

CLEARWATER

BRIGHT AND BEAUTIFUL • BAY TO BEACH

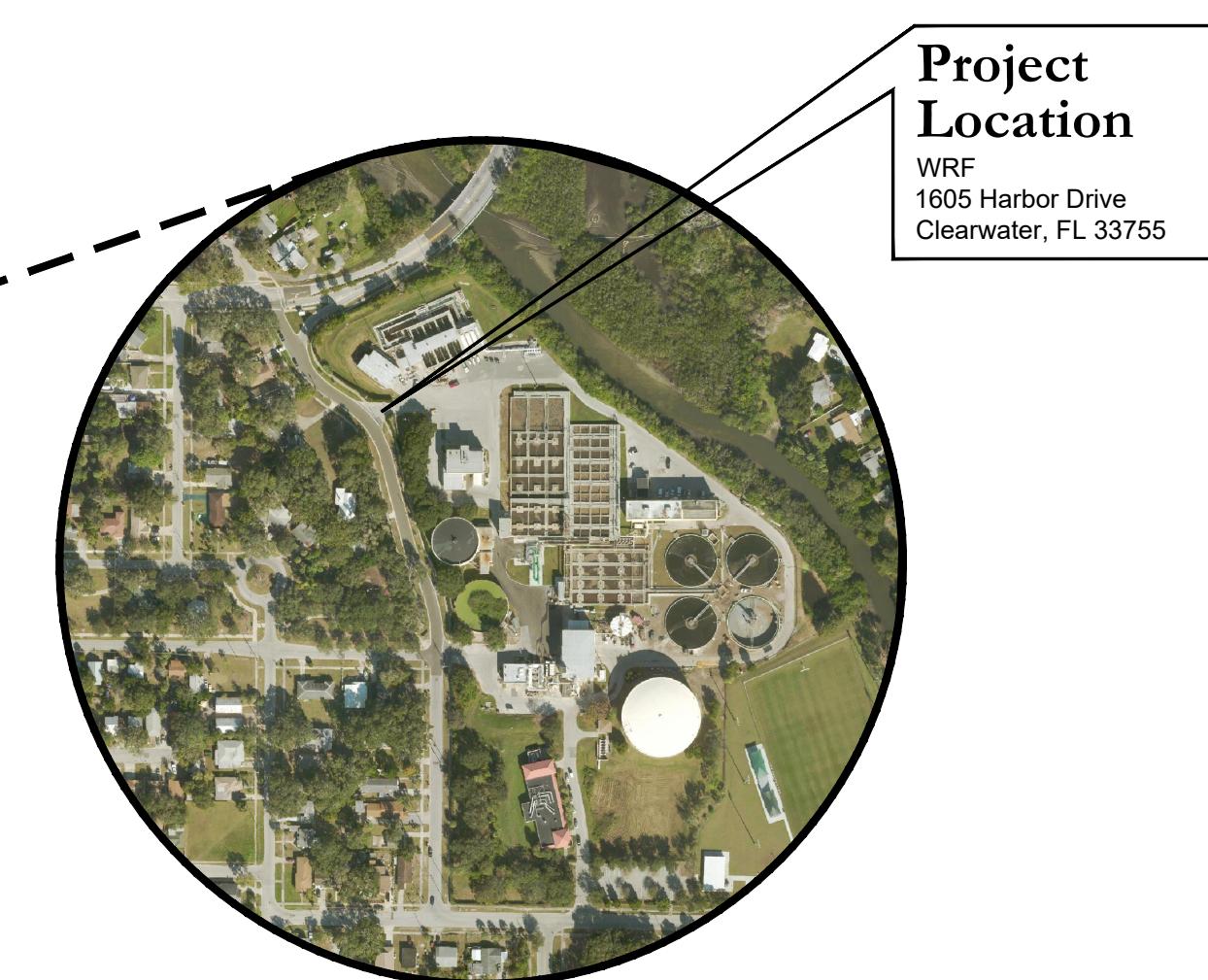
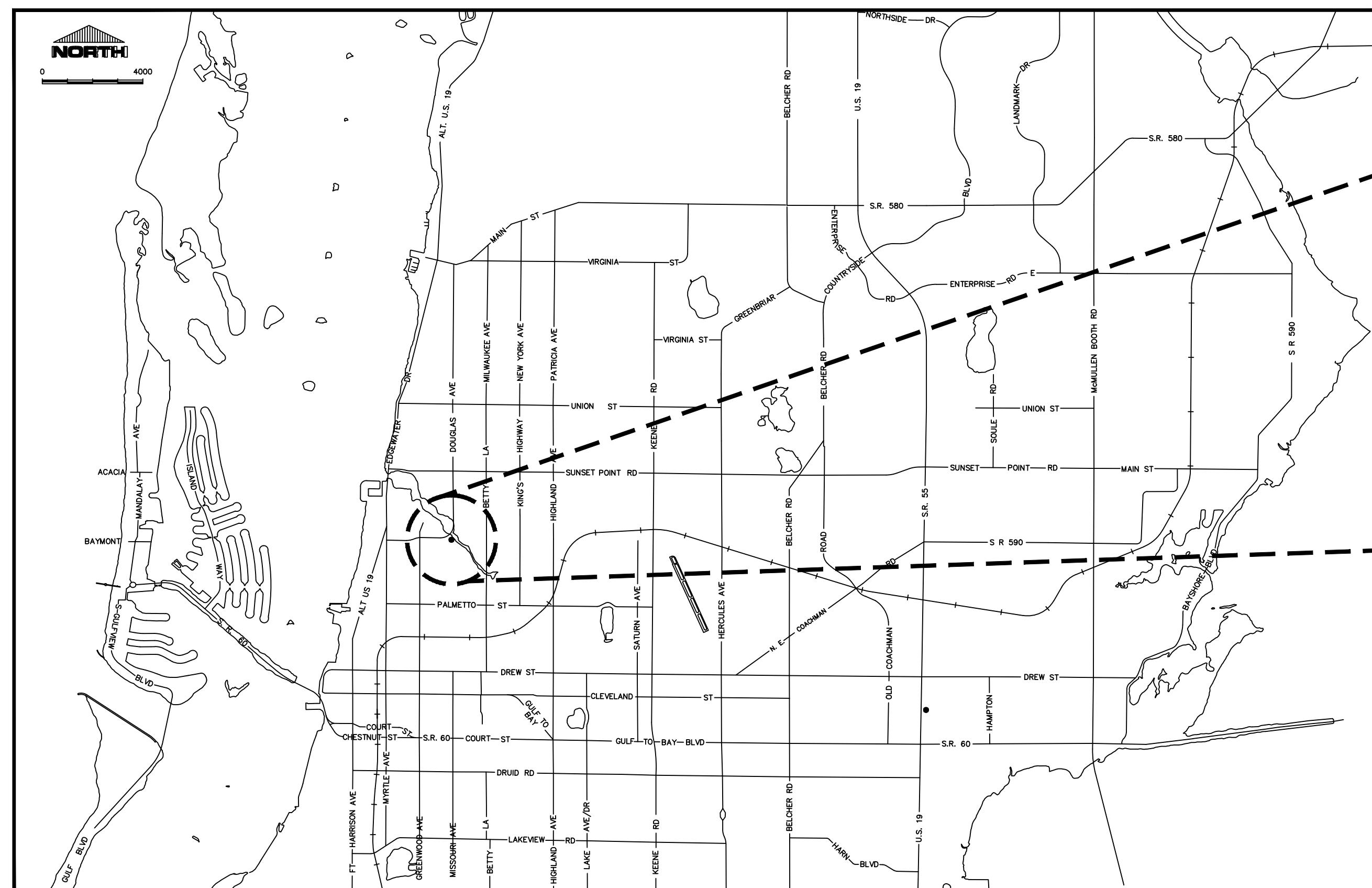
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SHEET INDEX

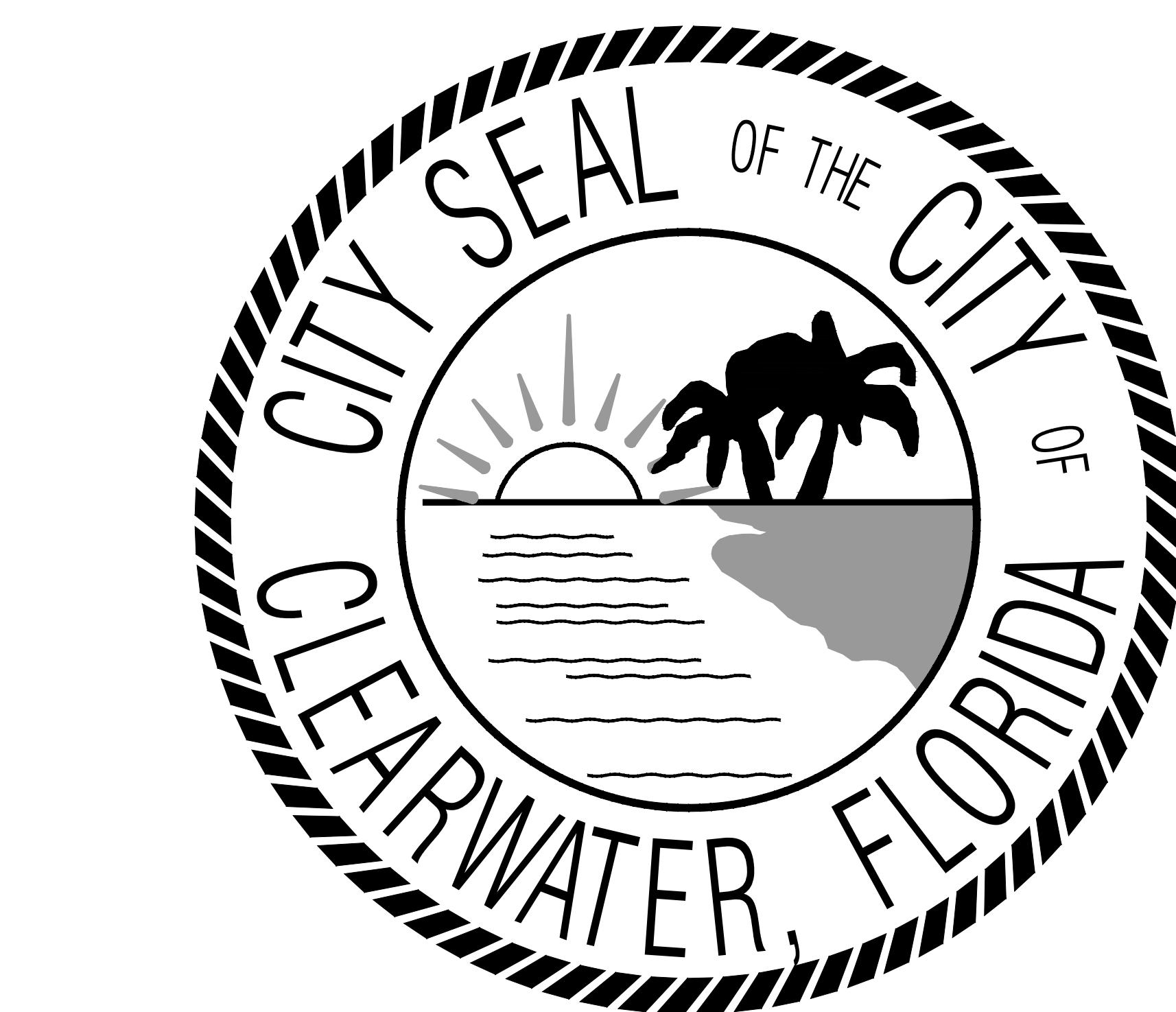
SHEET NUMBER	SHEET NAME	SHEET TITLE
GENERAL		
1	G-0001	COVER SHEET
2	G-0002	GENERAL NOTES
3	G-0003	LEGEND AND ABBREVIATIONS
CIVIL		
4	C-1000	SITE PLAN
5	C-1001	DETAILS
ELECTRICAL		
6	E-1000	ELECTRICAL PLAN

MS

WRF CHLORINE CONTACT CHAMBER



Project Location
WRF
1605 Harbor Drive
Clearwater, FL 33755



CITY OFFICIALS

Frank Hibbard	Seat 1
Mark Bunker	Councilmember-Seat 2
Kathleen Beckman	Councilmember-Seat 3
David Allbritton	Councilmember-Seat 4
Hoyt Hamilton	Councilmember-Seat 5
William B. Horne II	City Manager

TARA L. KIVETT, P.E.
City Engineer

Approved By

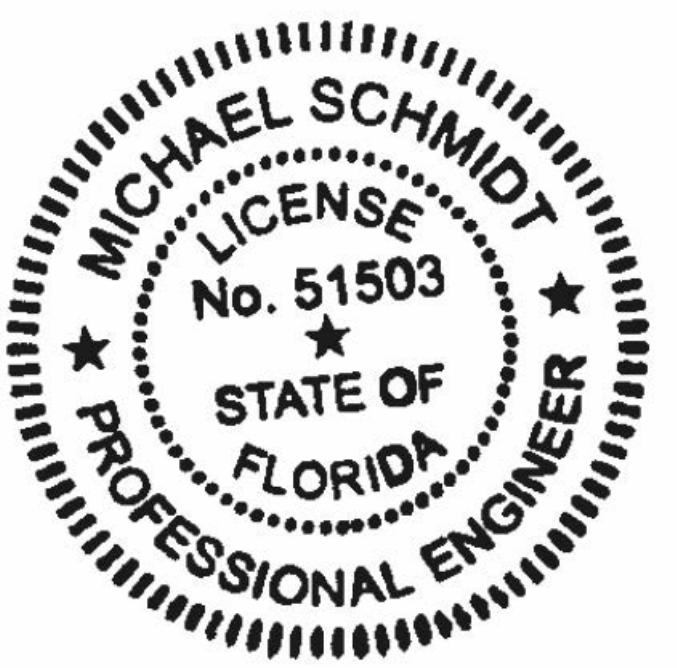
CITY ENGINEER TARA L. KIVETT, P.E. #86611

Date Approved

BID SET
City Project No. 18-0060-UT
Tetra Tech Project No. 200-41125-19003
Plan Set No. 2019036

GENERAL NOTES

1. All work performed shall comply with the regulations and ordinances of the various governmental agencies having jurisdiction over the work.
2. All workmanship and materials used in the construction of this project shall conform to the latest City of Clearwater standards, contract documents and specifications unless otherwise noted.
3. The Contractor shall obtain all required permits prior to construction.
4. The Contractor shall notify all utility companies at least forty eight (48) hours prior to start of construction, demolition and/or excavation in accordance with Florida Statutes.
5. Locations, elevations and dimensions of existing utilities, structures and other features are shown according to the best information available at the time of the preparation of these plans, but do not purport to be absolutely correct. The Contractor shall verify the location, elevations and dimensions of all existing utilities, structures and other features affecting the work prior to construction.
6. The Contractor shall be responsible to review the site to determine existing conditions. Anything not shown on these plans shall be brought to the attention of the City's Engineering Representative and shall not constitute additional scope of work approved by the Engineer.
7. The Contractor shall contact the City's Engineering Representative immediately concerning any conflicts arising during construction.
8. All construction activities must conform to the local noise ordinance.
9. Hours of work shall be in accordance with the local governmental agency.
10. These drawings do not include necessary components for construction safety. The Contractor is solely responsible for construction safety. Special precautions may be required in the vicinity of power lines and other utilities.
11. The Contractor shall furnish, erect and maintain all necessary traffic control and safety devices in accordance with the U.S. Department of Transportation, "Manual on Uniform Traffic Control Devices" and the latest Florida Department of Transportation "Design Standards".
12. The Contractor shall provide, erect and maintain effective barricades, danger signals, signs and pedestrian detours in all areas where required for the protection of the work and the safety of the public.
13. A registered Land Surveyor, at the Contractor's expense, shall reset all section corners or property corners dislocated or disturbed by any construction related activities.
14. Any National Geodetic Survey (NGS) Monument within the limits of construction is to be protected. If in danger of damage, contractor shall notify the city's field representative immediately and contact the National Geodetic Survey information center.
15. Unless noted on the plans, final grade is to generally be the same as existing grade. Restore uniformly and for proper yard drainage grade toward roadway.
16. The Contractor shall provide all sheeting, shoring and bracing required to protect adjacent structures or to minimize trench width. Where a separate pay item is not provided, the cost of all sheeting and bracing required shall be included in the contract price for the item of work for which sheeting, shoring and bracing is anticipated to be required in accordance with local, state, or federal regulations for construction.
17. All concrete shall have a minimum compressive strength of 3,000 psi (28-day strength), unless otherwise noted on drawings.
18. Materials interfering with construction shall be disposed of as directed by the City's Engineering Representative, unless otherwise noted on plans.
19. All excess soil resulting from construction activities that is not claimed by the Owner shall become the property of the Contractor and disposed of by the Contractor.
20. All disturbed landscaped and/or grassed areas shall be restored uniformly and be generally at the same elevation as existing grades.
21. All disturbed areas shall be replaced within fifteen (15) days to a condition equal to or better than existing conditions.
22. All voids after placement of sod shall be filled with prepared soil mix. The sod shall be rolled to meet the proposed grades. Sod placed on slopes 3:1 or steeper shall be pegged.
23. Areas of exposed earth resulting from construction shall be sodded in kind as directed by the City's Engineering Representative unless otherwise noted on plans.
24. The Contractor shall maintain an accurate set of marked-up drawings (As-Builts) at the construction site.
25. The bottom trench width in an unsupported trench shall be limited to the minimum practicable width allowing working space to place and compact the backfill material. The use of trench boxes and movable sheeting shall be performed in such a manner that removal, backfill and compaction will not disturb compacted backfill material or pipe alignment. Dewatering of the trench bottom shall be accomplished using adequate means to allow preparation of bedding, placement of the backfill material and pipe in the trench without standing water. Dewatering shall continue until sufficient backfill is placed above the pipe to prevent flotation or misalignment.
26. The Contractor shall dispose of all unsuitable materials, construction debris, and other waste materials offsite in accordance with applicable regulatory agency requirements at the Contractor's expense. All backfill shall be free of unsuitable materials.
27. The Contractor shall be responsible for providing a Hurricane Preparation Plan to the City's Engineering Representative for review and approval prior to commencing construction activities.
28. Any damage to city, county, or state roads caused by the Contractor shall be repaired by the Contractor in a timely manner and to the satisfaction of the City's Engineering Representative. Payment shall not be made for this work.
29. The Contractor shall protect private property.



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RECORD DRAWINGS	DRAWN BY:
SURVEYED BY:	
REVIEWED BY:	
PROJECT ENGINEER	DATE
APPROVED BY:	
CITY ENGINEER TARA L. KIVETT, P.E. # 86811	DATE

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756



GENERAL NOTES

SURVEY NOTES

1. The City of Clearwater Control Network's Horizontal Datum is: North American Datum (N.A.D.), Florida State Plane Coordinates, Florida West Zone 83(1999).
2. The City of Clearwater Control Network's Vertical Datum is: North American Vertical Datum (N.A.V.D.) 1988.

TREE PROTECTION

1. The Contractor will be responsible for adhering to all Tree Protection measures required by the City of Clearwater codes, ordinances and Standard Specifications. This will include all tree barricades, root pruning and tree trimming/pruning activities. These requirements will apply within the specified "limits of work" and will also be applicable in all areas where the Contractor and/or his subcontractors stage, store or park vehicles, equipment, materials and debris.
2. All tree pruning and/or root pruning on existing trees to be preserved will only be performed by or under the direct supervision of an International Society of Arboriculture (ISA) Certified Arborist. Furthermore, all tree work shall conform to the American National Standards Institute (ANSI) 2001, American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Pruning) ANSI A-300.
3. Where called for on the plans, install tree barricades, erosion control/silt fencing or other approved protective barriers around all trees to be preserved, per City Standard Detail. Where applicable, and specifically approved by the City's Engineering Representative protective barriers may be placed in root prune trenches.
4. Prior to any field changes taking place, it will be the Contractor's responsibility to review the potential impacts to existing trees with his Certified Arborist, and include any and all recommended tree protection measures in his proposal to modify the approved design. The City's Engineering Representative must approve, in writing, any changes to the approved design prior to implementation of said change.
5. The Contractor will avoid any open excavations, fill or other construction activities whenever possible within the "critical root zone" of any existing tree (i.e., under the drip line/canopy).
6. No vehicles, equipment or materials shall be parked or stored under/within the drip line/protective barrier area of any tree.
7. Where construction activities are anticipated to last for an extended period of time near existing trees, the Contractor shall install and maintain City approved tree barricades as shown in the Standard Details and as approved by the City's Engineering Representative.
8. Woodchips, mulch or other cushioning surface material approved by the City's Engineering Representative shall be placed to a minimum depth of ten (10) inches over areas where roots are present and construction traffic occurs.
9. All tree protection measures shall remain in place at all times during construction until the City's Engineering Representative authorizes removal.
10. The Contractor will coordinate with the City's Engineering Representative, Tim Kurtz, at (727) 562-4737, to obtain approval in advance of any and all work within the critical root zone of any existing tree.

SEDIMENT & EROSION CONTROL

1. It is the responsibility of the Contractor to control and prevent erosion and the transportation of sediment to surface drains and outfalls.
2. The Contractor shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Florida Department of Environmental Protection (FDEP) Criteria for a National Pollution Discharge Elimination System (NPDES) Activities Permit.
3. The Contractor must obtain a FDEP Generic Permit for The Discharge of Produced Ground Water, if dewatering with offsite discharge will be required. The Contractor is responsible for all required preliminary water samples to satisfy the FDEP Generic Permit for the Discharge of Produced Ground Water. Sampling shall occur thirty (30) days prior to the start of dewatering.
4. Construction operations shall be carried out in such a manner that erosion and pollution shall be minimized. The submitted SWPPP shall be compiled with. All applicable federal, state, and local laws shall be complied with at all times. Please note that no hay bales are allowed on City of Clearwater projects.

UTILITY OWNERS

Bright House Networks
Attention: Mr. Ted Bingham
700 Carillon Parkway, Suite 6
St. Petersburg, Florida 33716-1123
Phone: (727) 329-2847

Verizon Telephone Operations
Attention: Mr. Raul Rivera
SLCW 5033
1280 Cleveland Street
Clearwater, Florida 33782
Phone: (727) 562-1130
Wide Open West (WOW!)
3001 Gandy Boulevard North
Pinellas Park, Florida 33782
Phone: (866) 745-3685 Office

Duke Energy
Attention: Ms. Sharon Dear
3300 Exchange Place
Lake Mary, Florida 32746
Phone: (407) 942-9421

City of Clearwater
Clearwater Gas System
400 North Myrtle Avenue
Clearwater, Florida 33755
Phone: (727) 562-4900

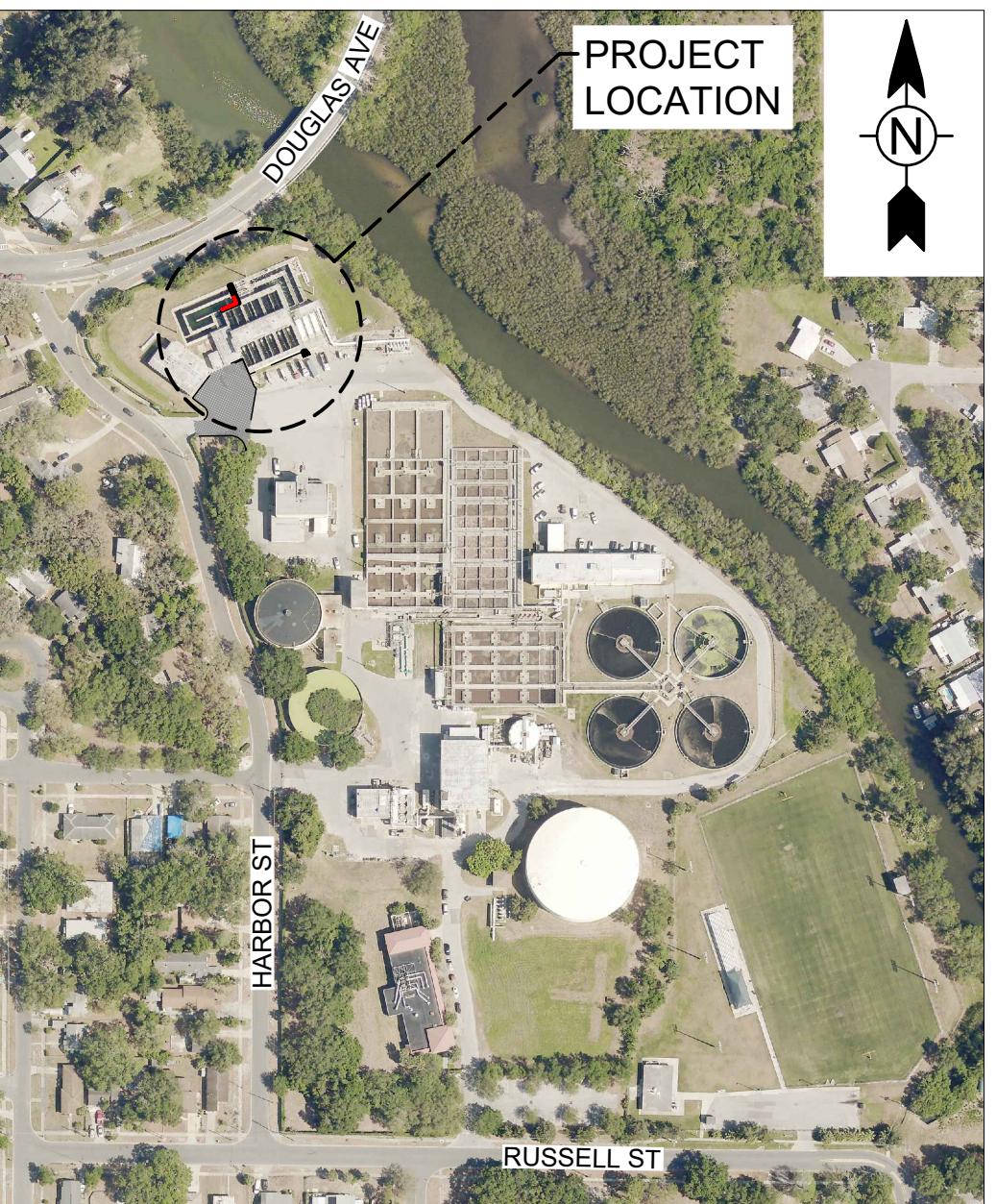
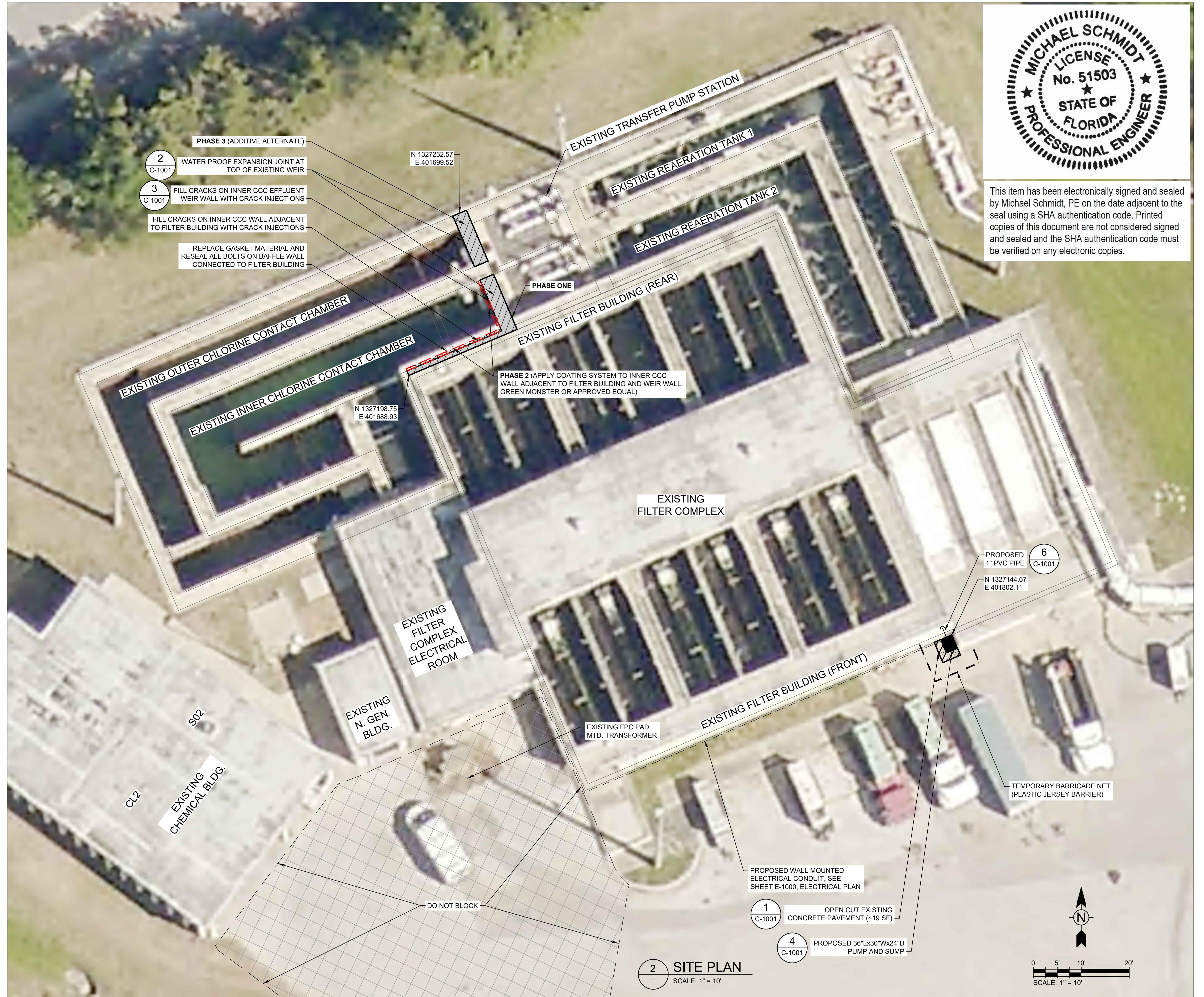
City of Clearwater
Engineering Department – Traffic Division
Attention: Mr. Paul Bertels
100 South Myrtle Avenue, Room 220
Clearwater, Florida 33756-4748
Phone: (727) 562-4794

City of Clearwater
Engineering Department – Survey Division
Attention: Mr. Tom Mahony
100 South Myrtle Avenue, Room 220
Clearwater, Florida 33756-4748
Phone: (727) 562-4762

City of Clearwater
Engineering Department – Public Utilities
Attention: Mr. David Porter
1650 North Arcturus Avenue
Clearwater, Florida 33755
Phone: (727) 562-4960 Ext. 7248

City of Clearwater
Engineering Department – Construction Management
Attention: Mr. Timothy Kurtz
100 South Myrtle Avenue, Room 220
Clearwater, Florida 33756
Phone: (727) 562-4737

DWG NAME: G-0002	FIELD BOOK: N/A	SURVEYED BY: N/A	SCALE: N/A
CONT'D PAGE: 18-0060-UT	DATE DRAWN: 08-14-19	DRAWN BY: HCR	HORIZ. N/A
JOB NO.: 200-41125-19003	DESIGNED BY: MJA	CHECKED BY: SLR	SLR
APPROVED FOR CONSTRUCTION	SHEET NO.: 2 OF 6		
CITY ENGINEER TARA L. KIVETT, P.E. # 86811			



NOTE:	1. ADDITIONAL CRACKS FOUND ONCE CHLORINE CONTACT CHAMBER (CCC) IS EMPTY WILL BE REPAIRED VIA CRACK INJECTION.		
DWG NAME:	C-1000	FIELD BOOK:	N/A
CONTRACT NO.:	18-0060-UT	DATE DRAWN:	08-14-19
JOB NO.:	200-41125-19003	DRAWN BY:	HCR
APPROVED FOR CONSTRUCTION:	MJA	CHECKED BY:	SLR
		SHEET NO.:	4 OF 6
		DATE:	

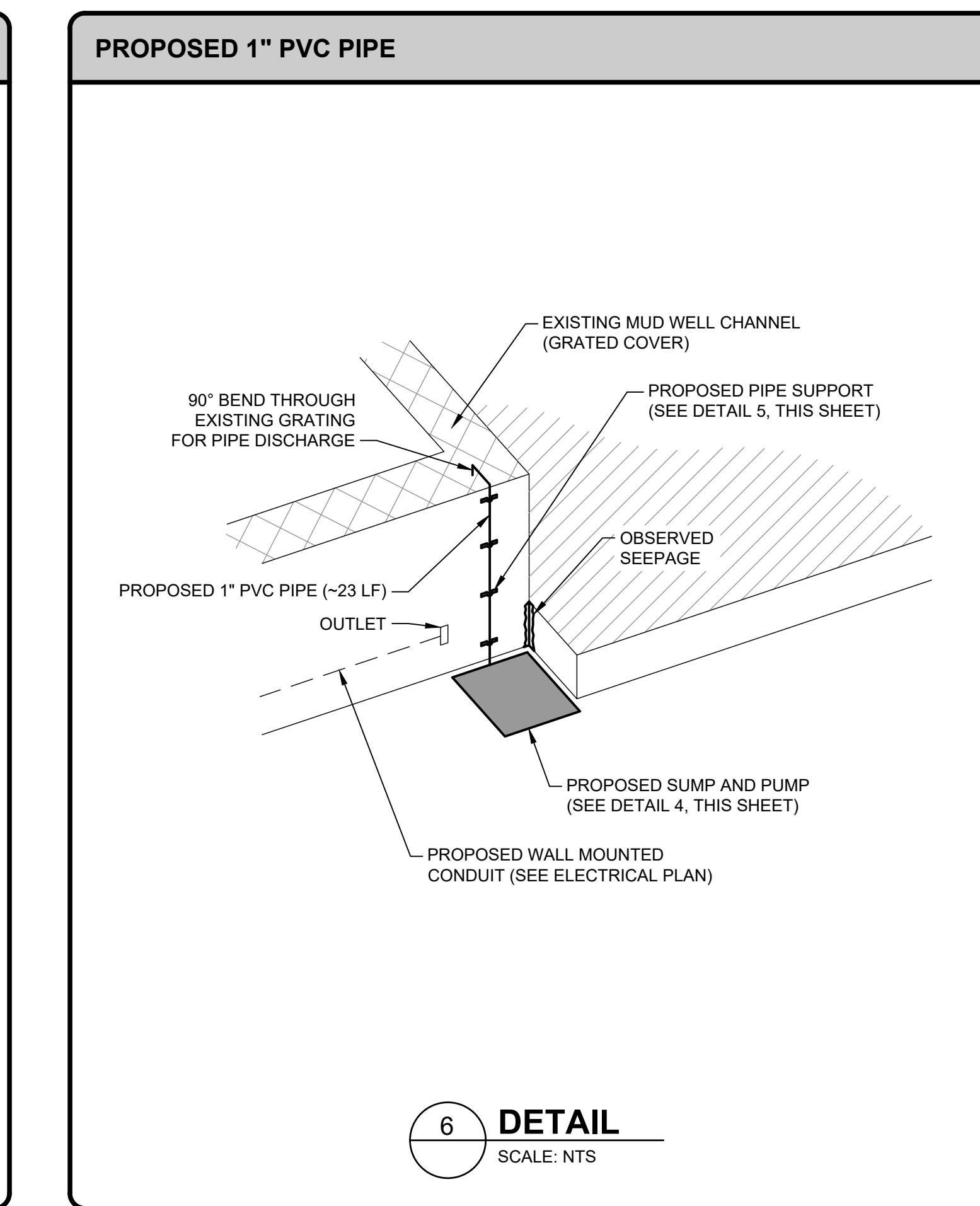
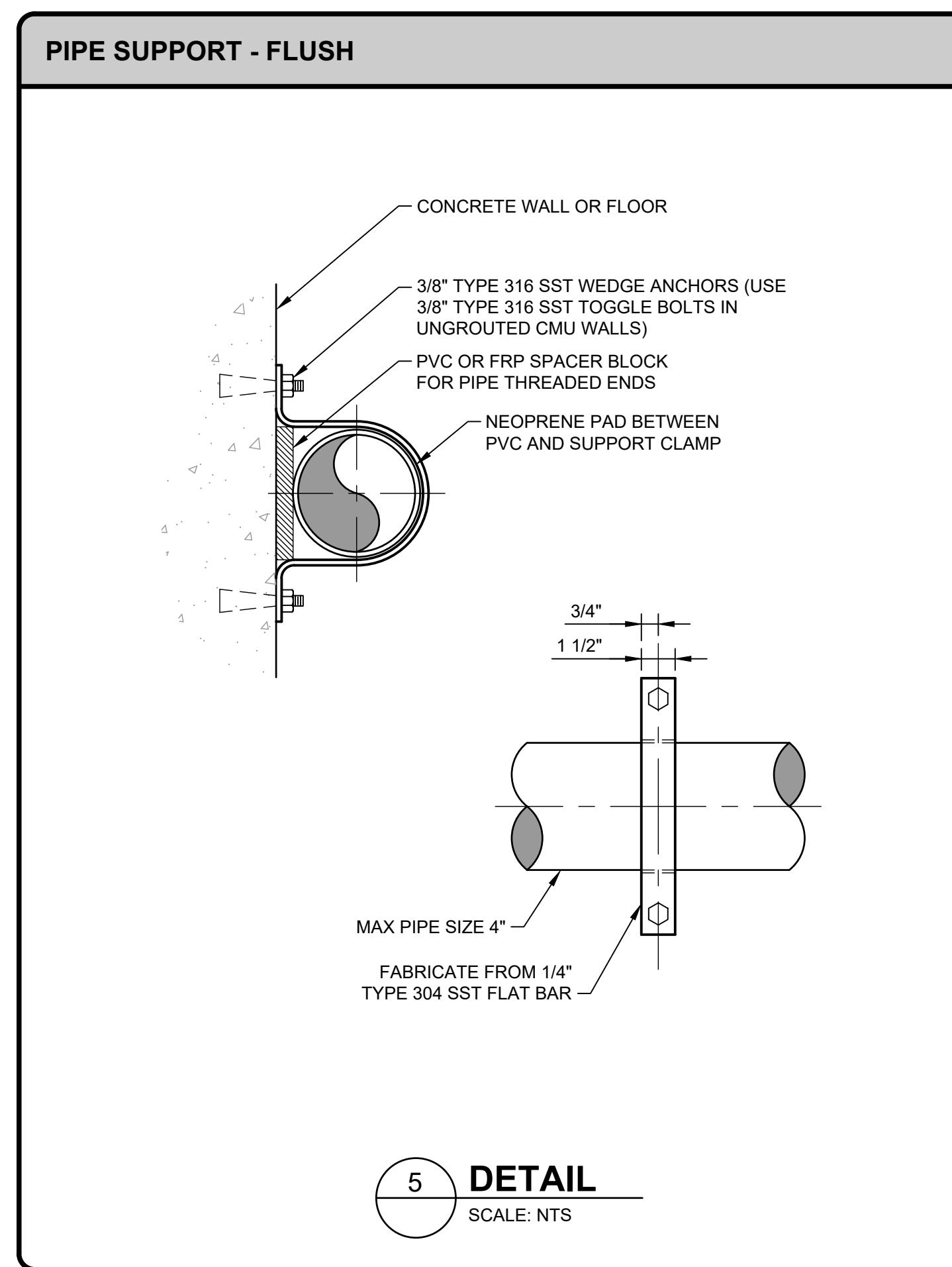
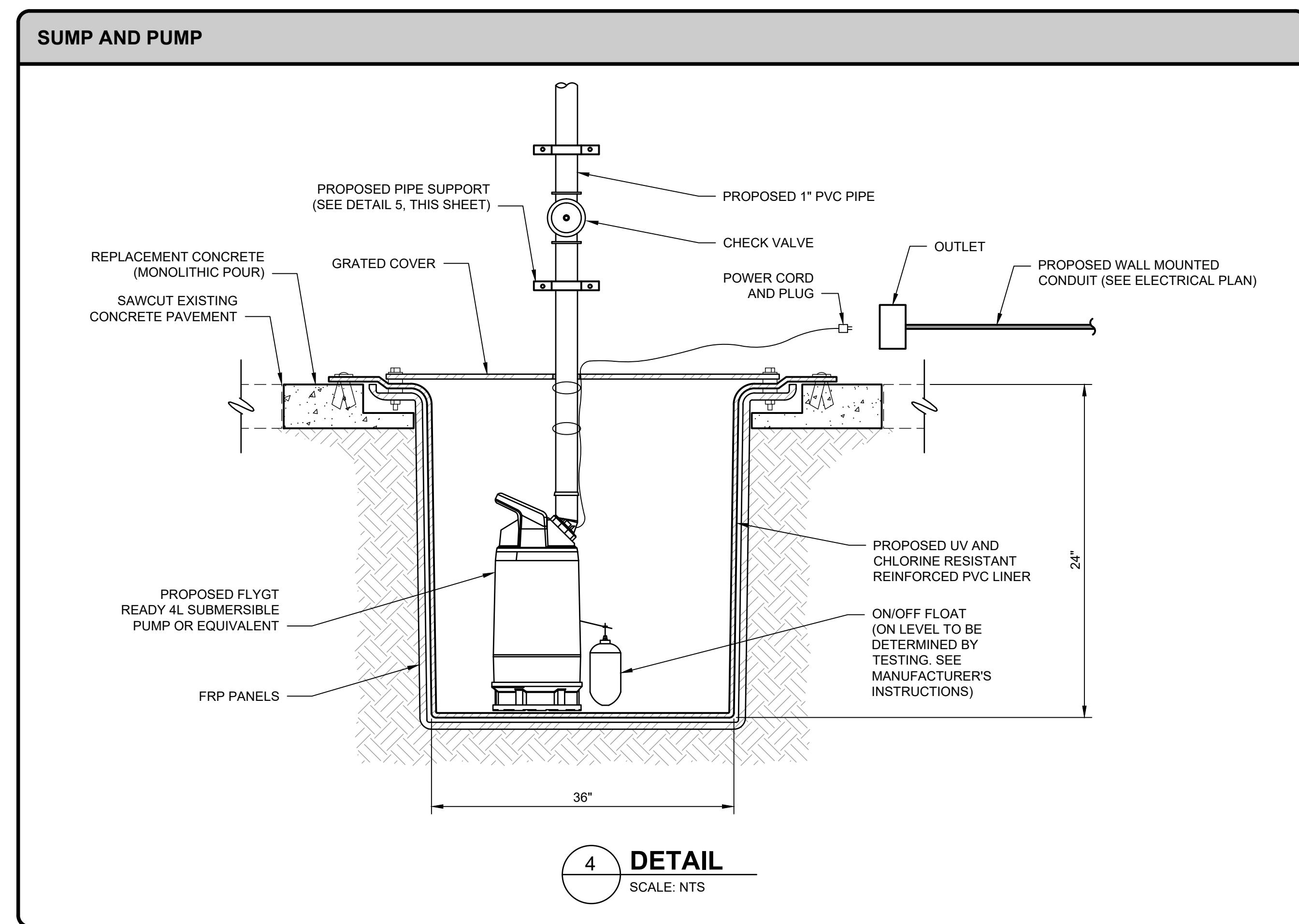
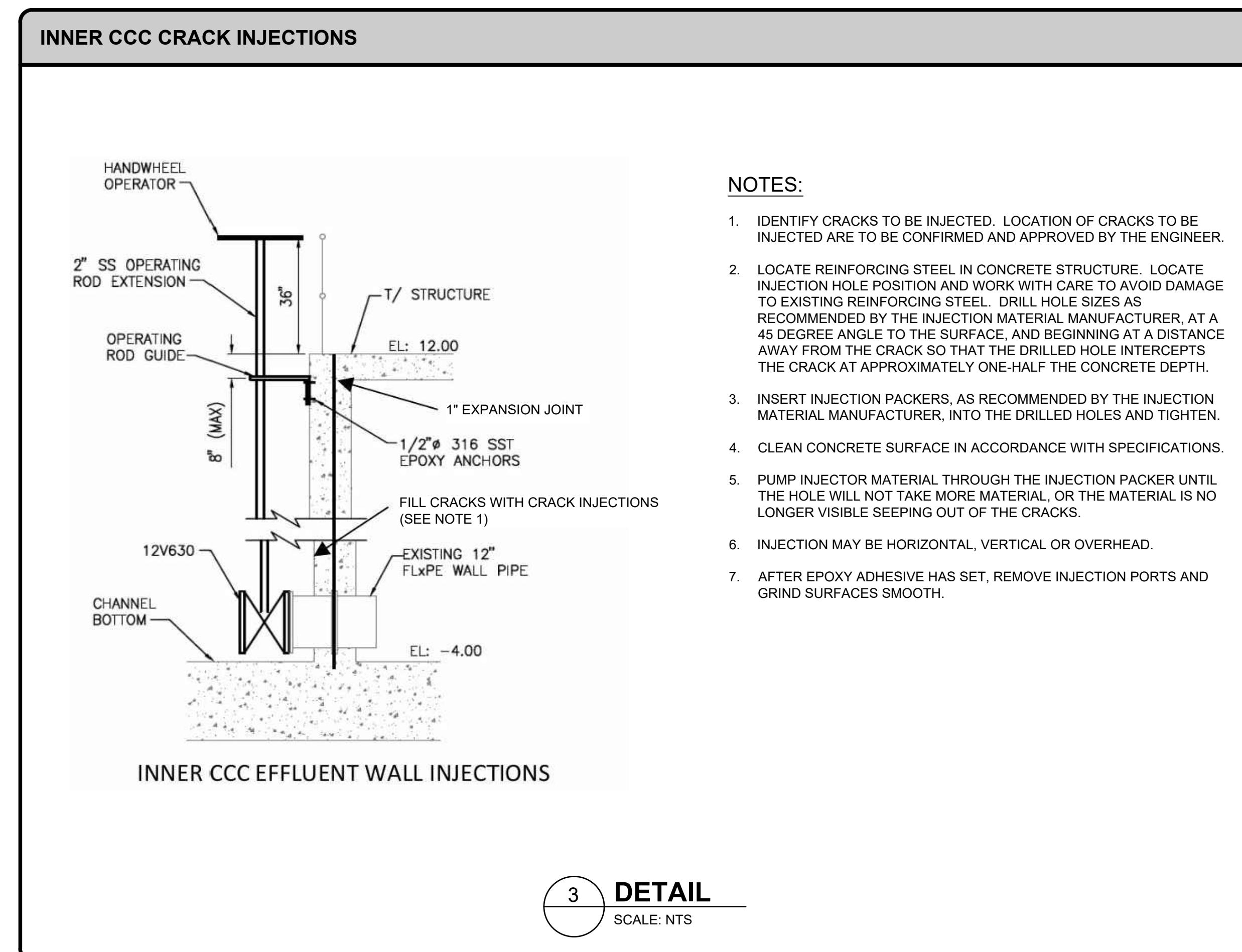
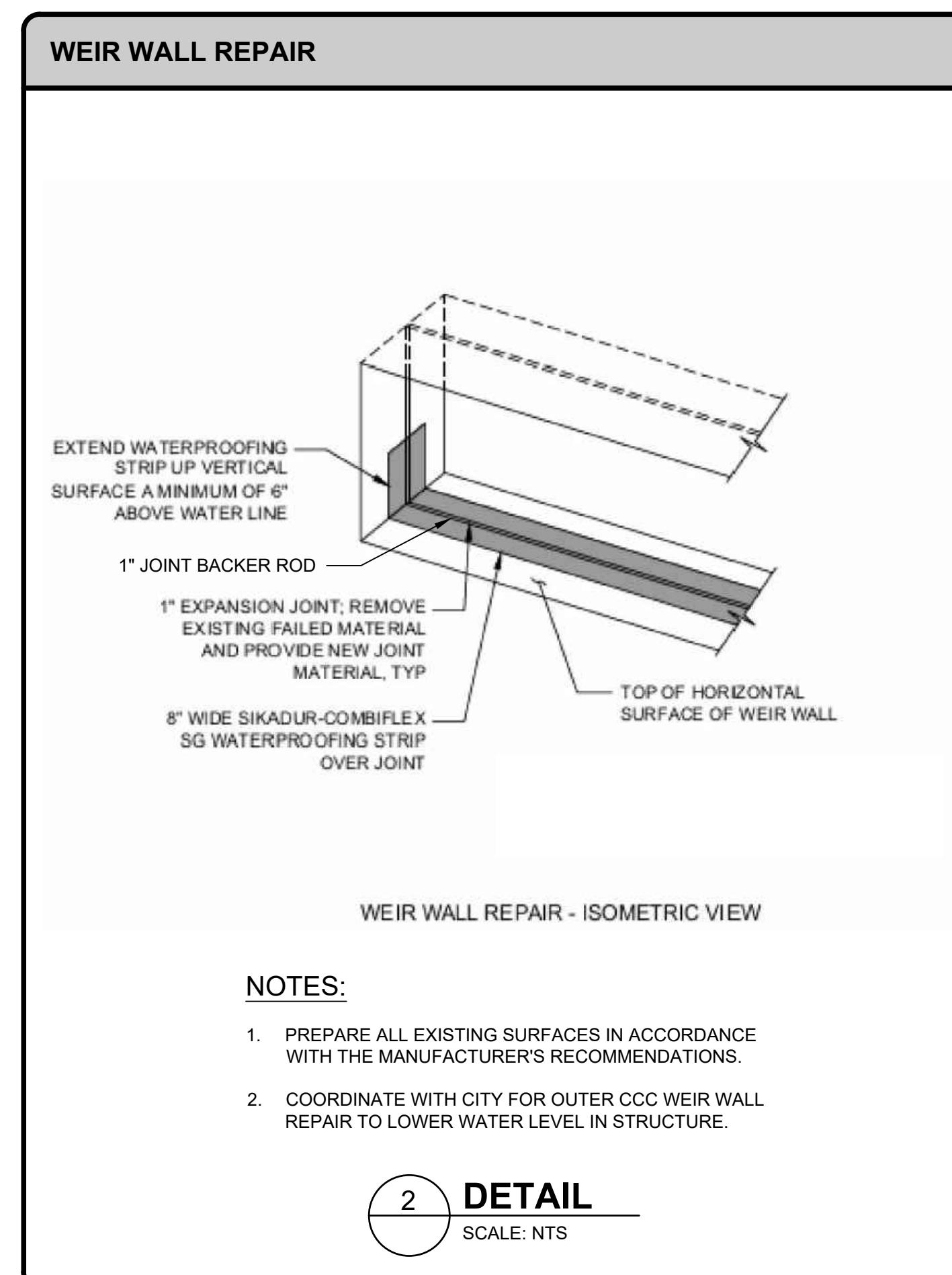
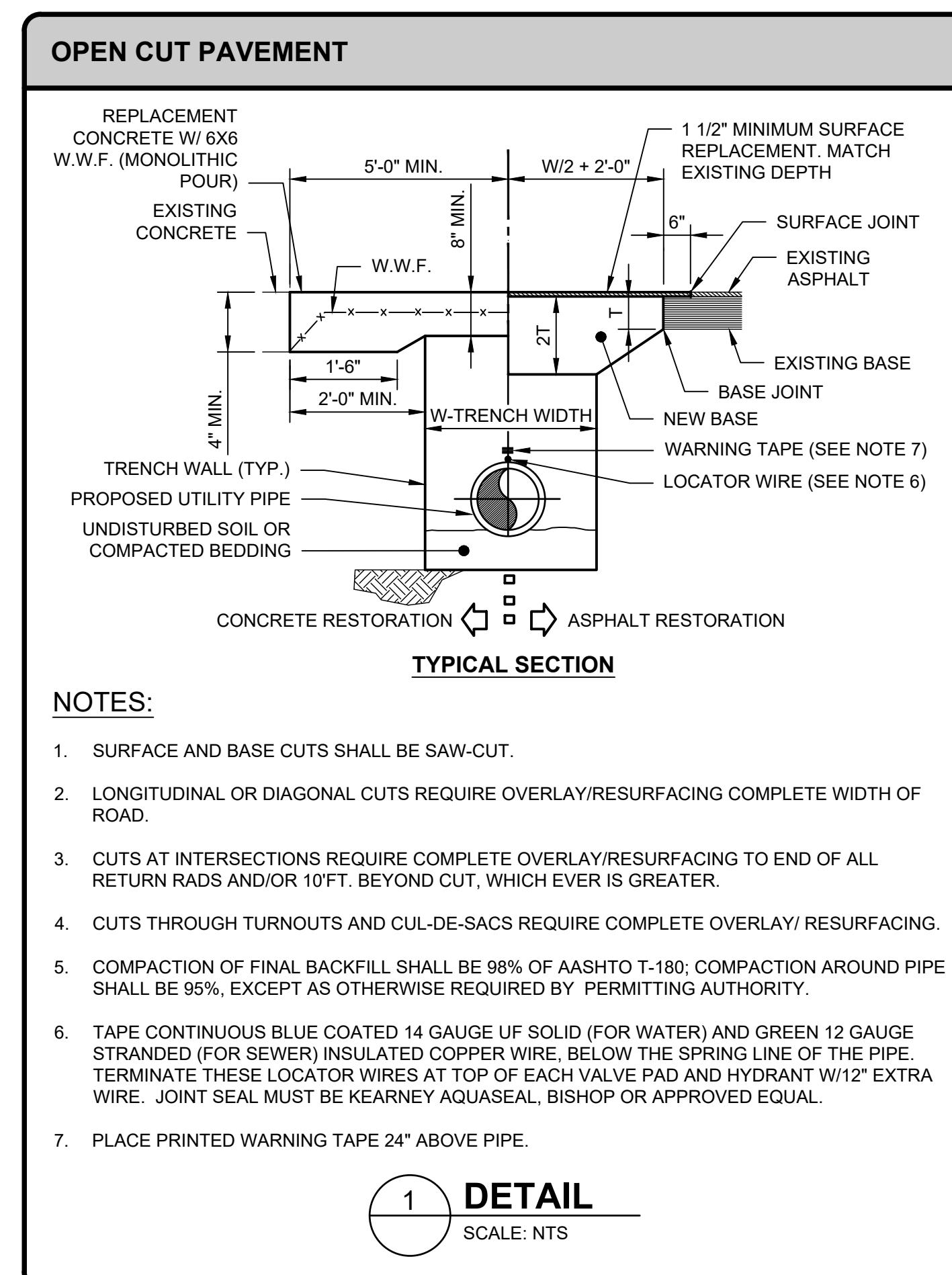
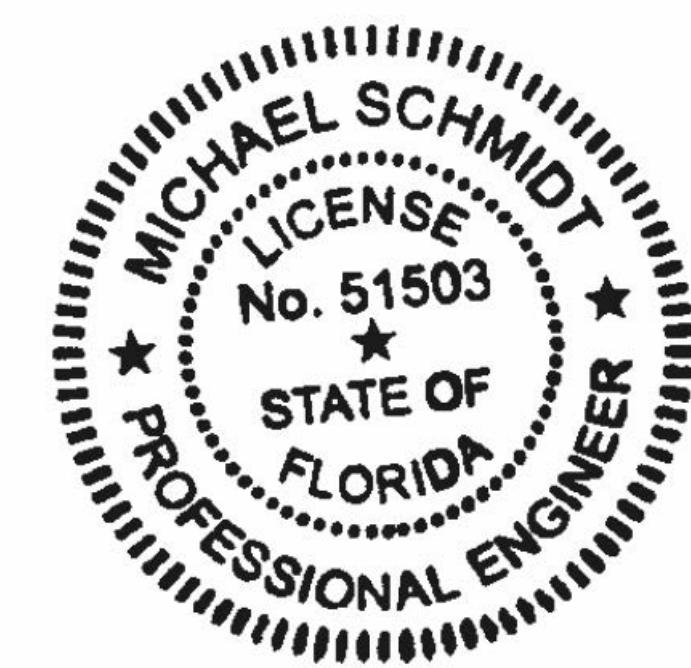
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REVIEWED BY:	
PROJECT ENGINEER	DATE
APPROVED BY:	
CITY ENGINEER TARA L. KIVETT, P.E. # 86811	DATE

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756



SITE PLAN

CITY ENGINEER TARA L. KIVETT, P.E. # 86811
DATE



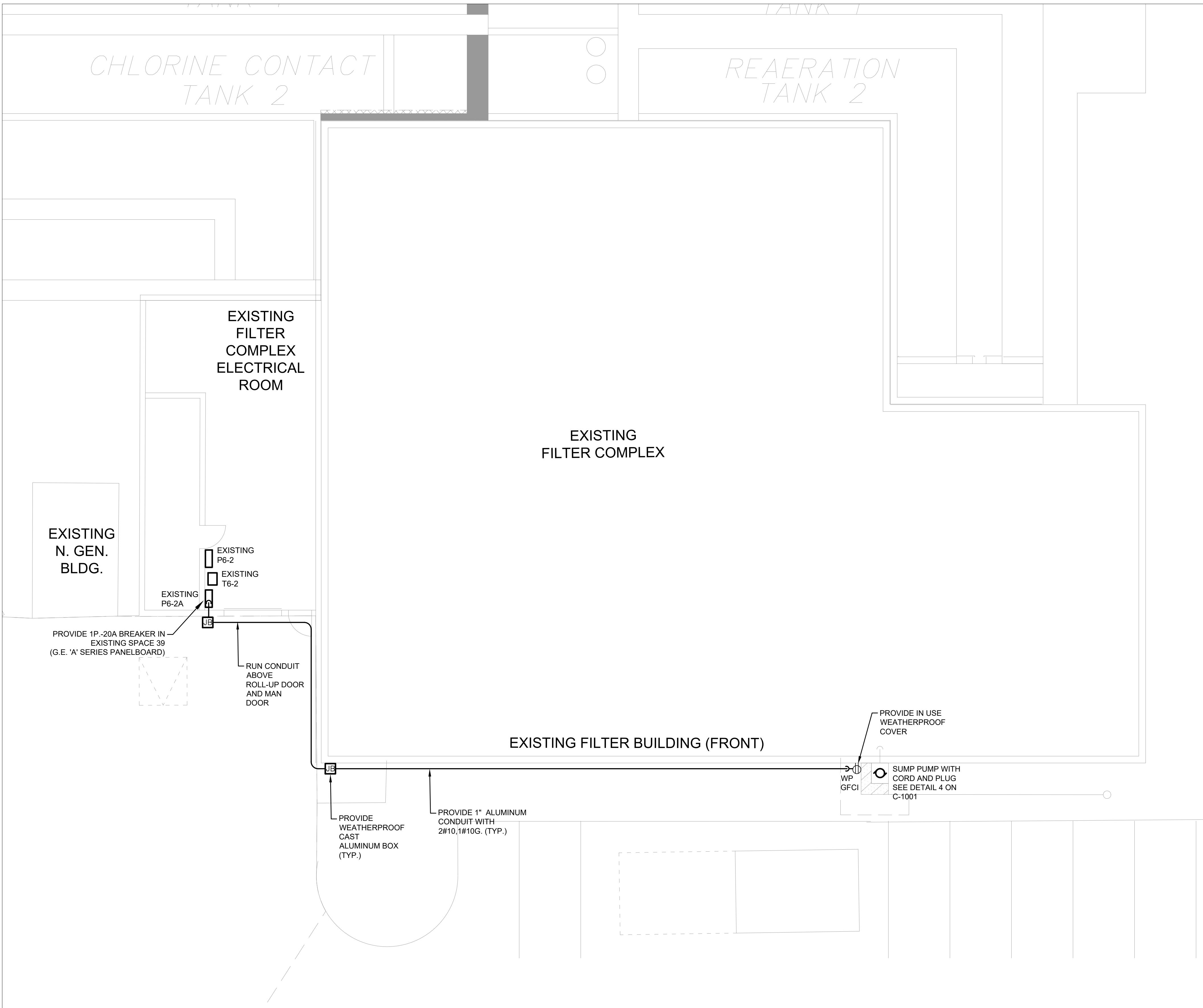
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CITY ENGINEER TARA L. KIVETT, P.E. # 86811	DATE

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756



DETAILS

DET	FIELD BOOK	SURVEYED BY:	SCALE:
1	N/A	N/A	VERT. N/A
CONT. DET. NO.	DATE DRAWN:	DRAWN BY: HCR	HORZ. N/A
18-0060-UT	08-14-19		
JOB NO.: 200-41125-19003	DESIGNED BY: MJA	CHECKED BY: SLR	SLR
APPROVED FOR CONSTRUCTION			SHEET NO.: 5 OF 6
			CITY ENGINEER TARA L. KIVETT, P.E. # 86811
			DATE



GENERAL SPECIFICATIONS

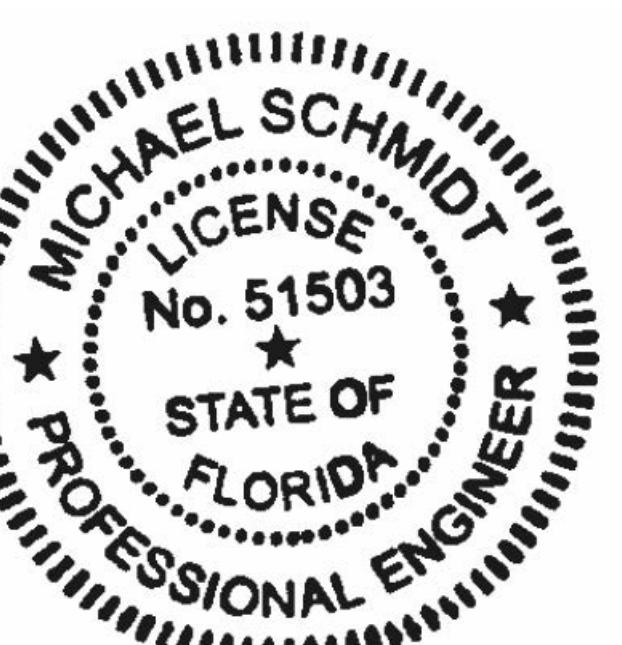
1. THE ELECTRICAL INSTALLATION SHALL COMPLY WITH N.E.C AND ALL STATE AND LOCAL CODES.
2. MAKE ALL CONNECTIONS TO ELECTRICAL EQUIPMENT SHOWN ON DRAWINGS.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING AND CONDUIT FOR ALL EQUIPMENT UNLESS OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND CURRENT CHARACTERISTICS OF ALL EQUIPMENT BEFORE INSTALLATION OF CONDUIT, WIRE, ETC.
4. LOCATE OUTLETS AS INDICATED ON PLANS WITH MOUNTING HEIGHTS AS REQUIRED. COORDINATE INSTALLATION OF OTHER EQUIPMENT. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS:
 - (1) UNDERWRITERS LABORATORIES INC. - U.L.
 - (2) NATIONAL FIRE PROTECTION ASSOCIATION - NFPA
 - (3) NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION - NEMA
 - (4) NATIONAL ELECTRICAL CODE - NEC
5. ALL CIRCUITS SHALL BE 1" C. 2#10, 1#10 G. UNLESS OTHERWISE NOTED.
6. USE ONLY APPROVED LUBRICANT FOR WIRE PULLING PURPOSES.
7. ELECTRICAL CONTRACTOR SHALL SECURE ALL PERMITS.
8. ELECTRICAL DRAWINGS ARE CONSIDERED DIAGRAMATIC AND INDICATE GENERAL ARRANGEMENT ONLY.
9. CONDUCTORS SHALL BE COPPER, #10 AWG CLASS 'B' STRANDED THHN OR THWN, 600 VOLT. MINIMUM SIZE #10.
10. GROUND RECEPTACLE IN ACCORDANCE WITH NEC.
11. GROUND CONDUCTOR SHALL BE INSTALLED IN ALL BRANCH CIRCUIT CONDUITS. ALL EQUIPMENT GROUND CONDUCTORS SHALL BE COPPER AND SIZED PER NEC ART 250-122.
12. ALL CONDUITS SHALL BE A MIN. OF 1" UNLESS OTHERWISE NOTED. EXTERIOR CONDUITS ABOVE GRADE SHALL BE ALUMINUM.
13. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT SHALL BE NEMA 3R OR WEATHERPROOF.
14. WIRING DEVICE SHALL BE SPECIFICATION GRADE. RECEPTACLES SHALL BE GFCI DUPLEX 2 WIRE, 3 POLE GROUNDED, 20 AMP 120 VOLT.

RECORD DRAWINGS	
SURVEYED BY:	DRAWN BY:
REVIEWED BY:	
PROJECT ENGINEER	DATE
APPROVED BY:	
CITY ENGINEER TARA L. KIVETT, P.E. # 86811	DATE

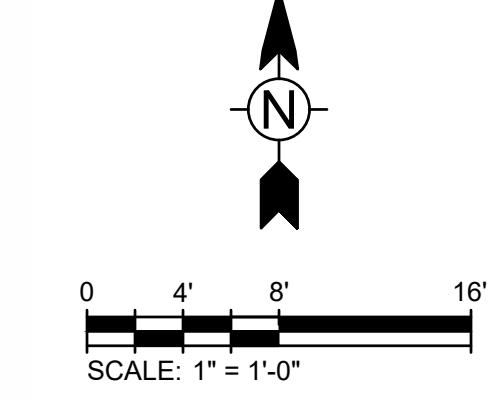
CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756



ELECTRICAL PLAN



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DWG NAME: E-1000	FIELD BOOK: N/A	SURVEYED BY: N/A	SCALE: VERT. N/A
CONTRACT NO: 18-0060-UT	DATE DRAWN: 09-28-20	DRAWN BY: DK	HORIZ. N/A
JOB NO: 200-41125-19003	DESIGNED BY: DK	CHECKED BY: BRW	SHEET NO: 6 OF 6
APPROVED FOR CONSTRUCTION			
	CITY ENGINEER TARA L. KIVETT, P.E. # 86811		DATE