and approved with the current Miami-Dade NOA® Approval number listed and shown clearly in the submittals

D. Roof system shall have current FLORIDA BUILDING CODE PRODUCT APPROVAL and shall be supported by ASCE 7 “stamped/sealed” Florida Independent Engineer Calculations from the Roofing System Manufacturer to support the applicable Zone 1, Zone 2 and Zone 3 loads for this particular project. Extrapolations will not be allowed in these calculations, only interpolations by the Engineer to illustrate the clip layout for each Zone listed above.

1.5 WARRANTIES

A. The Manufacturer shall warrant for twenty years (20) from the date of substantial completion of the Work related to this section, that the work is not defective in

workmanship or material, and that the roof will be adequate to prevent leaks. This warranty may be provided in the short term by the Contractor/Roof Installer, however must have the backing and assurance of the roof system manufacturer.

B. Finish Warranty on Aluminum:

1. Written 20 Year Finish Warranty shall be required for the Aluminum Standing Seam Roof System including Flashings, and related rain-carrying equipment as supplied by the manufacturer and roofing contractor. This warranty will be for 20 Years and cover: Chalking, Fading and Integrity of the Kynar 500™ paint finish on the Aluminum. Note this is a Coastal Application with exposure to the ocean and Salt Spray. This 20 Year Finish Warranty shall cover this type of Coastal Application and must be signed and executed by the Roofing System manufacturer

1.6 SUBMITTALS

A. Furnish detailed drawings showing profile and gauge of exterior sheets, location and type of fasteners, location, gauges, shape and method of attachment of all trim locations and type of sealants, and any other details as may be required for a weather-tight installation..

B. Provide finish samples of all colors specified.

PART 2 - PRODUCTS

2.1 PANEL DESIGN

A. Roof panels shall be standing seam in 18" widths with 1 ¾" high seam. No pencil ribs or other embossing will be acceptable.

B. Roof Panels with this system shall be from .032” Aluminum, Current Standard Aluminum Association gage thickness.

C. Clips shall be Stainless Steel as recommended by the Manufacturer for the respective wind uplifts for the project.

D. Clip screws shall be Stainless Steel as recommended by the Manufacturer to comply with the Florida Product Approval in place for this panel system.

2.2 ACCEPTABLE MANUFACTURERS

A. This project is detailed around the roofing product of Petersen Aluminum Corporation, Kennesaw, GA "SNAP-CLAD" PANEL,

B. Color shall be selected from the full range of standard colors by the manufacturer.

C. Subject to compliance with specifications, other acceptable Manufacturers:

1. IMETCO, Tucker, GA, “SNAP-LOK” PANEL ONLY.

2. MERCHANT & EVANS, Burlington, NJ “Panel 305” ONLY.

3. ATAS Aluminum, Allentown, PA “Dutch Seam Panel”.

D. PANEL MATERIAL AND FINISHES

1. Face Sheet Material: Aluminum Gauge .032” per ASTM B 209, Aluminum shall be tension leveled (temper passed and stretcher leveled) with camber a maximum of 1/4 inch in 20 feet, manufactured in the USA. Product to meet UL-90 Design Standards and FLORIDA BUILDING CODE PRODUCT APPROVAL.

2. Finish

a. Finish shall be Kynar 500 or Hylar 5000 Flurocarbon coating with a top side film thickness of 0.70 to 0.90 mil over 0.25 to 0.31 mil prime coat to provide a total dry film thickness of 0.95 to 1.25 mil. Bottom side shall be coated with a primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesion, flexibility and longevity as specified by Kynar 500 or Hylar 5000 finish supplier.

b. If Strippable coating shall be applied on the pre-finished panels to the top side to protect the finish during fabrication, shipping and field handling. This strippable coating shall be removed before installation.

c. Field protection must be provided by the Contractor at the jot site so material is not exposed to weather and moisture

3. Trim: Trim shall be fabricated of the same material and finish to match the profiled sheeting and press broken in lengths of 10 to 12 feet. Trim shall be formed only by the manufacturer or their approved dealer. Trim to be erected in overlapped condition. Use lap strips only as indicated on drawings

4. Closures: Use composition or metal profiled closures at top of each elevation to close ends of the panels. Metal closures to be made in the same material and finish as face sheet.

5. Exposed Fasteners: (if used) with Approval by Architect, shall be 300 series stainless steel, dished washers stainless steel with bonded neoprene.

6. Zees: Where required by design of primary structural framing system shall be used to span between beams and/or joists. Thermally responsive base and top clips shall be fastened to the zees on 12" centers.

E. Forming: Use continuous end rolling method. No end laps on panels. No "portable roll-forming machines will permitted on this project, no installer-owned or installer- rented machines will be permitted. It is the intent of the Architect to provide Factory-Manufactured panel systems only for this project.

2.3 Roofing Underlayment

A. On all surfaces to be covered with roofing material, furnish and install a Minimum thickness of 40 Mil "Peel & Stick Membrane” will be required as outlined by the metal panel manufacturer.

B. Membrane to be minimum of 40 MIL Thickness, smooth, non-granular, one of the following manufacturers:

1. W.R. Grace “Ice & Water Shield”.

2. Carlisle: CCW WIP 300HT.

3. Mid States Asphalt : Quick Stick HT.

4. MFM Corp : ‘’Wind & Water Shield’’.

5. Polyguard: Deck Guard HT or Polyglas HT.

6. TAMKO: TW Tile & Metal Underlayment.

C. Underlayment shall be laid in horizontal layers with joints lapped toward the eaves a minimum of 6", and well secured along laps and at ends as necessary to properly hold the underlayment in place. All underlayment shall be preserved unbroken and whole.

D. Ice & Water Shield shall lap all hips and ridges at least 12" to form double thickness and shall be lapped 6" over the metal of any valleys or built-in gutters and shall be installed as required by the Standing Seam Panel Manufacturer to attain the desired 20 Year Weather-tightness Warranty.

2.4 Sealants

A. Provide two part polysulfide class “B” non-sag type for vertical and horizontal joints, or;

B. One part polysulfide not containing pitch or phenolic extenders, or;

C. Exterior grade silicone sealant recommended by roofing manufacturer, or;

D. One part non-sag, gun grade, exterior type polyurethane recommended by roofing manufacturer.

2.5 FABRICATION

A. Comply with dimensions, profile limitations, gauges and fabrication details shown and if not shown and, if not shown, provide manufacturer's standard product fabrication.

B. Fabricate components of the system in factory, ready for field assembly.

C. Fabricate components and assemble units to comply with fire and performance requirements specified.

D. Apply specified finishes in conformance with manufacturer's standards, and according to manufacturer's instructions.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine alignment of structural steel and related supports prior to installation and do not proceed until the defects are corrected by the responsible contractor.

3.2 FASTENERS

A. Secure units to supports.

B. Place fasteners as indicated in manufacturer's standards.

3.3 INSTALLATION

A. Panels shall be installed plumb and true in proper alignment and relation to the structural framing. The erector must have at least five years successful experience with similar applications.

B. Install metal panels, fasteners, trim and related sealants in accordance with approved shop drawings and as may be required for a weather-tight installation.

C. Remove all strippable coating and provide a dry wipe-down cleaning of the panels as they are erected.

D. Field Inspection of installed panel roof system by Metal Panel Manufacturer Factory-Approved/Authorized inspector will be required for the 20 Year Limited Weathertightness Warranty. Minimum of two (2) inspections by the Factory Inspector will be required with written reports of these inspections.

E. Roofing System Installers must be “pre-approved” by the Roofing System manufacturer, been in business for at least five (5) years and provide evidence of three (3) similar size projects with the specified Weathertightness Warranty.

3.4 DAMAGED MATERIAL

A. Upon determination of responsibility, repair or replace damaged metal panels and trim to the satisfaction of the Architect and Owner.

END OF SECTION 01 3300

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Standard steel doors and frames.

B. Related Sections:
   1. Division 1: Administrative, procedural, and temporary work requirements.
   2. Section 087111 - Door Hardware.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM) A 653/A 653M - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.

B. Door Hardware Institute (DHI) - Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.

C. National Fire Protection Association (NFPA) 80 - Standard for Fire Doors and Windows.

D. Steel Door Institute (SDI) 100 - Recommended Specifications - Standard Steel Doors and Frames.

E. Underwriters Laboratories (UL) 10C - Standard for Positive Pressure Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Shop Drawings: Indicate locations, elevations, dimensions, model designations, fire and thermal ratings, and anchoring details.

B. Product Data: Show elevations, dimensions, gages of metal, hardware reinforcing gages and locations, and anchor types.

C. Door Schedule: Submit schedule of doors and frames using same reference numbers for details and openings as those on Contract Drawings.

1.4 QUALITY ASSURANCE

A. Doors:
   1. SDI 100, Grade II - Heavy Duty, Model 1 - Full Flush.
   2. Minimum R value: 12.0.

B. Frames: SDI 100, Grade II - Heavy Duty.

C. Fire Door and Frame Construction: Conform to UL 10C.

D. Installed Fire Rated Door and Frame Assemblies: Conform to NFPA 80.

1.5 DELIVERY, STORAGE AND HANDLING

A. Ship door frames with removable angle spreader; do not remove until frame is installed.

B. Store doors upright in protected, dry area, off ground or floor, with at least 1/4 inch space between individual units.

C. Do not cover with non vented coverings that create excessive humidity.

D. Remove wet coverings immediately.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Amweld Building Products, Inc.
   2. Ceco Door Products.
   3. Curries Company.
   4. Fenestra Corp.
   5. Kewanee Corp.
   6. Pioneer Industries.
   7. Republic Builders Products.
   8. Steelcraft Manufacturing Co.

B. Substitutions: Under provisions of Division 1.

2.2 MATERIALS

A. Galvanized Steel Sheet: ASTM A 653/A 653M, Structural Quality, Class A60 galvanized.

B. Door Core: Foamed-in-place polyurethane.

C. Primer: Zinc rich type.

2.3 FABRICATION

A. Fabricate doors and frames in accordance with SDI 100. Fabricate steel door and frame units to be rigid, neat in appearance, and free from defects, warp, or buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project site. Comply with ANSI/SDI 100 requirements

B. Accurately form to required sizes and profiles.

C. Clearances: Not more than 1/8 inch (3.2 mm) at jambs and heads, except not more than 1/4 inch (6.4 mm) between non-fire-rated pairs of doors. Not more than 3/4 inch (19 mm) at bottom
   1. Fire Doors: Provide clearances according to NFPA 80.

D. Grind and dress exposed welds to form smooth, flush surfaces.

E. Do not use metallic filler to conceal manufacturing defects.

F. Fabricate with internal reinforcement for hardware specified in Section 08710 welded in place.

G. Doors:
   1. Fabricate from minimum 18 gage steel sheets.

2. Internal Construction: One of the following manufacturer's standard core materials according to SDI standards.
    a. Resin-impregnated paper honeycomb.
    b. Rigid polyurethane conforming to ASTM C 591.
    c. Rigid polystyrene conforming to ASTM C 578.
3. Close top and bottom edges of doors with steel channel, minimum 16 gage, extending full width of door, and spot welded to both faces, with top channel flush and bottom channel recessed.
4. Fabricate in thickness indicated or in 1-3/4" thickness if not indicated.
5. Thermal-Rated (Insulating) Assemblies: At exterior locations and elsewhere as shown or scheduled, provide doors fabricated as thermal-insulating door and frame assemblies and tested according to ASTM C 236 or ASTM C 976 on fully operable door assemblies.
    a. Unless otherwise indicated, provide thermal-rated assemblies with U-value rating of 0.42 Btu/sq. ft. x h x deg F (2.33 W/sq. m x K) or better.
6. Exterior Doors: Galvanized Steel Doors, Panels, and Frames: Fabricate doors, panels, and frames from galvanized steel sheet according to SDI 112. Close top and bottom edges of doors flush as an integral part of door construction or by addition of minimum 0.0635-inch- (1.6-mm-) thick galvanized steel channels, with channel webs placed even with top and bottom edges. Seal joints in top edges of doors against water penetration.

H. Frames:
1. Fabricate from minimum 16 gage steel sheets.
2. Close corner joints tight with trim faces mitered, continuously welded, and ground smooth.
3. Anchors:
    a. Provide anchor at each jamb for each 30 inches of door height or fraction thereof.
    b. Use proper anchor types to provide positive fastenings to adjacent construction.
    c. Provide one welded floor anchor at each jamb.
4. Door Silencers: Except on weatherstripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames

I. Louvers:
1. Manufacturer's standard sightproof, stationary, inverted "Y" blade type.
2. Frames: Minimum 20 gage steel.
3. Blades: Minimum 24 gage steel.
4. Weld blades to frame with one molding integral with louver.
5. Install loose molding on secure side of door.

J. Glazing Stops: Minimum 0.0359-inch- (0.9-mm-) thick steel or 0.040-inch- (1-mm-) thick aluminum:
1. Provide nonremovable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.
2. Provide screw-applied, removable, glazing beads on inside of glass, louvers, and other panels in doors.

K. Finish:
1. Touch up damaged galvanized coatings with cold galvanizing compound.
2. Chemically treat and clean; apply manufacturer's standard prime coating.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install in accordance with DHI requirements.

B. Set plumb and level.

C. Secure to adjacent construction using fastener type best suited to application.

D. Install hardware in accordance with Section 08710.

3.2 ADJUSTING

A. Touch up minor scratches and abrasions in primer paint.

END OF SECTION

SECTION 08 7100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Mechanical door hardware.
2. Electrified door hardware.

B. Related Sections:

1. 08 1113 – Hollow Metal Doors & Frames
2. 08 1416 – Flush Wood Doors
3. 08 3000 – High Speed Rolling Doors
4. 08 3300 – Overhead Coiling Doors
5. 08 3600 – Sectional Overhead Doors
6. 08 4210 – All Glass Storefronts & Doors
7. 08 4113 – Aluminum Storefronts
8. 08 4413 – Aluminum Curtainwall

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Details of electrified door hardware, indicating the following:

1. Wiring Diagrams: For power, signal, and control wiring and including the following:

a. Details of interface of electrified door hardware and building safety and security systems.
b. Schematic diagram of systems that interface with electrified door hardware.
c. Point-to-point wiring.
d. Risers.
e. Elevations doors controlled by electrified door hardware.

2. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.

C. Other Action Submittals:

1. Door Hardware Schedule: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as installation procedures and diagrams. Coordinate final door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

   a. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
   b. Content: Include the following information:

      1) Identification number, location, hand, fire rating, size, and material of each door and frame.
      2) Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
      3) Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
      4) Description of electrified door hardware sequences of operation and interfaces with other building control systems.
      5) Fastenings and other pertinent information.
      6) Explanation of abbreviations, symbols, and codes contained in schedule.
      7) Mounting locations for door hardware.
      8) List of related door devices specified in other Sections for each door and frame.

2. Keying Schedule: Prepared by or under the supervision of Installer, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and an Architectural Hardware Consultant who is available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as follows:

1. For door hardware, an Architectural Hardware Consultant (AHC) who is also an Electrified Hardware Consultant (EHC).

C. Source Limitations: Obtain each type of door hardware from a single manufacturer.

1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

D. Fire-Rated Door Assemblies: Where fire-rated door assemblies are indicated, provide door hardware rated for use in assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C, unless otherwise indicated.

E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

F. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

G. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
2. Comply with the following maximum opening-force requirements:

a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
b. Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
4. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

C. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

D. Deliver keys and permanent cores to Owner by registered mail or overnight package service.

1.5 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

E. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures including excessive deflection, cracking, or breakage.
b. Faulty operation of doors and door hardware.
c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.

2. Warranty Period: Three years from date of Substantial Completion, unless otherwise indicated.

a. Electromagnetic and Delayed-Egress Locks: Five years from date of Substantial Completion.
b. Exit Devices: Two years from date of Substantial Completion.
c. Manual Closers: 10 years from date of Substantial Completion.
d. Concealed Floor Closers: 10 years from date of Substantial Completion.

1.7 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door and door hardware operation. Provide parts and supplies that are the same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. Provide door hardware for each door to comply with requirements in this Section.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated.
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.

2.2 ACCEPTABLE MANUFACTURERS

A. To the greatest extent possible, obtain each kind of hardware from only one manufacturer.

B. All numbers and symbols used herein have been taken from the current catalogues of the following manufacturers.

PRODUCT	BASIS OF DESIGN	ACCEPTABLE MANUFACTURERS
1) Hinges	Hager	Stanley, McKinney
2) Locks & Latches	Schlage	Yale, Corbin Russwin
3) Cylinders, Keys, Keying	Schlage	Yale, Corbin Russwin
4) Exit Devices	Von Duprin	Yale, Corbin Russwin
5) Door Closers	Von Duprin	LCN, Yale, Corbin Russwin
6) OH Stops/Holders	Glynn Johnson	
7) Magnetic Hold Opens	LCN	
8) Stops, Flushbolts	Rockwood	Ives
9) Push / Pull	Rockwood	Ives
10) Kick Plates	Rockwood	Ives
11) Threshold/Weather-strip	Pemco	
12) Silencers	Ives	

C. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.
2. References to BHMA Designations: Provide products complying with these designations and requirements for description, quality, and function.

2.3 LOCKSETS

A. Provide heavy duty cylindrical locksets and cylinders as noted in hardware sets. Locksets shall meet ANSI A156.13, Grade One operational, Grade Two security, UL listed. Lock cases shall be field reversible.

B. Basis of design = Schlage ND Series Cylindrical Locks with Athens Lever

C. Provide in locking configuration as indicated.

2.4 HINGES

A. Hinges: Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.

B. Provide standard weight, full mortise, for all doors.

C. Provide No Rise Pins for all exterior doors.

2.5 ELECTRIC STRIKES

A. Electric Strikes: Faceplate to suit lock and frame.

2.6 ELECTROMAGNETIC LOCKS

A. Electromagnetic Locks: Electrically powered; with electromagnet attached to frame and armature plate attached to door; full-exterior or full-interior type, as required by application indicated.

2.7 SELF-CONTAINED ELECTRONIC LOCKS

A. Self-Contained Electronic Locks: Mortise; with internal, battery-powered, self-contained electronic locks; consisting of complete lockset, motor-driven lock mechanism, and actuating device; enclosed in zinc-dichromate-plated, wrought-steel case, and strike that suits frame. Provide key override, low-battery detection and warning, LED status indicators, and ability to program at the lock.

2.8 EXIT LOCKS AND EXIT ALARMS

A. Exit Locks and Alarms: BHMA A156.29, Grade 1.

2.9 EXIT DEVICES AND AUXILIARY ITEMS

A. Exit Devices and Auxiliary Items: BHMA A156.3.

B. Basis of design = Von Duprin Series 98/99 Exit Device.

C. Provide in configuration as indicated.

D. Provide exterior trim where indicated.

2.10 SURFACE CLOSERS

A. Surface Closers: Rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.11 CONCEALED CLOSERS

A. Concealed Closers: Rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.12 ELECTROMAGNETIC STOPS AND HOLDERS

A. Electromagnetic Door Holders: Grade 1; unit with strike plate attached to swinging door; coordinated with fire detectors and interface with fire alarm system for labeled fire-rated door assemblies.

2.13 THRESHOLDS

A. Thresholds: Fabricated to full width of opening indicated.

B. Provide ADA compliant thresholds.

2.14 PUSH / PULL SETS

A. Unless otherwise scheduled, provide the following:

B. Tubular push / pull sets equal to Rockwood Series 47 #11047 – 8” CTC pull dimension. No exposed pull plates. All fasteners to be concealed.

2.15 KICKPLATES

A. Provide the type and size of these plates as noted in the hardware sets. These items are intended for the use and accessibility as protection of the openings indicated in the hardware schedule

2.16 DOOR GASKETING

A. Door Gasketing: BHMA A156.22; air leakage not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) of crack length for gasketing other than for smoke control, as tested according to ASTM E 283; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

2.17 LOCK CYLINDERS

A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

B. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.

C. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

2.18 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference.

1. Grand Master Key System: Change keys, a master key, and a grand master key operate cylinders.

2. Keyed Alike: Key all cylinders to same change key.

B. Keys: Nickel silver.

1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

a. Notation: "DO NOT DUPLICATE."

2. Quantity: In addition to one extra key blank for each lock, provide the following:

a. Cylinder Change Keys: Three.
b. Master Keys: Five.
c. Grand Master Keys: Five.
d. Great-Grand Master Keys: Five.

2.19 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed

unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.

2. Fire-Rated Applications:

   a. Wood or Machine Screws: For the following:

      1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.
      2) Strike plates to frames.
      3) Closers to doors and frames.

   b. Steel Through Bolts: For the following unless door blocking is provided:

      1) Surface hinges to doors.
      2) Closers to doors and frames.
      3) Surface-mounted exit devices.

3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
4. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."
5. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.20 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

B. Finishes to be as follows unless otherwise noted:

1.	Exterior Hinges	630
2.	Interior Hinges	626
3.	Surface Mounted Closers	689
4.	Exterior Locksets / Exit Devices	630
5.	Interior Locksets / Exit Devices	626
6.	Kick Plates / Armor Plates	630
7.	Door Stops	630
8.	Thresholds	Mill Finish Aluminum
9.	Overhead Holders	626

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

D. 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.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

3.2 PREPARATION

A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

B. Wood Doors: Comply with DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI**/**SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

D. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches of door height greater than 90 inches.

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as indicated in keying schedule.
2. Furnish permanent cores to Owner for installation.

F. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

G. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

H. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

I. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

J. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

B. Occupancy Adjustment: Approximately three months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.5 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Section 017900 "Demonstration and Training."

3.7 SCHEDULE – HARDWARE SETS

EXT 1 EXTERIOR SINGLE HM RESTROOM DOOR (102 & 103)

3 EA	HINGE		630
1 EA	OFFICE LOCKSET		630
1 EA	LOCK GUARD		630
1 EA	PUSH PLATE (INTERIOR) (NO LOCK ON INSIDE)		626
1 EA	RAIN DRIP		
1 EA	SURF MTD CLOSER		689
1 EA	HIGH PROFILE FLOOR STOP		630
1 EA	THRESHOLD		ALUM
1 EA	DOOR SWEEP		630
1 EA	KICKPLATE	12” x 2” LDW	630
1 SET	WEATHERSTRIPPING		630

EXT 2 EXTERIOR STORAGE SINGLE HM DOOR (104)

3 EA	HINGE	630
1 EA	STORERM LOCKSET	630
1 EA	LOCK GUARD	630
1 EA	RAIN DRIP	
1 EA	SURF MTD CLOSER	689
1 EA	STOPS	630
1 EA	THRESHOLD	ALUM
1 EA	DOOR SWEEP	630
1 SET	WEATHERSTRIPPING	630

EXT 3 EXTERIOR SINGLE HM DOOR (101A)

3 EA	HINGE		630
1 EA	OFFICE LOCKSET		630
1 EA	LOCK GUARD		630
1 EA	RAIN DRIP		
1 EA	SURF MTD CLOSER		689
1 EA	HIGH PROFILE FLOOR STOP		630
1 EA	THRESHOLD		ALUM
1 EA	DOOR SWEEP		630
1 EA	KICKPLATE	12” x 2” LDW	630
1 SET	WEATHERSTRIPPING		630

OH-1 MANUAL ROLLING COUNTER DOOR (101B & 101C)

ALL HARDWARE BY DOOR MNFR

END OF SECTION 08 7100

SECTION 09 9123 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes surface preparation and field painting of exposed exterior items and surfaces.

B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

1.2 SUBMITTALS

A. Product Data: For each paint system indicated. Include block fillers and primers.

1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
2. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).
3. Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.

B. Samples for Initial Selection: Manufacturer’s color charts showing the full range colors available for each type of finish-coat material indicated.

1. After color selection, Architect will furnish color chips for surfaces to be coated.

C. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
2. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.

D. Maintenance Data: Schedule of Paint and Coatings manufacturer’s recommendations for preventative maintenance programs and recoating schedule and procedures to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Applicator 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. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each type of coating and substrate required. Duplicate finish of approved sample Submittals.

1. Wall Surfaces: Provide samples on at least 100 sq. ft.
2. Small Areas and Items: Architect will designate items or areas required.
3. Apply benchmark samples, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated. Provide required sheen, color, and texture on each surface.
4. Final approval of colors will be from benchmark samples.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.5 PROJECT CONDITIONS

A. Apply paints only when moisture content and alkalinity levels for each substrate have been tested and do not exceed the following:

1. Moisture Content:

a. 12% maximum for Plaster.
b. 12% maximum for Concrete and Masonry

2. Alkalinity (PH):

a. 8.5 maximum for Plaster.
b. 8.5 maximum for Concrete and Masonry

B. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.

C. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.

D. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with requirements; manufacturers offering products that may be incorporated in the project include the following.

1. Benjamin Moore & Co. (Moore).
2. Sherwin Williams
3. ICI / Duvoe
4. Pratt & Lambert

2.2 PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

C. Colors: See Finish Schedule for colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.

1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.

1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and re-prime.
2. Cementitious Materials: Prepare concrete, concrete unit masonry, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.

    a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
    b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces if moisture content exceeds that permitted in manufacturer's written instructions.
    c. Clean concrete floors to be painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to remove acid, neutralize with ammonia, rinse, allow to dry, and vacuum before painting.

3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.

    a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer.
    After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
    b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
    c. If transparent finish is required, backprime with spar varnish.
    d. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.

4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.

    a. Blast steel surfaces clean as recommended by paint system manufacturer .
    b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
    c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.

5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
2. Provide finish coats that are compatible with primers used.
3. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
4. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
5. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
6. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
7. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
8. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.
9. Sand lightly between each succeeding enamel or varnish coat.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. Sand between applications to produce a smooth, even surface according to manufacturer's written instructions.
2. Omit primer over metal surfaces that have been shop primed and touchup painted.
3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated.

E. Mechanical items to be painted include, but are not limited to, the following:

1. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
2. Duct, equipment, and pipe insulation having paintable jacket material.
3. Mechanical equipment that is indicated to have a factory-primed finish for field painting.

F. Electrical items to be painted include, but are not limited to electrical equipment that has a factory-primed finish for field painting.

G. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

H. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

I. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.

J. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 FIELD QUALITY CONTROL

A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:

1. Owner may engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor. The Owner will also test the application and final thickness of the painting for conformance with listed requirements and manufacturers recommendations.
2. Owner may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.5 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.6 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.7 PAINT SCHEDULE

A. Concrete and Concrete Masonry Units: Provide the following systems in locations as indicated on the drawings:

1. Semi-Gloss Latex Finish: 2 Finish Coats over Primer

a. 1st Coat: Interior/Exterior Block Filler.
b. 2nd and 3rd Coats: Latex Semi-Gloss.
(4 mils wet, 1.5 mils dry per coat)

2. Gloss Epoxy System (Water Base): 2 Finish Coats over Primer

a. 1st Coat Heavy Duty Block Filler (8-10 mils dry)
b. 2nd and 3rd Coats: Water Based Catalyzed Epoxy (8 mils wet, 3 mils dry per coat)

B. Ferrous Metal:

1. Semi-Gloss Alkyd Finish: 2 Finish Coats over Primer

a. 1st Coat: Metal Primer, (6 mils wet, 3 mils dry)
b. 2nd and 3rd Coat: Alkyd Semi-Gloss, (4 miles wet, 1.7 mils dry per coat)

C. Zinc-Coated Material:

1. Semi-Gloss Alkyd Finish: 2 Finish Coats over Primer

a. 1st Coat: Metal Primer (6 mils wet, 2 mils dry)
b. 2nd and 3rd Coat: Alkyd Semi-Gloss (4 mils wet, 1.7 mils dry per coat)

END OF SECTION 09 9123

COUNTY PROJ. NO.	SHEET NO.
	5

20'

120 LF – 15" RCP

REMOVE STORM PIPE

34 LF–12" PVC

S–19 U–TYPE E.W. FL. 88.65 (12")

S–20 U–TYPE E.W. FL. 88.75 (12")

MATCH

REMOVE STORM PIPE

50 LF – 15" RCP

S–6
U–TYPE E.W.
FL. 87.00 (15")

INSTALL & MAINTAIN SILT FENCE

S–7
INLET TYPE E
GRATE EL. 89.92
E & W SLOT EL. 88.75
(36"W x 12"H)
W. FL. 86.40 (15")
SW. FL. 86.40 (15")
NE. FL. 86.40 (18")

176 LF – 18" RCP

INSTALL & MAINTAIN SILT FENCE AROUND CLAY STOCKPILE

REMOVE STORM PIPE

PLUG WEST INVERT

INSTALL & MAINTAIN SILT FENCE

S–8
INLET TYPE C
GRATE EL. 89.55
NW, SE SLOT EL. 88.55
(24"W x 10"H)
SW. FL. 86.07 (18")
NE. FL. 86.07 (18")

172 LF – 18" RCP

EXERCISE CAUTION DURING TRENCHING, EXCAVATION, AND EARTHMOVING OPERATIONS TO AVOID DAMAGING UNDERGROUND UTILITIES NOT SHOWN IN THE PLANS OR LOCATED BY 811. BE PREPARED TO RESOLVE MULTIPLE CONFLICTS WITH UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: ELECTRICAL, WATER, SANITARY SEWER, AND COMMUNICATIONS LINES.

12 LF – 24" RCP

PROPOSED SWALE (2' BOT., 1:4 MAX S.S.)

PROTECT WAX CRAPE MYRTLE

INSTALL & MAINTAIN SILT FENCE

S–9
INLET TYPE E
GRATE EL. 89.60
S. SLOT EL. 88.60
(36"W x 10"H)
SW. FL. 85.75 (18")
S. FL. 86.1 (EX.)
N. FL. 85.75 (24")

PROTECT TIMBER PEDESTRIAN BRIDGE TO REMAIN. DO NOT DISTURB STRUCTURE OR THE SOIL BENEATH IT OR NEAR IT.

FILL HOLE WITH CRUSHCRETE AND COMPACT

S–10
U–TYPE E.W.
S. FL. 85.70 (24")

RE–GRADE DITCH
(4' BOT., 1:4 MAX S.S.)

INSTALL & MAINTAIN SILT FENCE

INSTALL & MAINTAIN SILT FENCE

REVISIONS		
DATE	BY	DESCRIPTION
6/18/18	DMG	BID ADDENDUM #1

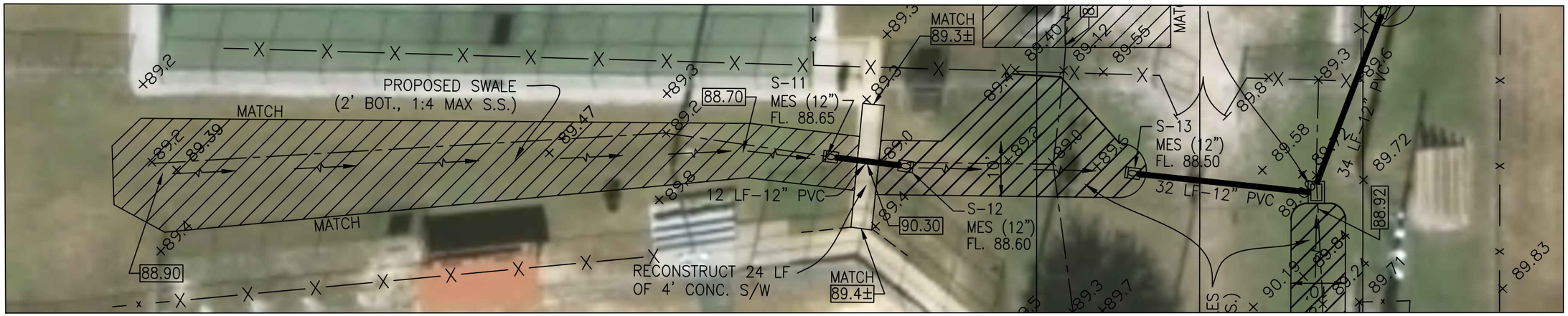
DESIGNED: D.M.G.	DATE:	SUPERVISED:	
DRAWN: D.M.G.	DATE: 4/18/18	APPROVED BY : DALE SMITH, P.E. PROFESSIONAL ENGINEER	
CHECKED: S.T.			

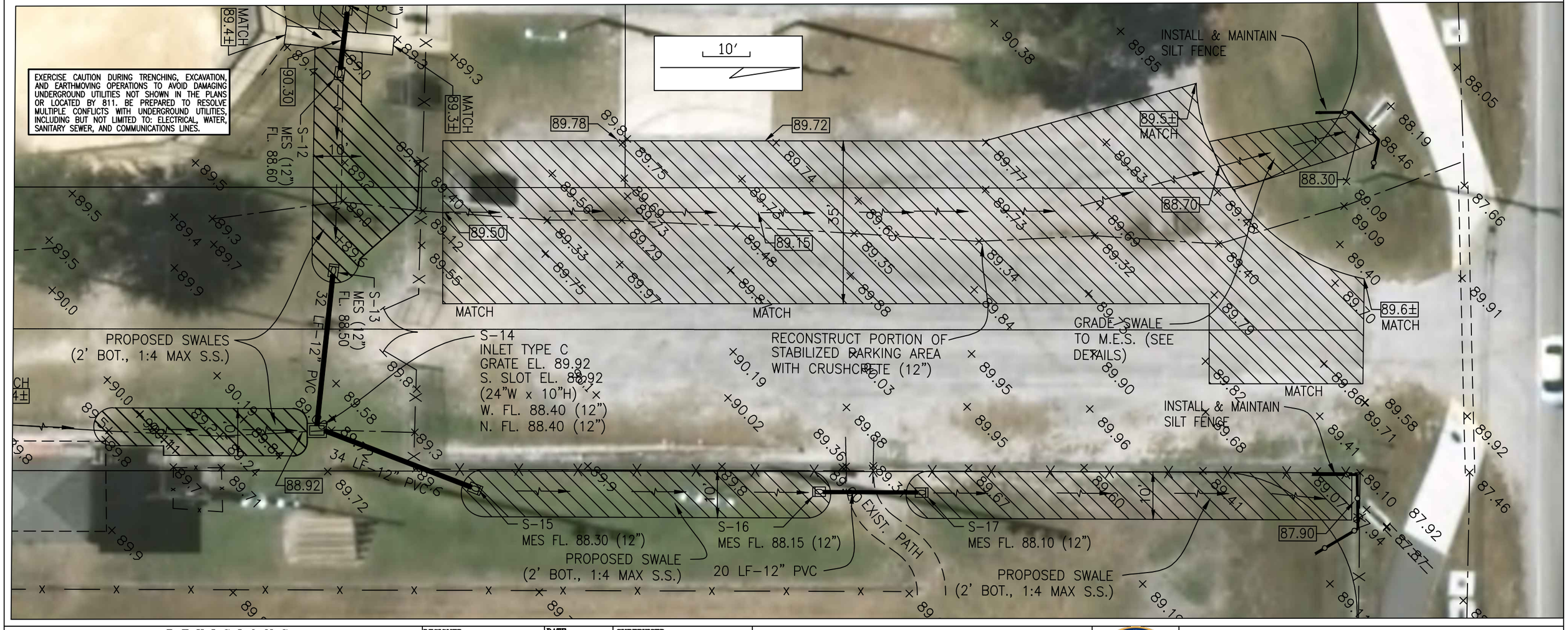
CLAY COUNTY ENGINEERING DEPARTMENT
CLAY COUNTY, FLORIDA
477 HOUSTON ST.
GREEN COVE SPRINGS, FL 32043

MAINLINE DRAINAGE PLAN

OMEGA PARK IMPROVEMENTS

COUNTY PROJ. NO.	SHEET NO.
	6





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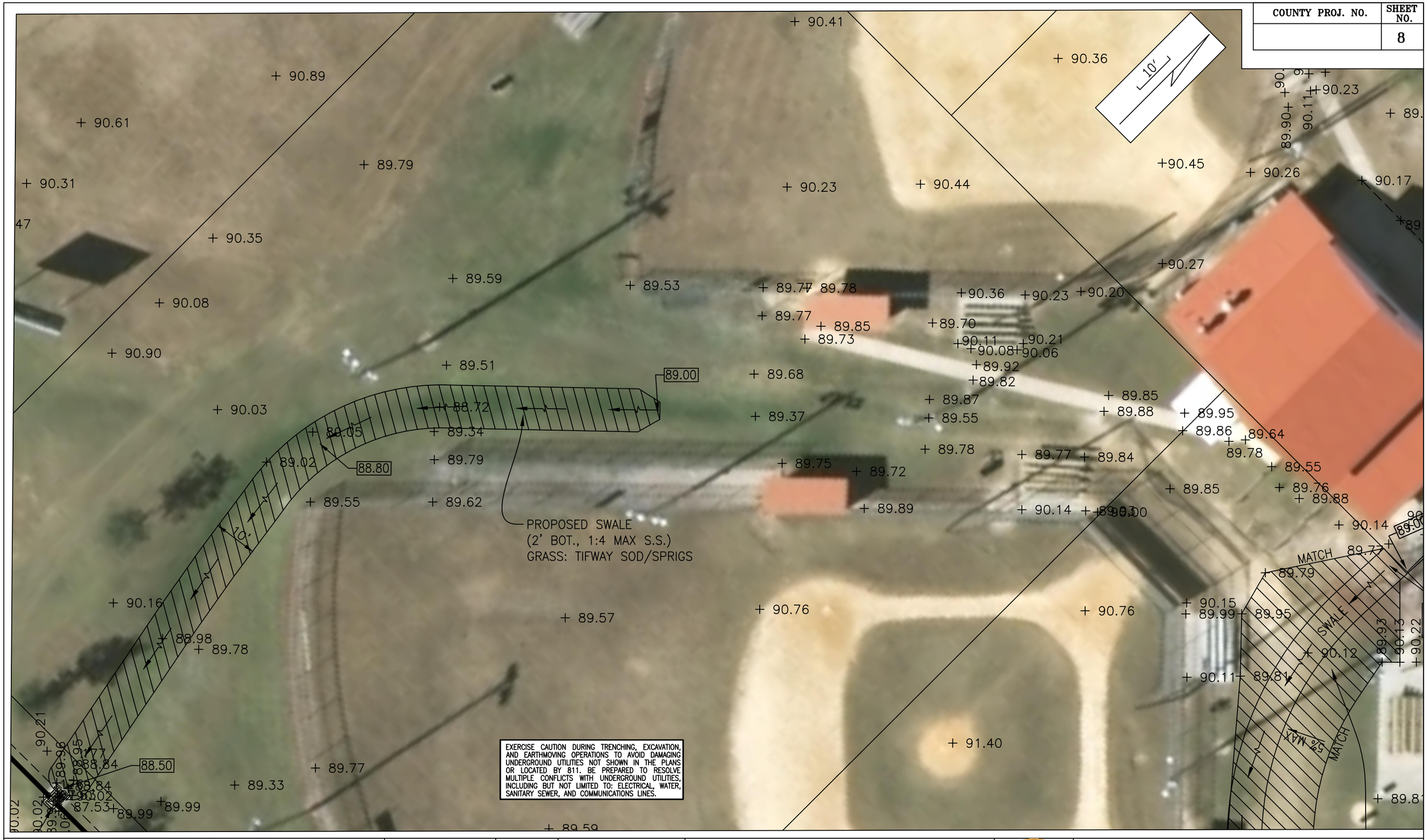
CLAY COUNTY ENGINEERING DEPARTMENT
CLAY COUNTY, FLORIDA
477 HOUSTON ST.
GREEN COVE SPRINGS, FL 32043

PARKING & TENNIS AREA PLAN

OMEGA PARK IMPROVEMENTS

COUNTY PROJ. NO.	SHEET NO.
	8



EXERCISE CAUTION DURING TRENCHING, EXCAVATION, AND EARTHMOVING OPERATIONS TO AVOID DAMAGING UNDERGROUND UTILITIES NOT SHOWN IN THE PLANS OR LOCATED BY 811. BE PREPARED TO RESOLVE MULTIPLE CONFLICTS WITH UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: ELECTRICAL, WATER, SANITARY SEWER, AND COMMUNICATIONS LINES.

REVISIONS

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CLAY COUNTY ENGINEERING DEPARTMENT
CLAY COUNTY, FLORIDA
477 HOUSTON ST.
GREEN COVE SPRINGS, FL 32043

S.W. CORRIDOR GRADING PLAN

OMEGA PARK IMPROVEMENTS

COUNTY PROJ. NO.	SHEET NO.
	9

10'

89.41

89.14

PROPOSED SWALE
(5' BOT., 1:6 MAX S.S.)
GRASS: TIFWAY SOD/SPRIGS

FILL HOLE

SIDEWALK & CONCR
PAVEMENT CONSTRU
(SEE DETAILS)

EXERCISE CAUTION DURING TRENCHING, EXCAVATION, AND EARTHMOVING OPERATIONS TO AVOID DAMAGING UNDERGROUND UTILITIES NOT SHOWN IN THE PLANS OR LOCATED BY 811. BE PREPARED TO RESOLVE MULTIPLE CONFLICTS WITH UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: ELECTRICAL, WATER, SANITARY SEWER, AND COMMUNICATIONS LINES.

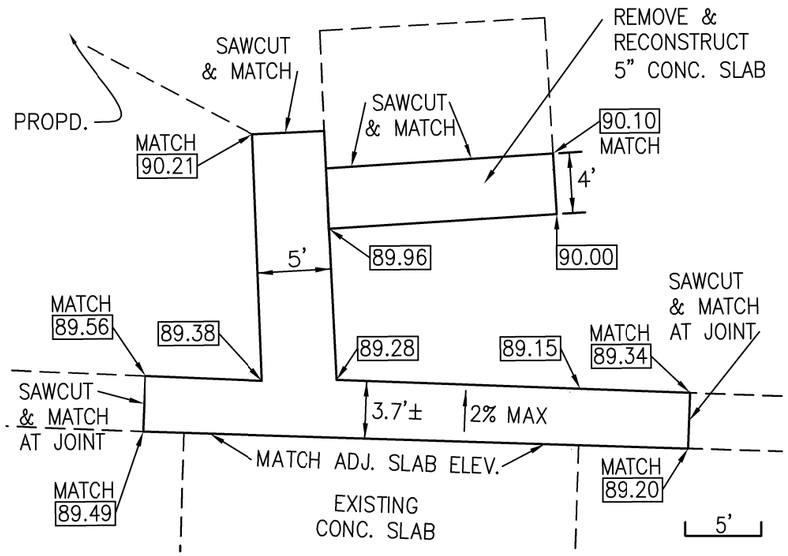
REVISIONS		
DATE	BY	DESCRIPTION
6/18/18	DMG	BID ADDENDUM #1

DESIGNED: D.M.G.	DATE:	SUPERVISED:	CLAY COUNTY ENGINEERING DEPARTMENT CLAY COUNTY, FLORIDA 477 HOUSTON ST. GREEN COVE SPRINGS, FL 32043
DRAWN: D.M.G.	DATE: 4/16/18	APPROVED BY : DALE SMITH, P.E. PROFESSIONAL ENGINEER	
CHECKED: S.T.			

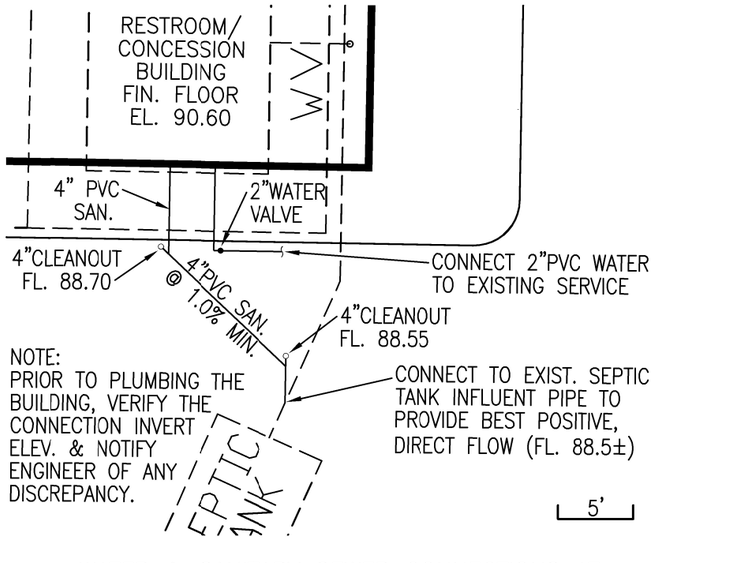
N.W. CORRIDOR GRADING PLAN

OMEGA PARK IMPROVEMENTS

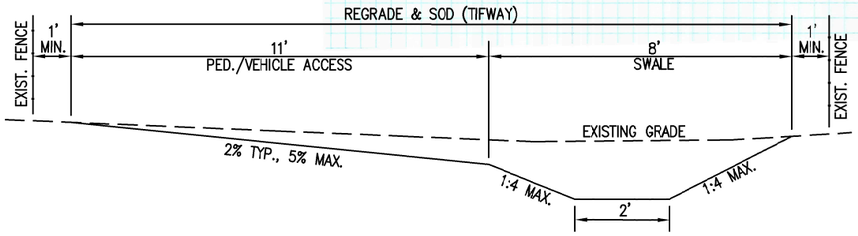
COUNTY PROJ. NO.	SHEET NO.
	12



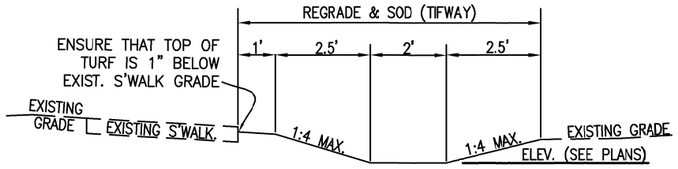
CONCRETE SIDEWALK AND PAVEMENT RECONSTRUCTION AT N.E. CORRIDOR



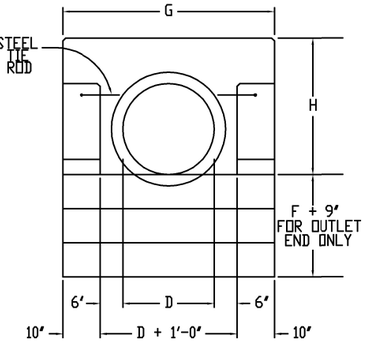
WATER & SANITARY SEWER CONNECTIONS AT PROPOSED RESTROOM & CONCESSION BUILDING



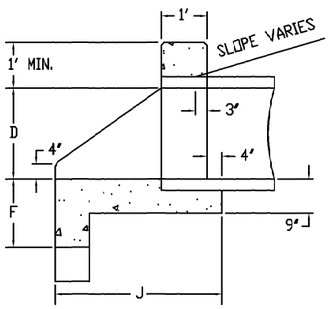
S.E. CORRIDOR RE-GRADING
(N.T.S.)



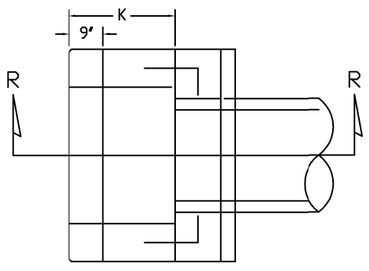
N.E. CORRIDOR SWALE
(N.T.S.)



FRONT ELEVATION



SECTION R-R



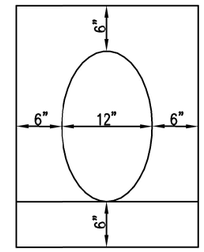
PLAN VIEW

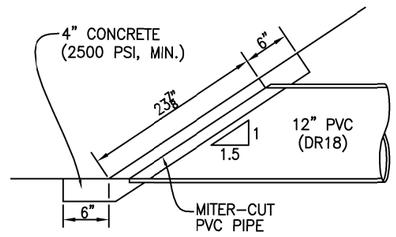
NOTE:

1. CHAMFER ALL EXPOSED EDGES 3/4" MIN. BEARING CAPACITY 2000 P.S.I.
2. WHERE THE RODS ARE REQUIRED, THE COST OF THE SAME SHALL BE INCLUDED IN THE UNIT BID PRICE
3. CONCRETE DESIGN STRENGTH 3000 P.S.I.

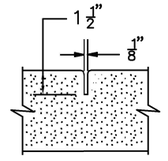
DIMENSIONS						
OPENING		WALL			FOOTING	
D	AREA SQ.FT.	G	H	K	F	J
12"	0.8	3'-8"	2'-0"	1'-0"	1'-3"	2'-2"
15"	1.2	3'-11"	2'-3"	1'-5"	1'-3"	2'-7"
18"	1.8	4'-2"	2'-6"	1'-9"	1'-3"	2'-11"
24"	3.1	4'-8"	3'-0"	2'-6"	1'-6"	3'-8"

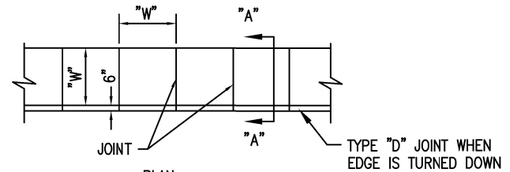
U-TYPE CONCRETE ENDWALL
(CITY OF JACKSONVILLE PLATE D-409)

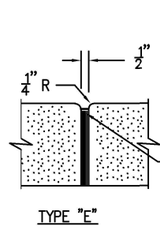




12" M.E.S.
(MITERED END SECTION)
(N.T.S.)







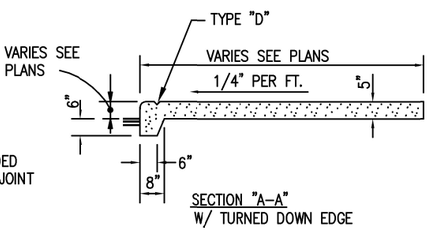


TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
"D"	TRANSVERSE JOINT AT INTERVALS EQUAL TO THE SIDEWALK WIDTH
"E"	AT THE P.C'S AND P.T.'S OF EACH CURVE, ABRUPT CHANGES IN DIRECTION, AND WHERE NEW SIDEWALK ABUTS EXISTING SIDEWALK OR OTHER EXIST. CONCRETE SURFACE STRUCTURES.

NOTE: TYPE "D" JOINT MAY BE EITHER TOOLED IN WET CONCRETE OR SAWCUT WITHIN 18 HOURS OF PLACEMENT OF CONCRETE.

CONCRETE FOR SIDEWALK SHALL BE 3,000 PSI.

CONCRETE SIDEWALK/PAVEMENT
(NOT TO SCALE)

REVISIONS		
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DRAWN: D.M.G.	DATE: 4/18/18	APPROVED BY : DALE SMITH, P.E. PROFESSIONAL ENGINEER	
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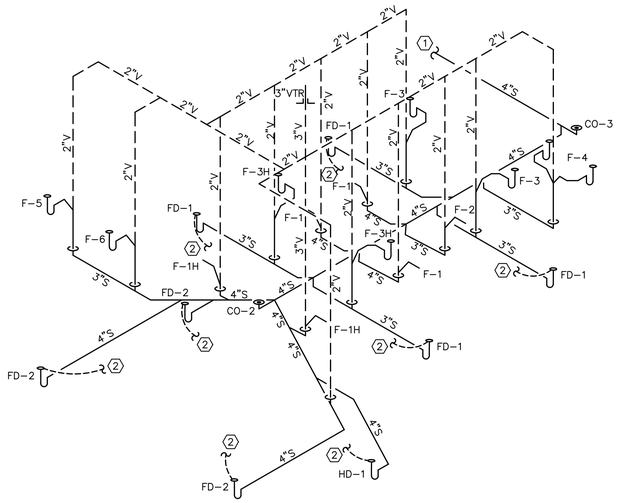
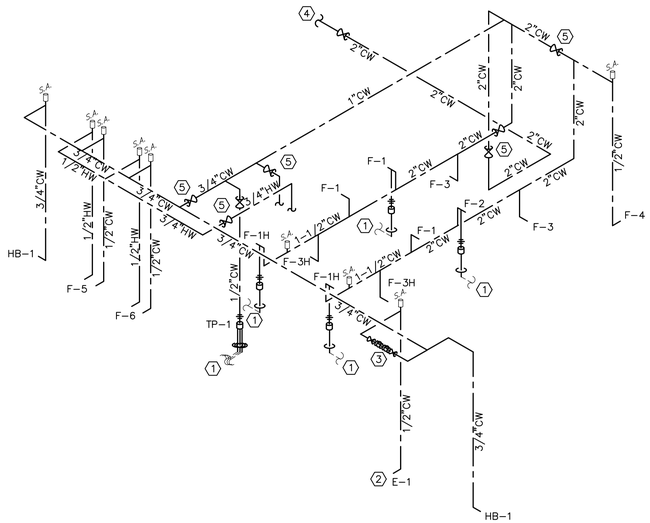
CONSTRUCTION DETAILS

OMEGA PARK IMPROVEMENTS



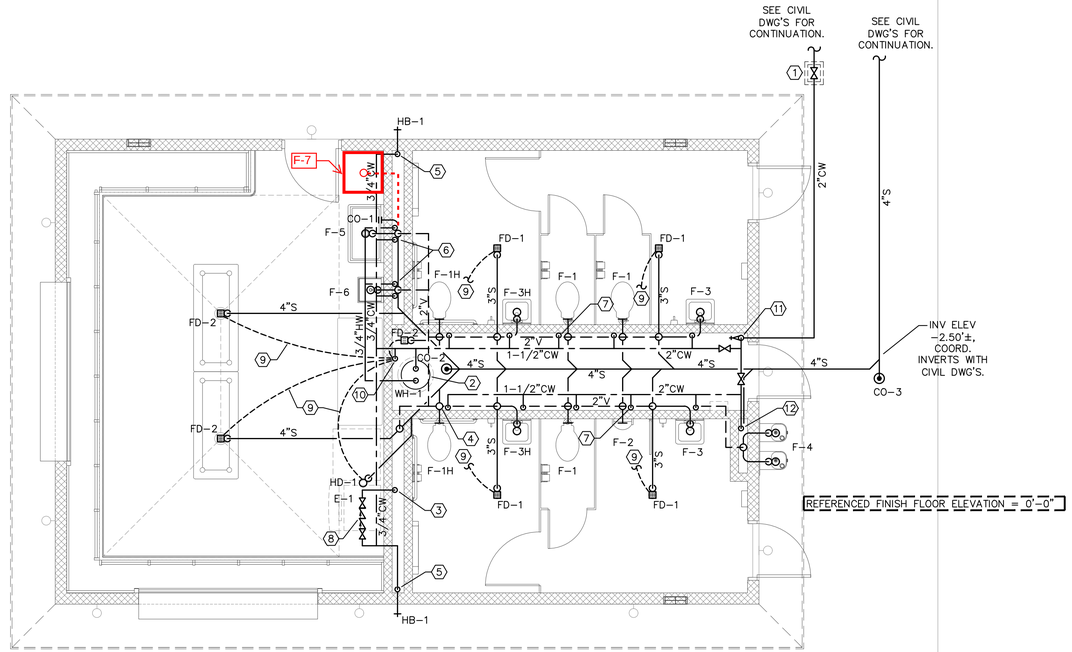
1. 4" S BELOW GRADE, SEE CIVIL DRAWINGS.
2. 1/2" TRAP PRIMER SUPPLY TO FD-1 OR FD-2.

SANITARY RISER DIAGRAM
NOT TO SCALE



1. 1/2" TRAP PRIMER SUPPLY TO FD-1 OR FD-2.
2. 1/2" CW VALVED AND CAPPED FOR FUTURE ICE MACHINE.
3. 1/2" BACKFLOW PREVENTER BFP-1.
4. 2" CW BELOW GRADE, SEE CIVIL DRAWINGS.
5. ISOLATION VALVE. TYPICAL AS SHOWN. SAME SIZE AS PIPE SIZE.

DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE



SEE RISER DIAGRAMS FOR ADDITIONAL PIPE SIZES

PLUMBING FLOOR PLAN
SCALE: 1/4" = 1'-0"

1. CAST IRON VALVE BOX WITH COVER FLUSH WITH FINISHED GRADE.
2. 50-GALLON ELECTRIC WATER HEATER EWH-1. FOR ADDITIONAL INFORMATION SEE EQUIPMENT SCHEDULE AND DETAIL.
3. 1/2" CW DOWN AND CAPPED FOR FUTURE ICE MACHINE.
4. 3" V UP TO 3" VTR.
5. 3/4" CW DOWN TO HB-1.
6. 1/2" CW & HW DOWN.
7. 1-1/2" CW SUPPLY TO EACH F-1/1H, 3/4" CW TO F-2 AND 1/2" CW TO F-3/3H.
8. 1/2" BFP-1, ROUTE DRAIN FROM BACKFLOW PREVENTER ABOVE CEILING AND DOWN WALL. TERMINATE OVER FLOOR DRAIN SERVING EQUIPMENT WITH MINIMUM AIR GAP REQUIRED PER THE 2014 FLORIDA PLUMBING CODE.
9. 1/2" TRAP PRIMER SUPPLY BELOW FLOOR.
10. 1/2" CW DOWN TO TP-1. SEE DETAIL.
11. 2" CW MAIN RISE WITH SHUT-OFF VALVE.
12. 1/2" CW DOWN.

DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 309
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190

FL LICENSE NUMBER
AA26002165
WWW.DASHERHURST.COM

CIVIL ENGINEER
Prosser Engineering, PA
13901 Sutton Park Drive South, Suite 200
Jacksonville, FL 32224

STRUCTURAL ENGINEER
Baker Klein Engineering Services
1334 Walnut Street Jacksonville, FL 32206
Phone: (904) 356-8520

MEP ENGINEER
Powell & Hinkle Engineering, PA
1409 Kingsley Avenue, Suite #12A
Orange Park, FL 32073

CLAY COUNTY PARKS AND RECREATION
Thunderbolt Restroom / Concession Building

REVISIONS:

DATE: APRIL 24, 2017

PLUMBING FLOOR PLAN

PROJECT NO.: 16008

P101

PERMIT SET

P&H ENGINEERING
POWELL & HINKLE ENGINEERING, P.A.
1409 KINGSLEY AVENUE, BLDG 12A
ORANGE PARK, FLORIDA 32073
(904) 264-5570 FAX:(904) 278-2646
CORPORATION FLA. REG. EB-4577

ROBERT L. HINKLE	PE 29302
GALTON C. MOK	PE 33192
LANE R. HINKLE	PE 48076
THOMAS M. ELDER	PE 56121
RICHARD A. MATHEWS	PE 59418
DAVID R. SPELL JR.	PE 54729