

# REPLACEMENT OF SECURITY PERIMETER FENCE

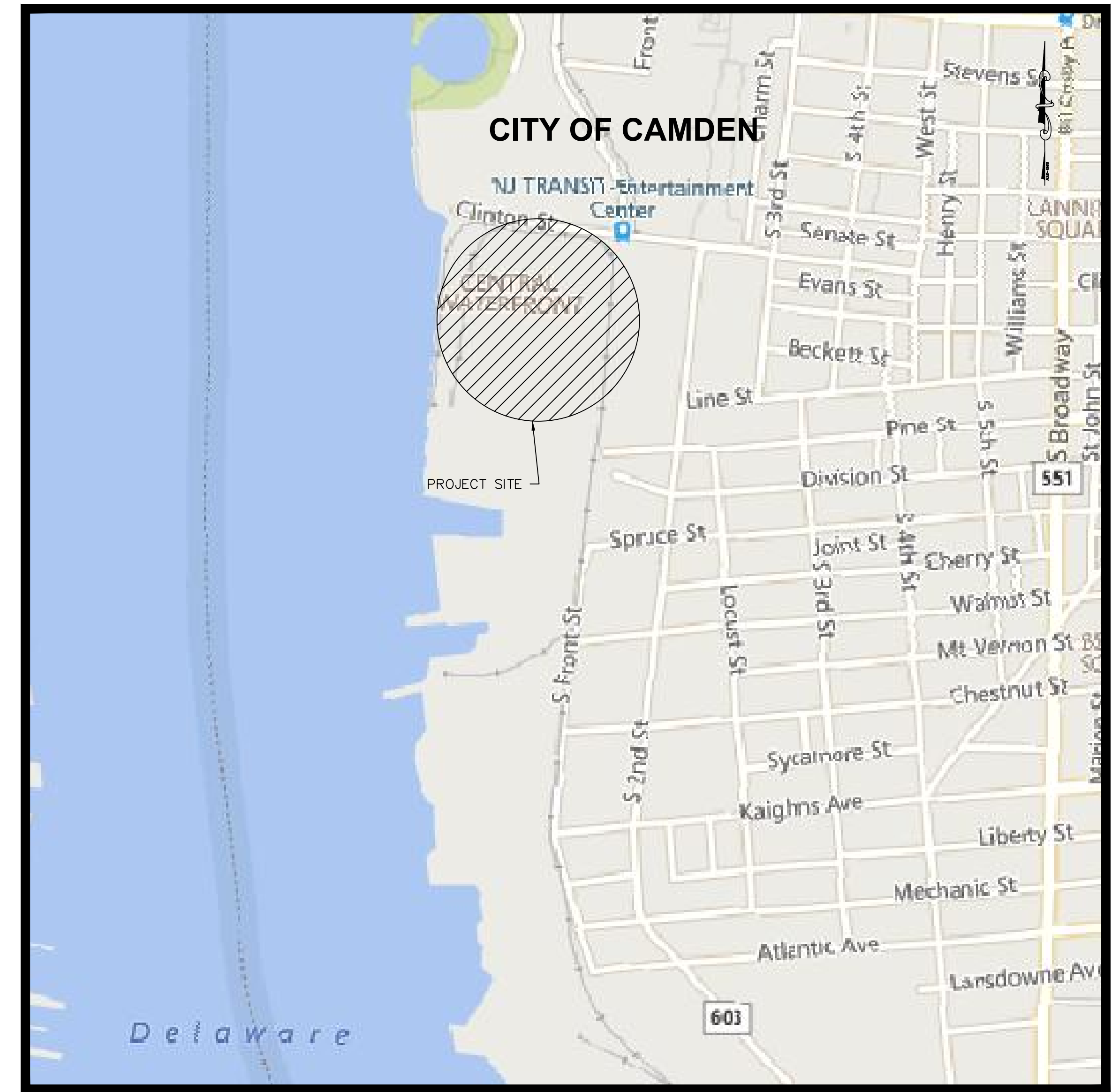
## BALZANO MARINE TERMINAL

**RVE**  
1901  
**REMINGTON & VERNICK ENGINEERS**  
2059 SPRINGDALE ROAD  
CHERRY HILL, NJ 08003  
(856) 795-9595, FAX (856) 795-1882  
WEB SITE ADDRESS : WWW.RVE.COM  
Certification of Authorization: 24 GA 28003300  
~ENGINEERING EXCELLENCE~

DATE:  
**WILLIAM M. BISIRRI**  
NJ PROFESSIONAL ENGINEER LIC. No. 51082

LIST OF UTILITIES	
<b>WATER &amp; SEWER:</b>	<b>CAMDEN WATER L.L.C.</b> 1257 S. SECOND ST. CAMDEN, NJ 08104 856-635-1264
<b>WATER:</b>	<b>NEW JERSEY AMERICAN WATER CO.</b> 213 CARRIAGE LANE DELRAN, NJ 08075
<b>GAS:</b>	<b>PSE&amp;G GAS DISTRIBUTION DIVISION</b> 300 CONNECTICUT DRIVE BURLINGTON, NJ 08086 856-778-6776 ATTN: GEORGE BAKER
<b>ELECTRIC:</b>	<b>PSE&amp;G ELECTRIC DISTRIBUTION DIVISION</b> 300 NEW ALBANY ROAD MOORESTOWN, NJ 08057 856-573-2077 ATTN: BOB SODER
<b>CABLE:</b>	<b>COMCAST</b> 1250 HADDONFIELD ROAD CHERRY HILL, NJ 08034 856-272-1000
<b>TELEPHONE:</b>	<b>VERIZON - NEW JERSEY</b> 10 TANSBORO ROAD BERLIN, NJ 08009
<b>AT&amp;T:</b>	<b>TRANSCONTINENTAL CABLE ROUTE</b> UNDERGROUND LOCATION SERVICE NEW JERSEY UTILITIES ASSOCIATION 800-252-1133

SHEET INDEX	
SHEET #	DESCRIPTION
1	TITLE
2	LEGEND
3	ESTIMATE & GENERAL NOTES
4	OVERALL SITE PLAN
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8 - 12	CONSTRUCTION DETAILS



**PROJECT LOCATION MAP**

SCALE: 1" = 1000'

THE ELECTRONIC VERSION OF THE 2019 NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, EFFECTIVE SEPTEMBER 1, 2019, AS REFERENCED IN BASELINE DOCUMENT CHANGE ANNOUNCEMENT BDC19S-01, UNLESS MODIFIED WITHIN THE TECHNICAL SPECIFICATIONS OF THIS CONTRACT, SHALL GOVERN.

THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION\TRAFFIC CONTROL\BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2007 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

### CITY OF CAMDEN

## CAMDEN COUNTY, NEW JERSEY

OCTOBER, 2021

**FUNDING SOURCE:**  
**SJPC**

**New Jersey One Call**  
**CALL BEFORE YOU DIG**  
**811 or 1-800-272-1000**  
**ITS THE LAW**

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT NJ ONE CALL PRIOR TO THE START OF CONSTRUCTION. CALL FOR MARKOUTS THREE (3) FULL BUSINESS DAYS IN ADVANCE AND BEGIN EXCAVATION WITHIN 10 DAYS. ALL CONTRACTORS ON-SITE MUST HAVE THEIR OWN MARKOUT.

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

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NO.	REVISION	DATE	BY	CHK

**TITLE SHEET**

SOUTH JERSEY PORT CORPORATION  
**REPLACEMENT OF SECURITY PERIMETER FENCE**  
**BALZANO MARINE TERMINAL**

CITY OF CAMDEN  
CAMDEN COUNTY  
NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
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DATE:	DATE:	SHEET No.:	
4/20/2021		1 of 12	
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3965X001			

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# STANDARD LEGEND

NOTE: ALL SYMBOLS MAY NOT BE USED



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BALZANO MARINE TERMINAL  
CITY OF CAMDEN  
CAMDEN COUNTY  
NEW JERSEY

DATE	SCALE
4/20/2021	AS NOTED
JOB No.: 3965X001	2 of 12

ITEM	DESCRIPTION	EXISTING	PROPOSED
	OVERHEAD WIRE		
	SANITARY FORCE MAIN PIPE		
	STORM SEWER PIPE ≤ 12"		
	STORM SEWER PIPE > 12"		
	GAS SERVICE		
	SANITARY SEWER PIPE ≤ 12"		
	SANITARY SEWER PIPE > 12"		
	ELECTRIC SERVICE		
	FIBER OPTIC SERVICE		
	TELEPHONE SERVICE		
	COMMUNICATIONS SERVICE		
	IRRIGATION PIPE		
	WATER SERVICE		
	WATER SHUT-OFF		
	WATER METER		
	WATER VALVE		
	WATER HYDRANT		
	WELL		
	YARD HYDRANT		
	METER PIT		
	GAS SHUT-OFF		
	GAS METER		
	GAS VALVE		
	GAS LINE MARKER		
	CLEANOUT		
	SEWER VENT		
	INLET TYPE A		
	INLET TYPE B		
	INLET TYPE E		
	AREA DRAIN		
	MANHOLES		
	IRRIGATION CONTROL VALVE		
	IRRIGATION BOX		
	IRRIGATION CONTROL BOX		
	SPRINKLER HEAD		
	UNKNOWN VALVE		
	COMMUNICATIONS PEDESTAL		
	COMMUNICATIONS LINE MARKER		
	TELEPHONE PEDESTAL		
	TELEPHONE LINE MARKER		
	ELEC. BOX		
	ELEC. METER		
	ELEC. TRANSFORMER PAD		
	ELEC. VAULT		
	ELEC. LINE MARKER		
	UTILITY POLE		
	GUY ANCHOR		
	ELEC. OUTLET		
	LIGHTS		
	VENT		
	VENT PIPE		

ITEM	DESCRIPTION	EXISTING	PROPOSED
	CROWS FOOT		
	AERIAL TARGET		
	CONCRETE MONUMENT		
	PK / MAG NAIL		
	DRILL HOLE SPIKE		
	DRILL HOLE W/ WINGS		
	STAKE		
	HUB		
	PIN W/ CAP		
	IRON PIPE		
	IRON PIN		
	CROSS CUT		
	DISK		
	STONE		
	REBAR		
	BASELINE		
	CENTERLINE		
	EASEMENT		
	RIGHT-OF-WAY		
	PROPERTY BOUNDARY		
	ADJACENT PROPERTY BOUNDARY		
	RAILROAD TRACKS		
	STATE BOUNDARY		
	MUNICIPAL / COUNTY BOUNDARY		
	BORING LOCATION		
	MONITORING WELL LOCATION		
	TEST PIT LOCATION		
	FRESHWATER WETLAND FLAG		
	FRESHWATER WETLAND LINE		
	FRESHWATER WETLAND BUFFER		
	EDGE OF WATER		
	STREAM CENTERLINE		
	GRASS/SOD		
	DECIDUOUS TREE		
	SHRUBS / BUSH		
	EVERGREENS		
	STUMP		
	WOODS / TREE LINE		
	WIRE FENCE		
	SPLIT RAIL FENCE		
	WOOD / VINYL FENCE		
	CHAIN-LINK FENCE		
	TOP OF BANK / DITCH		
	BOTTOM OF BANK / DITCH		
	CONTOUR (MAJOR)		
	CONTOUR (MINOR)		
	FLOW LINE / SWALE		
	TIME OF CONCENTRATION		
	SPOT GRADE		
	ROADWAY GRADE		
	DRAINAGE FLOW		

ITEM	DESCRIPTION	EXISTING	PROPOSED
	EDGE OF PAVEMENT		
	CURB		
	PAVEMENT / CONC. / SIDEWALK		
	LIMIT OF EXCAVATION		
	GUIDE RAIL		
	BOLLARD		
	MAILBOX		
	SIGNS		
	FLAG POLE		
	BENCH		
	PILE		
	DETECTABLE WARNING SURFACE		
	TYPICAL STRIPING		
	ADA STRIPING		
	TRAFFIC CONTROL BOX		
	TRAFFIC LIGHT		
	DEPT. OF TRANSPORTATION MANHOLE		
	STATE HIGHWAY DEPARTMENT		
	RAILROAD CROSSING BEACON		
	CALL BOX		
	OIL FILL		
	UNDERGROUND STORAGE TANK LID		
	RISER PIPE		
	RAISED PAVEMENT MARKER		
	BBQ GRILL		
	WATER FOUNTAIN		
	KIOSK		
	AIR CONDITIONER		
	PARKING METER		
	FIRE CONTROL VALVE		
	BARRICADE		
	PHOTO LOCATION		
	BENCHMARK LOCATION		
	TYPICAL SECTION ARROW		
	MATCH LINE		
	TYPICAL NORTH ARROW		
		NORTH POINT TO BE USED ON STANDARD CONSTRUCTION SHEETS WHERE BEARINGS REFER TO STATE PLANE COORDINATE SYSTEM.	

ABBREVIATIONS			
APR.	APRON	E.B., W.B.	EASTBOUND, WESTBOUND
BL	BASELINE	N.B., S.B.	NORTHBOUND, SOUTHBOUND
G	GUTTER	PC	POINT OF CURVATURE
GR	GRATE	PI	POINT OF INFLECTION
BIT.	BITUMINOUS	PT	POINT OF TANGENCY
BLDG.	BUILDING	PK	PARKER KAYLON MASONRY NAIL
CL	CENTERLINE	P.V.C.	POLYVINYL CHLORIDE PIPE
C.I.P.	CAST IRON PIPE	PROP.	PROPOSED
CONC.	CONCRETE	R	RADIUS
C.M.P.	CORRUGATED METAL PIPE	R.C.P.	REINFORCED CONCRETE PIPE
CULV.	CULVERT	R.M.C.	RIGID METALLIC CONDUIT
D.C.	DEPRESSED CURB	R.O.W.	RIGHT OF WAY
DH	DRILL HOLE	R.R.	RAILROAD
DIA.	DIAMETER	RTE.	ROUTE
D.W.Y.	DRIVEWAY	R.T.S.	RIGHT OF WAY
D.I.P.	DUCTILE IRON PIPE	SAN.	SANITARY
EL.	ELEVATION	SWK.	SIDEWALK
EX.	EXISTING		
		PERF.	PERFORATED

**UTILITIES**

**SITE & ROADWORK**

**MISC.**

**GENERAL**

**ABBREVIATIONS**

**SURVEY**

**ENVIRONMENTAL**

**LANDSCAPING**

**GRADING**

LGD-1

ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
001	REMOVAL OF VEGETATION	1	LS	SEE PLAN NOTES FOR LOCATION
002	8' ORNAMENTAL ALUMINUM FENCE	175	LF	
003	8' HIGH CHAIN LINK FENCE WITH BARBED WIRE TOP	1450	LF	
004	10' HIGH CHAIN LINK FENCE WITH BARBED WIRE TOP AND PRIVACY SLATS	1000	LF	
005	8' HIGH BI-FOLD GATE	1	EA	G4
006	8' HIGH RAIL GATE	1	EA	G6
007	10' HIGH RAIL GATE WITH BARBED WIRE TOP AND PRIVACY SLATS	1	EA	G1
008	8' HIGH DOUBLE SWING GATE	2	EA	G5, G7
009	8' HIGH SINGLE SWING GATE	1	EA	G8
010	10' HIGH DOUBLE SWING GATE WITH BARBED WIRE TOP AND PRIVACY SLATS	2	EA	G2, G3

GENERAL NOTES:

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO THE START OF THE CONSTRUCTION, ANY ERRORS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL USE EXCAVATED MATERIALS FOR BACKFILL UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL PAVED AND CONCRETE AREAS DISTRIBUTED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED PRIOR TO THE START OF CONSTRUCTION.
- ALL GRASSED OR WOODED AREAS DISTRIBUTED DURING CONSTRUCTION SHALL BE TOPSOILED AND SEEDED.
- ALL FILL SHALL BE PLACED IN 12" LAYERS AND THOROUGHLY COMPACTED TO THE SATISFACTION OF THE ENGINEER. IF BORROW FILL IS REQUIRED, IT SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PRESERVATION OF THE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION AND IT SHALL BE AT HIS OWN EXPENSE TO REPAIR OR REPLACE ANYTHING THAT HE DAMAGES.
- APPROXIMATE DEPTH OF ALL WATER MAINS ARE ± 4 FEET.
- APPROXIMATE DEPTH OF ALL GAS MAINS ARE ± 3 FEET.
- ALL UNUSED MATERIAL EXCAVATED FROM THE PROJECT SITE ARE TO BE DISPOSED OF AT AN APPROVED FACILITY.
- FENCING TO COMPLY WITH UNITED FACILITIES CRITERIA (UFC) 4-022-03, SECURITY FENCES AND GATES.
- GATE IDENTIFICATION PLACARDS AND ALL FENCE SIGNS SHALL BE REMOVED PRIOR TO CONSTRUCTION AND PRESERVED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- CONTRACTOR SHALL REPLACE ALL GATE IDENTIFICATION PLACARDS AND FENCE SIGNS UPON COMPLETION OF CONSTRUCTION.
- CONTRACTOR SHALL RESTORE ALL GATE ALARMS AND OTHER FENCE SECURITY DEVICES TO FULL WORKING ORDER UPON COMPLETION OF CONSTRUCTION.

CONSTRUCTION STAGING REQUIREMENTS:

OPTION A:

- SECURITY FENCE REPLACEMENT SHALL BE LIMITED TO ONE (1), 400' (FEET) LENGTH OF FENCE MAXIMUM AT A TIME.
- WHEN FENCE SECTIONS ARE REMOVED, A PORT SECURITY GUARD SHALL BE POSTED AT THAT LOCATION FOR THE DURATION OF THE WORK AND/OR UNTIL FENCE SECTION HAS BEEN REPLACED AND THE SECURITY PERIMETER FENCE IS DEEMED SECURE.
- THE INTENT OF THIS PROCEDURE IS TO ENSURE THAT NO SECTION OF THE FENCE IS REMOVED BEYOND THAT WHICH CANNOT BE FULLY REPLACED DURING ONE WORK DAY.
- AT THE END OF EACH WORK DAY, THE PORT PERIMETER SECURITY FENCING SHALL BE FULLY INTACT AND SECURE IN ACCORDANCE WITH USCG REQUIREMENTS.

OPTION B:

- SHOULD THE CONTRACTOR ELECT TO USE TEMPORARY FENCING/BARRIERS TO ALLOW FOR MORE THAN 400' (FEET) OF FENCE REMOVAL AT A TIME, THE FOLLOWING WILL BE REQUIRED: TEMPORARY FENCING LAYOUT, MATERIALS AND LENGTH OF FENCE REMOVAL SUBJECT TO ENGINEER APPROVAL.
- TEMPORARY FENCING SHALL MEET USCG STANDARDS AND REQUIREMENTS.
- POSTS FOR TEMPORARY FENCING SHALL BE ADEQUATELY ANCHORED INTO THE GROUND. FENCE POST STANDS ON GRADE ARE NOT ACCEPTABLE.
- AN APPROVED TEMPORARY FENCING SYSTEM SHALL BE INSTALLED SUCH THAT IT REMAINS IN PLACE AT ALL TIMES AND THE PORT REMAINS SECURE. ANY OPENINGS IN THE SECURITY PERIMETER, HOWEVER TEMPORARY, SHALL BE APPROVED BY THE ENGINEER AND SHALL HAVE A PORT SECURITY GUARD POSTED FOR THE DURATION OF THE OPENING.



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ADDENDUM NO. 4	REVISION	DATE	BY (CHK)
		12/21	CFC/DHS

**ESTIMATE OF QUANTITIES**

SOUTH JERSEY PORT CORPORATION  
 REPLACEMENT OF SECURITY PERIMETER FENCE  
 BALZANO MARINE TERMINAL  
 CITY OF CAMDEN CAMDEN COUNTY NEW JERSEY

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4/20/2021	3 of 12		
JOB No.:	3965X001		

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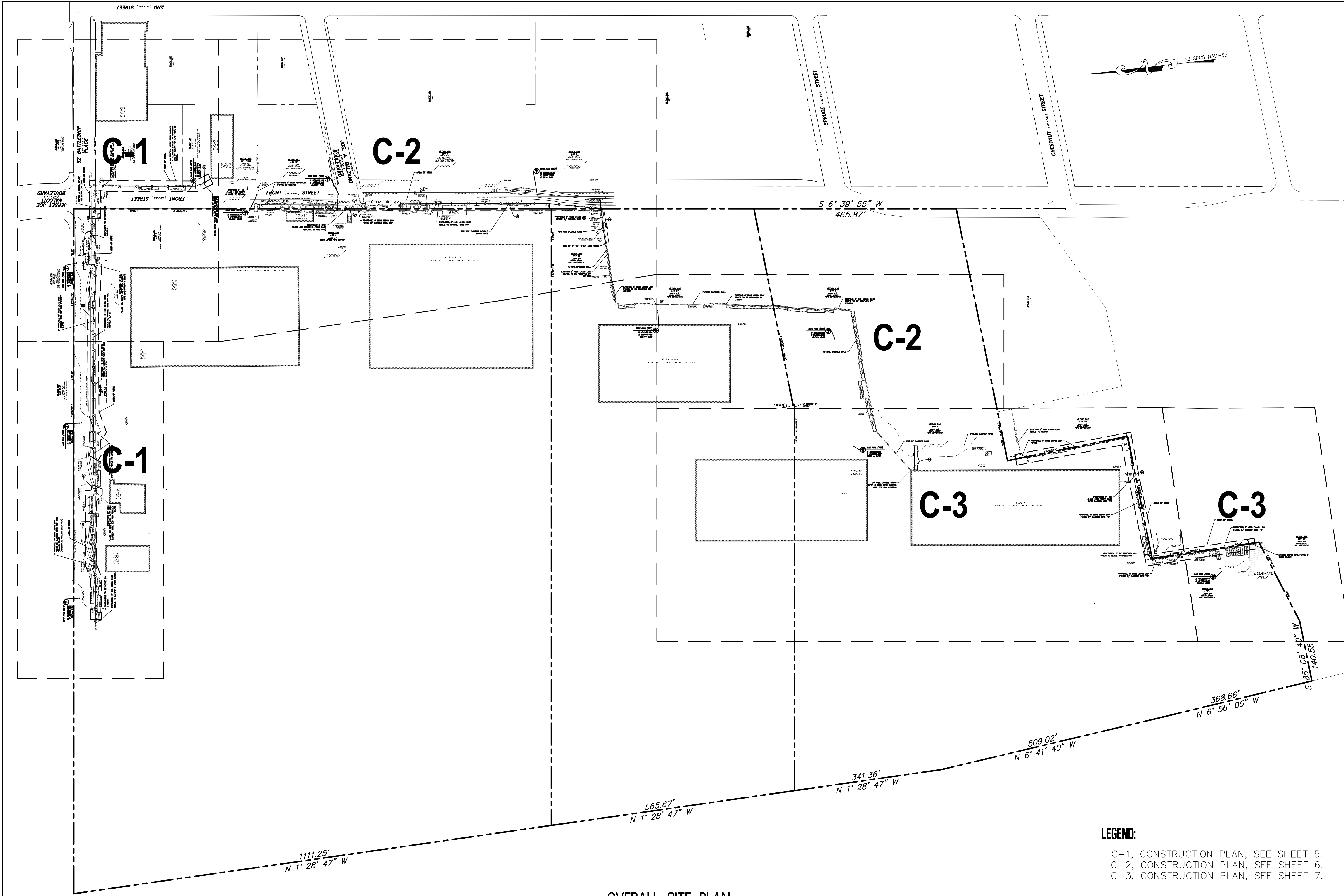
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**OVERALL SITE PLAN**

SOUTH JERSEY PORT CORPORATION  
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 BALZANO MARINE TERMINAL  
 CITY OF CAMDEN CAMDEN COUNTY NEW JERSEY

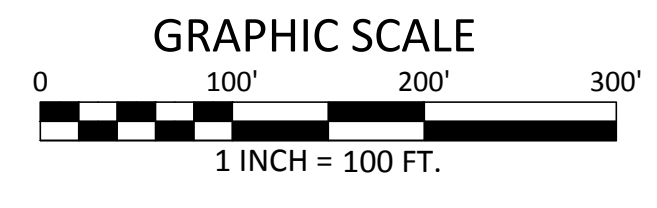
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3965X001			4 of 12



**OVERALL SITE PLAN**  
 SCALE: 1" = 100'

**LEGEND:**

C-1, CONSTRUCTION PLAN, SEE SHEET 5.  
 C-2, CONSTRUCTION PLAN, SEE SHEET 6.  
 C-3, CONSTRUCTION PLAN, SEE SHEET 7.



S-1  
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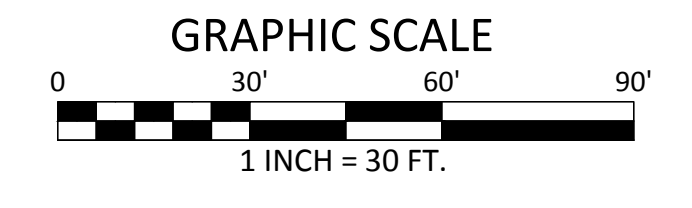
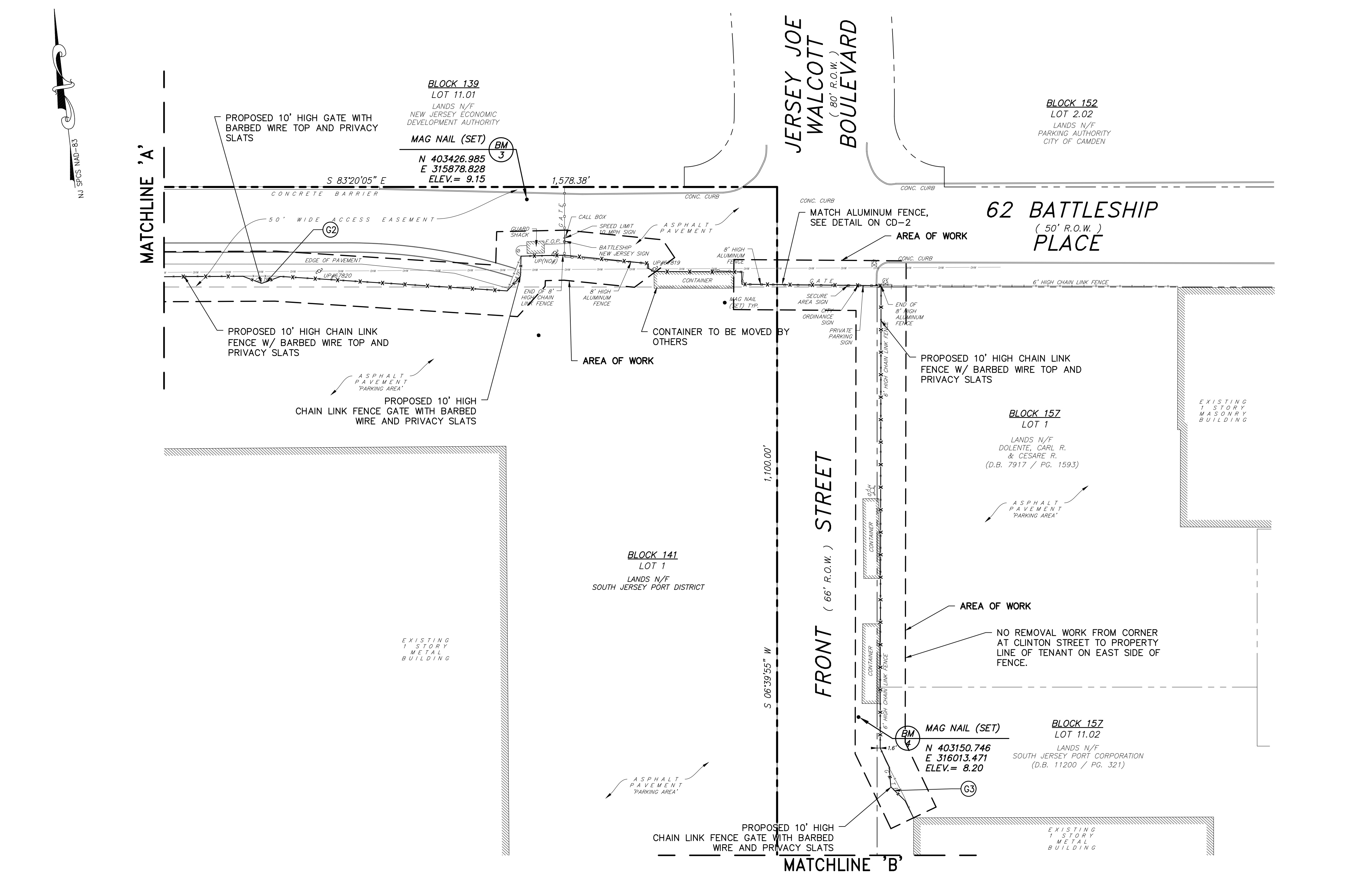
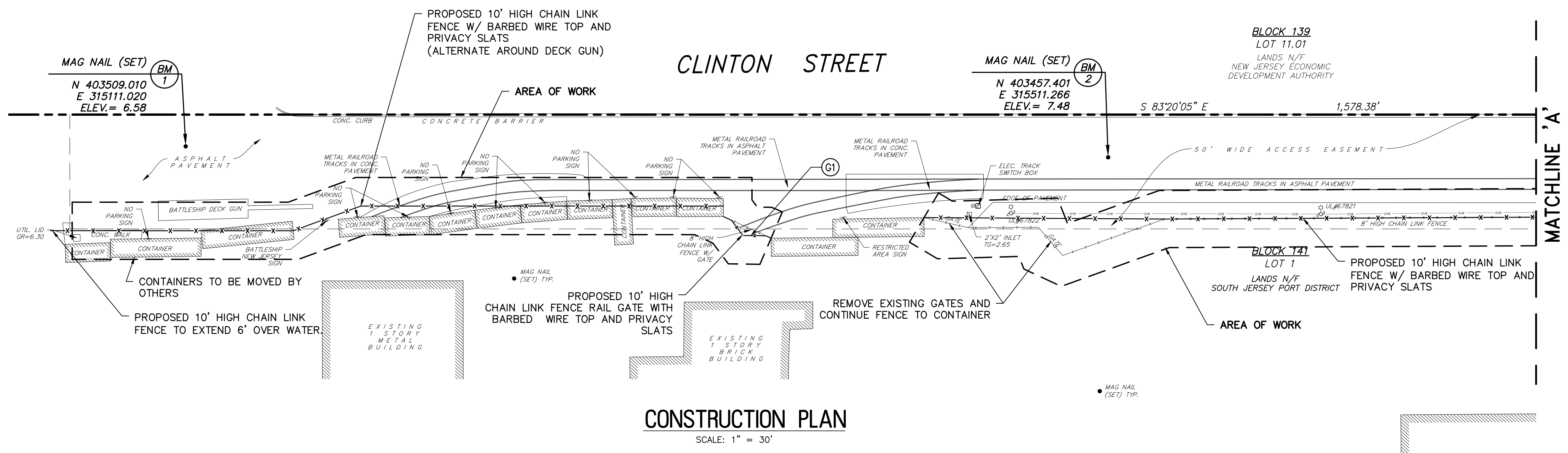
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 NEW JERSEY

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C-1  
 C-3



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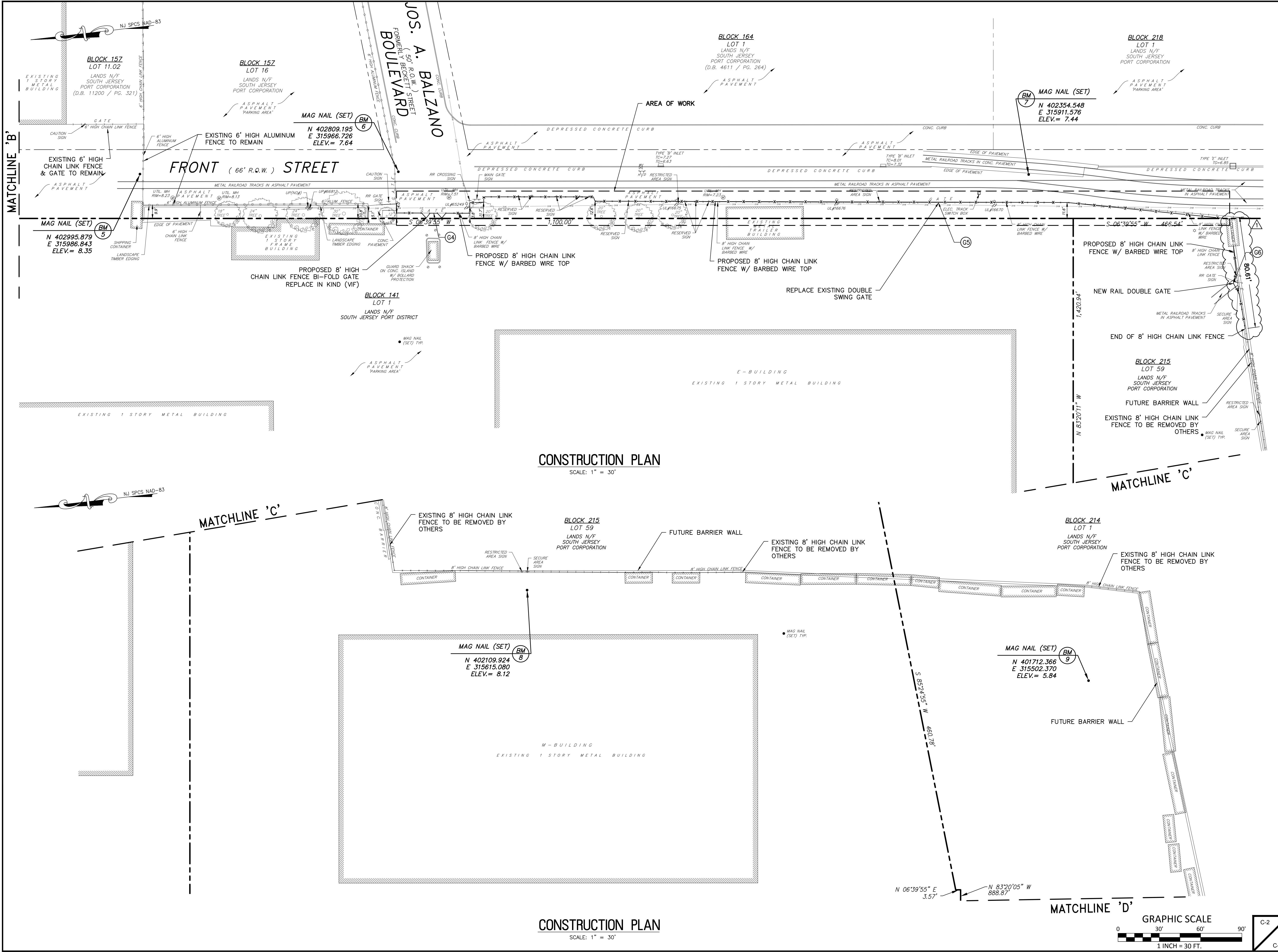
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**CONSTRUCTION PLAN**

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CITY OF CAMDEN  
 CAMDEN COUNTY  
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11/17/2021 11:22:02 AM 11/22/2021 CFC/MBH BY/CHK  
 ADDENDUM NO. 2 REVISION  
 SOUTH JERSEY PORT CORPORATION  
 BALZANO MARINE TERMINAL  
 CAMDEN COUNTY  
 NEW JERSEY  
 12/20/2021 4:22:00 PM



**REMINGTON & VERNICK ENGINEERS**  
 2059 SPRINGDALE ROAD  
 CHERRY HILL, NJ 08003  
 (856) 795-9595, FAX (856) 795-1882  
 WEB SITE ADDRESS : WWW.RVE.COM  
 Certification of Authorization: 24 GA 28003300  
 "ENGINEERING EXCELLENCE"

DATE:  
**WILLIAM M. BISIRRI**  
 NJ PROFESSIONAL ENGINEER LIC. No. 51082

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID

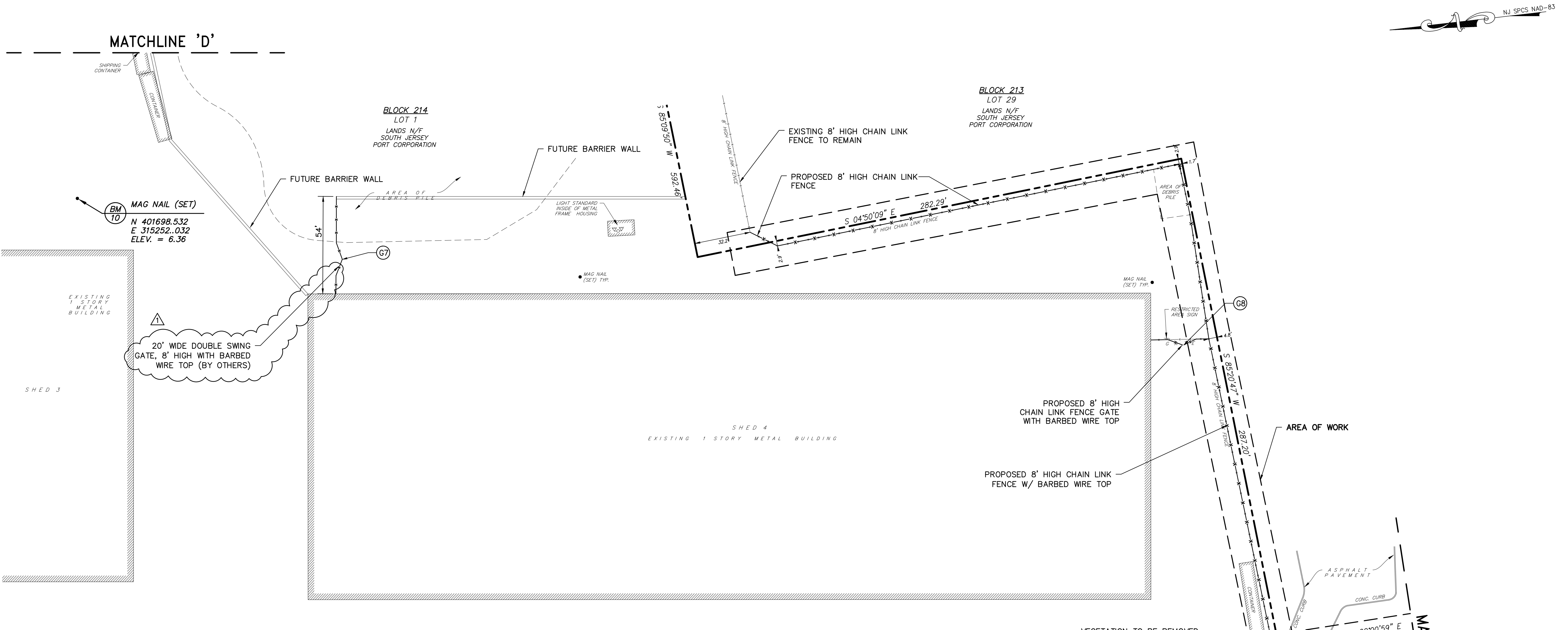
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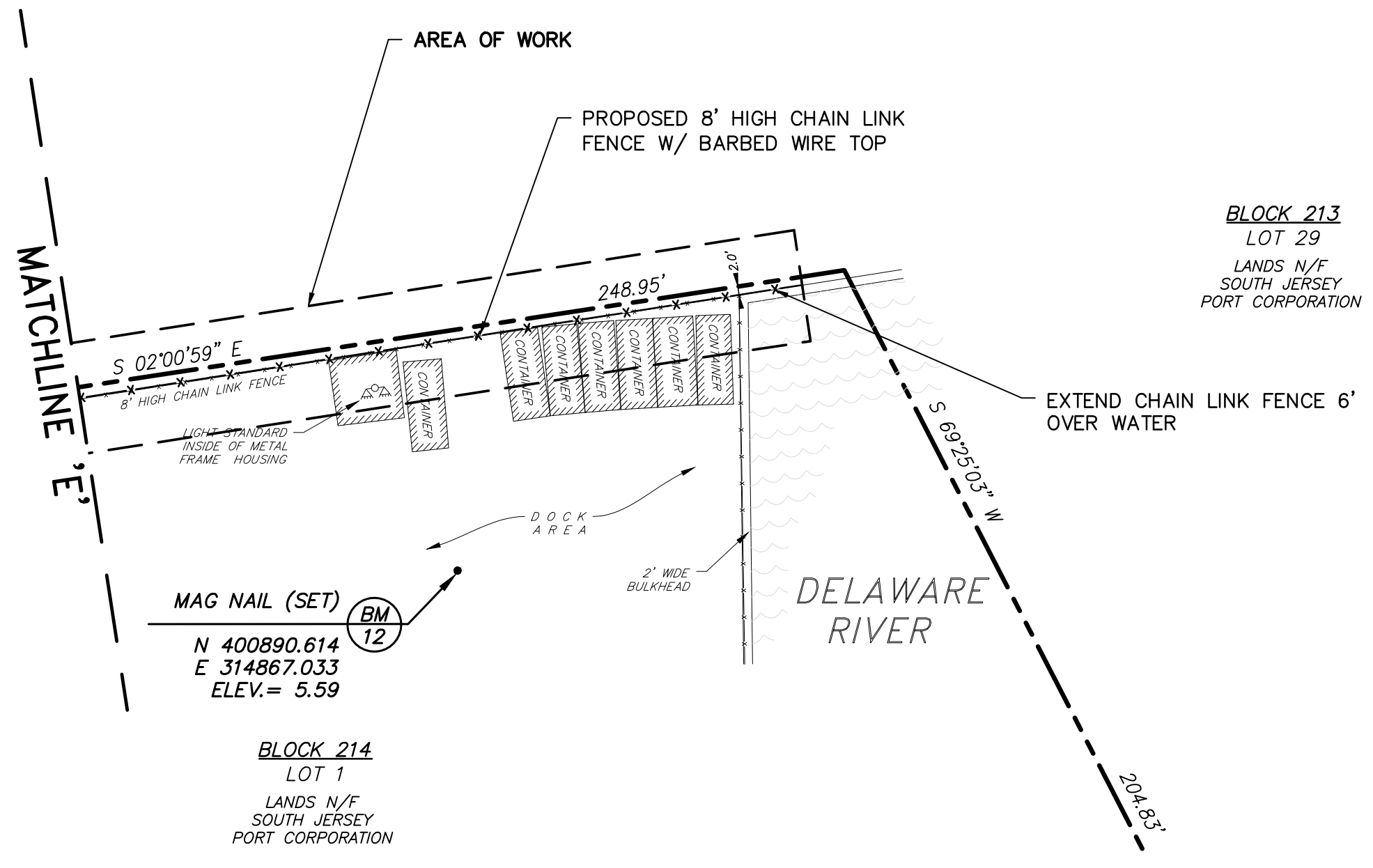
**CONSTRUCTION PLAN**

SOUTH JERSEY PORT CORPORATION  
 REPLACEMENT OF SECURITY PERIMETER FENCE  
 BALZANO MARINE TERMINAL  
 CITY OF CAMDEN CAMDEN COUNTY NEW JERSEY

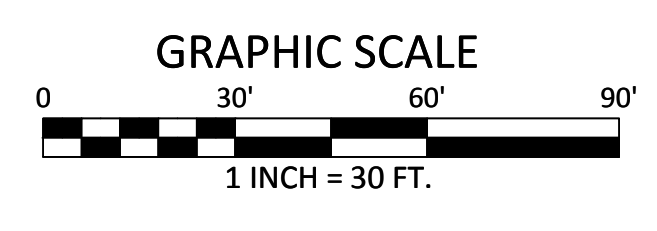
DATE	DESIGN BY	CHECKED BY	SCALE
4/20/2021	DHS	WMB	AS NOTED
JOB No.:	3965X001		
7 of 12			



**CONSTRUCTION PLAN**  
 SCALE: 1" = 30'



**CONSTRUCTION PLAN**  
 SCALE: 1" = 30'



C-3  
 C-3

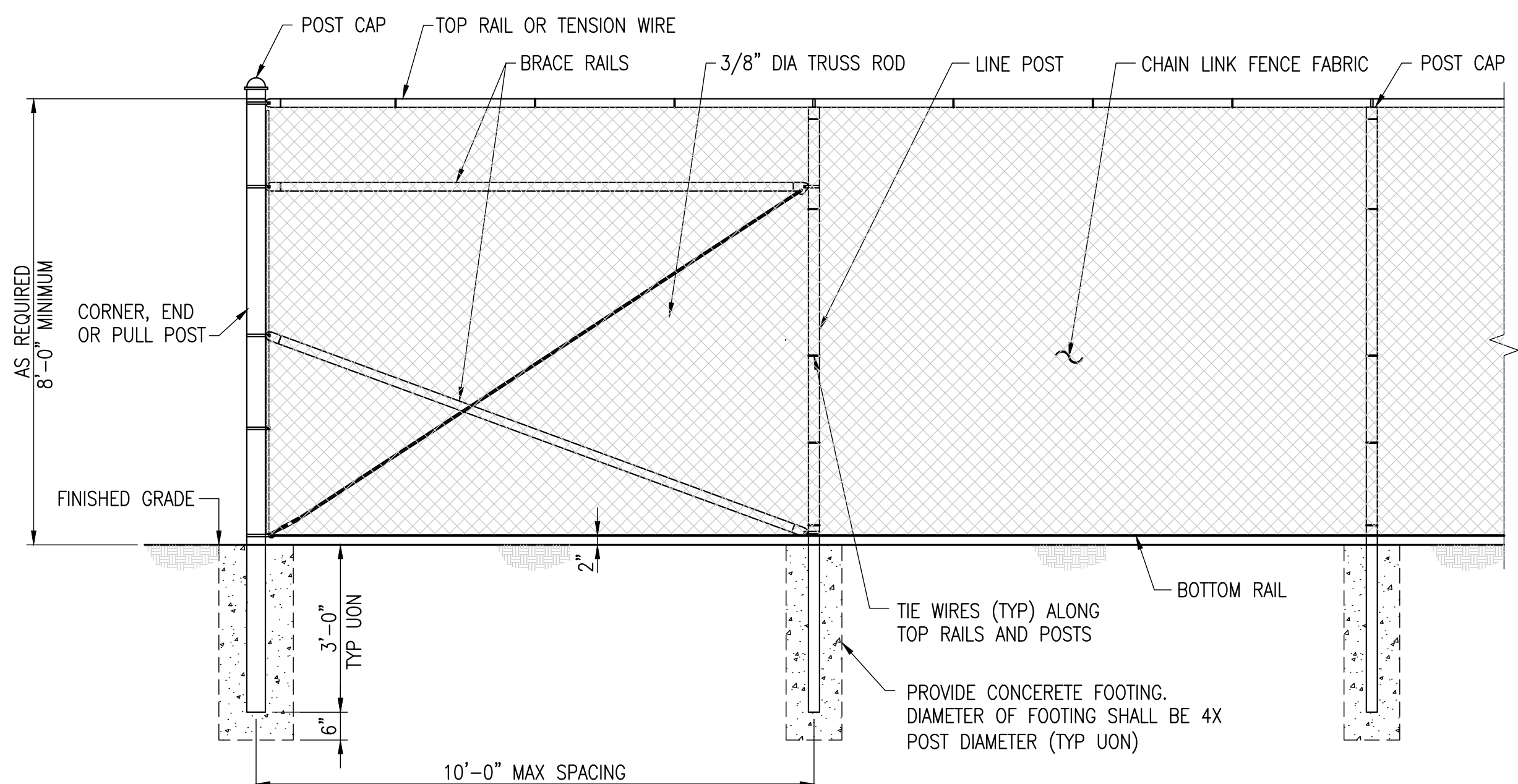
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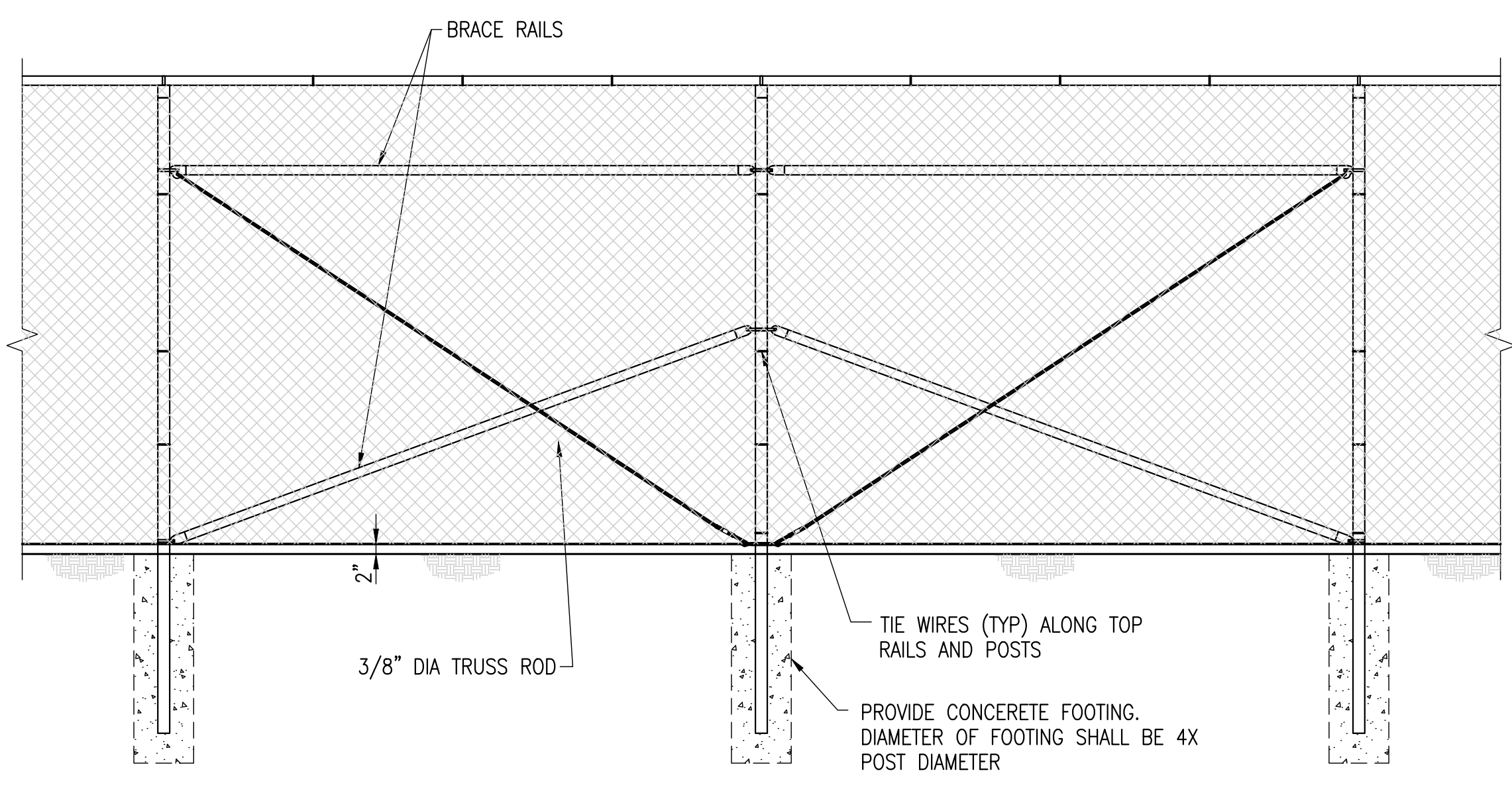
NO.	REVISION	DATE	BY

**CONSTRUCTION DETAILS**  
SOUTH JERSEY PORT CORPORATION  
**REPLACEMENT OF SECURITY PERIMETER FENCE**  
BALZANO MARINE TERMINAL  
CITY OF CAMDEN CAMDEN COUNTY NEW JERSEY



**TYPICAL FENCE AND CORNER PANEL ELEVATION**

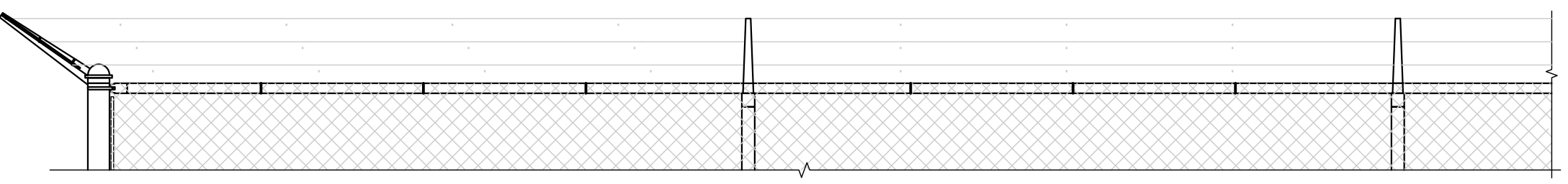
SCALE: 1" = 1'-0"



**TYPICAL FENCE AND BRACED PANEL ELEVATION**

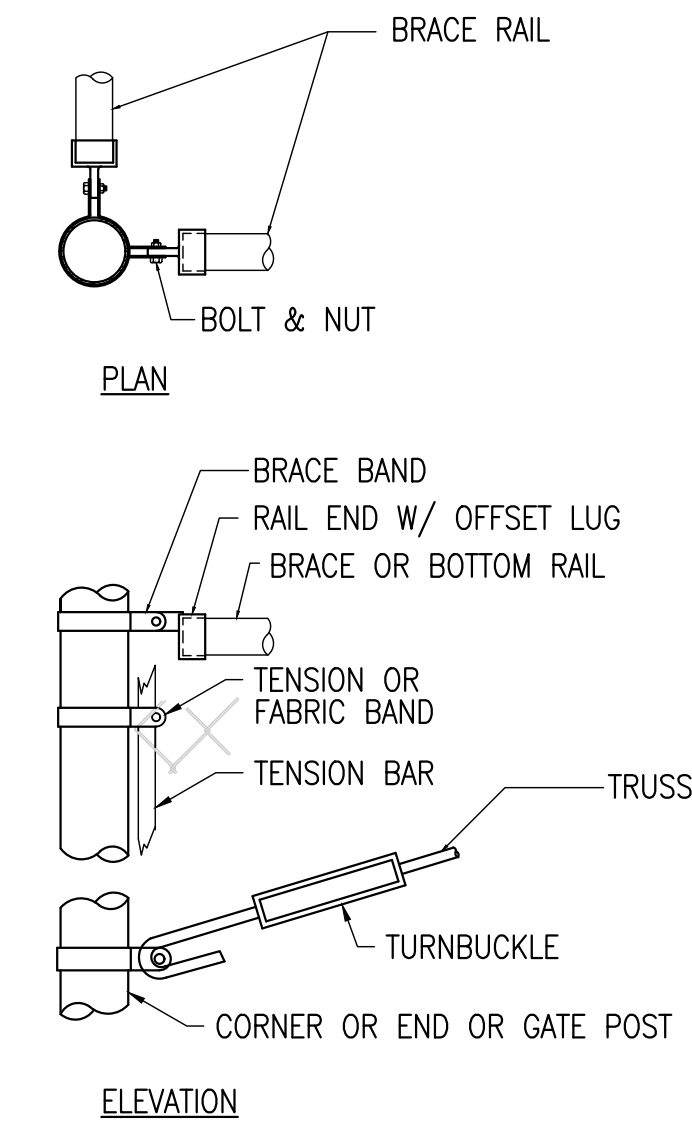
SCALE: 1" = 1'-0"

**NOTE (1):** A BOTTOM RAIL CAN BE ADDED FOR SECURITY, IT SHALL BE INSTALLED APPROX 3" ABOVE GRADE (A MINIMUM OF 2" AND A MAXIMUM OF 4"). HARDWARE SHALL BE WELDED OR SHOT NAILED TO POSTS AND RAILS IN ORDER TO SECURE IN PLACE. ATTACH FABRIC TO NEW BOTTOM RAIL TO ELIMINATE POSSIBILITY OF PEELING UP FABRIC.  
**NOTE (2):** SOME LOCATIONS MAY REQUIRE 8' OF FABRIC.



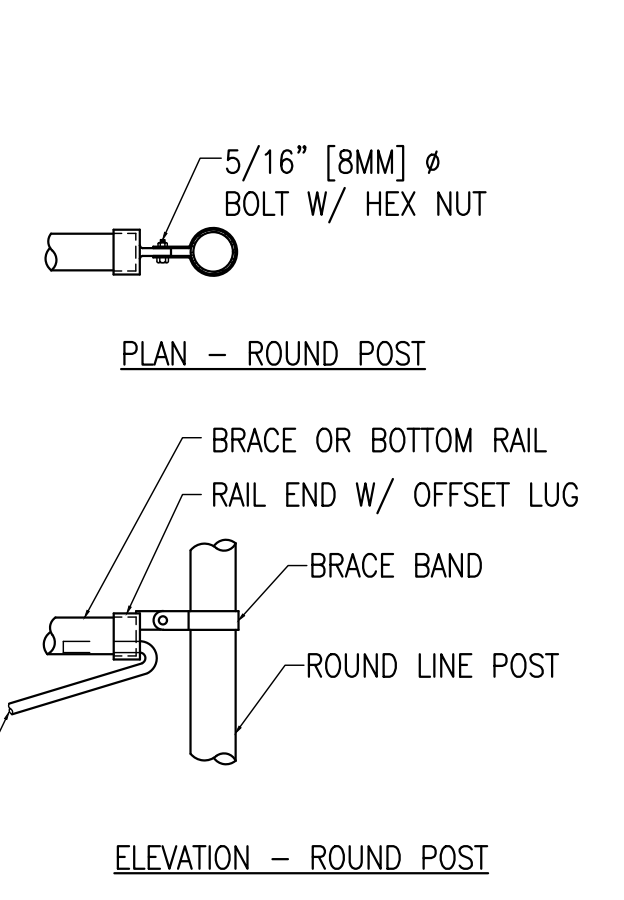
**TYPICAL 3 STRAND BARBED WIRE AND SINGLE EXTENSION ARM CONFIGURATION**

SCALE: 1" = 1'-0"



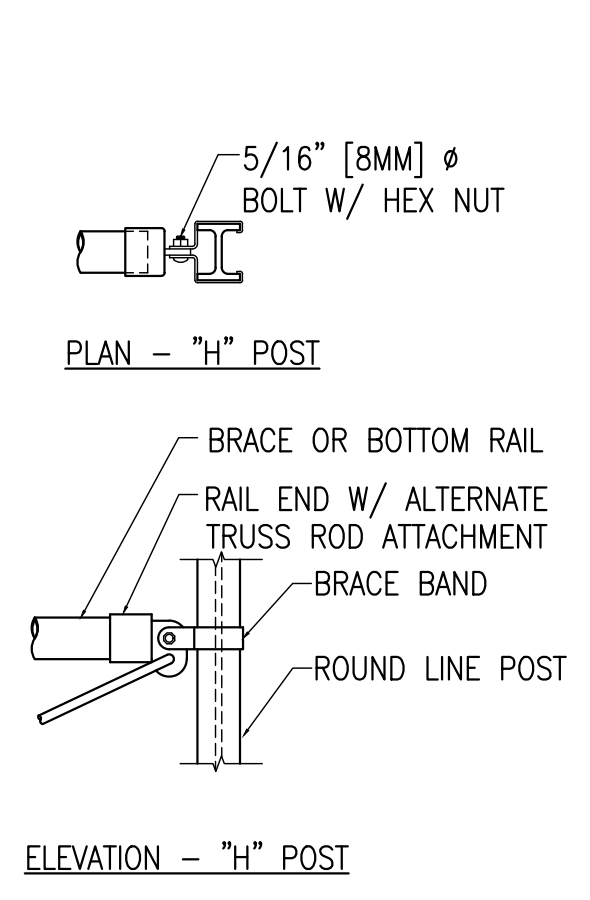
**CORNER OR END POSTS**

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

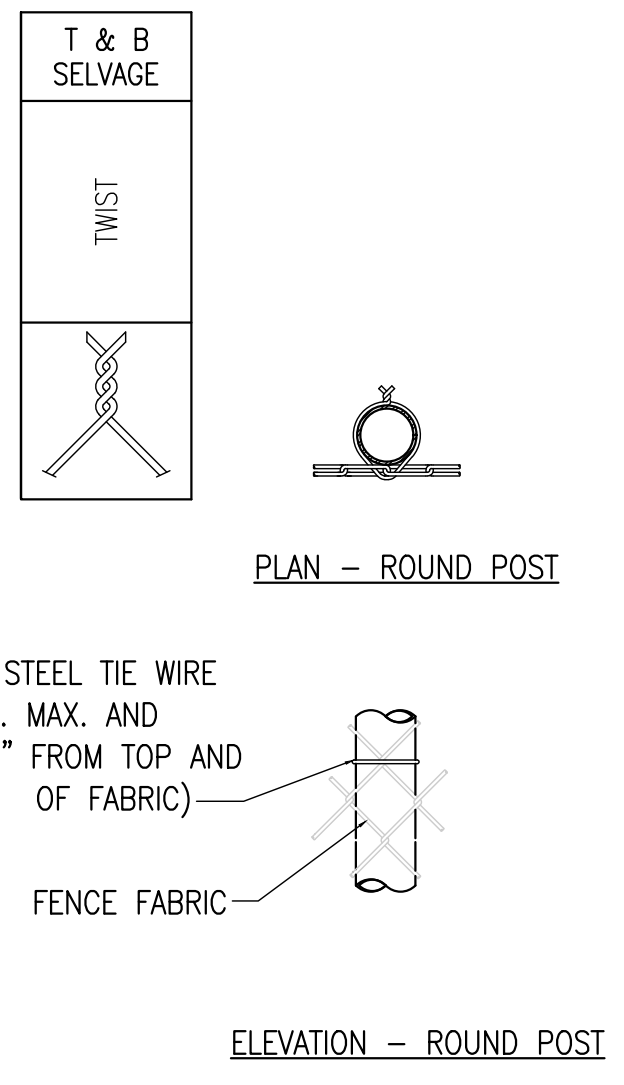


**LINE POST DETAILS**

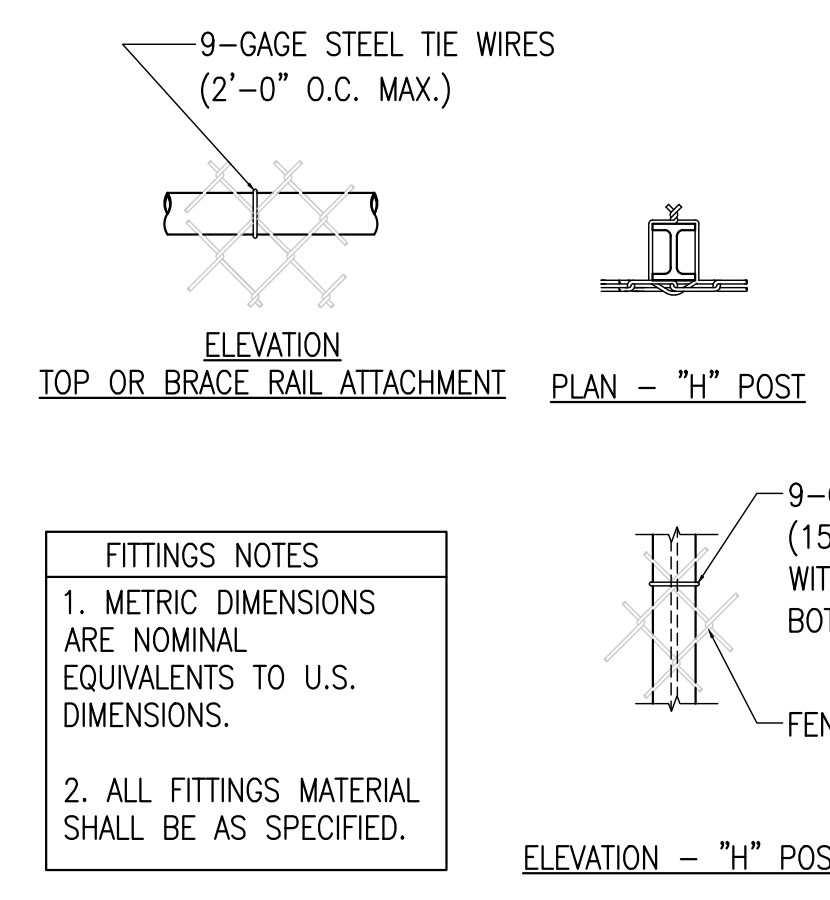
SCALE: 1 1/2" = 1'-0"



**ELEVATION - "H" POST**

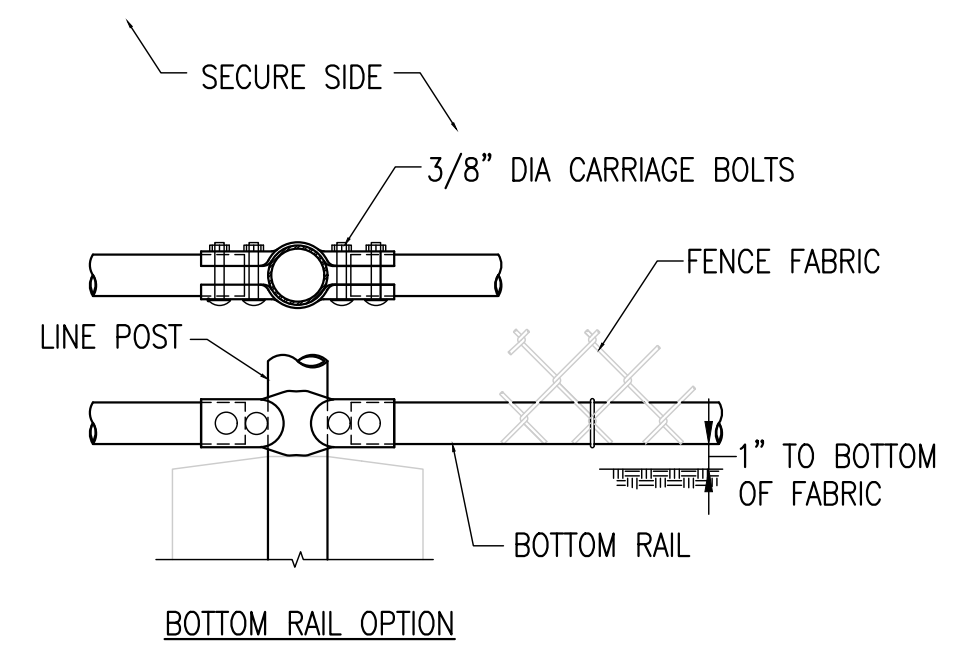


**ELEVATION - ROUND POST**



**FITTINGS NOTES**  
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.  
2. ALL FITTINGS MATERIAL SHALL BE AS SPECIFIED.

**ELEVATION - "H" POST**



**BOTTOM RAIL OPTION**

**CHAIN-LINK FENCE AND DETAILS**

**GRAPHIC SCALES**

1" = 1'-0"	0 6" 1' 2'
1 1/2" = 1'-0"	0 4" 8" 1'-4"

DRAWN BY	DESIGN BY	CHECKED BY	SCALE
CFC	DHS	WMB	AS NOTED
DATE	4/20/2021		
JOB No.	3965X001		8 of 12

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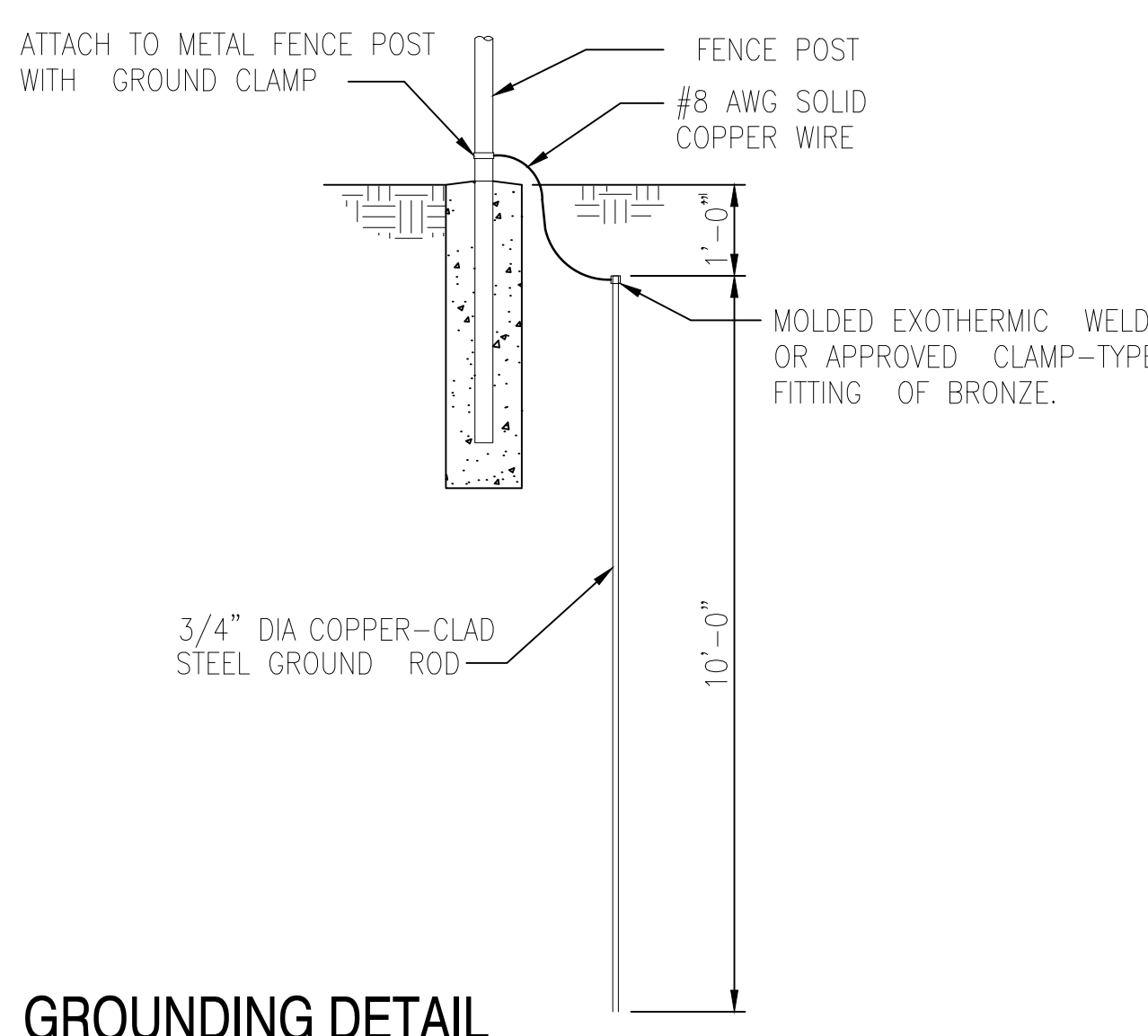
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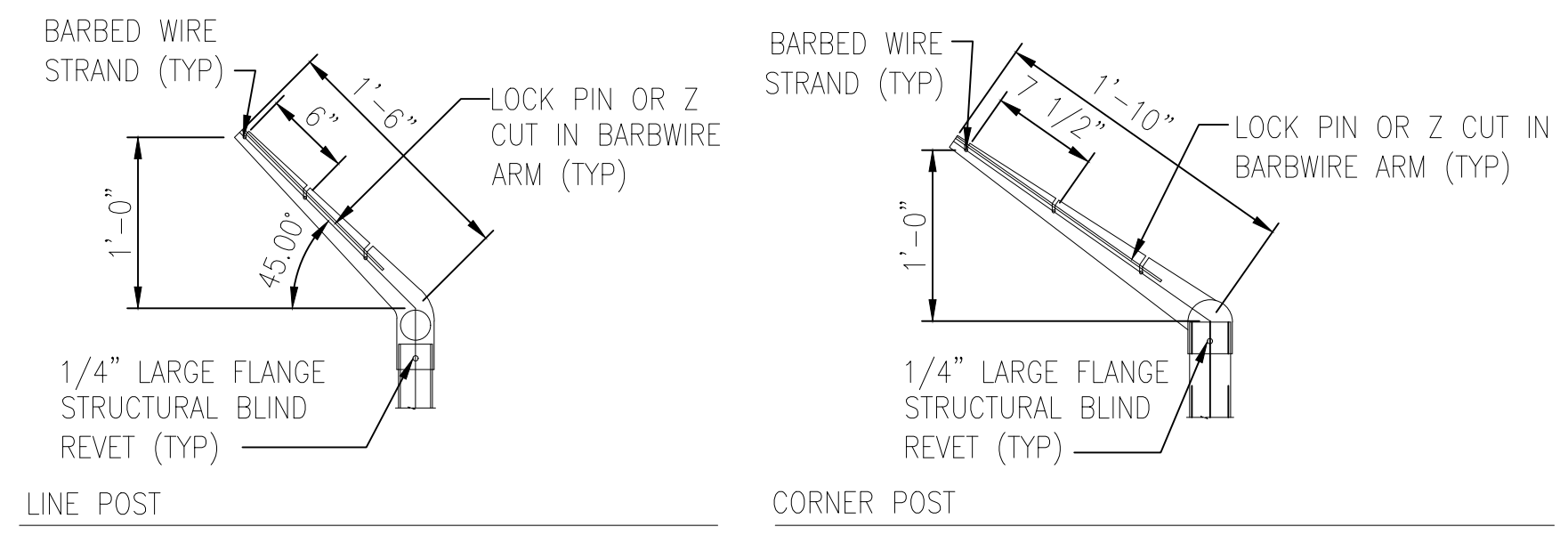
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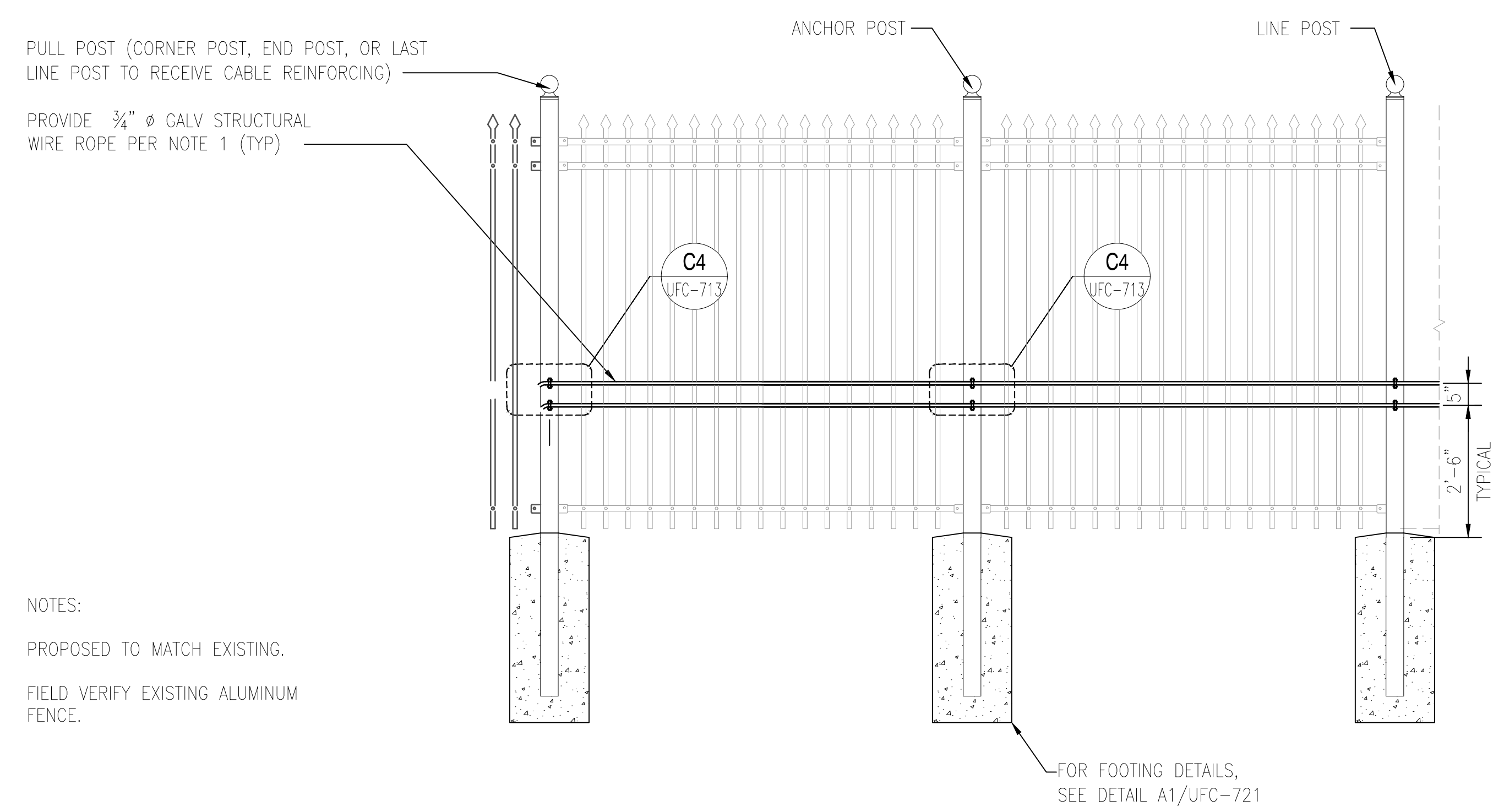
**CONSTRUCTION DETAILS**  
 SOUTH JERSEY PORT CORPORATION  
**REPLACEMENT OF SECURITY PERIMETER FENCE**  
 BALZANO MARINE TERMINAL  
 CITY OF CAMDEN CAMDEN COUNTY NEW JERSEY



**GROUNDING DETAIL**  
 NO SCALE



**SINGLE EXTENSION ARM DETAILS**  
 SCALE: 1" = 1'-0"



NOTES:  
 PROPOSED TO MATCH EXISTING.  
 FIELD VERIFY EXISTING ALUMINUM FENCE.

**TYPICAL ELEVATION OF ALUMINUM FENCE**  
 SCALE: 1/2" = 1'-0"

A1  
 UFC-720 | UFC-720

**ALUMINUM FENCE DETAILS**

**GRAPHIC SCALES**

1" = 1'-0"

1 1/2" = 1'-0"

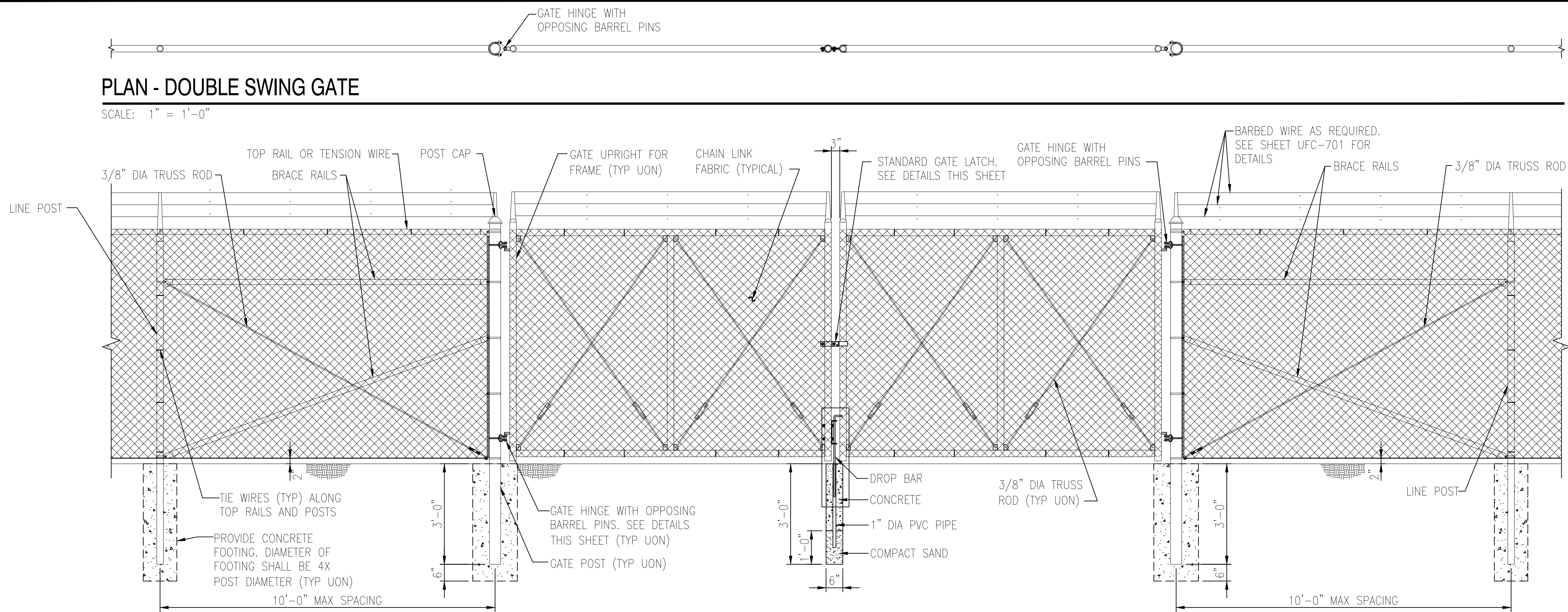
CD-2  
 CD-5

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
CFC	DHS	WMB	AS NOTED
DATE:	SHEET No.:		
4/20/2021	9 of 12		
JOB No.:	3965X001		

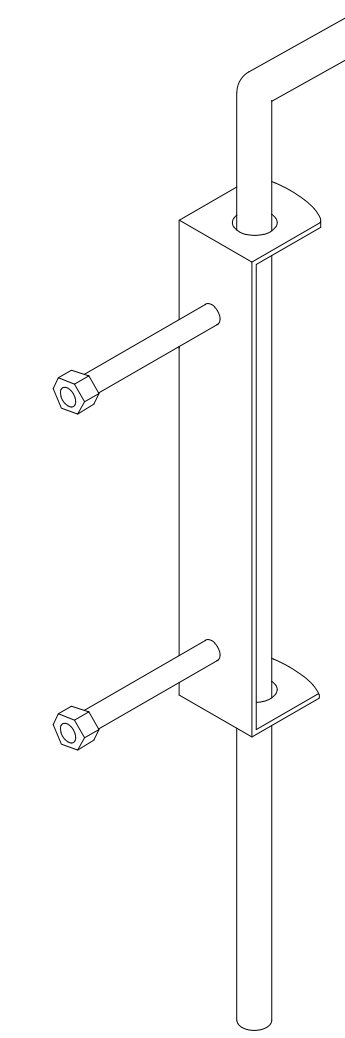
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**PLAN - DOUBLE SWING GATE**

SCALE: 1" = 1'-0"



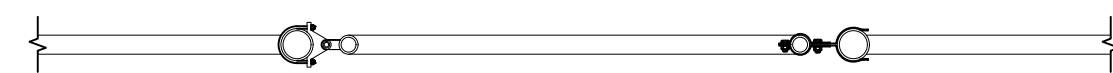
NOTE: PROVIDE ONE DROP BAR FOR EACH LEAF (TYP). ASSOCIATED GALV SLEEVES TO BE INSTALLED FLUSH WILL GRADE AT FULLY OPEN AND CLOSED POSITIONS. CONTRACTOR SHALL PROVIDE 6" LAYER OF #10 STONE BELOW BOTTOM OF SLEEVE TO ALLOW FOR DRAINAGE.



**DETAIL: DROP BAR**  
NOT TO SCALE

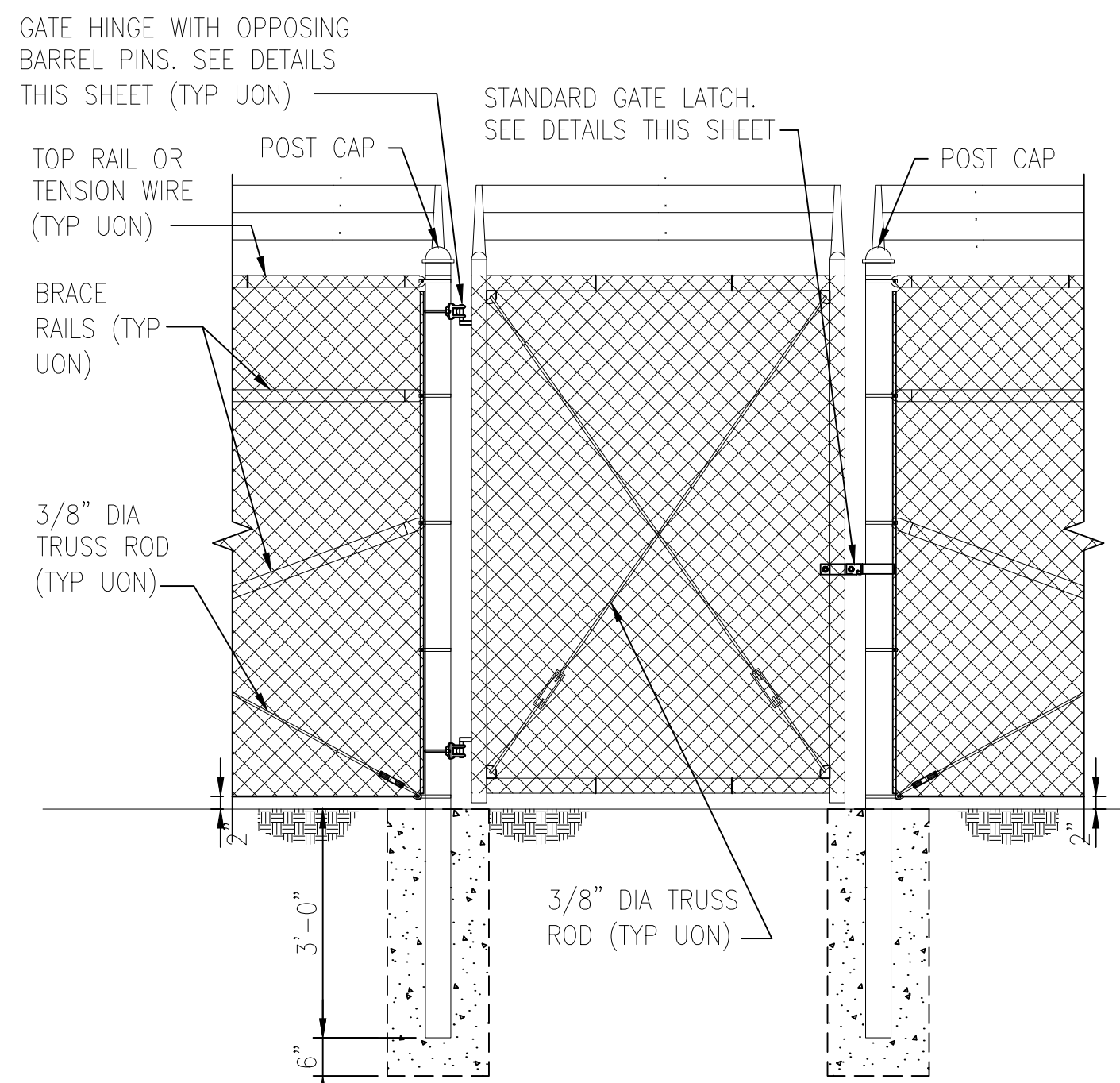
**TYPICAL 20' WIDE DOUBLE SWING GATE ELEVATION, G2, G3, G5, G7**

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



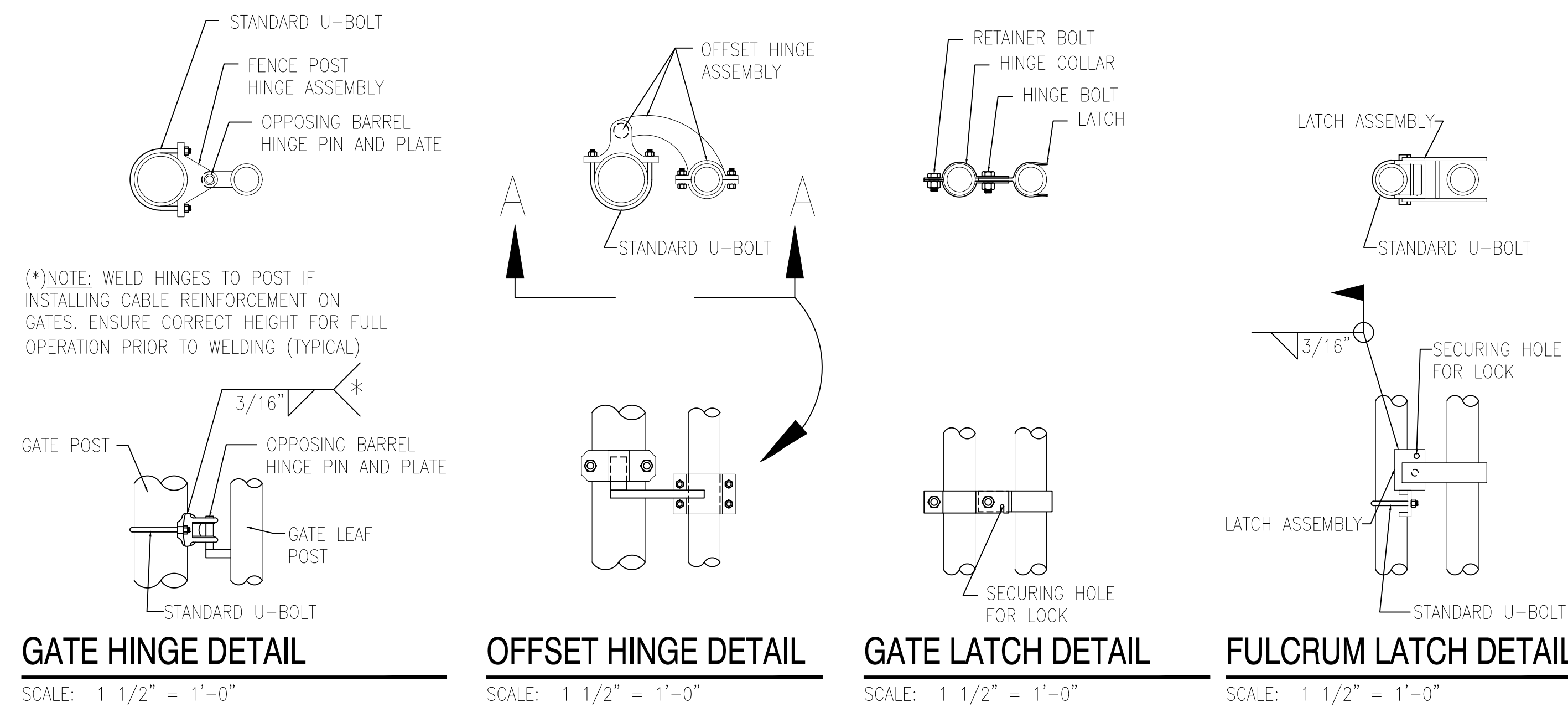
**PLAN SINGLE SWING GATE**

SCALE: 1" = 1'-0"



**5'-0" WIDE TYPICAL FENCE SINGLE SWING GATE ELEVATION, G8**

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



SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM HT INCLUDING BARBED WIRE	ACTUAL DIM	ACTUAL DIM
8'-0" [2438MM]	7'-10" [2388MM]	6'-8 1/2" [2045MM]

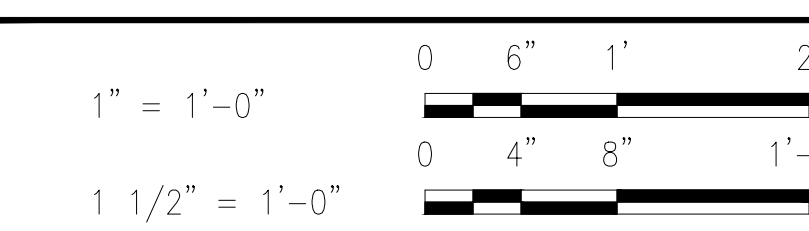
SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQUARE & ROUND SIZES	POST TO UPRIGHT
3'-0" [914MM]	2.5" [63.5MM] SQ x 3/16" TH OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
6'-0" [1829MM]	4" [102MM] SQ x 3/16" TH OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
12'-0" [3657MM]	6" [153MM] SQ x 3/16" TH OR 6.625" [168MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
19'-0" [5790MM]	8" [203MM] SQ x 1/4" TH OR 8.625" [219MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]

GATE POSTS & FOUNDATIONS: GATE POST SIZE AND ASSOCIATED FOOTING DIAMETER TO BE DETERMINED BY MANUFACTURER, BASED ON LEAF WEIGHT & DIMENSION, BUT NOT LESS THAN DIAMETER SHOWN ON THESE DRAWINGS. MINIMUM FOOTING DIAMETERS (TO BE FILLED W/4000 PSI CONC): 40" Ø FOR 8" POST; 36" Ø FOR 6" POST; 24" Ø FOR 4" POST; OTHER SIZES TO BE DESIGNED BY MFR OR KTR. NO FOOTING WIDTH SHALL BE LESS THAN 4(X) THE POST WIDTH.

NOTE: IF GATE HINGES ARE NOT OPPOSING (AS SHOWN ABOVE) OR LEAF IS NOT LOCKED MECHANICALLY TO THE HINGES, WELD AN ANGLE, PLATE, OR BLOCK ABOVE HINGE TO RESTRICT LEAF FROM BEING REMOVED OR LIFTED OFF. RESTRICTION SHALL NOT HINDER OPERATION OF GATE.

**BARBED WIRE ARRANGEMENT DETAILS**

**GRAPHIC SCALES**



**RVE**  
1901  
**REMINGTON & VERNICK ENGINEERS**  
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**CONSTRUCTION DETAILS**  
SOUTH JERSEY PORT CORPORATION  
**REPLACEMENT OF SECURITY PERIMETER FENCE**  
BALZANO MARINE TERMINAL  
CITY OF CAMDEN  
CAMDEN COUNTY  
NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
CFC	DHS	WMB	AS NOTED
DATE:	4/20/2021	JOB No.:	3965X001
SHEET No.:			10 of 12

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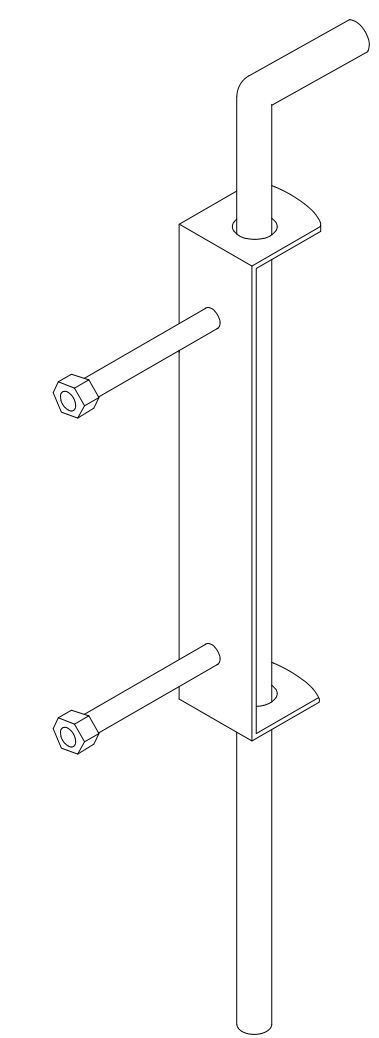
NO.	REVISION	DATE	BY

**CONSTRUCTION DETAILS**

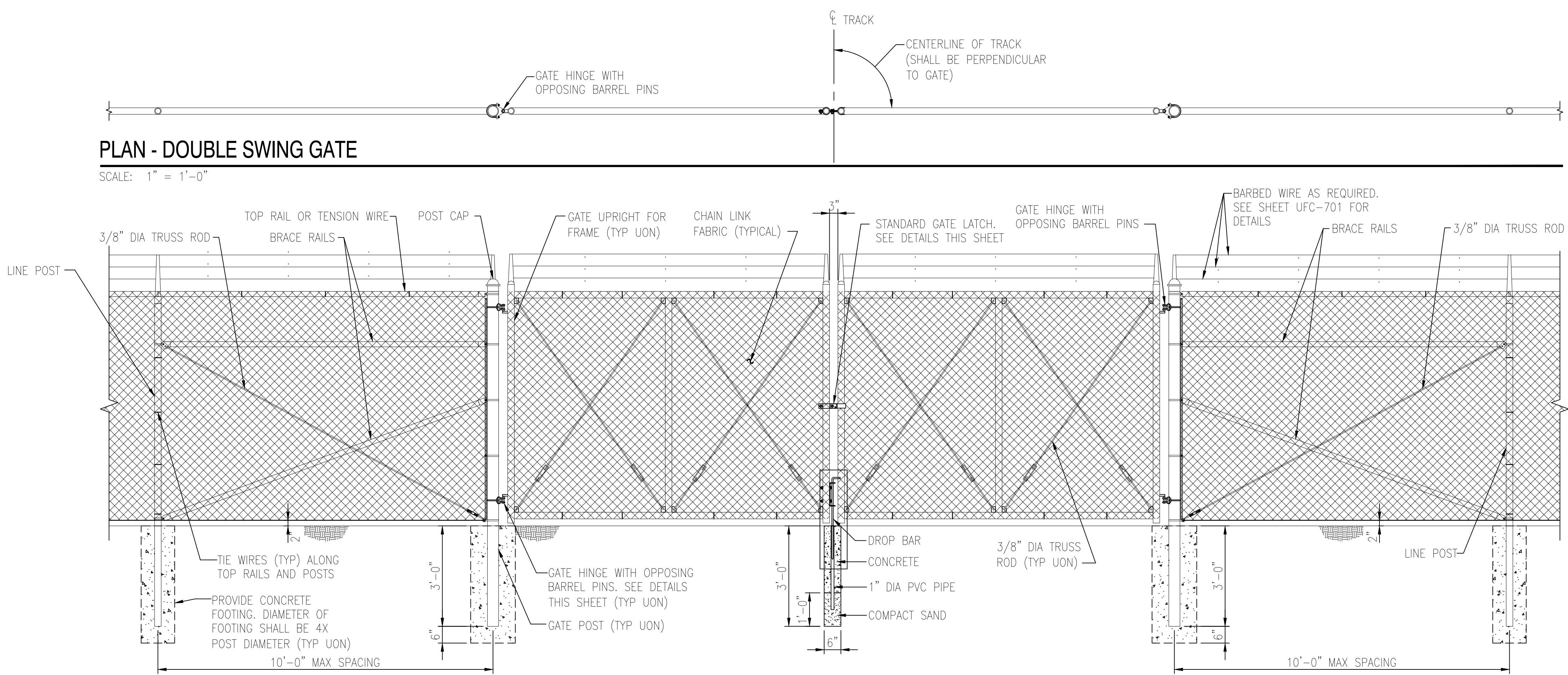
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SHEET No.:	11 of 12		

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**DETAIL: DROP BAR**  
NOT TO SCALE



**PLAN - DOUBLE SWING GATE**  
SCALE: 1" = 1'-0"

**TYPICAL 21' WIDE DOUBLE SWING GATE ELEVATION (RAIL GATE), G1, G6**

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

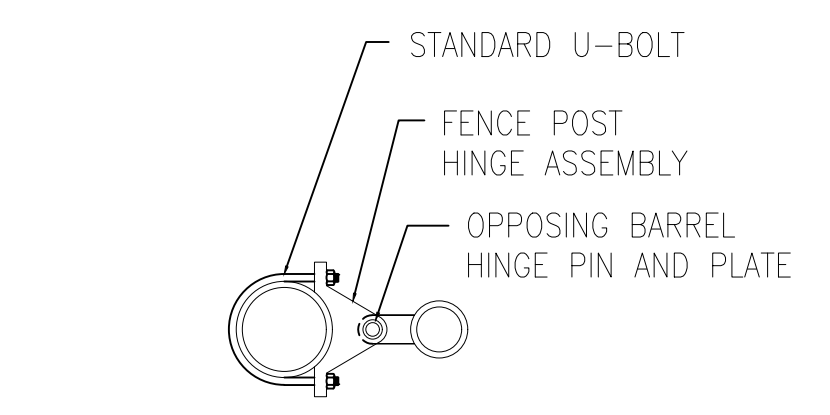
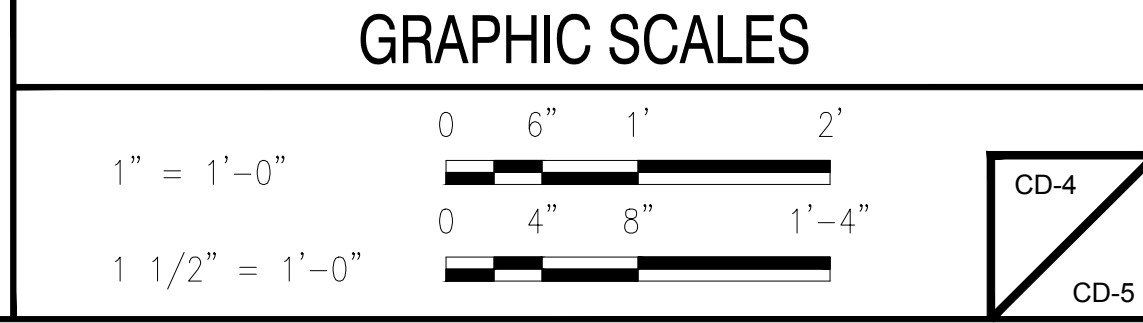
SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
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SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
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THROUGH	OR	
6'-0" [1829MM]	2.875" [73MM] OD	
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12'-0" [3657MM]	4" [102MM] OD	
12'-0" [3657MM]	6" [153MM] SQ x 3/16" TH	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
THROUGH	OR	
19'-0" [5790MM]	6.625" [168MM] OD	
19'-0" [5790MM]	8" [203MM] SQ x 1/4" TH	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
THROUGH	OR	
23'-0" [7010MM]	8.625" [219MM] OD	

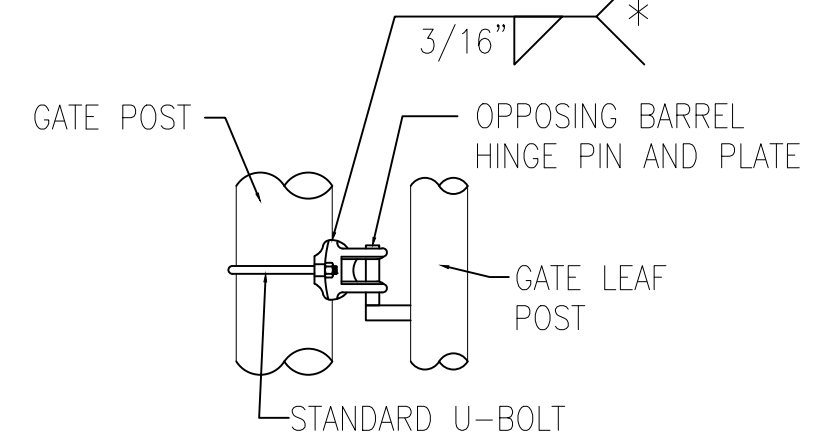
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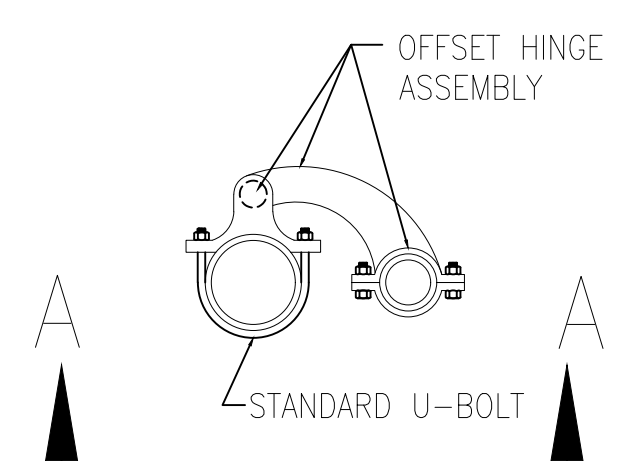
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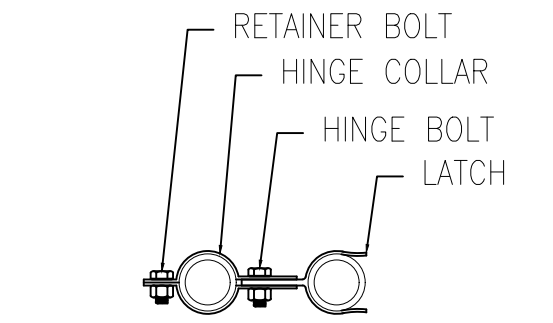
(\*NOTE: WELD HINGES TO POST IF INSTALLING CABLE REINFORCEMENT ON GATES. ENSURE CORRECT HEIGHT FOR FULL OPERATION PRIOR TO WELDING (TYPICAL))



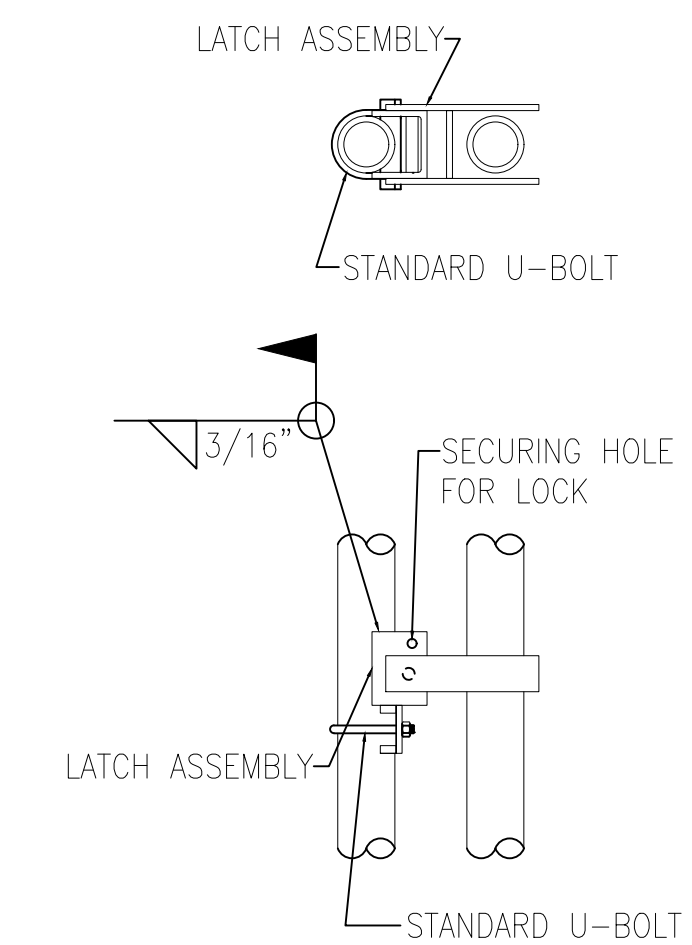
**GATE HINGE DETAIL**  
SCALE: 1 1/2" = 1'-0"



**OFFSET HINGE DETAIL**  
SCALE: 1 1/2" = 1'-0"



**GATE LATCH DETAIL**  
SCALE: 1 1/2" = 1'-0"



**FULCRUM LATCH DETAIL**  
SCALE: 1 1/2" = 1'-0"



DATE: \_\_\_\_\_  
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ADDENDUM NO.	4-ADDED SHEET 12	DATE	BY	CHK

**CONSTRUCTION DETAILS**

SOUTH JERSEY PORT CORPORATION  
 REPLACEMENT OF SECURITY PERIMETER FENCE  
 BALZANO MARINE TERMINAL  
 CITY OF CAMDEN CAMDEN COUNTY NEW JERSEY

DRAWN BY: CFC    DESIGN BY: DHS    CHECKED BY: WMB    SCALE: AS NOTED  
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 JOB No.: 3965X001

### LAYOUT OF REINFORCING

DESIGNER OF RECORD TO LOCATE DEADMEN ON SITE PLANS, SATISFYING SPACING CRITERIA, OVERLAPS, AND FENCE CORNERS / TURNING POINTS. AT GATES IT IS DESIRABLE TO HAVE TRAFFIC / EITHER SIDE OF A MEDIAN TO OPERATE AND PROTECT INDEPENDENTLY (NOT UTILIZING THE SAME DEADMAN SYSTEMS). THEREFORE DEADMEN SHOULD BE PLACED IN THE MEDIAN TO ANCHOR THE GATE REINFORCING FOR EACH SIDE OF THE ROAD. IF THERE IS NO PHYSICAL MEDIAN (MERELY PAINTED LINES), LIMITED ROOM, OR UTILITY CONFLICTS THAT DO NOT ALLOW FOR DEADMEN PLACEMENT BETWEEN THE GATES, ENSURE THAT THE CABLING FOR BOTH GATES ARE CONNECTED-- EITHER DIRECTLY OR VIA AN INTERMEDIATE CABLE WHICH CREATES AN INTEGRAL CABLE SYSTEM ACROSS THE ENTIRE GATE AREA.

### MODIFICATIONS TO TYPICAL DESIGN

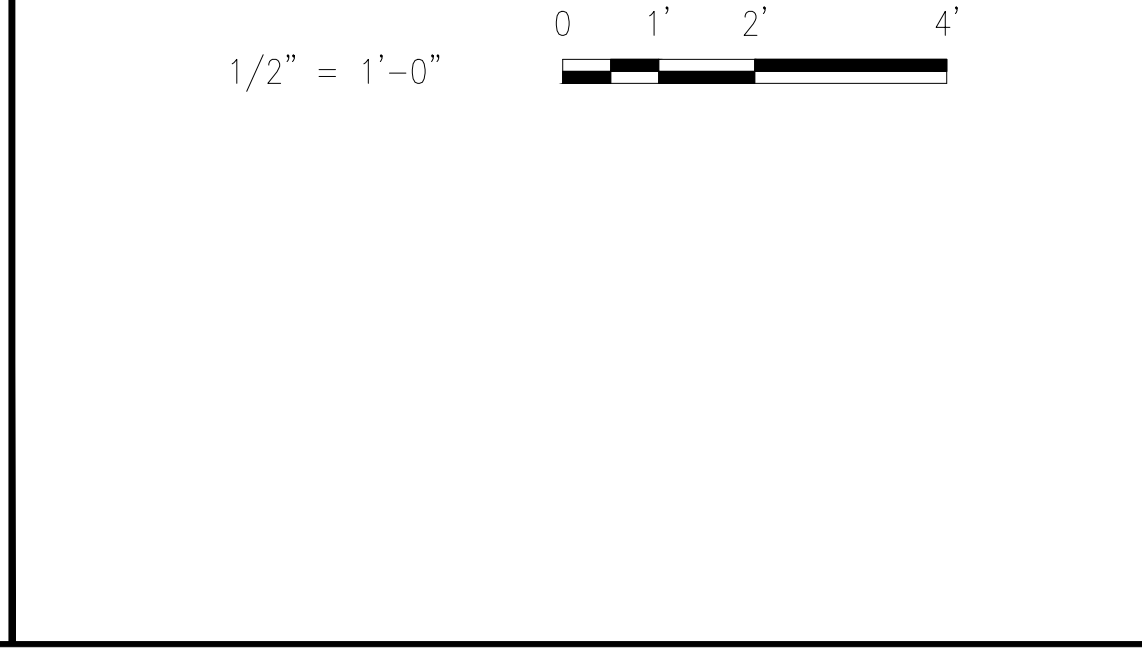
IF LARGER DESIGN THREATS OR CUSTOMER REQUESTS INDICATE A NEED FOR GREATER SECURITY, MORE 3/4" Ø CABLES CAN BE UTILIZED OR THE CABLES CAN BE UPGRADED TO 1" Ø. BOTH SCENARIOS REQUIRE THE DEADMAN (WHICH WILL NEED TO BE LARGER) TO BE DESIGNED BY A PROFESSIONAL ENGINEER TO SATISFY THE CRITERIA OUTLINED IN REINF NOTE 19 ON THIS SHEET. FOR BIDDING PURPOSES, ESTABLISH A UNIT COST FOR ADDITIONAL EXCAVATION AND NEW CONCRETE PER CUBIC FOOT.

IF 1" Ø CABLE IS USED, SPECIFICATIONS SHALL MATCH REINF NOTE 1 ON THIS SHEET, EXCEPT THE CABLE SHALL HAVE A MINIMUM BREAKING STRENGTH OF 70,000 POUNDS (35 TONS). OTHER COMPONENTS, SUCH AS EYEBOLTS, U-BOLTS, ROPE CLIPS, THIMBLES, AND OTHER ASSOCIATED HARDWARE SHALL BE SIZED ACCORDINGLY.

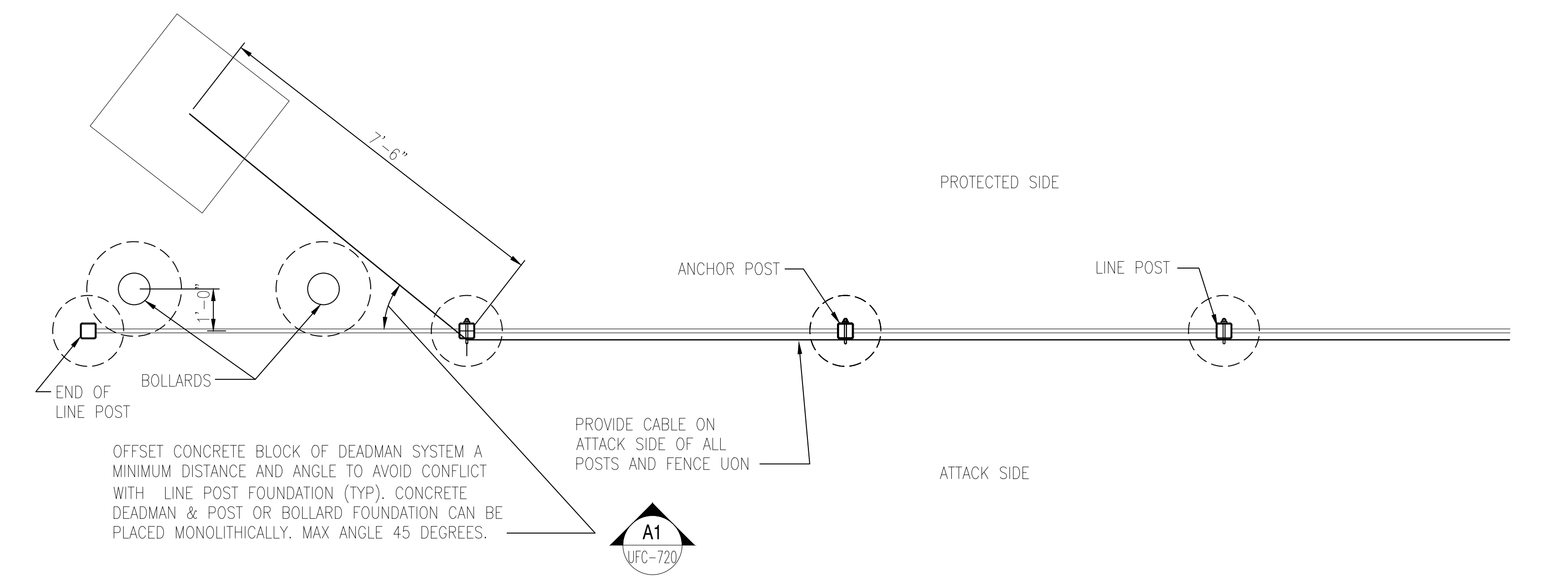
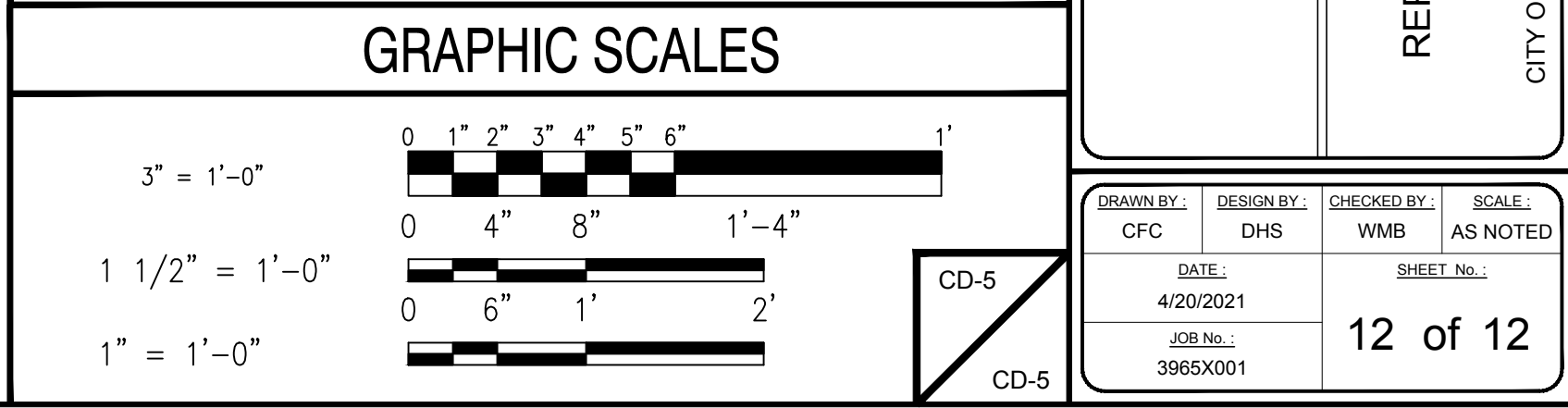
### REINFORCING NOTES

- REINFORCING CABLES SHALL BE U.S. DOMESTIC MINIMUM 3/4" Ø 6x19 CLASS WIRE ROPE, REGULAR LAY, EXTRA IMPROVED FLOW STEEL (EIP), INDEPENDENT WIRE ROPE CORE (IWRC), CLASS A CONFORMING TO ASTM A1023 AND GALVANIZED IN ACCORDANCE WITH ASTM A475, & HAVE A MINIMUM BREAKING STRENGTH OF 40,000 POUNDS (20 TONS). CABLES SHALL HAVE A BLACK VINYL COATING, BUT SHALL NOT BE IMPREGNATED.
- CABLES SHALL BE CONTINUOUS FROM DEADMAN TO DEADMAN. NO SPLICES IN CABLE SHALL BE ALLOWED. CABLE BARRIER SHALL BE INSTALLED BETWEEN FENCE POST AND FENCE FABRIC AS PER PLANS. U-BOLTS SHALL BE INSTALLED PERPENDICULAR TO THE LAY OR THE STRANDS OF THE WIRE ROPE AND SHALL BE TIGHTENED AFTER SAG IN CABLE BARRIER HAS BEEN REMOVED. CONCRETE DEADMAN SPACING SHALL BE AT MAXIMUM 200' INTERVALS & TURNING POINTS (EXTERNAL CORNERS).
- WIRE ROPE ENDS SHALL TERMINATE AROUND TURNBUCKLES, GATE POSTS OR EXTRA HEAVY-DUTY WIRE ROPE THIMBLES (AT GATES). THESE TERMINATIONS REQUIRE 18" MINIMUM OF ROPE FOR TURN BACK AND A MINIMUM OF (4)- CLIPS EACH (EQUAL SPACING).
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS.
- DEADMEN TO BE INSTALLED ON THE SECURED SIDE (INTERIOR) OF THE FENCE; WHILE CABLES SHOULD BE INSTALLED ON THE EXTERIOR SIDE OF POST.
- PROVIDE NECESSARY SLACK IN CABLES (GATES ONLY) TO ALLOW FOR FULL SWING OF ALL GATE LEAVES.
- OFFSET DEADMAN SYSTEMS FROM FENCELINE (PLAN VIEW) TO AVOID CONFLICT WITH EXISTING FENCE POSTS.
- ALLOW EPOXY ANCHOR BOLTS (MIN 2 DAYS) & CONCRETE DEADMEN (MIN 7 DAYS) TO CURE, PRIOR TO APPLYING LOADS (INSTALLING TURNBUCKLES & STRAIGHTENING CABLES).
- ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.1. ALL WELD MATERIAL SHALL BE E70XX ELECTRODES.
- STRUCTURAL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NINTH EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION FOR ALLOWABLE STRESS DESIGN."
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 AND SHALL HAVE A MINIMUM YIELD STRESS OF 36000 PSI.
- ALL STRUCTURAL STEEL MEMBERS AND HARDWARE USED IN CABLE ANCHORING SYSTEM SHALL BE HOT-DIPPED GALVANIZED. ANY AREAS WHERE COATING IS DAMAGED OR REMOVED SHALL BE COVERED WITH A ZINC RICH COMPOUND.
- TURNBUCKLES SHALL BE 1/4"x18", TYPE I, GALVANIZED IN ACCORDANCE WITH ASTM F1145.
- WIRE ROPE CLAMPS SHALL BE TYPE I, GALVANIZED, IN ACCORDANCE WITH FS FF-C-450.
- ALL THREADED RODS, U-BOLTS, AND BOLTS SHALL CONFORM TO ASTM A307 AND SHALL BE INSTALLED WITH F844 WASHERS AND A563 NUTS. ENTIRE BOLT ASSEMBLY SHALL BE GALVANIZED. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- ZINC RICH COMPOUND FOR REPAIRS SHALL BE 95% METALLIC ZINC, BY WEIGHT IN DRIED FILM; CONFORMING TO FED SPEC DOD-P-21035A & MEETING MILITARY SPEC MIL-P-26915A. INSTALL AT LEAST TWO COATS, 4 MILS MIN TOTAL THICKNESS.
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSL. THE MINIMUM CONCRETE COVER SHALL BE 3", UNLESS OTHERWISE NOTED.
- ALL ITEMS NOT NOTED AS "EXIST" OR "EXISTING" SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.
- DESIGN CRITERIA:  
 UFC 4-022-03 "SECURITY ENGINEERING: FENCES, GATES AND GUARD FACILITIES"  
 UFC 4-022-02 "SELECTION AND APPLICATIONS OF VEHICLE BARRIERS."
- IF CABLE REINFORCING GATES, PROVIDE EYEBOLTS TO SECURE CABLE TO GATE PICKETS @ 24" OC & U-BOLTS TO SECURE TO GATE UPRIGHTS. MODIFY AS NEEDED FOR OPERATION.

### GRAPHIC SCALES

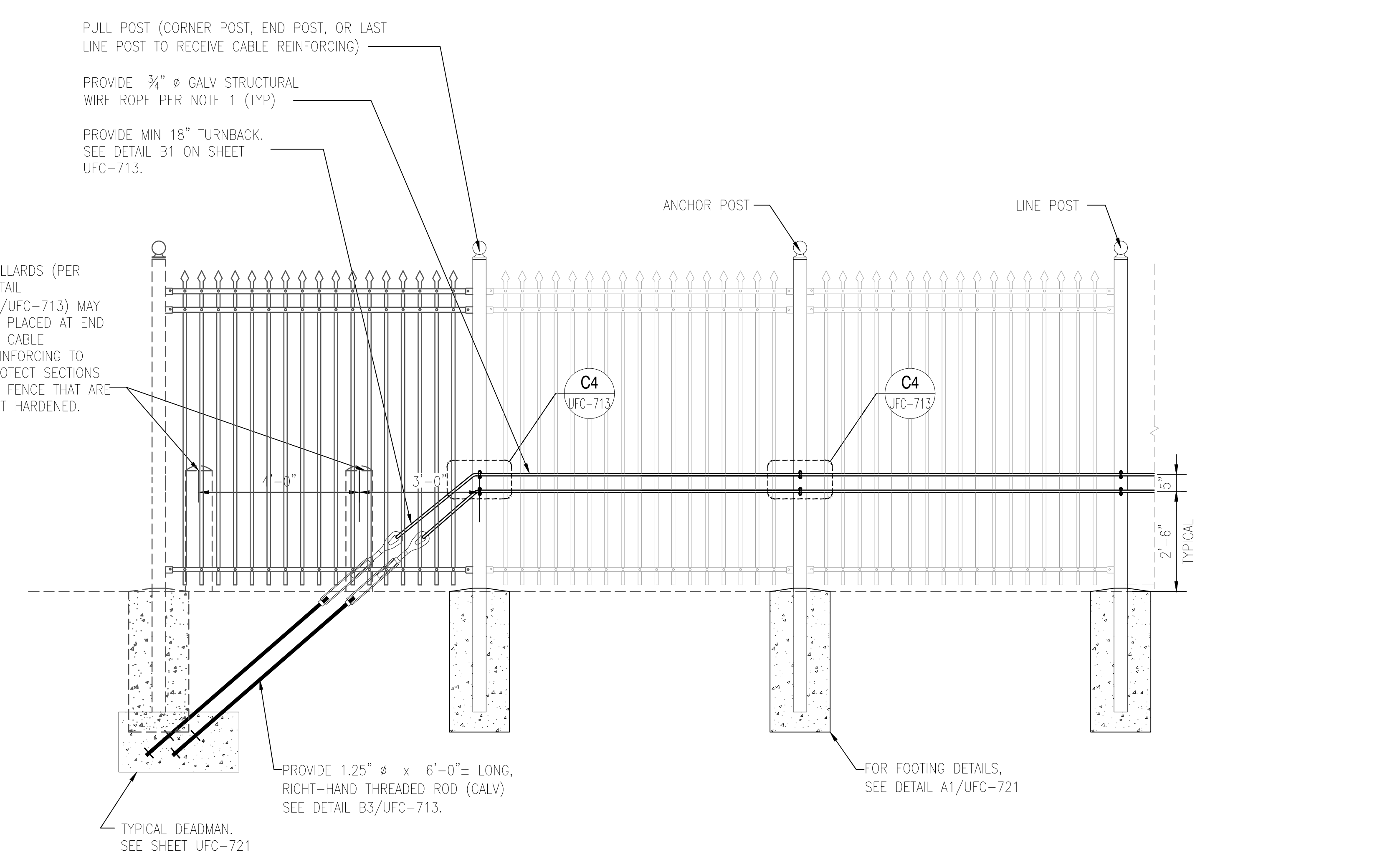


### TYPICAL CABLE REINFORCED ORNAMENTAL FENCE END POST



**TYPICAL PLAN OF END POST DEADMAN AND LINE POST LAYOUT**

SCALE: 1/2" = 1'-0" CIVIL DWGS UFC-720



**TYPICAL ELEVATION OF END POST DEADMAN AND LINE POST LAYOUT**

SCALE: 1/2" = 1'-0" UFC-720 UFC-720