# CONSTRUCTION PLANS FOR

# CEFCO-WEST SPENCERFIELD RD & FL SR-10

# WEST SPENCERFIELD RD & FL SR-10 PACE, SANTA ROSA COUNTY, FLORIDA

TAX PARCELS: 09-1N-29-3010-00000-1400, 09-1N-29-3010-00000-1590, 09-1N-29-3010-00000-1580, 09-1N-29-3010-00000-1570 & 16-1N-29-0000-03000-0000, 09-1N-29-3010-00000-1410

> **SANTA ROSA COUNTY PLANNING AND ZONING APPROVAL**

> > 3/22/2024

CEFCO-WEST SPENCERFIELD RD & FL SR-10 TOTAL SITE AREA: 3.323 AC.

ZONING: HIGHWAY COMMERCIAL DEVELOPMENT (HCD)

**DIRECTIONS TO SITE:** 

LATITUDE: 30.6040737832451 N LONGITUDE: -87.1494401303807 W **SECTION: 9 & 16** TOWNSHIP: 1 NORTH RANGE: 29 WEST

**COUNTY: SANTA ROSA** 

PROJECT IS LOCATED AT THE NORTHWEST CORNER OF S.R. 10 & W. SPENCER FIELD

RD., SANTA ROSA COUNTY, FLORIDA.

## **DEVELOPMENT TEAM**

DEVELOPER COSTORDE, LLC

9764 WHITHORN DR. HOUSTON, TX. 77095 PHONE: 281-550-6000 CONTACT: DENISE ANDERSON **CIVIL ENGINEER** 

ATWELL, LLC 9001 AIRPORT FRWY., SUITE 660 NORTH RICHLAND HILLS, TX. 76180 PHONE: (972) 638-8860 CELL: (214) 864-5706 **CONTACT: JEFF GREEN** 

**SURVEYOR** 

GUSTIN, COTHERN & TUCKER, INC. 121 HART ST. NICEVILLE, FL. 32578 PHONE: (850) 678-5141 FAX: (850) 729-2460 CONTACT: ALLEN TUCKER, PSM



**VICINITY MAP** 

NOTE: BASED ON GRAPHIC DETERMINATION, THIS PROPERTY DOES NO LIE IN A F.E.M.A./F.I.R.M.SPECIAL FLOOD HAZARD AREA PER COMMUNITY PANEL NO. 12113C0410H DATED 11/19/2021.

SUBMITTAL DATE

SUBMITTAL - 2023-09-06

### PROJECT NARRATIVE

CITY OF MILTON

(GAS SERVICE)

6738 DIXON STREET

PHONE: (850) 336-0866

CONTACT: DANNY RICE

EMAIL: DRICE@MILTONFL.ORG

MILTON, FL. 32572

CONSTRUCT A 30' ACCESS DRIVE OFF OF S.R. 10, A 15' ONE WAY ACCES DRIVE OFF W SPENCER FIELD RD, A 30' ACCESS DRIVE OFF PLANT AVE & A DRIVE CONNECTED TO PACE RD. INTO A PROPOSED CEFCO CONVENIENCE STORE AND GASOLINE FUELING STATION.

## GOVERNING AGENCIES AND UTILITY CONTACTS

FLORIDA DEPT. OF **TRANSPORTATION** 

6025 OLD BAGDAD HWY. MILTON, FL. 32583 PHONE: (850) 981-2737 **CONTACT: HEIDI TAYLOR** 

AT&T

(TELEPHONE) PHONE: (855) 441-4668

# SANTA ROSA COUNTY

(DEVELOPMENT SERVICES) 6051 OLD BAGDAD HIGHWAY SUITE 202 MILTON, FL. 32583 PHONE: (850) 981-7000 CONTACT: JASON McCLARTY

## SANTA ROSA COUNTY

(STORMWATER) 6051 OLD BAGDAD HWY SUITE 300 MILTON, FL. 32583 PHONE: (850) 981-7100 CONTACT: JOHN HAYNIE

## PACE WATER SYSTEM, INC.

(WATER & SEWER) 4401 WOODBINE RD. PACE, FL. 32571 PHONE: (850) 994-5129 EMAIL: RLEE@PACEWATER.ORG **CONTACT: RACHEL LEE** 

## FLORIDA POWER & LIGHT - MILTON

(ELECTRIC) 8486 RANDY BROWN RD, MILTON, FL 32583 PHONE: (800) 778-9140

### VARIANCES REQUESTED

VARIANCE 2022-3-V APPEAL WAS APPROVED AUGUST 25, 2022, BY THE SANTA ROSA COUNTY BOARD OF COUNTY COMMISSIONERS TO REDUCE THE DRIVEWAY SPACING REQUIREMENT ON A MAJOR COLLECTOR FROM 245' TO 110', TO ACCOMMODATE A COMMERCIAL DRIVEWAY. THE VARIANCE WAS APPROVED WITH THE FOLLOWING CONDITIONS

DRIVEWAY WILL BE RIGHT IN ONLY. DRIVEWAY WILL HAVE 60' RADIUS.

DRIVEWAY WILL HAVE A "NO LEFT TURN" SIGN, FOR NORTHBOUND TRAFFIC.

DRIVEWAY WILL HAVE A RAISED/HARD CURVE.

## **REZONE CASE #2019-R-024**

APPROVED BY SANTA ROSA COUNTY BOARD OF COMMISSIONERS MAY 23, 2019

## PREPARED FOR:

COSTORDE, LLC C/O DENISE ANDERSON, CCIM 9764 WHITHORN DR. HOUSTON, TX. 77095 PHONE: (281) 382-7117

#### **BENCHMARKS:** TRAVERSE POINT IRON ROD (L.B. #3501)

N: 592958.161 E: 1134801.250 ELEVATION=73.780 TRAVERSE POINT IRON ROD (L.B. #3501) N: 592958.477

> E: 1135241.546 ELEVATION=76.851

This item has been digitally signed and sealed by John Nourzad, PE, on the date shown hereon.

Printed copies of this document are not considered signed and sealed and the signature must be verifies on any electronic copies.

#### SHEET INDEX OF DRAWINGS

SHEET	NAME	ORIG. PLAN DATE	REVISION	REV. PLAN DATE
C000	COVER SHEET	11-04-22	06-15-2023	09-08-2023
C100	GENERAL NOTES	"	11	"
C110	DEMOLITION PLAN	"	"	"
C200	SITE PLAN	"	11	11
C201	SITE PLAN w AUTO TURN	"	"	11
C210	PAVING PLAN	"	"	"
C300	GRADING PLAN	"	"	"
C310	PRE DEVELOPED DRAINAGE AREA MAP	"	"	п
C320	POST DEVELOPED DRAINAGE AREA MAP	"	"	11
C330	DRAINAGE PLAN	"	n .	11
C400	UTILITY PLAN	"	"	"
C401	UTILITY DEMO & RELOCATION PLAN	"	"	11
C500	EROSION CONTROL PLAN	"	"	"
C501	EROSION CONTROL PLAN	"	"	"
C700	DETAILS (SITE)	"	"	"
C701	DETAILS (SITE)	"	"	"
C702	DETAILS (FDOT)	"	"	"
C703	DETAILS (FDOT)	"	"	"
C704	DETAILS (FDOT)	"	11	"
C705	UNDEDRAIN DETAILS	"	"	11
C706	CONTROL STRUCTURE DETAIL	"	II .	"
C707	WALL DETAIL	"	n .	"

2023-09-06 2023-06-15

Digitally Nourzad a 2024.03.06 A17:04:47 -05'00'

RAWN BY: ML

HECKED BY: JKG DJECT MANAGER: JKG OB #: 21000648 F CODF: ## HEET NO.

ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE OR THE ENGINEER PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION. ANY DEVIATION WITHOUT THE OWNERS' CONSENT

WILL BE AT THE CONTRACTOR'S RISK. THE DEMOLITION CONTRACTOR SHALL LOCATE, IDENTIFY PROPERLY, TERMINATE, AND MARK ALL EXISTING UTILITIES THAT SHALL REMAIN WITHIN

16. THE CONTRACTOR SHALL COMPARE PLAN AND PROFILE STORM SEWER INFORMATION FOR DISCREPANCIES. IF ANY EXIST THE CONTRACTOR THE DEMOLITION AREA TO PROTECT THEM FROM DAMAGE.

THE DEMOLITION CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES, ASSOCIATED GOVERNMENT DEPARTMENTS, AND THE OWNER'S REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY UTILITY SERVICE. NOTIFICATION MUST BE MADE PER THE PROJECT SPECIFICATIONS. THE DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH AND ADHERENCE TO THE REQUIREMENTS OF EACH UTILITY

COMPANY AND ANY GOVERNMENT UTILITY DEPARTMENT REGARDING SERVICE INTERRUPTION. THE DEMOLITION CONTRACTOR SHALL PROTECT ALL LANDSCAPING AND OTHER FEATURES DESIGNATED TO REMAIN AND REPLACE/REPAIR ALL ITEMS THAT ARE DISTURBED DURING DEMOLITION.

THE CONTRACTOR SHALL CONDUCT ALL DEMOLITION OPERATIONS WITH MINIMUM INTERFERENCE TO PUBLIC AND/OR PRIVATE ACCESSES AND

THE DEMOLITION CONTRACTOR SHALL PROTECT BENCH MARKS, PROPERTY CORNERS, AND ALL OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF A MARKER IS REMOVED OR DISTURBED, IT SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AT THE CONTRACTORS

THE DEMOLITION CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES AS REQUIRED IN ACCORDANCE WITH THE US DEPT. OF

TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND GOVERNING AGENCY REQUIREMENTS DEPRESSIONS AND VOID AREAS CAUSED BY DEMOLITION WORK SHALL BE FILLED TO SUB-GRADE AND PROPERLY COMPACTED. THE

CONTRACTOR SHALL SLOPE ALL DISTURBED AREAS TO DRAIN IN ORDER TO AVOID PONDING THE DEMOLITION CONTRACTOR SHALL ACQUIRE ALL PERMITS AND PAY ALL ASSOCIATED FEES PERTAINING TO THE DEMOLITION AND DISPOSAL REQUIREMENTS. HE SHALL BE RESPONSIBLE FOR ADHERENCE TO ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING THIS WORK. IF THERE ARE NO LOCAL, STATE OR FEDERAL REQUIREMENTS THE DEMOLITION CONTRACTOR SHALL ACQUIRE AN ENGINEER'S CERTIFICATION THAT

THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY AND SAFETY MANAGEMENT. THE CONTRACTOR SHALL PROCEED WITH THE DEMOLITION IN AN ORGANIZED MANNER FOLLOWING ALL APPLICABLE OSHA REQUIREMENTS IN ORDER TO ENSURE WORKER AND CIVIC SAFETY.

THE DEMOLITION CONTRACTOR SHALL DO THE FOLLOWING:

12.1. CONFIRM THAT COPIES OF ALL PERMITS AND APPROVALS ARE KEPT ONSITE AND THAT THEY ARE AVAILABLE FOR REVIEW UPON REQUEST.

12.2. INSTALL INITIAL PHASE SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE. 12.3. REMOVE AND DISPOSE OFFSITE ALL DEBRIS NOT ACCEPTABLE TO THE OWNER.

12.4. LOCATE AND CAP/PLUG ALL WET AND DRY UTILITIES TO BE REMOVED/ABANDONED WITHIN THE LIMITS OF DISTURBANCE.

12.5. PROTECT AND KEEP IN OPERATION ALL ACTIVE SYSTEMS THAT ARE NOT TO BE REMOVED/ABANDONED.

EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND/OR UTILITY COMPANY REQUIREMENTS. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING DURING "OFF-PEAK" HOURS OR ON WEEKENDS TO MINIMIZE THE IMPACT ON THE PUBLIC.

12.7. DIRECT A LICENSED ENVIRONMENTAL TESTING COMPANY COMPLETE A CONTAMINANT AND INSPECTION AND REPORT WITH REGARD TO BUILDINGS/STRUCTURES TO BE REMOVED, AND ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. CONTAMINATED/HAZARDOUS BUILDING MATERIAL AND/OR SOILS SHALL BE REMOVED AND DISPOSED OF OFFSITE BY A QUALIFIED/LICENSED CONTRACTOR FAMILIAR WITH THE APPLICABLE REGULATIONS

EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES. IF PERMISSION IS GIVEN, ALL RELATED PERMITS AND MEASURES SHALL BE AT THE DIRECTION OF THE LOCAL ISSUING AUTHORITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSPECTIONS AND SEISMIC VIBRATION TESTING REQUIRED FOR PROPER MONITORING OF LOCAL

THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN ACCORDANCE WITH "THE MANUAL ON UNIFORM TRAFFIC CONTROL", AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS SHOULD DEMOLITION RELATED ACTIVITIES IMPACT

ROADWAYS OR RIGHTS-OF-WAY. STREET CLOSURES MUST BE APPROVED BY THE APPROPRIATE GOVERNMENTAL AUTHORITY. 15. EQUIPMENT AND OPERATION OF EQUIPMENT SHALL BE CONTROLLED TO WITHIN THE LIMITS OF DISTURBED ONSITE AREA OF THE PROPERTY.

#### SITE NOTES

- THE PROJECT BOUNDARY SURVEY HAS BEEN PROVIDED BY GUSTIN, COTHERN & TUCKER, INC. (THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY, OR FOR DESIGN ERRORS OR OMISSIONS AS A RESULT OF SURVEY INACCURACIES.)
- THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL BUILDINGS AND BUILDING APPURTENANCES WITHIN FIVE (5) FEET OF THE BUILDING WALL TO INCLUDE TRUCK DOCKS, SIDEWALKS, STEPS, ETC.
- THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL SITE WORK AND SITE APPURTENANCES UP TO FIVE (5) FEET OF THE BUILDING.
- THIS INCLUDES TRANSFORMER AND DUMPSTER PADS AS WELL AS ALL UTILITY CONDUITS. 4. CONTRACTOR SHALL OBTAIN ALL PERMITS FROM THE OWNER PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB AND TO THE END OF PARKING STRIPE UNLESS OTHERWISE NOTED. ALL DIMENSIONS
- SHOWN TO BUILDINGS ARE TO THE OUTSIDE FACE OF THE BUILDING. ALL STRIPED OR CURBED RADII SHALL BE 3' UNLESS OTHERWISE NOTED.
- PARKING LOT STRIPING SHALL HAVE TWO (2) COATS OF PAINT (MIN).
- ALL HANDICAP ACCESSIBLE PARKING SIGNS AND STRIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICAN WITH DISABILITY ACT (ADA) REQUIREMENTS. LOCAL CODES MAY GIVE ADDITIONAL DIRECTION WITH REGARD TO GEOMETRICS.

ALL CONCRETE WORK SHALL BE INSTALLED TO THE COMPRESSIVE STRENGTH ESTABLISHED IN THE PROJECT GEO-TECHNICAL REPORT. THE REPORT SHALL BE FOLLOWED IF THERE IS A DISCREPANCY WITHIN THESE DRAWINGS.

10. ALL ONSITE AND OFFSITE CURB AND GUTTER SHALL BE INSTALLED PER CURB AND GUTTER DETAILS WITHIN THIS DRAWING SET. 1/2 INCH EXPANSION JOINTS OF PRE-MOLDED BITUMASTIC EXPANSION JOINT. MATERIAL SHALL BE PROVIDED AT ALL RADIUS POINTS AND AT INTERVALS

NOT TO EXCEED 50 FEET IN THE REMAINDER OF THE ON-SITE CURB AND GUTTER. 11. ALL SIGNS DEPICTED ON THESE PLANS ARE SHOWN FOR INFORMATION ONLY. ALL SIGNS SHALL BE PERMITTED SEPARATELY BY OTHERS

12. ALL TRAFFIC SIGNS SHALL CONFORM TO THE UNIFORM TRAFFIC CONTROL MANUAL AND/OR TO THE STATE DEPARTMENT OF TRANSPORTATION RULES AND REGULATIONS.

13. SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS UPON THE COMPLETION OF THE PROJECT.

14. A SEPARATE PERMIT IS REQUIRED FOR ALL SIGNAGE

#### **ACCESSIBILITY NOTES**

- ALL HANDICAP ACCESSIBLE PARKING SIGNS AND STRIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITY ACT (ADA) REQUIREMENTS. LOCAL CODES MAY GIVE ADDITIONAL DIRECTION WITH REGARD TO GEOMETRICS.
- ALL HANDICAPPED PARKING SPACES AND ACCESS AISLES ADJACENT TO THE HANDICAP PARKING SPACES SHALL BE CONSTRUCTED TO A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS (THIS INCLUDES RUNNING SLOPE AND CROSS SLOPE).
- IF AN ACCESSIBLE ROUTE FROM THE PUBLIC STREET OR SIDEWALK TO THE ENTRANCE IS TO BE PROVIDED IT SHALL BE CONSTRUCTED TO A MINIMUM OF 5' WIDE. THE RUNNING SLOPE OF THE ROUTE SHALL NOT EXCEED 5% AND THE CROSS SLOPE SHALL NOT EXCEED 2%.
- CURB, LANDINGS). NO RAMP SHALL EXCEED AN 8% RUNNING SLOPE OR 2% CROSS SLOPE.
- AND THE CROSS SLOPE SHALL NOT EXCEED 2%. THIS STANDARD APPLIES ALSO TO CROSS WALKS WITHIN THE DRIVEWAY. SPECIAL ATTENTION SHALL BE PAID DURING STAKING TO ENSURE A 2% CROSS SLOPE IS MET. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THE HANDICAP PARKING SPACES, ACCESSIBLE ROUTES, AND
- SIDEWALKS/CROSSWALKS ARE CONSTRUCTED TO MEET ADA REQUIREMENTS. INSTALLATIONS THAT ARE NON-COMPLIANT SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ACCESSIBLE PARKING SHALL HAVE 98" VERTICAL CLEARANCE. DETECTABLE WARNING STRIPS SHALL BE PLACED ON ALL RAMPS.
- ). ALL ADA PARKING SPACES SHALL HAVE PROPER SIGNAGE POSTED TO DESIGNATE REGULAR SPACES AND VAN SPACES, AS WELL AS APPLICABLE LOCAL FINES FOR VIOLATIONS.

#### GRADING NOTES

- THE PROJECT TOPOGRAPHIC SURVEY HAS BEEN PROVIDED BY GUSTIN, COTHERN & TUCKER, INC. (THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY, OR FOR DESIGN ERRORS OR OMISSIONS AS A RESULT OF SURVEY INACCURACIES.) SHOULD THE CONTRACTOR NOT ACCEPT THE EXISTING TOPOGRAPHY AS SHOWN ON THE PROJECT SURVEY OR THESE DESIGN DRAWINGS, HE
- MAY OPT TO HAVE A NEW TOPOGRAPHIC SURVEY PREPARED AT HIS OWN EXPENSE. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT FOR STORMWATER DISCHARGE
- INFORMATION CONCERNING SITE SOIL CONDITIONS SHALL BE PROVIDED BY THE OWNER'S GEO-TECHNICAL ENGINEER. THE PROJECT GEO-TECHNICAL REPORT AND RECOMMENDATIONS THEREIN ARE CONSIDERED PART OF THE AUTHORIZED CONSTRUCTION DOCUMENTS. IN CASE OF CONFLICT OR DISCREPANCY, THE GEO-TECHNICAL REPORT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE
- EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH THE GEO-TECHNICAL REPORT AND ARCHITECTURAL
- ALL FILL USED TO INCREASE THE ELEVATION OF THE FLOOR SLAB OR ANY FILL TO BE USED AS BACKFILL, SHALL BE CLEAN, SELECT, GRANULAR MATERIAL. PRIOR TO THE USE OF ANY GRANULAR FILL, GRADATION ANALYSIS SHALL BE PERFORMED ON REPRESENTATIVE SAMPLES OF THE FILL MATERIAL TO DETERMINE WHETHER THE MATERIAL IS SUITABLE FOR FILL. COMPACTED FILL SHALL BE PLACED IN ACCORDANCE WITH THE APPROVED GEO-TECHNICAL REPORT FOR THE PROJECT.
- ALL ROCKS, STUMPS, ROOTS, AND ORGANIC MATTER SHALL BE REMOVED TO A DEPTH OF TWO FEET MINIMUM BELOW THE BOTTOM OF THE BASE SECTIONS. THE CONTRACTOR SHALL CONTACT THE GEO-TECHNICAL ENGINEER FOR DIRECTION BEFORE BURYING ROCK ONSITE.
- ALL SOIL EROSION AND SEDIMENT SHALL BE CONTROLLED AND CONTAINED ON-SITE.

THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDINGS.

DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCY.

- 9. ALL SLOPES AND DISTURBED AREAS NOT COVERED BY BUILDING OR PAVEMENT SHALL BE GRADED UNIFORMLY AND SHALL RECEIVE A MINIMUM 13. ALL DISTURBED AREAS LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING. OF 4 INCHES OF TOPSOIL. THE CONTRACTOR SHALL IMPORT TOPSOIL IF NOT READILY AVAILABLE ONSITE. OPEN AREAS SHALL BE SEEDED,
- MULCHED, FERTILIZED AND WATERED TO PROVIDE AN UNIFORM STAND OF GRASS. 10. CONTRACTOR SHALL INSTALL SLOPE STABILIZATION FABRIC TO ALL SLOPES 2H:1V OR STEEPER AND SHALL MAINTAIN ALL SLOPE AREAS UNTIL
- THERE EXISTS A HEALTHY STAND OF GRASS.

- 12. THE FLOW IN ALL EXISTING STORM SEWERS, STORM DRAINS, AND WATERWAYS SHALL BE MAINTAINED
- 13. ALL SPOT ELEVATIONS SHALL BE TAKEN TO BE THE TOP OF PAVEMENT OR FINISHED GROUND UNLESS OTHERWISE NOTED.
- TC=TOP OF CURB ELEVATION
- MATCH=PROPOSED GRADE TO MATCH EXISTING GRADE TW=TOP OF RETAINING WALL ELEVATION;
- FG=FINISHED GRADE AT TOE OF WALL ELEVATION
- 14. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING STORM SEWER STRUCTURES, PIPES, AND ALL UTILITIES
- PRIOR TO CONSTRUCTION.
- 15. ALL PIPE LENGTHS SHOWN ON PLAN AND PROFILE VIEWS ARE BASED ON THE HORIZONTAL DISTANCE BETWEEN STRUCTURES
- SHALL NOTIFY THE ENGINEER FOR CLARIFICATION. 17. PRECAST CONCRETE OR BRICK STRUCTURES MAY BE USED AT THE CONTRACTOR'S OPTION
- 18. ALL STORM PIPE CONNECTIONS AT MANHOLES SHALL BE WATER TIGHT 19. ALL STORM SEWER MANHOLE STRUCTURES IN PAVED AREAS SHALL BE INSTALLED OR ADJUSTED WITH TRAFFIC READY LIDS FLUSH WITH THE
- PAVEMENT. MANHOLE STRUCTURES IN UNPAVED AREAS SHALL BE INSTALLED FLUSH WITH FINISH GRADE. 20. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
- 21. ALL SYSTEM MANHOLES AND PIPES SHALL BE FLUSHED CLEAN PRIOR TO TURNING OVER TO THE OWNER. 22. THE CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. EXISTING UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST SOURCES AVAILABLE (FIELD SURVEYS AND UTILITY MAPS) AND MAY NOT BE FULLY
- BUT NOT SHOWN ON THE APPROVED DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION. 23. THE GRADING CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES, ASSOCIATED GOVERNMENT DEPARTMENTS, AND THE OWNER'S REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY UTILITY SERVICE. NOTIFICATION MUST BE MADE PER THE PROJECT SPECIFICATIONS. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH AND ADHERENCE TO THE REQUIREMENTS OF EACH UTILITY COMPANY AND ANY GOVERNMENT UTILITY DEPARTMENT REGARDING SERVICE INTERRUPTION.
- 24. AT COMPLETION OF CONSTRUCTION, ALL EXPOSED DIRT SHALL BE STABILIZED WITH SOD, A HAY/SEED MIX OR HYDRO-SEED.MA

#### **UTILITY NOTES**

- 1. THE PROJECT UTILITY SURVEY HAS BEEN PROVIDED BY GUSTIN, COTHERN & TUCKER, INC.
- 2. THE CONTRACTOR SHALL HAVE A COPY OF THE APPROVED PLANS, A COPY OF THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND A COPY OF ALL PERMITS AND APPROVALS ON THE JOB.
- 3. ALL UTILITY TRENCHES ARE TO BE SLOPED OR BRACED AND SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKERS AND FOR THE
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, TRENCH EXCAVATION AND SHORINGS, TRAFFIC CONTROL, AND SECURITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SECURITY DURING CONSTRUCTION.
- 12.6. COORDINATE WITH APPROPRIATE UTILITY SERVICE COMPANY/PROVIDER AND PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE 5. THE CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND/OR DIRECTIVES WITH REGARD TO EXCAVATION AND TRENCHING
  - 6. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED PRIOR TO UTILITY INSTALLATION.
  - 7. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS "AS-BUILT PLANS" AND "FINAL PLATS" (IF APPLICABLE) UPON COMPLETION OF THE
  - 8. THE CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. EXISTING UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST SOURCES AVAILABLE (FIELD SURVEYS AND UTILITY MAPS) AND MAY NOT BE FULLY ACCURATE. AS SUCH, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE GRADING. ANY UTILITY RELOCATION DEEMED NECESSARY BUT NOT SHOWN ON THE APPROVED DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION.
  - 9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY UTILITY CONFLICTS, ADDITIONAL UTILITIES ENCOUNTERED, AND/OR ANY OTHER UTILITY INFORMATION WHICH MAY REQUIRE EXAMINATION.
  - 10. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO DETERMINE AND IMPLEMENT THEIR SPECIFIC INSTALLATION REQUIREMENTS AND SPECIFICATIONS
  - 11. THE CONTRACTOR SHALL CALL 811 AT LEAST 72 HOURS PRIOR TO EXCAVATION IN ORDER THAT UTILITIES BE FIELD LOCATED.
  - 12. THE CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY INSPECTOR 72 HOURS BEFORE CONNECTING TO ANY EXISTING UTILITY.
  - 13. THE SITE CONTRACTOR SHALL COORDINATE SERVICE ROUTING OF ALL GAS, TELEPHONE, AND ELECTRICAL LINES WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY CONSTRUCTION SHALL COMPLY WITH THE RESPECTIVE UTILITY'S STANDARDS AND SPECIFICATIONS. 14. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATION OF OR ADJUSTMENTS TO
  - EXISTING UTILITIES DURING CONSTRUCTION. THIS WORK SHALL BE PERFORMED IN A TIMELY FASHION AND WITH A MINIMAL DISRUPTION OF 15. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR THE PROPOSED LOCATION OF ALL WET AND DRY UTILITY
  - ENTRANCES INTO THE BUILDING. CONTRACTOR SHALL COORDINATE INSTALLATION OF THE VARIOUS UTILITIES TO AVOID CONFLICTS AND ENSURE THAT THE PROPER DEPTHS ARE ACHIEVED.
  - 16. ALL DRY UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE PROPER UTILITY COMPANY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL DRY UTILITIES BY OTHERS.
  - 17. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION.
  - 18. THE CONTRACTOR SHALL COORDINATE THE INSTALLATIONS OF WATER AND SANITARY SERVICES WITH THE LOCAL WATER AND SEWER PROVIDER. THE LOCAL WATER AND SEWER AUTHORITY STANDARD SPECIFICATIONS AND DETAILS SHALL GOVERN ALL WATER AND SANITARY SEWER 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE, AND MATERIAL OF ANY EXISTING WATER AND/OR
  - SEWER FACILITY PROPOSED FOR CONNECTION OR USE BY THIS PROJECT. THE RELOCATION OF ALL WATER/SEWER FACILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANY. 20. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL TELEVISE EXISTING SANITARY SEWER LINE FROM THE POINT OF CONNECTION THROUGH THE
  - NEXT SUCCESSIVE DOWNSTREAM RUN OF PIPE. THE CONTRACTOR SHALL ALSO TELEVISE ALL NEWLY INSTALLED SANITARY SEWER PIPE TO ENSURE LINES AND GRADES HAVE BEEN MET. 21. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN SANITARY, WATER, STORM, AND PRIVATE UTILITY LINES.
  - MEASUREMENTS SHALL BE TAKEN FROM THE NEAREST EDGE OF THE UTILITIES IN QUESTION.
  - 22. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE WATER AND SEWER SERVICES SHALL BE 8'. THE MINIMUM VERTICAL SEPARATIONS
  - 23. SANITARY SEWER PIPE SLOPE SHALL BE MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
  - 24. ALL MANHOLES REQUIRE KOR-N-SEAL OR EQUAL RUBBER BOOTS.
  - 25. TOPS FOR SANITARY SEWER MANHOLES PLACED WITHIN PAVED AREAS SHALL BE INSTALLED WITH TRAFFIC READY FRAMES AND SHALL MATCH
  - THE FINISHED PAVEMENT ELEVATIONS. TOPS FOR MANHOLES PLACED WITHIN GRASSED AREAS SHALL MATCH FINISHED GRADE ELEVATIONS. ALL EXISTING MANHOLES & UTILITY BOXES SHALL BE ADJUSTED AS NECESSARY TO MATCH FINISHED GRADING.
  - 26. ALL SANITARY MANHOLES AND PIPE SHALL BE FLUSHED CLEAN OF DEBRIS PRIOR TO TURNING SYSTEM OVER TO OWNER. 27. ALL FIRE HYDRANTS SHALL CONFORM TO LOCAL REQUIREMENTS.
  - 28. THRUST BLOCKS ARE REQUIRED WHEREVER PIPE CHANGES DIRECTION (TEES, BENDS, ETC.).
  - 29. GRAVITY SEWER LINE MATERIAL SHALL BE PVC (SDR35) OR DIP (CLASS 350).
  - 30. THE PRIMARY ELECTRIC SERVICE SHALL BE PROVIDED BY THE LOCAL POWER PROVIDER. THIS INCLUDES THE TRANSFORMER, PAD, TRENCHING, BACKFILL AND COMPACTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE SECONDARY SERVICE. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF BOTH SERVICES.
  - 31. THE GAS SERVICE UP TO THE GAS METER SHALL BE PROVIDED BY THE LOCAL GAS PROVIDER. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE GAS SERVICE
- SLOPES EXCEEDING 5% BUT LESS THAN 8% WILL REQUIRE A RAMP AND MUST CONFORM TO THE REQUIREMENTS FOR RAMP DESIGN (HANDRAILS, 32. THE GAS AND UNDERGROUND POWER LINES ARE SHOWN FOR INFORMATION PURPOSES ONLY. EXACT LOCATIONS SHALL BE FIELD DETERMINED **DURING CONSTRUCTION**
- IN THE CASE THAT A NEW SIDEWALK IS TO BE CONSTRUCTED IN THE PUBLIC R/W, THE RUNNING SLOPE OF THE SIDEWALK SHALL NOT EXCEED 5% 33. A UTILITY PERMIT FROM THE COUNTY ROAD AND BRIDGE DEPARTMENT IS REQUIRED BEFORE COMMENCING WORK IN A COUNTY RIGHT-OF-WAY.

#### **EROSION NOTES**

- 1. THE PROJECT TOPOGRAPHIC SURVEY HAS BEEN PROVIDED BY GUSTIN, COTHERN & TUCKER, INC. (THE ENGINEER SHALL NOT BE HELD
- RESPONSIBLE FOR THE ACCURACY OF THE SURVEY, OR FOR DESIGN ERRORS OR OMISSIONS AS A RESULT OF SURVEY INACCURACIES.) 2. THE OWNER SHALL ALLOW AND MAINTAIN OFF-STREET PARKING FOR WORKERS ON THE SUBJECT PROPERTY THROUGHOUT CONSTRUCTION. 3. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ONSITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN
- 4. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL CONFORM TO THE LATEST EROSION AND SEDIMENT CONTROL REGULATIONS FOR ASSOCIATED FEDERAL, REGIONAL, AND LOCAL REGULATORY AGENCIES.
- 5. ALL EROSION CONTROL MEASURES SHALL MEET THE REQUIREMENTS AND THE SPECIFICATIONS CONTAINED WITHIN THE CONSTRUCTION DETAILS UNLESS AN EQUAL PRODUCT HAS BEEN PRESENTED TO AND APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
- 6. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES. THESE MEASURES SHALL BE MAINTAINED THROUGHOUT THE ENTIRE DURATION OF LAND DISTURBING ACTIVITIES.
- 7. THE CONTRACTOR SHALL PROTECT ANY BORDERING OR ADJACENT DRAINAGE COURSE AND SHALL REMOVE ANY INTRUDING CONSTRUCTION DEBRIS OR SPOIL MATERIAL IN AN EXPEDITIOUS MANNER. 8. THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY MARKED AT THE OUTSET OF CONSTRUCTION AND SHALL REMAIN IN PLACE THROUGHOUT
- THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS AS INDICATED ON THE APPROVED EROSION CONTROL DRAWINGS. IF WETLANDS EXIST ON-SITE, ALL CLEARING MUST BE PERFORMED IN ACCORDANCE WITH THE APPROVED CORPS WETLANDS PERMIT. A CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED AT THE OUTSET OF CONSTRUCTION AND SHALL BE MAINTAINED APPROPRIATELY IN
- SHALL BE REMOVED IMMEDIATELY. 10. ONCE A CONSTRUCTION EXIT HAS BEEN APPROPRIATELY INSTALLED, APPROPRIATE PERIMETER EROSION CONTROL AND STORMWATER MEASURES SHALL BE INSTALLED PRIOR TO FURTHER CONSTRUCTION.

ORDER TO PREVENT TRACKING ONTO PUBLIC ROADWAYS. ALL MATERIALS SPILLED ONTO A PUBLIC ROADWAY OR INTO A PUBLIC STORM SEWER

- 11. ALL SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED WITH EITHER PERMANENT HARD SURFACE GROUND COVER VEGETATION. 12. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ACCUMULATED SILT FROM EACH RESPECTIVE EROSION CONTROL MEASURE IN ACCORDANCE WITH THE NOTES AND DETAILS ON THESE DRAWINGS.
- 14. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION. 15. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED SHOULD INTERIM DRAINAGE CONDITIONS DIFFER FROM THE APPROVED FINAL

CONDITIONS. THE CONTRACTOR SHALL MAKE ADJUSTMENTS ACCORDINGLY IN ORDER THAT SEDIMENT NOT LEAVE THE SITE.

16. THE CONTRACTOR SHALL KEEP AN ON-SITE DAILY LOG OF THE MAINTENANCE OF ALL EROSION CONTROL MEASURES. THE LOG SHALL BE MADE

17. ALL STOCKPILES ARE TO BE PROTECTED AGAINST DUST AND EROSION

18. AT ALL TIMES DURING AND AFTER DEVELOPMENT, CLEARED AREAS SHALL BE STABILIZED. FINAL STABILIZATION METHODS SHALL BE IN PLACE WITHIN FOURTEEN DAYS OF FINAL GRADING

19. THE APPROVED ERP PERMIT WILL BE SUBMITTED WHEN OBTAINED AND PRIOR TO CONSTRUCTION.

20. NO CLEARING, GRADING, EXCAVATING, FILLING, OR OTHER DISTURBANCE OF THE NATURAL TERRAIN SHALL OCCUR UNTIL EROSION AND SEDIMENTATION CONTROL MEASURES HAVE BEEN

21. THE CONTRACTOR SHALL PROVIDE THE COUNTY ENGINEER A COPY OF THE NPDES PERMIT PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES AS REQUIRED BY FDEP'S NPDES PROGRAM.

#### LANDSCAPE NOTES

NO MORE THAN 50% OF REQUIRED LANDSCAPING MATERIAL MAY BE OF THE SAME SPECIES.

2. THE CONTRACTOR/OWNER SHOULD COORDINATE WITH THE COMMUNITY PLANNING, ZONING AND DEVELOPMENT DIVISION PRIOR TO PURCHASING OR INSTALLING LANDSCAPING TO DETERMINE CREDIT FOR EXISTING VEGETATION TO (PARTIALLY) MEET THE LANDSCAPING REQUIREMENTS SHOWN ON THIS PLAN

#### **DEMOLITION NOTES:**

- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXIST. UTILITIES AND GRAVITY STORM AND SANITARY SEWER LINES TO DETERMINE THE ACCURACY OF SURVEY INFORMATION REFLECTED ON THESE DRAWINGS. ADDITIONALLY, THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL CONNECTIONS RELATIVE TO THOSE SHOWN ON
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS ACCURATE. AS SUCH, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE GRADING. ANY UTILITY RELOCATION DEEMED NECESSARY UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF

THE CONTRACTOR TO RELOCATE ALL EXIST. UTILITIES WHICH CONFLICT WITH THE PROPOSED UTILITIES SHOWN ON THE PLANS.

Call before you di

NOTICE:

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24 HOUR EMERGENCY CONTAC

2023-09-06

DRAWN BY: ML

OB #: 21000648

LF CODF: ##

HEET NO.

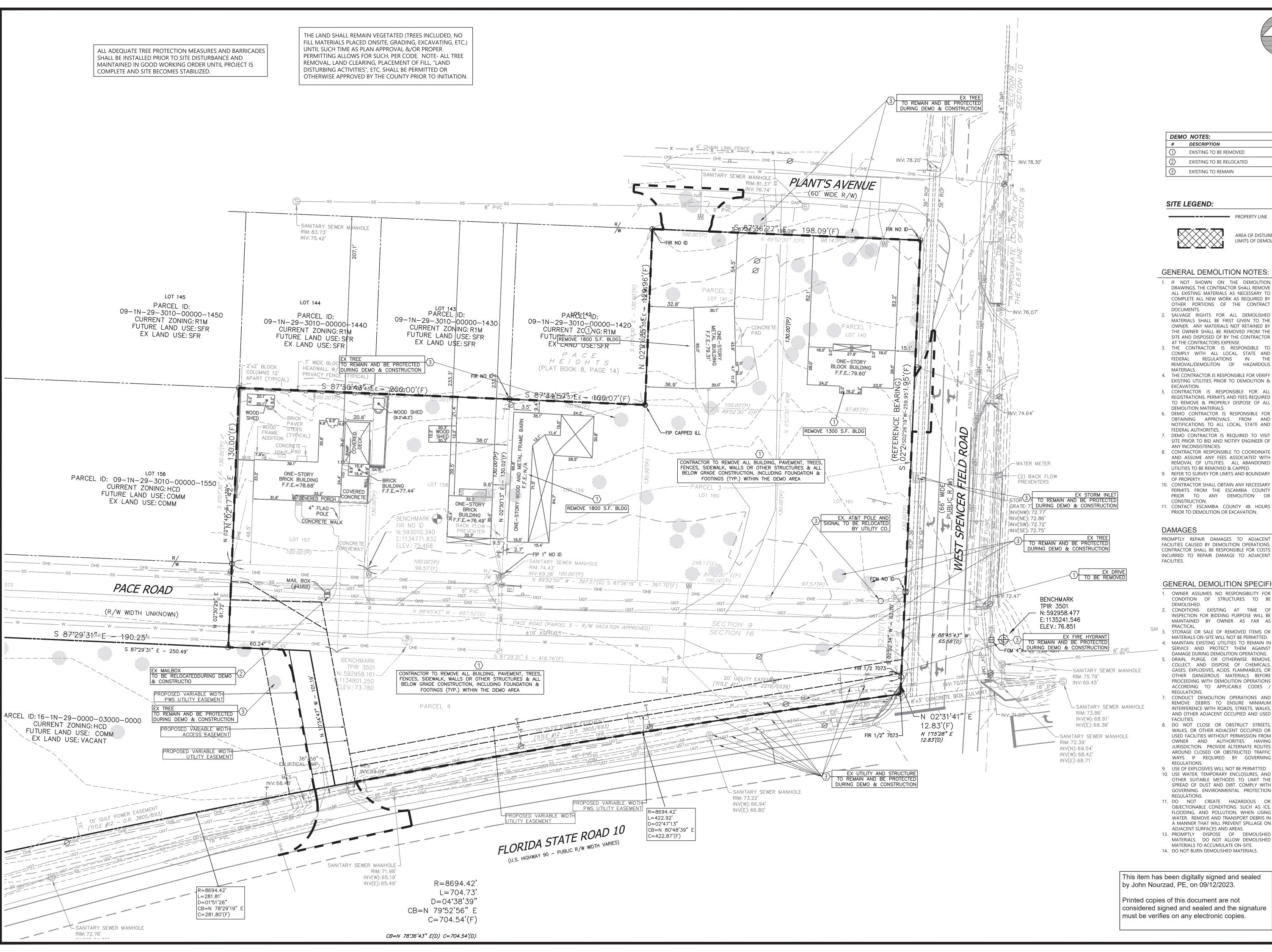
HECKED BY: JKG

ROJECT MANAGER: JKG

This item has been digitally signed and sealed

by John Nourzad, PE, on 09/12/2023.

Printed copies of this document are not considered signed and sealed and the signature must be verifies on any electronic copies.





ow what's **below**. Call before you die

DEFENDENCE THE CONTRACTOR SHA DETERMINE THE EXACT LOCATION OF AL EXISTING UTILITIES BEFORE COMMENCIN JORK, AND AGREES TO BE FULLY RESPONS ANY AND ALL DAMAGES WHICH MIGH ASIONED BY THE CONTRACTOR'S FAILUF NOTICE: ONSTRUCTION SITE SAFETY IS THE SO

NSIBILITY OF THE CONTRACTOR; NEIT OWNER NOR THE ENGINEER SHALL E Y OF THE WORK, OF PERSONS ENG WORK, OF ANY NEARBY STRUCTURES, OF ANY OTHER PERSONS. COPYRIGHT © 2023 ATWELL LLC NO EPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF ATWELL L

24 HOUR **EMERGENCY CONTAC** 

AREA OF DISTURBANCE LIMITS OF DEMOLITION

- 1. IF NOT SHOWN ON THE DEMOLITION DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXISTING MATERIALS AS NECESSARY TO COMPLETE ALL NEW WORK AS REQUIRED BY OTHER PORTIONS OF THE CONTRACT
- MATERIALS SHALL BE FIRST GIVEN TO THE OWNER. ANY MATERIALS NOT RETAINED BY THE OWNER SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR
- 3. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS IN THE REMOVAL/DEMOLITON OF HAZARDOUS
- EXISTING UTILITIES PRIOR TO DEMOLITION & 5. CONTRACTOR IS RESPONSIBLE FOR ALL REGISTRATIONS, PERMITS AND FEES REQUIRED TO REMOVE & PROPERLY DISPOSE OF ALL
- 6. DEMO CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVALS FROM AND NOTIFICATIONS TO ALL LOCAL, STATE AND
- 8. CONTRACTOR RESPONSIBLE TO COORDINATE
- AND ASSUME ANY FEES ASSOCIATED WITH REMOVAL OF UTILITIES. ALL ABANDONED UTILITIES TO BE REMOVED & CAPPED.
- 10. CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS FROM THE ESCAMBIA COUNTY PRIOR TO ANY DEMOLITION OR
- 11. CONTACT ESCAMBIA COUNTY 48 HOURS

PROMPTLY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY DEMOLITION OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS INCURRED TO REPAIR DAMAGE TO ADJACENT

#### **GENERAL DEMOLITION SPECIFICATION**

- 1. OWNER ASSUMES NO RESPONSIBILITY FOR CONDITION OF STRUCTURES TO BE
- 2. CONDITIONS EXISTING AT TIME OF INSPECTION FOR BIDDING PURPOSE WILL BE
- SAN 3. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE WILL NOT BE PERMITTED. 4. MAINTAIN EXISTING UTILITIES TO REMAIN IN
- DAMAGE DURING DEMOLITION OPERATIONS. 5. DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND DISPOSE OF CHEMICALS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS BEFORE PROCEEDING WITH DEMOLITION OPERATIONS ACCORDING TO APPLICABLE CODES
- 7. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED
- 8. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNING
- 9. USE OF EXPLOSIVES WILL NOT BE PERMITTED. 10. USE WATER, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT THE SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION
- 11. DO NOT CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS, SUCH AS ICE, FLOODING, AND POLLUTION, WHEN USING WATER. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
- 13. PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE.

This item has been digitally signed and sealed by John Nourzad, PE, on 09/12/2023.

considered signed and sealed and the signature

2023-09-06 11-30-2022

REVISIONS Digita

signed Date: 2024.03.06

RAWN BY: MI HECKED BY: JKG

HEET NO.

ROJECT MANAGER: JKG JOB #: 21000648 FILE CODE: ##

- 1. THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION IF THE LOCATION OR ELEVATION IS SUBSTANTIALLY DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF CONFLICTS EXIST, THE ENGINEER SHALL BE NOTIFIED.
- ALL EXISTING AND PROPOSED UTILITIES WITHIN LIMITS ALL EXISTING AND PROPOSED UTILITIES WITHIN LIMITS OF THE PROJECT MUST MEET MINIMUM DEPTH REQUIREMENTS UNDER PAVEMENT AND IN NATURAL AREAS, ANY EXISTING UTILITY THAT MAY BE IN CONFLICT WITH APPROVED ROADWAY FEATURES FOR THIS PROJECT MUST BE RELOCATED.
- 3. IN ADDITION TO THE RELOCATION OF THE EXISTING IN ADDITION TO THE RELOCATION OF THE EXISTING UTILITIES SHOWN ON THESE PLANS, FURTHER RELOCATION OF EXISTING UTILITIES MAYBE REQUIRED. CONTRACTOR/DEVELOPER TO COORDINATE WITH UTILITY COMPANIES AS NEEDED.

COMMENCING WORK IN A COUNTY RIGHT-OF-WAY

2. AT COMPLETION OF CONSTRUCTION, ALL EXPOSED DIRT SHALL BE STABILIZED WITH SOD, A HAY/SEED MIX OR HYDRO-SEED.

3. NO MORE THAN 50% OF REQUIRED LANDSCAPING MATERIAL MAY BE THE SAME SPECIES.

A SEPARATE PERMIT IS REQUIRED FOR ALL SIGNAGE.

5. THE CONTRACTOR/OWNER SHOULD COORDINATE WITH THE COMMUNITY PLANNING, ZONING AND DEVELOPMENT DIVISION PRIOR TO PURCHASING OR INSTALLING LANDSCAPING TO DETERMINE CREDIT FOR EXISTING VEGETATION TO (PARTIALLY) MEET THE LANDSCAPE REQUIREMENTS SHOWN ON THIS PLAN. DIFFERENCES SHALL BE REPORTED TO CIVIL ENGINEER PRIOR TO BUILDING LAYOUT.

ALL PROPOSED SIGNAGE WILL REQUIRE A VALID SANTA ROSA COUNTY SIGN PERMIT PRIOR TO CONSTRUCTION

**BENCHMARKS:** 

TRAVERSE POINT IRON ROD (L.B. #3501) N: 592958.161 E: 1134801.250

ELEVATION=73.780

ELEVATION=76.851

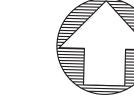
TRAVERSE POINT IRON ROD (L.B. #3501) N: 592958.477 E: 1135241.546

- REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION SHALL BEGIN UNTIL ALL PERMITS HAVE BEEN RECEIVED.
- 8. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE. CONTRACTOR SHALL REPAIR ANY DAMAGE DONE TO PRIVATE OR PUBLIC PROPERTY. 9. ACCESS TO UTILITIES, FIRE HYDRANTS, ETC. SHALL REMAIN UNDISTURBED AT ALL TIMES, UNLESS COORDINATED
- OTHERWISE 10. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF
- 11. ALL SUBGRADE PREPARATION, PAVING, AND UTILITY TRENCHING MUST BE IN ACCORDANCE WITH THE
- RECOMMENDATIONS OF THE SOILS INVESTIGATION. IF THERE IS A CONFLICT BETWEEN THE SOILS REPORT AND THE PLANS, THE MORE PROHIBITIVE OF THE TWO SHALL TAKE PRECEDENCE. 12. CONTRACTOR TO ENSURE COMPLIANCE WITH ANY AND ALL LAND DISTURBANCE NOTIFICATIONS REQUIREMENTS, AND THAT ALL REQUIRED EROSION CONTROL MEASURES ARE INSTALLED AND MAINTAINED IN

CONTROL DEVICES, LATEST EDITION, ALONG WITH THE REQUIREMENTS OF THE LOCAL FDOT AREA OFFICE.

- ACCORDANCE WITH THE STATE, LOCAL, OR FEDERAL REQUIREMENTS. 13. FOR WORK IN, OR ADJACENT TO, HIGHWAY RIGHT OF WAYS, CONTRACTOR SHALL ENSURE APPROPRIATE PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION. CONTRACTOR TO ERECT AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES IN CONFORMANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION TRAFFIC
- RE-DEVELOPED AND ARE REQUIRED TO MAKE CROSS CONNECTION TO SITE. 15. ALL PAVEMENT MARKINGS, DIRECTIONAL ARROWS REQUIRED TO BE REFLECTIVE THERMOPLASTIC PAINT ACCORDING TO SANTA ROSA COUNTY REQUIREMENT.

14. CROSS-ACCESS POINTS TO THE NORTH MUST BE OPENED IF/WHEN THE ADJACENT PARCELS ARE



SITE

3.323 ± AC (144,789 ± S.F.)

3.46± AC (150,947± S.F.)

1.94± AC (84,682± S.F.)

1.52± AC (66,265± S.F.)

SANTA ROSA COUNTY

SINGLE FAMILY RESIDENTIAL

SINGLE FAMILY RESIDENTIAL

COMMERCIAL & SINGLE FAMILY RESIDENTIAL

COMMERCIAL & SINGLE FAMILY RESIDENTIAL

COMMERCIAL

COMMERCIAL

COMMERCIAL

COMMERCIAL

COMMERCIAL

4.75%

24 SPACES

TIE IN NEW CURB TO MATCH EXISTING CURB

(SEE WIDTHS ON THIS PLAN SHEET)

WHEEL-STOPS

SAMPLE WELL

24" THERMOPLASTIC STOP BAR

3' WIDE RADIUS PROTECTION

PROPOSED GREASE INTECEPTOR

PROPOSED CEFCO SIGN LOCATION

AIR - SEE ARCH PLANS FOR DETAILS

PROPOSED SANITARY SEWER LIFT STATION

SITE LIGHTING - SEE ARCH PLANS FOR DETAILS

FUEL CANOPY (REF. FUEL SHEETS FOR DETAILS)

RAISED DOME DETECTABLE MAT (PER FDOT STDS.)

UNDERGROUND FUEL STORAGE TANKS

PROPOSED GENERATOR

FUEL DISPENSER (TYPICAL) - SEE ARCH PLANS FOR DETAILS

DUMPSTER ENCLOSURE - SEE ARCH PLANS FOR DETAILS

TRAFFIC CONTROL SIGN - SEE TYPE THIS SHEET

PROPOSED TRANSFORMER - SEE UTILITY PLAN

LANDSCAPE AREA - SEE LANDSCAPE PLAN L-1.0

TRANSITION CURB FROM 6" TO 0" OVER 2' HORIZONTALLY

NEW CONCRETE PAVING - SEE PAVING PLAN FOR DETAILS

CONCRETE ROLL-OVER CURB AND GUTTER - SEE DETAILS

6" WIDE THERMOPLASTIC YELLOW TRAFFIC LANE DIVIDER

PARIS FURNISHINGS ADA RECTANGULAR SHADED PICNIC TABLE

TRAFFIC FLOW ARROWS - WHITE REFLECTIVE THERMOPLASTIC

SIDEWALK (SEE WIDTH THIS SHEET; SEE COUNTY NOTES THIS SHEET\*)

BOLT DOWN HIGH IMPACT FLEXIBLE POSTS PROVIDED BY OWNER

HANDICAP PARKING SIGN "\$100" VIOLATION FEE PER ADA REQ.

NEW CONCRETE CURB AND GUTTER - SEE DETAILS SHEET FOR DETAILS

NEW HEAVY DUTY CONCRETE PAVING - SEE PAVING PLAN FOR DETAILS

4 INCH WIDE PAINTED WHITE STRIPING (2 COATS) @ 2' O.C. AND 45°

1 SPACE PER 250 G.F.A.

(6,037 / 250 = 24 SPACES)

33 SPACES, 2 ADA SPACES (1 VAN)

COORESPONDING

**DETAIL NUMBER** 

(SEE DETAIL SHEETS)

C-700 C-702

C-702

N/A

PER FDOT STD.

**REF ARCH PLANS** 

PER FDOT STD.

PER FDOT STD.

SEE MEP PLANS

REF MEP PLANS

BY OTHERS

C-701

N/A

C-700

N/A

C-700

HCD - HIGHWAY COMMERCIAL DEVELOPMENT/COMMERCIAL

SITE AREA

DISTURBED AREA:

JURISDICTION:

FUTURE LAND USE:

ZONING:

(EAST)

(SOUTH)

CORNER SIDE

BUILDING AREA:

**BUILDING HEIGHT** 

BUILDING COVERAGE

PARKING REQUIREMENTS

TOTAL PARKING REQUIRED

(CONVENIENCE STORE)

PARKING PROVIDED

NOTE

NUMBER

TOTAL PROPERTY AREA:

IMPERVIOUS AREA/PAVED AREA:

PERVIOUS AREA/OPEN LANDSCAPE AREA:

ADJACENT FUTURE LAND USE: (NORTH)

ADJACENT FUTURE LAND USE: (SOUTH)

ADJACENT FUTURE LAND USE: (WEST)

**BUILDING SETBACKS** 

BUILDING SUMMARY

PARKING SUMMARY

REAR ALONG DUAL FRONTAGE SIDE ADJACENT TO RESIDENTIAL

ADJACENT FUTURE LAND USE: (EAST)

ZONING CLASSIFICATION

EXIST/FUTURE LAND USE CATEGORIES

ow what's **below**. Call before you die

DEPENDENTLY VENTILED BY THE OWNER C REPRESENTATIVE. THE CONTRACTOR SHA DETERMINE THE EXACT LOCATION OF A EXISTING UTILITIES BEFORE COMMENCIN (ORK, AND AGREES TO BE FULLY RESPON): OR ANY AND ALL DAMAGES WHICH MIGH CCASIONED BY THE CONTRACTOR'S FAILU NOTICE:

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24 HOUR EMERGENCY CONTAC

2023-09-06

08-10-2023 01-30-2024 02-11-2024 03-04-2024

REVISIONS Digitall signed by John Nourzadt Date:

2024.03.06

AWN BY: MI ECKED BY: JKG

LF CODF: ## HEET NO. C200

ROJECT MANAGER: JKG JOB #: 21000648

FOR EXISTING VEGETATION TO (PARTIALLY) MEET THE LANDSCAPE REQUIREMENTS SHOWN ON THIS PLAN.

WB-67 - Interstate Semi-Trailer

Overall Mody Height Min Body Ground Clearance Max Track Width

Lock-to-lock time Max Steering Angle (Virtual)

Overall Length Overall Width

FROM THAT SHOWN ON THE PLANS, OR IF CONFLICTS EXIST, THE

2. ALL EXISTING AND PROPOSED UTILITIES WITHIN LIMITS ALL

3. IN ADDITION TO THE RELOCATION OF THE EXISTING IN

FOR THIS PROJECT MUST BE RELOCATED.

EXISTING AND PROPOSED UTILITIES WITHIN LIMITS OF THE

MAY BE IN CONFLICT WITH APPROVED ROADWAY FEATURES

ADDITION TO THE RELOCATION OF THE EXISTING LITHLITIES

UTILITIES MAYBE REQUIRED. CONTRACTOR/DEVELOPER TO

COORDINATE WITH UTILITY COMPANIES AS NEEDED.

SHOWN ON THESE PLANS, FURTHER RELOCATION OF EXISTING

PROJECT MUST MEET MINIMUM DEPTH REQUIREMENTS UNDER

PAVEMENT AND IN NATURAL AREAS. ANY EXISTING UTILITY THAT

ENGINEER SHALL BE NOTIFIED.



SINGLE FAMILY RESIDENTIAL COMMERCIAL

#### **BUILDING SETBACKS**

#### **BUILDING SUMMARY**

BUILDING COVERAGE 4.75%

PARKING REQUIREMENTS (CONVENIENCE STORE) TOTAL PARKING REQUIRED

#### **SITE GENERAL NOTES:**

- 1. DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS OTHERWISE INDICATED. THE RADII OF THE PLANTER ISLANDS AT DRIVEWAY INTERSECTIONS MUST BE AT LEAST 10 FEET. ALL OTHER
- 3. THE INFORMATION PERTAINING TO EXISTING CONDITIONS WAS TAKEN FROM A SURVEY PROVIDED BY: GUSTIN,
- CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTH OF UTILITY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- 5. ALL ACCESSIBLE PARKING SPACES AND TRAVEL ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.D.A. AND/OR STATE REQUIREMENTS (I.E. PROJECTS IN FLORIDA SHALL BE APPROVED BY A STATE SPECIALIST). 6. ANY DISCREPANCIES IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER AND
- REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION SHALL BEGIN UNTIL ALL PERMITS HAVE BEEN RECEIVED. 8. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED
- DAMAGE DONE TO PRIVATE OR PUBLIC PROPERTY. 9. ACCESS TO UTILITIES, FIRE HYDRANTS, ETC. SHALL REMAIN UNDISTURBED AT ALL TIMES, UNLESS COORDINATED
- 10. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
- 12. CONTRACTOR TO ENSURE COMPLIANCE WITH ANY AND ALL LAND DISTURBANCE NOTIFICATIONS REQUIREMENTS, AND THAT ALL REQUIRED EROSION CONTROL MEASURES ARE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE STATE, LOCAL, OR FEDERAL REQUIREMENTS.
- PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION. CONTRACTOR TO ERECT AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES IN CONFORMANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL DEVICES, LATEST EDITION, ALONG WITH THE REQUIREMENTS OF THE LOCAL FDOT AREA OFFICE. 14. CROSS-ACCESS POINTS TO THE NORTH MUST BE OPENED IF/WHEN THE ADJACENT PARCELS ARE
- ACCORDING TO SANTA ROSA COUNTY REQUIREMENT.

SITE AREA

TOTAL PROPERTY AREA: 3.323 ± AC (144,789 ± S.F.) DISTURBED AREA: 3.46± AC (150,947± S.F.) IMPERVIOUS AREA/PAVED AREA: 1.94± AC (84,682± S.F.) PERVIOUS AREA/OPEN LANDSCAPE AREA: 1.52± AC (66,265± S.F.)

#### **ZONING CLASSIFICATION**

JURISDICTION: SANTA ROSA COUNTY HCD - HIGHWAY COMMERCIAL DEVELOPMENT/COMMERCIAL FUTURE LAND USE: ADJACENT FUTURE LAND USE: (NORTH) SINGLE FAMILY RESIDENTIAL ADJACENT FUTURE LAND USE: (EAST) COMMERCIAL ADJACENT FUTURE LAND USE: (SOUTH) COMMERCIAL

ADJACENT FUTURE LAND USE: (WEST) COMMERCIAL & SINGLE FAMILY RESIDENTIAL

## EXIST/FUTURE LAND USE CATEGORIES

COMMERCIAL COMMERCIAL & SINGLE FAMILY RESIDENTIAL

BUILDING AREA: **BUILDING HEIGHT** 

#### PARKING SUMMARY

1 SPACE PER 250 G.F.A. (6,037 / 250 = 24 SPACES)24 SPACES 33 SPACES, 2 ADA SPACES (1 VAN)

PLANTER ISLAND RADII CAN BE 4 FEET. COTHERN & TUCKER, INC. 4. THE LOCATION OF ALL EXISTING UTILITIES WERE OBTAINED FROM AVAILABLE INFORMATION. THE

ENGINEER PRIOR TO THE START OF CONSTRUCTION. 7. PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT ALL

FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE. CONTRACTOR SHALL REPAIR ANY

11. ALL SUBGRADE PREPARATION, PAVING, AND UTILITY TRENCHING MUST BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS INVESTIGATION. IF THERE IS A CONFLICT BETWEEN THE SOILS REPORT AND THE PLANS, THE MORE PROHIBITIVE OF THE TWO SHALL TAKE PRECEDENCE.

13. FOR WORK IN, OR ADJACENT TO, HIGHWAY RIGHT OF WAYS, CONTRACTOR SHALL ENSURE APPROPRIATE

RE-DEVELOPED AND ARE REQUIRED TO MAKE CROSS CONNECTION TO SITE. 15. ALL PAVEMENT MARKINGS, DIRECTIONAL ARROWS REQUIRED TO BE REFLECTIVE THERMOPLASTIC PAINT low what's **below**. Call before you die

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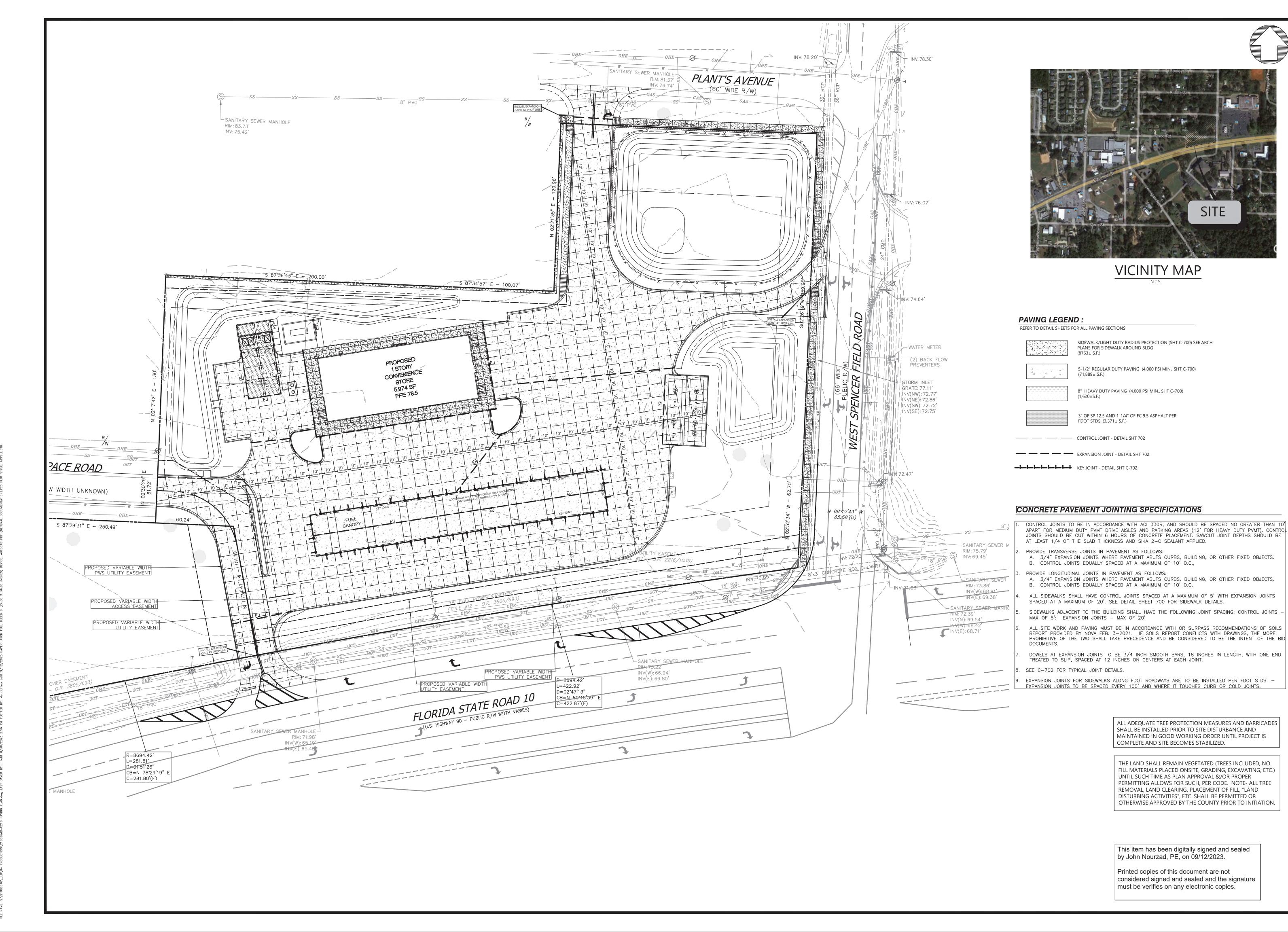
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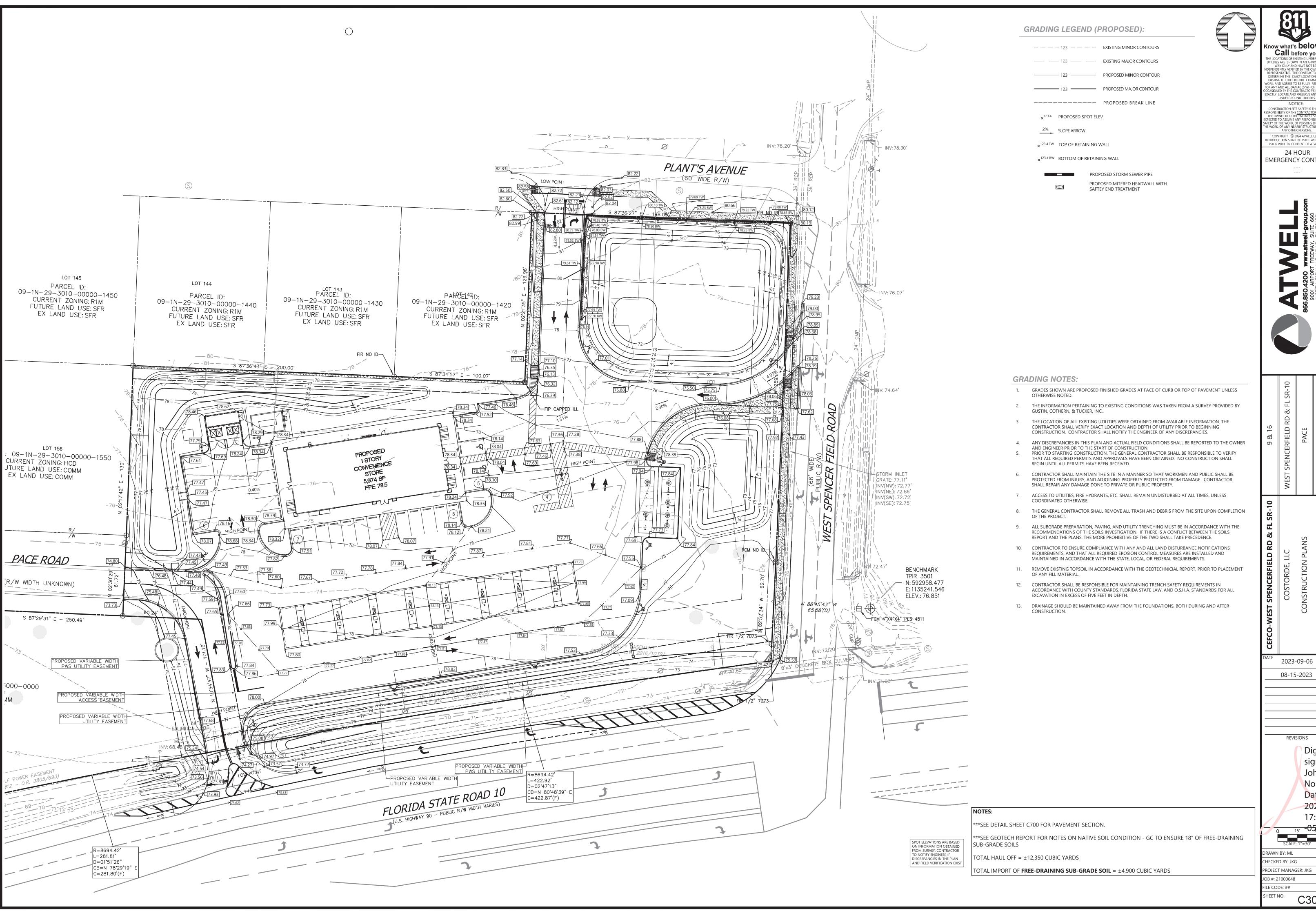
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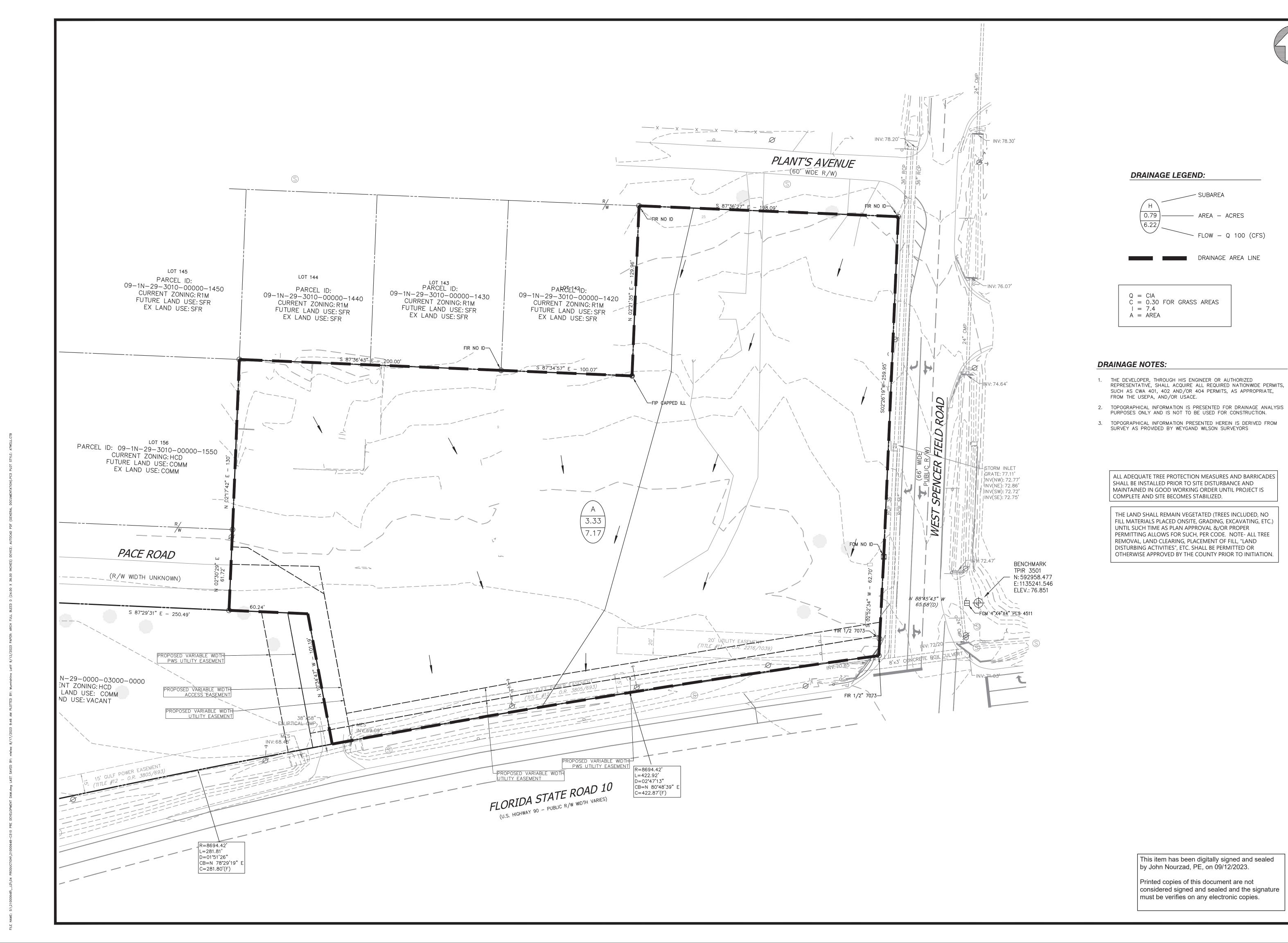
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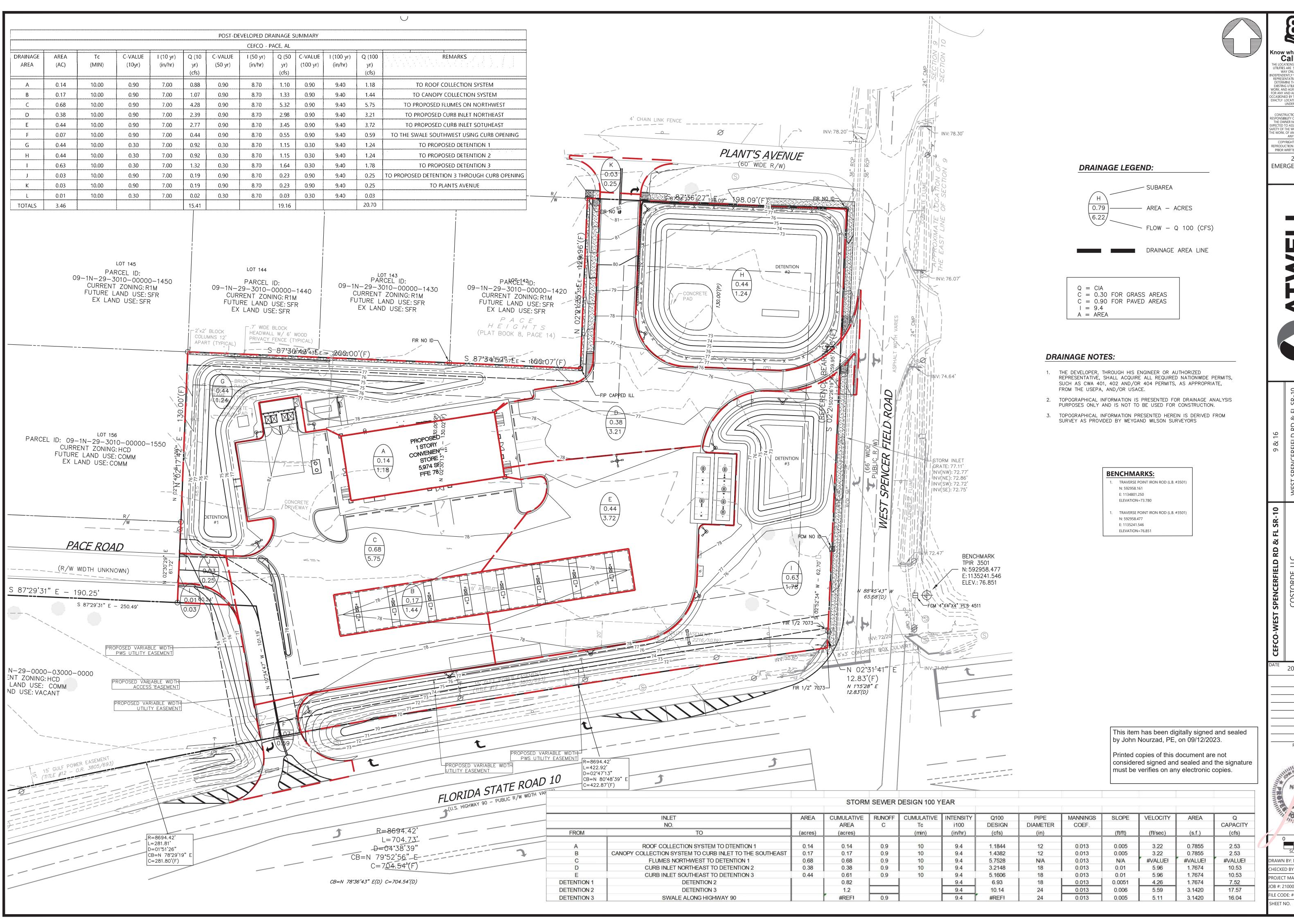
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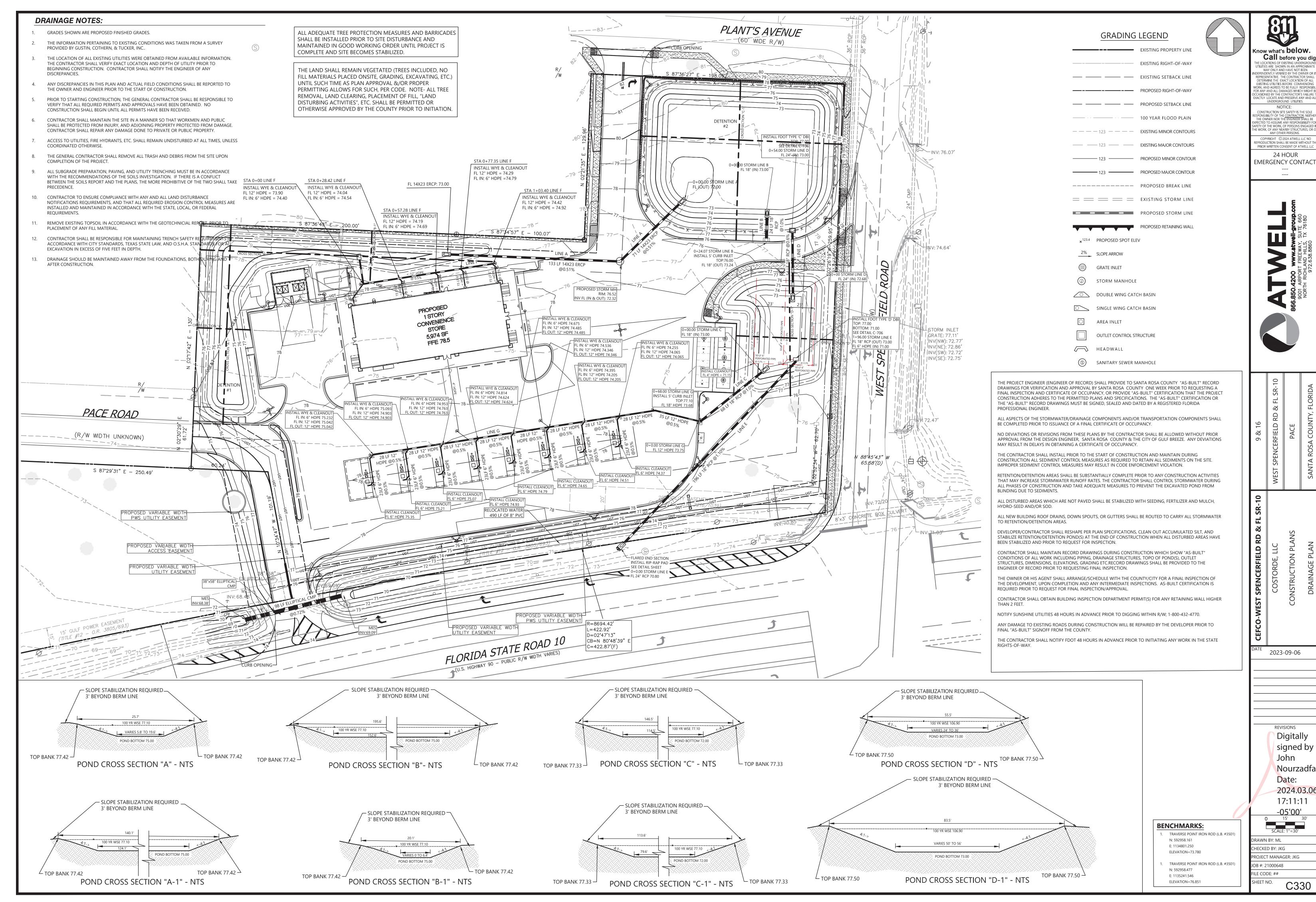
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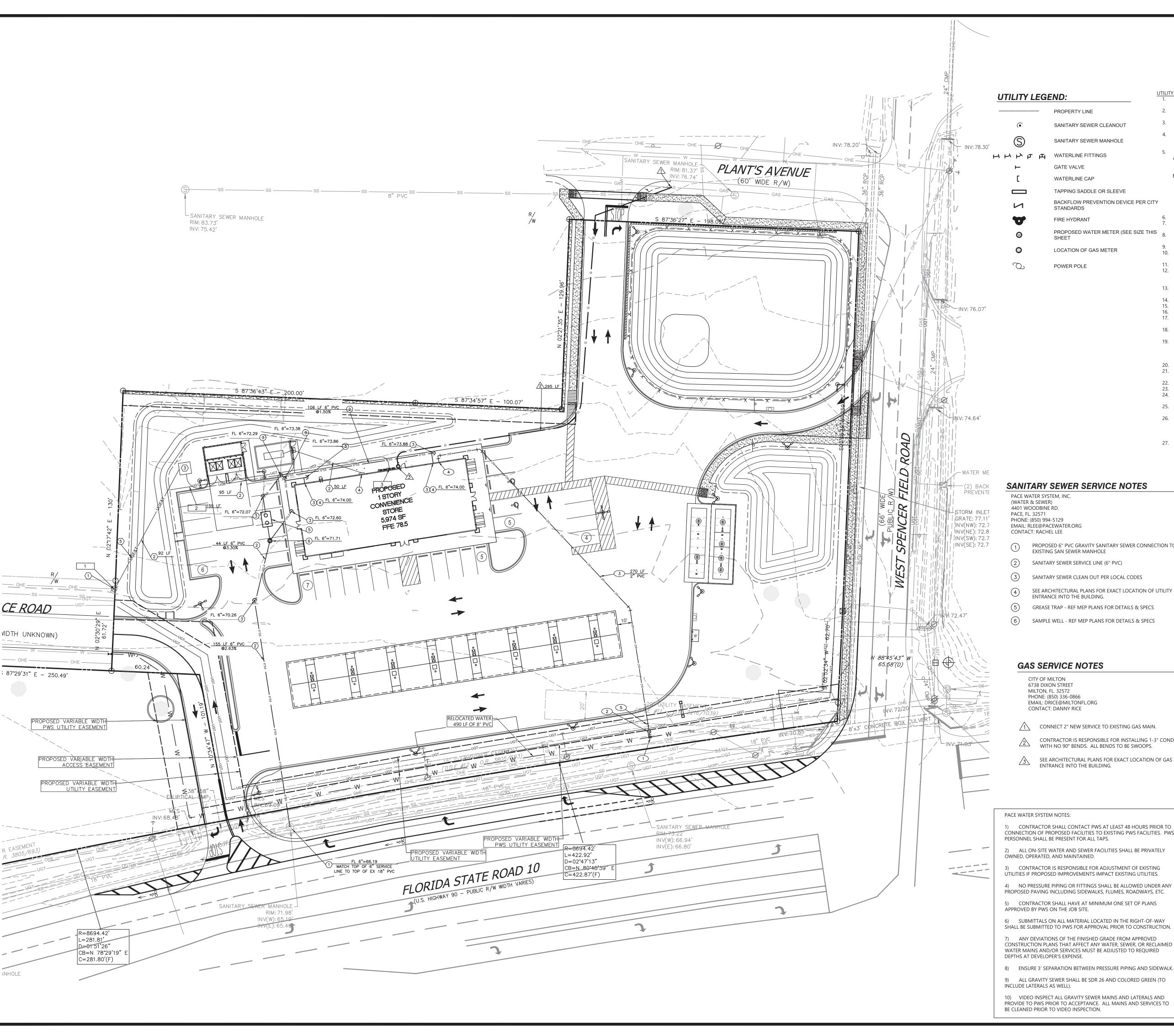
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SANITARY SEWER CLEANOUT

BACKFLOW PREVENTION DEVICE PER CITY

LOCATION OF GAS METER

UTILITY PLAN NOTES

1. CONTRACTOR TO HAVE ALL FILL MATERIAL IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.

. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES. 3. CONTRACTOR SHALL NOTIFY UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO

ANY EXISTING LINE. 4. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:

6" PVC SCHEDULE 40

8" AND 10" PVC SDR26 WATER LINE SHALL BE AS FOLLOWS: A. PIPE SIZES LESS THAN 3-INCHES THAT ARE INSTALLED BELOW GRADE AND OUTSIDE THE BUILDING SHALL COMPLY WITH THE FOLLOWING:

1. ENDOPURE - ASTM D2737, 200 PSI - PE 4710/PE 3408 B. PIPE SIZES 3-INCHES OR GREATER THAT ARE INSTALLED BELOW GRADE AND OUTSIDE THE BUILDING SHALL COMPLY WITH THE FOLLOWING 1. POLYVINYL CHLORIDE (PVC) WATER PIPE: PIPE, AWWA C900, RATED DR 18 (CLASS 150),

CONTINUALLY MARKED AS REQUIRED. a. ELASTOMERIC GASKETS AND LUBRICANT: ASTM - F477 FOR

SMALLER PIPES b. PIPE JOINTS: INTEGRALLY MOLDED BELL ENDS, ASTM D 3139

14. DRAWINGS DON'T PURPORT TO SHOW ALL EXISTING UTILITIES.

MINIMUM TRENCH WIDTH SHALL BE 2 FEET. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT IN PROPOSED WATER METER (SEE SIZE THIS 8. SPECIFICATIONS FOR WATER MAINS.
WATER AND SANITARY SEWER SHOULD BE KEPT TEN (10') APART (PARALLEL) OR 18" APART WHEN CROSSING (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE)

> O. CONTRACTOR SHALL MAINTAIN 3'-0" COVER ON ALL WATERLINES. 10. ALL UTILITIES SHALL BE KEPT TEN (10') APART (PARALLEL) OR 18" APART WHEN CROSSING (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE)

11. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING. 12. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS

(WHEN PLACED IN GRASS AREA). 13. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.

15. EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION OF ANY NEW LINES. 16. REFER TO INTERIOR PLUMBING FOR TIE-IN ON ALL UTILITIES. 17. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

18. CONTRACTOR TO PROVIDE TRENCHING, CONDUIT, PULL WIRE, AND BACKFILL FOR TELEPHONE AND ELECTRIC LINES UNLESS OTHERWISE NOTED. 19. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE. AND MATERIAL

OF ANY EXISTING WATER OR SEWER FACILITY FOR CONNECTION OR USE BY THIS PROJECT. THE RELOCATION OF ANY WATER/SEWER FACILITY REQUIRED TO AVOID ANY PART OF THIS DEVELOPMENT IS THE RESPONSIBILTY OF THE DEVELOPER.

20. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING AND ELECTRICAL PLANS. 21. ALL WATER SERVICE AND FIRE LINES AFTER THE WATER METER LOCATED IN THE VAULT WILL BE

PRIVATE LINE AND THE RESPONSIBILITY OF THE OWNER. 22. NO UTILITIES/STORM/SANITARY LINES ARE ALLOWED TO CROSS PETROLEUM PIPING. 23. ALL PUBLIC WATER MAINS MUST BE LOCATED IN RECORDED EASEMENTS.

24. ALL CONSTRUCTION TO CONFORM TO APPLICABLE CITY/COUNTY SPECIFICATIONS AND IN ACCORDANCE WITH CITY/ COUNTY ORDINANCES. 25. GENERAL CONTRACTOR TO PROVIDE ALTERNATE BID FOR OVERHEAD ELECTRIC AND TELEPHONE

SERVICE LINES TO BE MINIMUM 16' CLEAR ABOVE FINISHED GRADE. 26. THE SEWER FORCE MAIN SHALL COMPLY WITH SECTION 712.4.2 CAPACITY SEE TABLE 712.4.2 DIAMETER OF THE DISCHARGE PIPE AND CAPACITY OF PUMP OR EJECTOR. EXCEPTIONS, GRINDER

PUMPS OR GRINDER EJECTORS THAT RECEIVE THE DISCHARGE OF WATER CLOSETS SHALL HAVE A

DISCHARGE OPENING OF NOT LESS THAN  $\frac{11}{14}$  INCH. 27. A UTILITY PERMIT FROM THE COUNTY ROAD AND BRIDGE DEPARTMENT IS REQUIRED BEFORE COMMENCING WORK IN A COUNTY RIGHT-OF-WAY.

#### **SANITARY SEWER SERVICE NOTES**

PROPOSED 6" PVC GRAVITY SANITARY SEWER CONNECTION TO

SANITARY SEWER SERVICE LINE (6" PVC)

SANITARY SEWER CLEAN OUT PER LOCAL CODES

SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF UTILITY

GREASE TRAP - REF MEP PLANS FOR DETAILS & SPECS

SAMPLE WELL - REF MEP PLANS FOR DETAILS & SPECS

SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF GAS ENTRANCE INTO THE BUILDING.

ONTRACTOR SHALL CONTACT PWS AT LEAST 48 HOURS PRIOR TO CONNECTION OF PROPOSED FACILITIES TO EXISTING PWS FACILITIES. PWS

2) ALL ON-SITE WATER AND SEWER FACILITIES SHALL BE PRIVATELY

3) CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENT OF EXISTING UTILITIES IF PROPOSED IMPROVEMENTS IMPACT EXISTING UTILITIES.

PROPOSED PAVING INCLUDING SIDEWALKS, FLUMES, ROADWAYS, ETC. 5) CONTRACTOR SHALL HAVE AT MINIMUM ONE SET OF PLANS

SHALL BE SUBMITTED TO PWS FOR APPROVAL PRIOR TO CONSTRUCTION. 7) ANY DEVIATIONS OF THE FINISHED GRADE FROM APPROVED CONSTRUCTION PLANS THAT AFFECT ANY WATER, SEWER, OR RECLAIMED

8) ENSURE 3' SEPARATION BETWEEN PRESSURE PIPING AND SIDEWALK. 9) ALL GRAVITY SEWER SHALL BE SDR 26 AND COLORED GREEN (TO

10) VIDEO INSPECT ALL GRAVITY SEWER MAINS AND LATERALS AND PROVIDE TO PWS PRIOR TO ACCEPTANCE. ALL MAINS AND SERVICES TO

#### **ELECTRIC SERVICE NOTES**

FLORIDA POWER & LIGHT - MILTON (ELECTRIC) 8486 RANDY BROWN RD, MILTON, FL 32583 PHONE: (800) 778-9140

LOCATION OF CONNECTION FOR NEW SERVICE

CONTRACTOR IS RESPONSIBLE FOR INSTALLING 2-4" CONDUITS WITH NO 90° BENDS. ALL BENDS TO BE SWOOPS. PROVIDE PULL

PAD MOUNTED TRANSFORMER

SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF UTILITY ENTRANCE INTO THE BUILDING.

CONTRACTOR TO COORDINATE WITH LOCAL ELECTRIC COMPANY TO INSTALL NEW UNDERGROUND PRIMARY WIRE TO PAD MOUNTED TRANSFORMER. CONTRACTOR TO INSURE MIN. 1' SEPARATION FROM PRIVATE UGE.

CONNECT 2" NEW SERVICE TO EXISTING GAS MAIN.

CONTRACTOR IS RESPONSIBLE FOR INSTALLING 1-3" CONDUITS WITH NO 90° BENDS. ALL BENDS TO BE SWOOPS.

#### (TELEPHONE)

PHONE: (855) 441-4668

1 LOCATION OF CONNECTION FOR NEW SERVICE

**TELEPHONE SERVICE NOTES** 

CONTRACTOR IS RESPONSIBLE FOR INSTALLING 1-3" CONDUITS WITH NO 90° BENDS. ALL BENDS TO BE SWOOPS. TURN CONDUIT UP AT THE ENDS WITH PULL STRINGS

SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF TELEPHONE AND DATA ENTRANCE INTO THE BUILDING. CONTRACTOR TO PROVIDE 4X4 BACKBOARD WITH NO. 6 GROUNDING WIRE.

#### **WATER SERVICE NOTES**

PACE WATER SYSTEM, INC. (WATER & SEWER) 4401 WOODBINE RD. PACE, FL. 32571 PHONE: (850) 994-5129 EMAIL: RLEE@PACEWATER.ORG CONTACT: RACHEL LEE

1 LOCATION OF 8"x1.5"TAPPING SADDLE CONNECTION TO

PROPOSED 8" WATER MAIN. (SERVICE LINES TO METER TO BE 1.5")

(2) 1-1/2" DOMESTIC METER (PER PACE WATER STDS)

3 2" DOMESTIC SERVICE LINE (POLYPIPE) 4 SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF UTILITY

ENTRANCE INTO THE BUILDING. 5 2" R.P.Z.A BACKFLOW DEVICE (DOM)

CUT AND CAP ANY EXISTING WATER/SEWER SERVICES NOT BEING UTILIZED.

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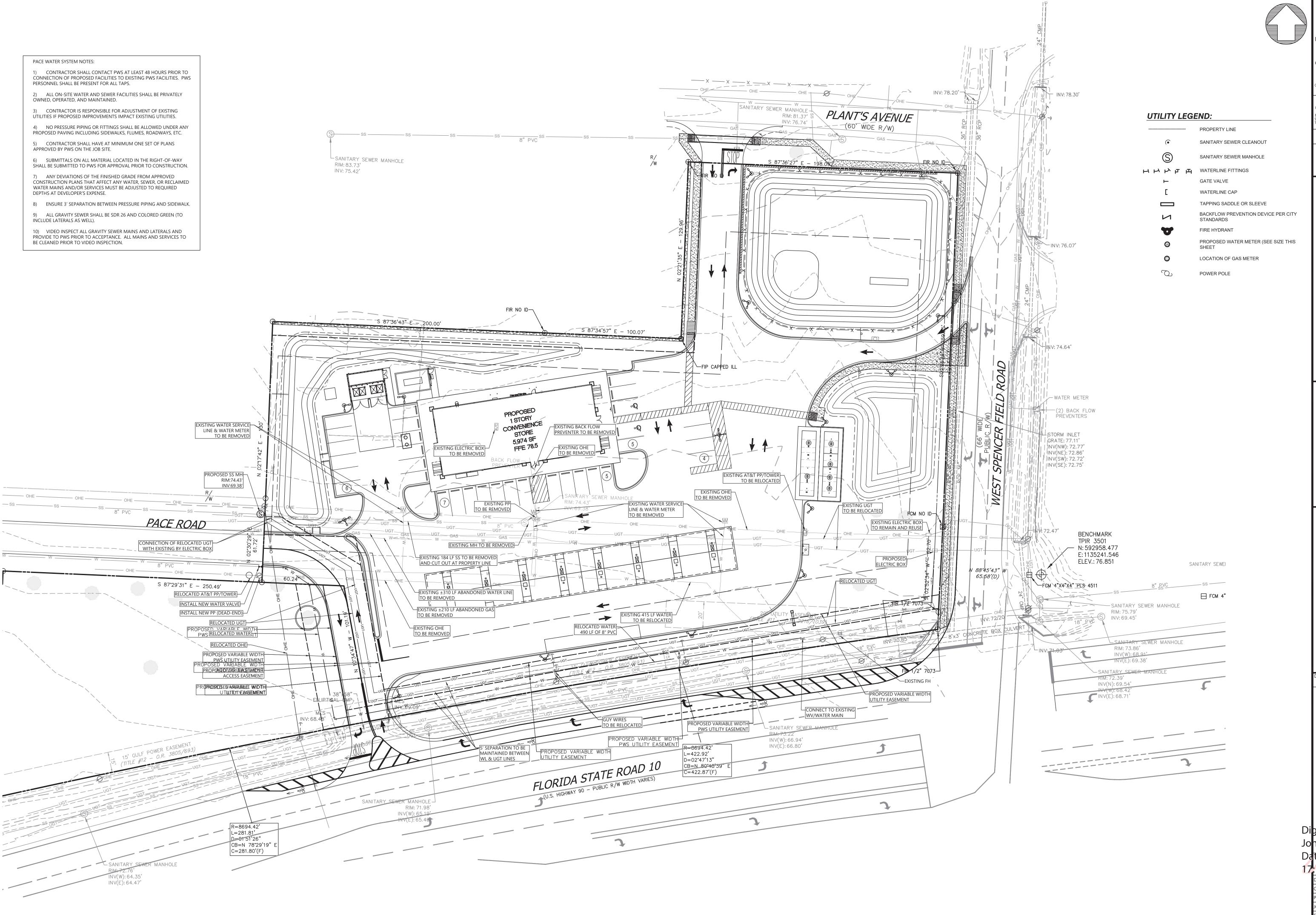
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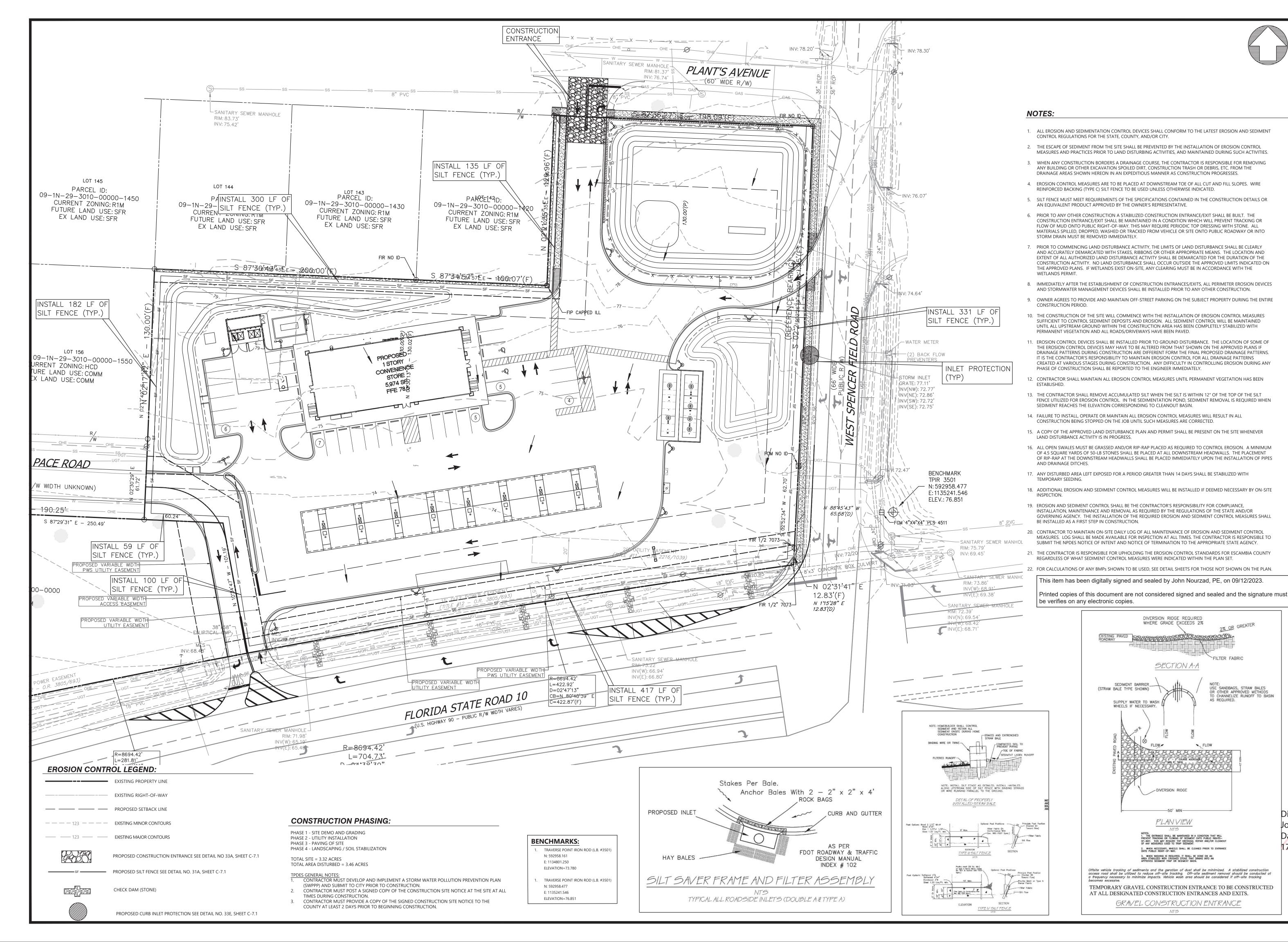
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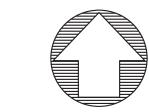
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NOTE: USE SANDBAGS, STRAW BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN

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HE PROPOSED PROJECT IS LOCATED AT THE NORTHWEST CORNER OF (S.R. 87) AND EAST HIGH SCHOOL BLVD., SANTA ROSA COUNTY, FLORIDA AND ENCOMPASSES 2.90 AC. AND IS /ACANT. CURRENTLY 2.20 AC. OF THE RUNOFF FLOWS TO AN EXISTING STORM SEWER INLET ALONG THE WEST PROPERTY LINE AND IN THE S.R. 87 R.O.W. AN ADDITIONAL 0.70AC. RUNS O AN EXISTING STORM SEWER MANHOLE IN THE NORTH R.O.W. OF HIGH SCHOOL BLVD. THE TOTAL AREA TO BE DISTURBED BY CONSTRUCTION WILL BE 3.08± AC. PROPOSED MPROVEMENTS INCLUDE THE FOLLOWING; CONSTRUCT A 30' ACCESS DRIVE OFF OF S.R. 87 & A 30' ACCESS DRIVE OFF HIGH SCHOOL BLVD., PAVED DRIVES, PARKING AREAS, DRIVES, SIDEWALKS, STORM & SANITARY SEWERS, WATER AND (3) WET STORM DETENTION PONDS FOR A PROPOSED CEFCO CONVENIENCE STORE AND GASOLINE FUELING STATION.

#### **EROSION & SEDIMENTATION CONTROLS:**

ROSION AND SEDIMENTATION FROM THE CONSTRUCTION SITE SHALL BE CONTROLLED AT ALL TIMES USING BEST MANAGEMENT PRACTICES (BMPs). PERIMETER CONTROLS SHALL BE NSTALLED PRIOR TO CLEARING ACTIVITIES OR AN CONSTRUCTION ACTIVITY THAT DISTURBS SOILS. INSTALLATION OF THOSE CONTROLS MAY BE STAGED TO CORRESPOND WITH THE CLEARING AND CONSTRUCTION SCHEDULE. IMMEDIATELY AFTER CLEARING ACTIVITIES APPROPRIATE CONTROLS SHALL BE INSTALLED TO LIMIT AND MINIMIZE THE VELOCITY OF TORMWATER RUNOFF OVER UNPROTECTED SOILS. TEMPORARY BPMs SHALL BE USED AS NECESSARY INSIDE THE PERIMETER CONTROLS AS THE CONSTRUCTION PROGRESS. PERIMETER CONTROLS SHALL BE ACTIVELY MAINTAINED UNTIL FINAL STABILIZATION OF THOSE PORTIONS OF THE SITE UPHILL OF THE PERIMETER CONTROLS. TEMPORARY CONTROLS SHALL BE REMOVED WHEN NECESSARY FOR THE NEXT STAGE OF CONSTRUCTION. CONTROLS SHALL BE CONSISTENT WITH THE PERFORMANCE STANDARDS FOR EROSION AND SEDIMENTATION CONTROL AS SET FORTH IN SECTION 62-40.432 F.A.C.

#### STABILIZATION & STRUCTURAL PRACTICES:

TABILIZATION PRACTICES MAY INCLUDE, BUT NOT LIMITED TO, TEMPORARY SEEDING, MULCHING, GEOTEXTILES, PERMANENT SOD AND PRESERVATION OF EXISTING VEGETATION. PRESERVATION OF THE EXISTING VEGETATION SHOULD ALWAYS BE THE FIRST CHOICE BMP. WHERE DISTURBED SOILS ARE TO REMAIN FOR EXTENDED PERIODS, TEMPORARY SEEDING SHOULD BE CONSIDERED PRIOR TO FINAL SOD STABILIZATION. A RECORD SHALL BE MAINTAINED OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE AND WHEN STABILIZATION MEASURES ARE INITIATED. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN 14 DAYS, IN THOSE AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.

STRUCTURAL PRACTICES SHALL DIVERT FLOWS FROM EXPOSED SOILS, STORE FLOWS, RETAIN SEDIMENT ON-SITE, OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SUCH PRACTICES MAY INCLUDE, BUT NOT LIMITED TO, SILT FENCES, EARTH DIKES, DIVERSION SWALES, SEDIMENT TRAPS, CHECK DAMS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, LEVEL SPREADERS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS AND TEMPORARY OR PERMANENT SEDIMENT BASINS.

#### STORMWATER MANAGEMENT:

A SINGLE ROW OF TYPE III SILT FENCE SHALL BE INSTALLED AROUND ENTIRE PERIMETER OF SITE ALONG WITH SILT SAVER FRAME AND INLET ASSEMBLY AT ALL CURB INLETS.

AFTER CLEARING ACTIVITIES, SILT FENCE AND HAY BALES SHALL BE INSTALLED AS NECESSARY, UPHILL OF THE PERIMETER CONTROLS TO REDUCE RUNOFF VELOCITIES AND THE POTENTIAL FOR EXCESSIVE EROSION. PRIOR TO ANY MAJOR GRADING ACTIVITY, THE STORMWATER DETENTION BASIN SHALL BE CONSTRUCTED.

AS THE GRADING ACTIVITIES PROGRESS, A DEPRESSED AREA SHALL BE CONSTRUCTED AROUND INLETS SURROUNDED BY HAY BALES FOR INLET PROTECTION. THESE DEPRESSED AREAS SHALL ACT AS SEDIMENT BASINS. RUNOFF FROM UPHILL AREAS SHALL BE DIRECTED TO THESE INLETS WHERE FEASIBLE BY DIVERSION SWALES.

THESE SWALES MAY REQUIRE TEMPORARY SEEDING AND CHECK DAMS TO MINIMIZE VELOCITIES AND AVOID EXCESSIVE EROSION. AS THE CONSTRUCTION PROGRESSES, EACH INSTALLED STORM INLET SHALL BE PROTECTED BY HAY BALES.

RIP-RAP OR SIMILAR VELOCITY CONTROL IS TO BE USED AS NECESSARY AT THE OUTFALLS FROM THE STORMWATER MANAGEMENT SYSTEM FOR VELOCITY DISSIPATION PRIOR TO DISCHARGE OFF-SITE. SILT FENCES, AND HAY BALES IF NECESSARY, SHALL BE INSTALLED ACROSS THE OUTFALLS UNTIL FINAL STABILIZATION IS ACHIEVED. EROSION CONTROL FACILITIES HALL ACTIVELY BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION AND SHALL REMAIN UNTIL FINAL STABILIZATION IS ACHIEVED AND ACCEPTED BY OWNER.

#### **CONTROLS FOR OTHER POTENTIAL POLLUTANTS:**

. MATERIALS MANAGEMENT AREA SHALL BE DESIGNATED ON-SITE FOR PROTECTED STORAGE OF CHEMICALS, SOLVENTS, FERTILIZERS AND OTHER POTENTIALLY TOXIC MATERIALS. STORAGE AREAS CAN BECOME A MAJOR SOURCE OF RICK SUE TO POSSIBLE MISHANDLING OF MATERIALS AND ACCIDENTAL SPILLS. AN INVENTORY SHOULD BE COMPILED AND MAINTAINED OF THE STORAGE AREA AND THE SITE. SPECIAL CARE SHOULD BE TAKEN TO IDENTIFY ANY MATERIAL THAT HAVE THE POTENTIAL TO COME INTO CONTACT WITH

PETROLEUM PRODUCTS SUCH AS OIL, GASOLINE, LUBRICANTS AND ASPHALTIC SUBSTANCES SHOULD BE HANDLED CAREFULLY TO MINIMIZE THEIR EXPOSURE TO STORMWATER. THESE 1ANAGEMENT PRACTICES SHALL BE USED TO REDUCE THE RISKS OF USING PETROLEUM PRODUCTS:

- HAVE EQUIPMENT AVAILABLE TO CONTAIN AND CLEAN UP PETROLEUM SPILLS IN FUEL STORAGE AREAS OR ON BOARD MAINTENANCE AND FUELING VEHICLES.
- WHERE POSSIBLE, STORE PETROLEUM PRODUCTS AND FUEL VEHICLES IN COVERED AREAS AND CONSTRUCT DIKES TO CONTAIN ANY SPILLS.
- CONTAIN AND CLEAN UP PETROLEUM SPILLS IMMEDIATELY. PERFORM PREVENTATIVE MAINTENANCE FOR ON-SITE EQUIPMENT TO PREVENT LEAKAGE.
- APPLY ASPHALTIC SUBSTANCES PROPERLY ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.

ZARDOUS PRODUCTS INCLUDING, BUT NOT LIMITED TO, PAINTS, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, CHEMICAL ADDITIVES USED FOR SOIL ABILIZATION, AND CONCRETE CURING COMPOUNDS SHOULD BE PROPERLY HANDLED. THESE PRACTICES WILL HELP AVOID POLLUTION OF STORMWATER BY THESE MATERIALS:

- KEEP EQUIPMENT TO TO CONTAIN AND CLEAN UP SPILLS OF HAZARDOUS MATERIALS IN THE AREAS WHERE THE MATERIAL ARE STORED.
- CONTAIN AND CLEAN UP SPILLS IMMEDIATELY AFTER THE OCCUR.
- KEEP MATERIALS IN A DRY COVERED AREA
- STORE MATERIALS IN THE ORIGINAL MANUFACTURERS CONTAINERS WHENEVER POSSIBLE BECAUSE OF SPECIAL HANDLING INSTRUCTIONS USUALLY ARE PRINTED ON THE

ESTICIDES INCLUDING INSECTICIDES, RODENTICIDES, AND HERBICIDES THAT ARE COMMONLY USED ON CONSTRUCTION SITES. THESE MANAGEMENT PRACTICES WILL REDUCE THE MOUNTS OF PESTICIDES THAT COULD CONTACT STORMWATER.

- HANDLE PESTICIDES AS INFREQUENTLY AS POSSIBLE. STORE MATERIALS IN THE ORIGINAL MANUFACTURERS CONTAINERS WHENEVER POSSIBLE BECAUSE SPECIAL HANDLING INSTRUCTIONS USUALLY ARE PRINTED ON THE
- OBSERVE ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS WHEN USING, HANDLING, OR DISPOSING OF PESTICIDES.
- STORE PESTICIDES IN A DRY COVERED AREA
- PROVIDE CURBS OR DIKES TO CONTAIN SPILLS.

DESIGNATE A WASTE DISPOSAL AREA ON-SITE.

HAVE MEASURES ON-SITE TO CONTAIN AND CLEAN UP SPILLS. STRICTLY FOLLOW RECOMMENDED APPLICATION RATES AND METHODS.

ERTILIZERS AND DETERGENTS USUALLY CONTAIN NUTRIENTS THAT CAN BE A MAJOR SOURCE OF POLLUTION IN STORMWATER. THESE PRACTICES SHOULD BE USED TO REDUCE THE

- ISKS OF NUTRIENT POLLUTION LIMIT THE APPLICATION OF FERTILIZERS TO THE MINIMUM AREA AND THE MINIMUM RECOMMEND AMOUNTS.
- REDUCE EXPOSURE OF NUTRIENTS TO STORMWATER RUNOFF BY WORKING THE FERTILIZER INTO THE SOIL TO A DEPTH OF 4 TO 6 INCHES.
- APPLY FERTILIZER MORE FREQUENTLY, BUT AT LOWER APPLICATION RATES. LIMIT HYDRO-SEEDING IN WHICH LIME AND FERTILIZERS ARE APPLIED TO THE GROUND SURFACE IN ONE APPLICATION.
- IMPLEMENT GOOD EROSION AND SEDIMENT CONTROL TO HELP THE AMOUNT OF FERTILIZER LOST AS A RESULT OF EROSION.
- LIMIT USE OF DETERGENTS ON THE SITE. WASH WATER CONTAINING DETERGENTS SHOULD NOT BE DISCHARGED TO THE STORMWATER MANAGEMENT SYSTEM. APPLY FERTILIZER AND USE DETERGENTS ONLY IN THE RECOMMENDED MANNER AND AMOUNTS.

PROPER MANAGEMENT AND DISPOSAL OF BUILDING MATERIALS AND OTHER CONSTRUCTION SITE WASTES ARE AN ESSENTIAL PART OF POLLUTION. CONSTRUCTION WASTE INCLUDE Surplus or refuse building material as well as hazardous waste. Management practices for these wastes include trash disposal, recycling, material handling, ND SPILL PREVENTION AND CLEAN UP. THESE PRACTICES SHOULD PROVIDE FOR THE PROPER DISPOSAL OF CONSTRUCTION WASTE:

- PROVIDE AN ADEQUATE NUMBER OF CONTAINERS WITH LIDS OR COVERS THAT CAN BE PLACED OVER THE CONTAINERS PRIOR TO RAINFALL. LOCATE CONTAINERS IN COVERED AREAS WHENEVER POSSIBLE
- ARRANGE FOR SCHEDULED WASTE PICK UP. ADJUST WASTE COLLECTION SCHEDULE AS NECESSARY TO PREVENT OVERFLOW OF THE CONTAINERS. ENSURE THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS IN COMPLIANCE WITH APPLICABLE STATE AND/OR
- LOCAL WASTE DISPOSAL REGULATIONS

DFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE KEPT TO A MINIMUM. A STABILIZED CONSTRUCTION ACCESS ROAD SHALL BE UTILIZED TO REDUCE PFF-SITE TRACKING. OFF-SITE SEDIMENT REMOVAL SHOULD BE CONDUCTED AT A FREQUENCY NECESSARY TO MINIMIZE IMPACTS. VEHICLE WASH AREA SHOULD BE CONSIDERED IF

HE CONSTRUCTION SITE MUST HAVE TEMPORARY SANITARY SEWER FACILITIES FOR ON-SITE PERSONNEL. POTABLE FACILITIES MAY BE UTILIZED THROUGHOUT THE SITE. LICENSED DOMESTIC WASTE HAULERS MUST BE CONTRACTED TO REGULARLY REMOVE THE SANITARY WASTES AND TO MAINTAIN THE FACILITIES IN GOOD WORKING ORDER. THE TEMPORARY ONSTRUCTION TRAILER MAY HAVE SANITARY SEWER FACILITIES WITH A HOLDING TANK. A LICENSED DOMESTIC WASTE HAULER SHALL ALSO SERVICE THIS FACILITY. AN ON-SITE SEPTIC STEM FOR THE CONSTRUCTION TRAILER IS NOT ALLOWED. TEMPORARY SANITARY SEWER FACILITIES SHALL BE PERMITTED BY THE LOCAL BUILDING DEPARTMENT IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS

#### **BENCHMARKS:**

- TRAVERSE POINT IRON ROD (L.B. #3501) N: 592958.161 E: 1134801.250
- ELEVATION=73.780 TRAVERSE POINT IRON ROD (L.B. #3501)
- N: 592958.477 E: 1135241.546 ELEVATION=76.85

#### **MAINTENANCE & INSPECTION CONTROLS:**

CONTROLS OF POLLUTANTS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL FINAL STABILIZATION IS ACHIEVED. QUALIFIED PERSONNEL SHALL INSPECT ALL POINTS OF DISCHARGE AND ALL DISTURBED AREA OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROLS, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF EVERY STORM EVENT THAT PRODUCES AT LEAST 0.50 INCHES OF RAINFALL. WHERE SITES HAVE FINALLY STABILIZED, SUCH INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED.

- \* STABILIZATION MEASURES DISTURBED AREA AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF THE POTENTIAL FOR. POLLUTANTS LEAVING THE SITE. THE INSPECTION SHOULD REVEAL WHEATEAR THE AREA WAS STABILIZED CORRECTLY, WHEATEAR THERE HAS BEEN DAMAGE TO
- THE AREA SINCE IT WAS STABILIZED, AND WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS. STRUCTURAL CONTROLS - SILT FENCES, HAY BALES AND OTHER EROSION CONTROL MEASURES SHALL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. THE INSPECTION SHOULD REVEAL WHETHER THE CONTROL WAS INSTALLED CORRECTLY, OR IF THERE HAS BEEN DAMAGE TO THE CONTROL SINCE INSTALLATION, AND WHAT SHOULD BE DONE TO CORRECT THE PROBLEMS. SEDIMENT SHOULD BE REMOVED FROM THE UPHILL SIDE OF THE SILT FENCE AND THE
- FENCE RECONSTRUCTED AS NECESSARY. HAY BALES SHALL BE ADDED OR REPLACED AS NECESSARY TO PROVIDE EFFECTIVE CONTROL DISCHARGE POINTS - DISCHARGE POINTS SHALL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM LEAVING THE SITE. SILT FENCES AND HAY BALES SHALL BE MAINTAINED OR REPLACED AS NECESSARY. THE INSPECTION SHOULD REVEAL WHETHER THE
- ON-SITE BMPs ARE EFFECTIVE, AND WHAT SHOULD BE DONE TO INCREASE THE EFFECTIVENESS. CONSTRUCTION ENTRANCES - LOCATION WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THE INSPECTION SHOULD REVEAL WHETHER THE STABILIZATION OF THE CONSTRUCTION ENTRANCE IS EFFECTIVE, AND WHAT SHOULD BE DONE TO INCREASE THE EFFECTIVENESS.
- AREAS USED FOR STORAGE OF EXPOSED MATERIALS THESE ARE LOCATIONS WHERE CONSTRUCTION MATERIALS (INCLUDING EXCAVATED SOILS) ARE STORED. THE INSPECTION SHOULD REVEAL THE POTENTIAL FOR EXCESSIVE EROSION AND SEDIMENTATION, AND WHAT ACTIONS SHOULD BE IMPLEMENTED TO REDUCE THE RISKS OF POLLUTION.

BASED ON THE RESULT OF THE INSPECTION, ALL MAINTENANCE OPERATIONS NEEDED TO ASSURE PROPER FUNCTION OF ALL CONTROLS, BMPs, PRACTICES OR MEASURES IDENTIFIED IN THIS PLAN SHALL BE DONE IN A TIMELY MANNER, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.

A REPORT SUMMARIZING THE SCOPE OF EACH INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATED TO THE IMPLEMENTATION OF THE STORMWATER POLLUTION PREVENTION PLAN, AND MODIFICATIONS TO THE STORMWATER POLLUTION PREVENTION PLAN SHALL BE PREPARED AND MAINTAINED AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED. SUCH REPORT SHALL IDENTIFY AND INCIDENCE OF NON-COMPLIANCE.

#### **IMPLEMENTED BMPs:**

TYPE:	IMPLEMENTED BY:	COMPANY NAME, CONTACT PERSON ADDRESS & PHONE NUMBER
PERIMETER SILT FENCING/HAY BALES		
INLET PROTECTION		
TEMPORARY CONSTRUCTION ENTRANCE		
TREE BARRICADES		

#### **CONTRACTOR CERTIFICATION:**

THIS STORMWATER POLLUTION PREVENTION PLAN MUST CLEARLY IDENTIFY, FOR EACH MEASURE IDENTIFIED WITHIN THE STORMWATER POLLUTION PREVENTION PLAN, THE CONTRACTOR(S) OR SUBCONTRACTOR(S) THAT WILL IMPLEMENT EACH MEASURE. ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN THE STORMWATER POLLUTION PREVENTION PLAN MUST SIGN THE FOLLOWING CERTIFICATION:

"I CERTIFY UNDER THE PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER"

NAME, TITLE	SIGNATURE	COMPANY NAME ADDRESS & PHONE NUMBER	DATE

#### **CONTRACTOR REQUIREMENTS:**

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE REQUIRED FDEP NPDES PERMIT PRIOR TO LAND DISTURBANCE.
- THE CONTRACTOR MUST HAVE TECHNICAL EXPERTISE IN EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR MUST AT ALL TIME MAINTAIN EROSION CONTROL METHODS THAT PREVENT ANY VIOLATION OF THE NPDES PROGRAM.

#### FAULTY INSTALLATION AND/OR POOR MAINTENANCE:

MOST NONCOMPLIANCE OCCURS BECAUSE MEASURES WERE NOT INSTALLED CORRECTLY OR MAINTAINED PROPERLY, OR BOTH. DETERMINING THE REASON WHY THE MEASURES ARE FAILING REQUIRES TECHNICAL KNOWLEDGE ABOUT THE DEVICES AND HOW TO CONSTRUCT THEM PROPERLY. CONTRACTORS FAILURE TO CONTROL EROSION, SEDIMENTATION OR TURBIDITY BOTH ON-SITE AND OFF-SITE IS NOT ACCEPTABLE. FAILURE TO DO SO MAY RESULT IN POSSIBLE FINES AND/OR TERMINATION FROM THE SITE WITHOUT PAYMENT FOR CONSTRUCTION PROGRESS.

#### COMPLIANCE:

THE GOAL OF THE PROGRAM IS TO PREVENT ACCELERATED EROSION AND OFF-SITE SEDIMENTATION. THE CONTRACTOR IS THE FIRST PERSON TO DETERMINE IT THE PERFORMANCE STANDARDS AND INTENT OF THE RULE ARE BEING MET. HE/SHE IS KEY PERSON IN ENSURING THAT THE CONSTRUCTION SITE IS EVALUATED FAIRLY AND CONSISTENTLY AND THAT THE SITE IS KEPT IN COMPLIANCE.

THE EROSION AND SEDIMENT CONTROL RULES ARE PERFORMANCE ORIENTED. THAT IS, THE MEASURES USED AT A CONSTRUCTION SITE MUST BE EFFECTIVE IN CONTROLLING EROSION AND PREVENT OFF-SITE SEDIMENTATION FOR THE SITE TO BE IN COMPLIANCE. FOLLOWING AN APPROVED PLAN AND INSTALLING THE CONTROL MEASURES MAY NOT BE ENOUGH FOR A SITE TO BE IN COMPLIANCE WITH THE RULES. IF EROSION AND OFF-SITE SEDIMENTATION OCCUR, THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING ADDITIONAL MEASURES TO CORRECT ANY PROBLEM ASSOCIATED WITH COMPLIANCE OF THE NPDES PERMIT OR ANY OTHER PERMIT REQUIRED FOR THE SITE CONSTRUCTION. THE CONTRACTOR WILL ALSO BE COMPLETELY RESPONSIBLE FOR ANY FINES LEVIED BY ANY GOVERNING AGENCY ON THE PROJECT DURING CONSTRUCTION.

THE RULES ARE ALSO FLEXIBLE, ALLOWING THE CONTRACTOR TO DECIDE THE MOST ECONOMICAL AND EFFECTIVE MEANS OF EROSION CONTROL. THIS ENCOURAGES THE USE OF INNOVATIVE TECHNIQUES AND SPECIFICALLY DESIGNED EROSION CONTROL SYSTEMS. THE CONTRACTOR IS THE KEY INDIVIDUAL IN MAKING THIS KIND OF PERFORMANCE BASED RULE WORK BECAUSE THE CONTRACTOR IS THE FIRST PERSON TO RECOGNIZE PERFORMANCE FAILURES AND REMEDY THE PROBLEMS

#### THE CONTRACTOR'S JOB IS TO:

- 1. DETERMINE THAT AN EROSION AND SEDIMENT CONTROL PLAN FOR THE SITE HAS BEEN APPROVED. DETERMINE THAT ALL SPECIFIED PRACTICES HAVE BEEN INSTALLED AND ARE BEING MAINTAINED ACCORDING TO THE PLAN.
- DETERMINE THAT BOTH ON-SITE AND OFF-SITE SEDIMENTATION, EROSION OR TURBIDITY IS BEING PREVENTED. IF THE CONTRACTOR FINDS DEFICIENCIES, APPROPRIATE ACTION

#### CONTROL OF NON-STORMWATER DISCHARGE:

IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGE MAY OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD: WATER FROM WATER LINE FLUSHING, PAVEMENT WASH WATER (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED), AND UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION). IF SAID DISCHARGES DO OCCUR, THEY WILL BE DIRECTED TO THE TEMPORARY SEDIMENT BASIN PRIOR TO DISCHARGE. TURBID WATER FROM THE STORMWATER POND SHALL NOT BE PUMPED DIRECTLY INTO EITHER OF THE RECEIVING WATERS. ANY PUMPED WATER FROM THE STORMWATER POND SHALL BE TREATED SO AS TO NOT ALLOW A DISCHARGE OF POLLUTED STORMWATER. TREATMENT CAN INCLUDE SILT FENCES, SETTLING PONDS, THE PROPER USE OF FLOCCULATING AGENTS OR OTHER APPROPRIATE

#### **RESPONSIBLE AUTHORITY:**

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.'

PROJECT NAME & LOCATION INFORMATION	S530 GULF BREEZE PKWY
RESPONSIBLE AUTHORITY INFORMATION	
PROJECT CONTACT	

NAME (OPERATOR AND/OR RESPONSIBLE A	JTHORITY



#### NATIONAL POLLUTANT DISCHARGE **ELIMINATION SYSTEM (NPDES) STORMWATER** NOTICE OF TERMINATION (RULE 62-621.300(6), F.A.C.)

You must use this form to terminate coverage under the Generic Permit for Stormwater Discharge from Large and Small Construction Activities provided in subsection 62-621.300(4), F.A.C., the Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity provided in subsection 62-621.300(5), F.A.C. as well as the conditional exclusion for "no exposure" of industrial activities and materials to stormwater provided in paragraph 62-620.100(2)(o), F.A.C.

#### All information provided on this form shall be typed or printed in ink.

#### I. TERMINATION INFORMATION:

B. Reason for Termination:	Check all that apply:			
No longer operator of	the facility/project.			
	Final stabilization criteria is met and all stormwater discharges associated with construction activity including dewatering operations have ceased (for construction activity only).			
All stormwater discha	All stormwater discharges associated with industrial activity have ceased (for industrial activity only).			
No longer meet the co	No longer meet the condition of "no exposure" (for industrial activity only).			

#### OPERATOR INFORMATION

II. OPERATOR INFORMATION:			
A. Operator Name:			
B. Address:	37		
C. City:	D. State:	E. Zip Code:	
F. Responsible Authority:	•	G. Responsible Authority's Phone No.:	
H. Responsible Authority's E-mail Add	ress:	I. Responsible Authority's Fax No.:	

#### III. FACILITY/PROJECT INFORMATION

A. Name:		
B. Address/Location:		
C. City:	D. State:	E. Zip Code:
F. County:		

#### IV. CERTIFICATION1:

I certify under penalty of law that all stormwater discharges associated with industrial or construction activity from the identified facility or project that are authorized by the referenced State of Florida generic permit have been eliminated; the facility no longer meets the conditional exclusion for "no exposure" outlined in paragraph 62-620.100(2)(o), F.A.C.; or that I am no longer the operator of the facility or project. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge stormwater associated with industrial or construction activity under a generic permit, and that discharging pollutants in stormwater associated with industrial or construction activity to surface waters of the State is unlawful unless authorized by a permit issued pursuant to Section 403.0885, F.S. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of their generic permit or conditional exclusion for "no exposure" from NPDES stormwater permitting for industrial activities.

Responsible Authority Name and Officia	l Title (Type or Print):
--	--------------------------

Responsible Authority Signature:	Date Signed

#### **Stormwater Pollution Prevention Plan Inspection Report Form** Inspections must occur at least once a week and within 24 hours of the end of a storm event that is 0.50 inches or greater.

## EDEP NPDES Stormwater Identification Number

Location	Rain data	Type of control (see below)	Date installed/ modified	Current Condition (see below)	Corrective Action / Other Remarks
	Weekly Report				
N. 100 C.		***************************************			
	100				

P = Poor, needs immediate maintenance or replacement M = Marginal, needs maintenance or replacement soon C =Needs to be cleaned O = Other

Control Type Codes			
1. Silt Fence	10. Storm drain inlet protection	19 Reinforced soil retaining system	28. Tree protection
2 Earth berm	11. Vegetative buffer strip	20. Stabilized aggregate roadway/parking	29. Detention pond
3. Structural diversion	12. Vegetative preservation area	21. Sediment Basin	30. Retention pond
4. Swale	13. Retention Pond	22. Temporary seed / sod-	31. Waste disposal / housekeeping
5 Sediment Trap	14. Construction driveway stabilization	23 Permanent seed / sod	32 Dam
6. Check dam	15. Perimeter ditch	24. Mulch	33. Sand Bag
7. Subsurface drain	16. Curb and gutter	25. Hay Bales	34. Turbidity Barrier
8. Pipe slope drain	17. Paved road surface	26. Geotextile	35. Dewatering (pump/hose/filter/well point, etc.)
9. Level spreaders	18. Rock outlet protection	27. Rip-rap	36. Other

Inspector	Inf	ormation:
medical collections		

Activities if there are not any incidents of non-compliance identified above.

The above signature also shall certify that this facility is in compliance with the Stormwater Pollution Prevention Plan and the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction

T certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penaltics for submitting false information, including the possibility of fine and imprisonment for knowing violations."

This item has been digitally signed and sealed by John Nourzad, PE, on 09/12/2023.

Name (Responsible Authority)

Printed copies of this document are not considered signed and sealed and the signature must be verifies on any electronic copies.



WAY ONLY AND HAVE NOT BEEN EPRESENTATIVE. THE CONTRACTOR SHA DETERMINE THE EXACT LOCATION OF A XISTING UTILITIES BEFORE COMMENCIN DRK, AND AGREES TO BE FULLY RESPON ANY AND ALL DAMAGES WHICH MIGH ASIONED BY THE CONTRACTOR'S FAILU

NOTICE: INSTRUCTION SITE SAFETY IS THE SO ISIBILITY OF THE CONTRACTOR; NEIT OWNER NOR THE ENGINEER SHALL E OF THE WORK, OF PERSONS EN WORK, OF ANY NEARBY STRUCTURES, O ANY OTHER PERSONS. COPYRIGHT © 2023 ATWELL LLC I

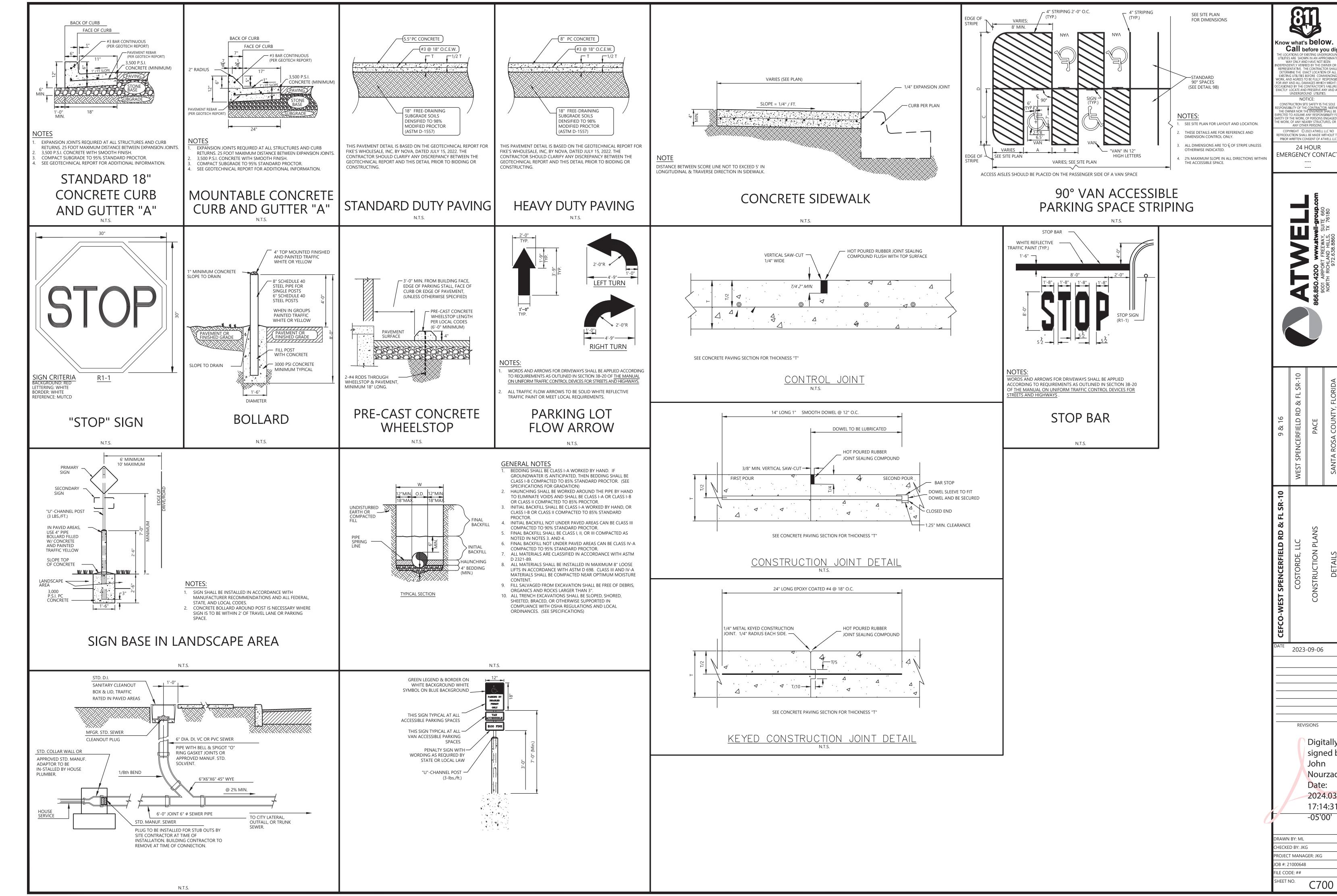
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2023-09-06

AWN BY: MI HECKED BY: JKG

ROJECT MANAGER: JKG DB #: 21000648 F CODF: ##



ow what's below. Call before you die

INSTRUCTION SITE SAFETY IS THE S

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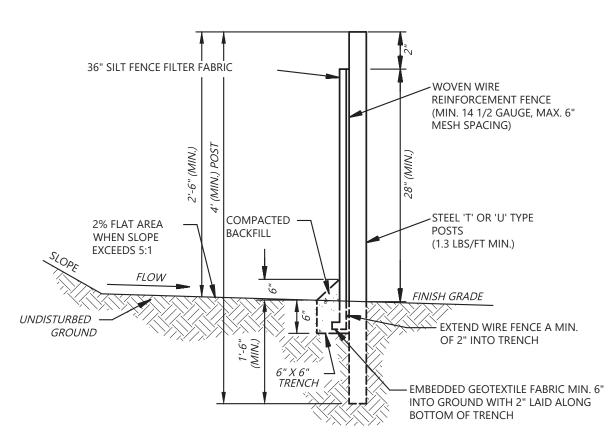
24 HOUR MERGENCY CONTAC

2023-09-06

signed by John Nourzadi Date:

2024.03.06 17:14:31 -05'00'

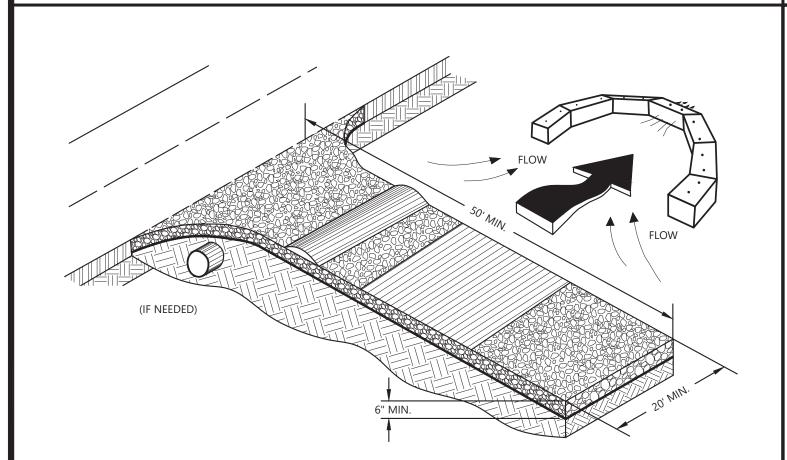
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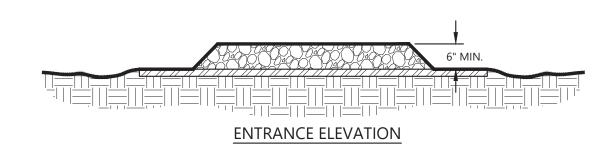


1/4 ACRE PER 100-LF MAX DRAINAGE AREA

**SECTION A-A** 

## SEDIMENT BARRIER TYPE C SILT FENCE





**EXIT DIAGRAM** 

AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE. . AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).

. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6". . PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'. .. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%...

INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.

WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE). WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY

CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT ). MAINTAIN AREA IN A WAY T<del>HAT PREV</del>ENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING

REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

INSTALLATION

- DO NOT INSTALL ACROSS STREAMS, DITCHES, WATERWAYS OR OTHER AREAS OF CONCENTRATED FLOW.
- INSTALL WHERE SHEET FLOW CONDITION EXIST.
- START POST INSTALLATION AT THE CENTER OF THE LOWEST POINT
- WITH REMAINING POSTS SPACED 4 FEET APART. TYPE 'C' SILT FENCE SHALL BE USED WHERE RUNOFF FLOWS OR
- VELOCITIES ARE PARTICULARLY HIGH. TYPE 'C' SILT FENCE SHALL BE USED WHERE SLOPES EXCEED A VERTICAL HEIGHT OF 10 FEET.
- TWO ROWS OF TYPE 'C' SILT FENCE MUST BE USED ALONG ALL STREAM BUFFERS.
- WOVEN WIRE REINFORCEMENT FENCE TO BE FASTENED SECURELY TO STEEL POSTS WITH WIRE TIES OR APPROVED EQUAL AT TOP, MID

MAXIMUM SLOPE LENGTH

2% - 5%

> 20%

5% - 10%

SILT FENCE MUST BE PROVIDED.

DRAINAGE STRUCTURE (SEE PLAN)

RIP-RAP PAD TO BE

OR PIPE. —

CENTERED ON STRUCTURE

DRAINAGE PIPE (SEE PLAN)

FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCEMENT FENCE WITH TIES SPACED EVERY 24" AT TOP AND

WHERE ALL RUNOFF IS TO BE STORED BEHIND THE SILT FENCE,

= 75 FT.

= 50 FT.

= 25 FT.

= 15 FT.

IN AREAS WHERE THE SLOPE IS GREATER THAN 20% OR 5:1, A FLAT

AREA LENGTH OF 10 FT BETWEEN THE TOE OF THE SLOPE AND THE

MAXIMUM SLOPE LENGTH SHALL NOT EXCEED:

### **MAINTENANCE**

SEDIMENT BARRIER

TYPE C SILT FENCE

STORM SEWER LINE

TRENCH AND BEDDING

**GENERAL NOTES** 

SILT FENCE FILTER FABRIC

FLOW RATE OF 70 GAL/MIN/SQ.FT.

ELONGATION PER ASTM D-4632 OF 40% MAX

UTILIZE DOT APPROVED FABRICS. COMMON EXAMPLES INCLUDE:

UTILIZE FENCE FABRIC THAT MEETS THE FOLLOWING CRITERIA:

MIRAFI 130X, AMOCO 1198, BELTECH 810, SI 915 SC, LING GTF 190

TENSILE STRENGTH PER ASTM D-4632 WITH WARP-260 AND FILL-180

APPARENT OPENING SIZE (MAX. SIEVE SIZE) PER ASTM D-4751 OF #30

 ULTRAVIOLET STABILITY OF 80 PER ASTM D-4632 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355

BURSTING STRENGTH OF 175 PSI MIN. PER ASTM D-3786

- SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.
- FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED. TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROX. 6 MONTHS), OR ANY TEARS OR HOLES ARE IN
- TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED. AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE

SPECIFICATIONS FOR GRADATION)

NOTED IN NOTES 3. AND 4.

OR CLASS II COMPACTED TO 85% PROCTOR.

COMPACTED TO 90% STANDARD PROCTOR.

COMPACTED TO 95% STANDARD PROCTOR.

ORGANICS AND ROCKS LARGER THAN 3".

ORDINANCES. (SEE SPECIFICATIONS)

10 ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED

SHEETED, BRACED, OR OTHERWISE SUPPORTED IN

COMPLIANCE WITH OSHA REGULATIONS AND LOCAL

CLASS I-B COMPACTED TO 85% STANDARD PROCTOR. (SEE

HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND

INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR

INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III

FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A

ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM

ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE

LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A

9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS,

MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE

MIN. LENGTH = 6 x PIPE DIA. IN

MIN. WIDTH =  $2 \times PIPE DIA$ . IN

FEET AT THE END OF RIP RAP

FEET AT THE PIPE, 3 x PIPE DIA. IN

FILTER FABRIC MARIFI 140N OR

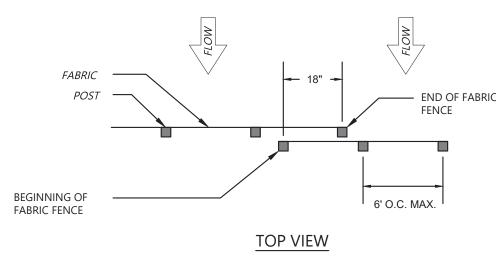
**EQUAL** 

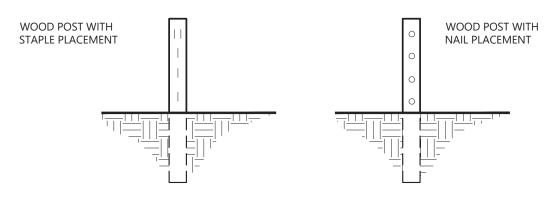
FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS

CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD

TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B

## OVERLAP AT FABRIC ENDS





THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND

**FRONT VIEW** 

## INSTALLATION

- THE SLOPE TOWARD THE INLET SHALL BE NO STEEPER THAN 3:1. A MINIMUM 1 FOOT WIDE LEVEL STONE AREA SHALL BE LEFT BETWEEN THE STRUCTURE AND AROUND THE INLET TO PREVENT GRAVEL FROM ENTERING THE INLET
- ON THE SLOPE TOWARD THE INLET, STONE 3 INCHES IN DIAMETER AND LARGER SHOULD BE USED.
- ON THE SLOPE AWAY FROM THE INLET, 1/2 TO 3/4 INCH GRAVEL (#57 WASHED STONE) SHOULD BE USED AT A MINIMUM THICKNESS OF 1

#### **MAINTENANCE**

- INSPECT, CLEAR, AND/OR REPAIR TRAP AT THE END OF EACH **WORKING DAY**
- DO NOT REMOVE INLET PROTECTION AND WASH SEDIMENT INTO THE
- REMOVE SEDIMENT FROM THE TRAP AND STABILIZE IT WITH VEGETATION
- REMOVE ALL MATERIALS AND ANY INSATIABLE SOIL ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED
- APPROPRIATELY STABILIZED ALL BARE AREAS AROUND THE INLET

# #57 STONE WRAPPED IN – CURB INLET FILTER FABRIC **SEDIMENT** CONCRETE GUTTER

# **CURB INLET SEDIMENT FILTER**

# N.T.S.

**FASTENERS FOR SILT FENCE** 



-

605 Suwannee Street Tallahassee, FL 32399-0450

MIKE DEW

SECRETARY

#### TO WHOM IT MAY CONCERN

The standards in effect in Florida that govern the layout of accessible parking spaces

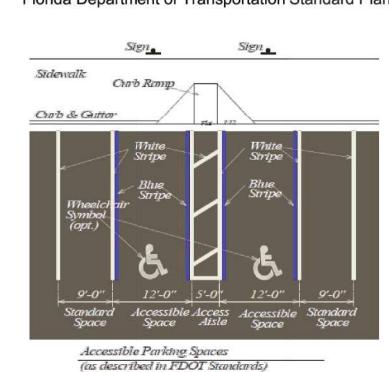
national standard for pavement markings, signage and traffic signals to "help insure highway safety by providing for the orderly and predictable movement of traffic...." It applies to the "national highway transportation system". As required by state law (s. 336.045 F.S. and s. 316.006 F.S.), FDOT has adopted the MUTCD as a state standard. FDOT adoption of the MUTCD applies to public parking spaces and to private parking spaces available for public use.

MUTCD section 3B-19 "Parking Space Markings" states that 'Parking space markings shall be white." This is intended to apply to parking spaces (on-street, off-street, parallel, diagonal and perpendicular, etc.) and accessory markings. The MUTCD also provides an option: "Blue lines may supplement white parking space markings of each parking space designated for use only by persons with disabilities." Note that the blue markings may 'supplement' the white markings, not replace them.

Florida. S. 553.5041(6) requires that accessible parking spaces "...must be prominently outlined with blue paint, and must be repainted when necessary, to be clearly distinguishable as a parking space designated for persons who have disabilities...."

designate it as a no-parking zone." Note there is no direction in Statute as to the number of diagonal lines or diagonal stripe angle or direction.

Considering the above: in Florida, all accessible parking spaces must be designated with blue paint. In this case, Florida law is applied in addition to the standard described in MUTCD. The correct markings for accessible parking spaces have both white and blue stripes and access aisles are marked in white. Usually this is applied with the blue paint 'inside' the white paint for the space (see drawing below, which illustrates the Florida Department of Transportation Standard Plans, Index 711-001.)



#### NOTES TO DRAWING: According to the MUTCD, the pavement

markings for the parking space and the access aisle (blue and white stripes) may be either 4" or 6".

If used, a ground-level wheelchair symbol should be white.

If there is a curb, there must be a curb ramp (1:12 max. slope) outside the space and access aisle. A perpendicular curb ramp must have flared sides (1:12 max. slope) if pedestrians may cross it transversely.

A pair of parallel curb ramps may also be used (w/5'-0" landing at the bottom). Wheel stops should be used to limit vehicular encroachment on the sidewalk.

FDOT Design Standards show dimensions to the centerline between two adjacent stripes. This is intended primarily for double lines between travel lanes on a roadway. For parking spaces, it is appropriate to dimension to the centerline of the white stripes and then add the

Also, as described above, the Florida accessible parking space provides the space for an automobile or a lift-equipped van. Therefore, a 'van accessible' sign and an 8' access aisle are not required. The standard for accessible parking in Florida is a 12' minimum parking space with an adjacent 5' minimum access aisle. Two accessible parking spaces may share an access aisle.

Respectfully Submitted, Florida Department of Transportation

H. Dean Perkins, Architect

A.D.A. Coordinator

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2023-09-06 REVISIONS

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HECKED BY: JKG ROJECT MANAGER: JKG

CRUSHED STONE CONSTRUCTION EXIT

SECTION A-A

THE STONES SHALL BE RESISTANT TO WATER EROSION. UNLESS OTHERWISE SPECIFIED, ALL STONES USED AS RIP-RAP SHALL WEIGH BETWEEN 50-150

POUNDS EACH, AND AT LEAST 60 PERCENT OF THE STONES SHALL WEIGH MORE THAN 100 POUNDS EACH.

SEE PLAN FOR LENGTH

RIP-RAP PAD

RICK SCOTT GOVERNOR January 31, 2018

# RE: Accessible Parking Spaces for Disabled Travelers - Florida Requirements

are the Manual on Uniform Traffic Control Devices (MUTCD), the 2017 Florida Accessibility Code for Building Construction (FACBC), and s. 553.5041, Florida

The MUTCD is published by the USDOT Federal Highways Administration. It is a

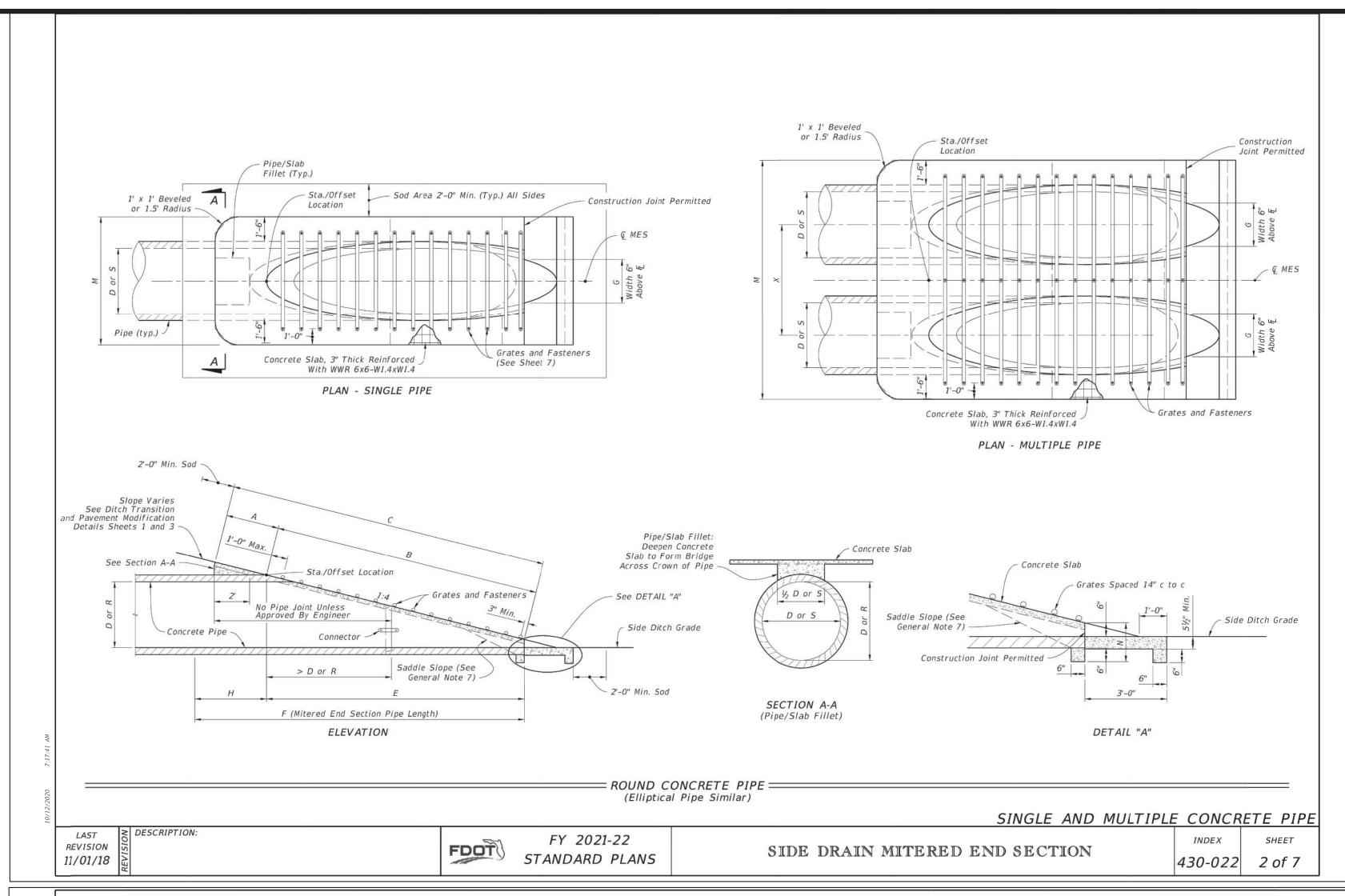
Sections 553.501-553.513 Florida Statutes, describe the accessibility requirements in

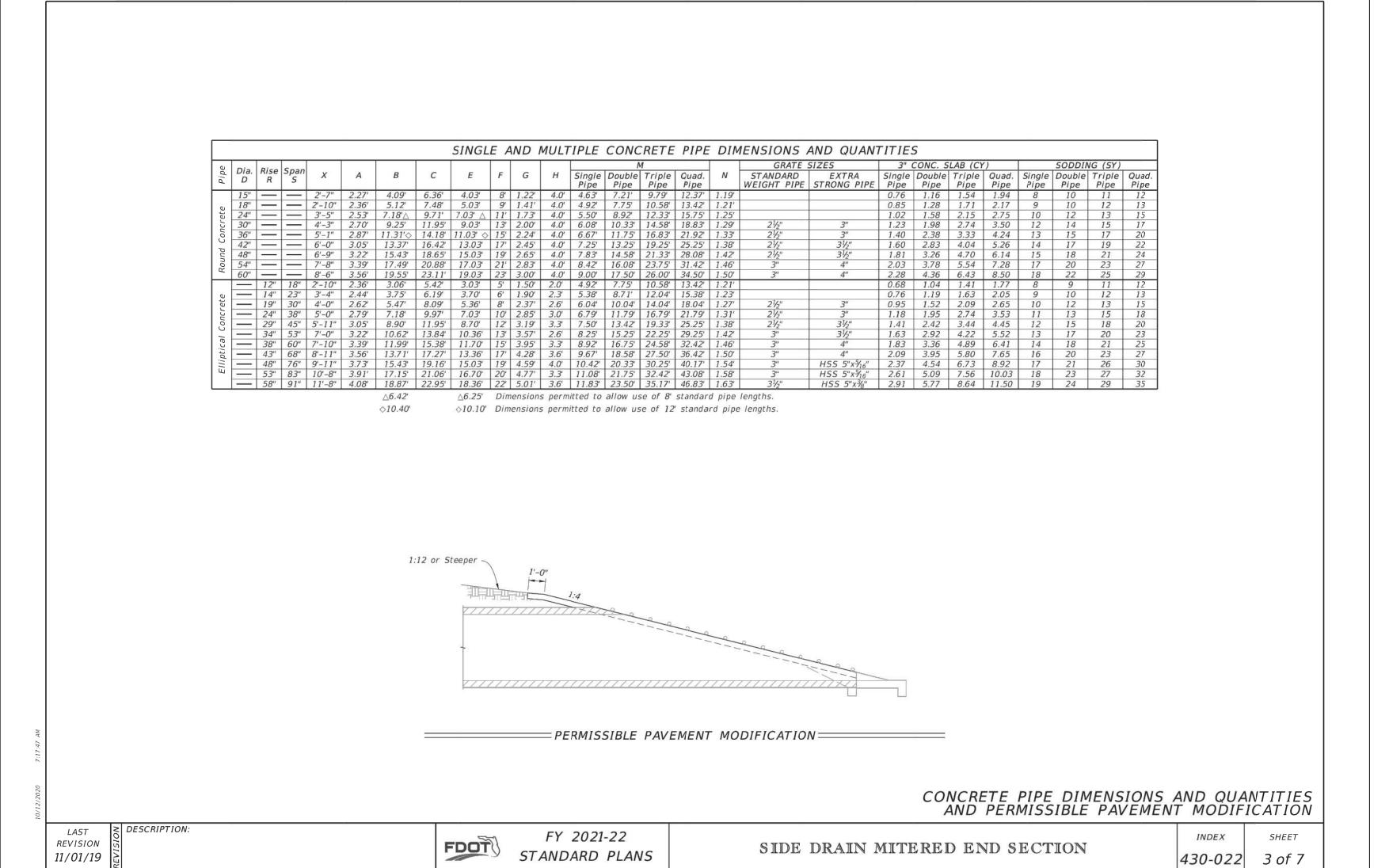
S. 553.5041(5)(c)1 requires that the "...access aisle must be striped diagonally to

www.dot.state.fl.us

FDOT ADA SPACE DETAIL

JOB #: 21000648 FILE CODE: ## SHEET NO. C701







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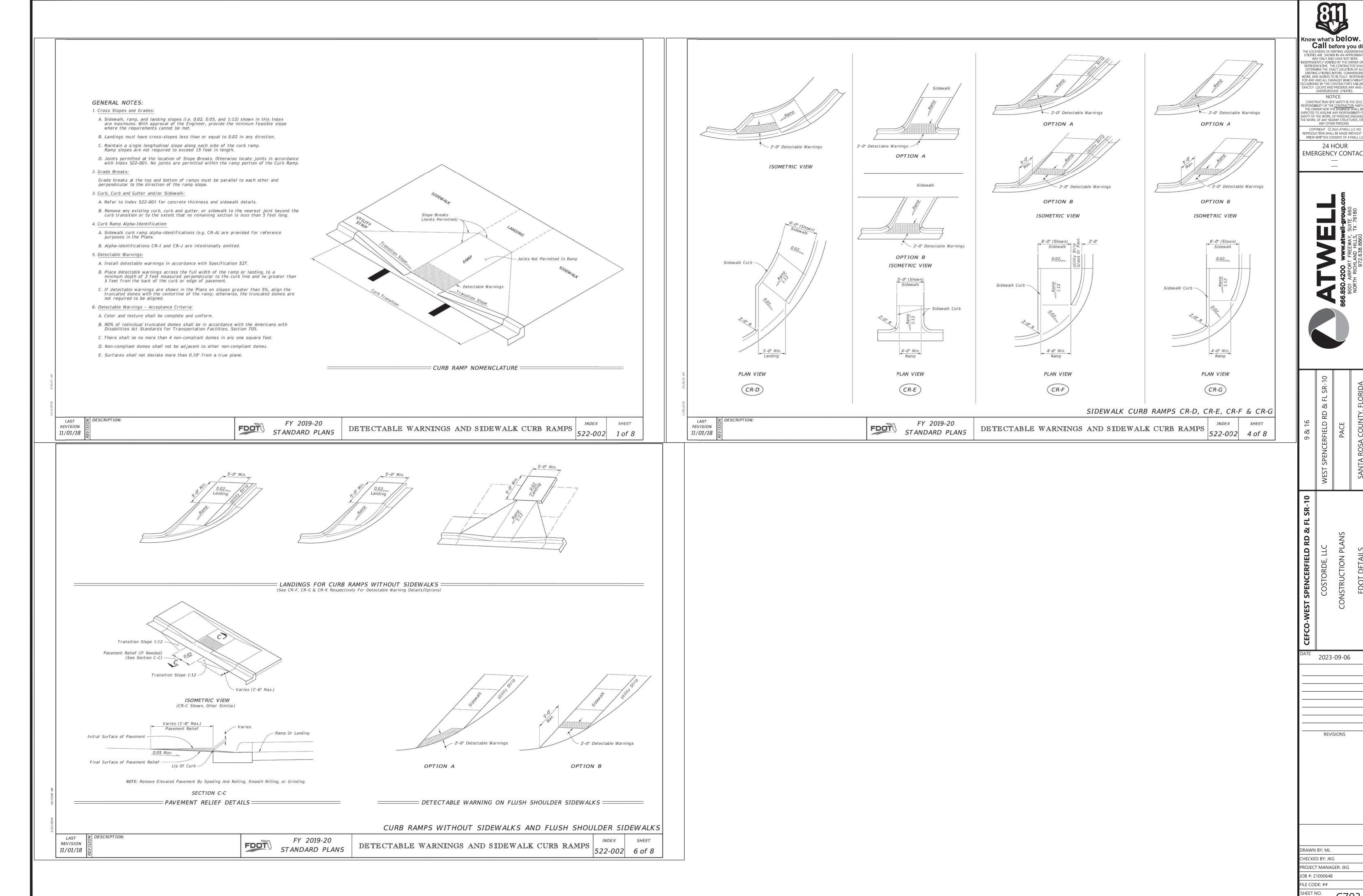
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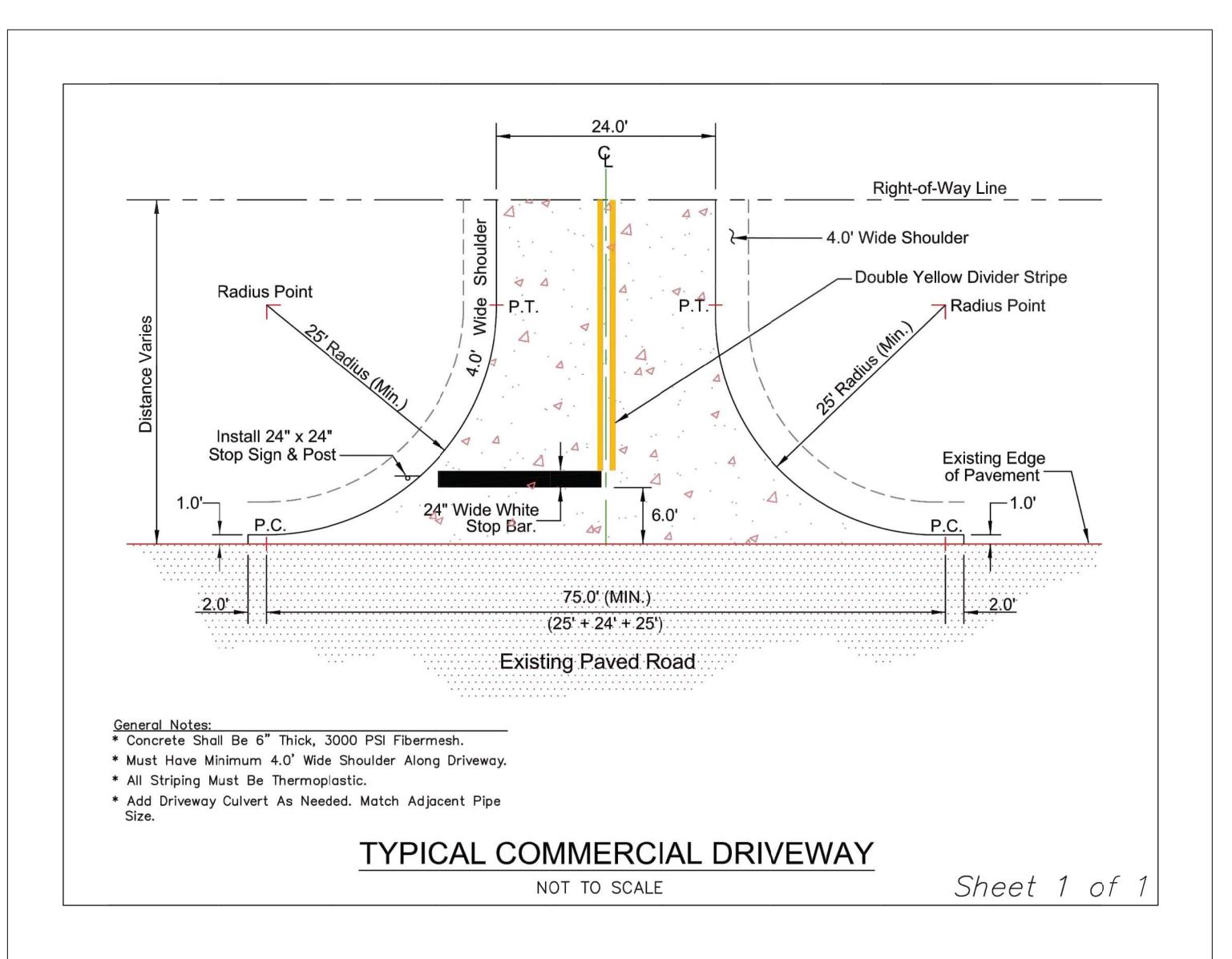
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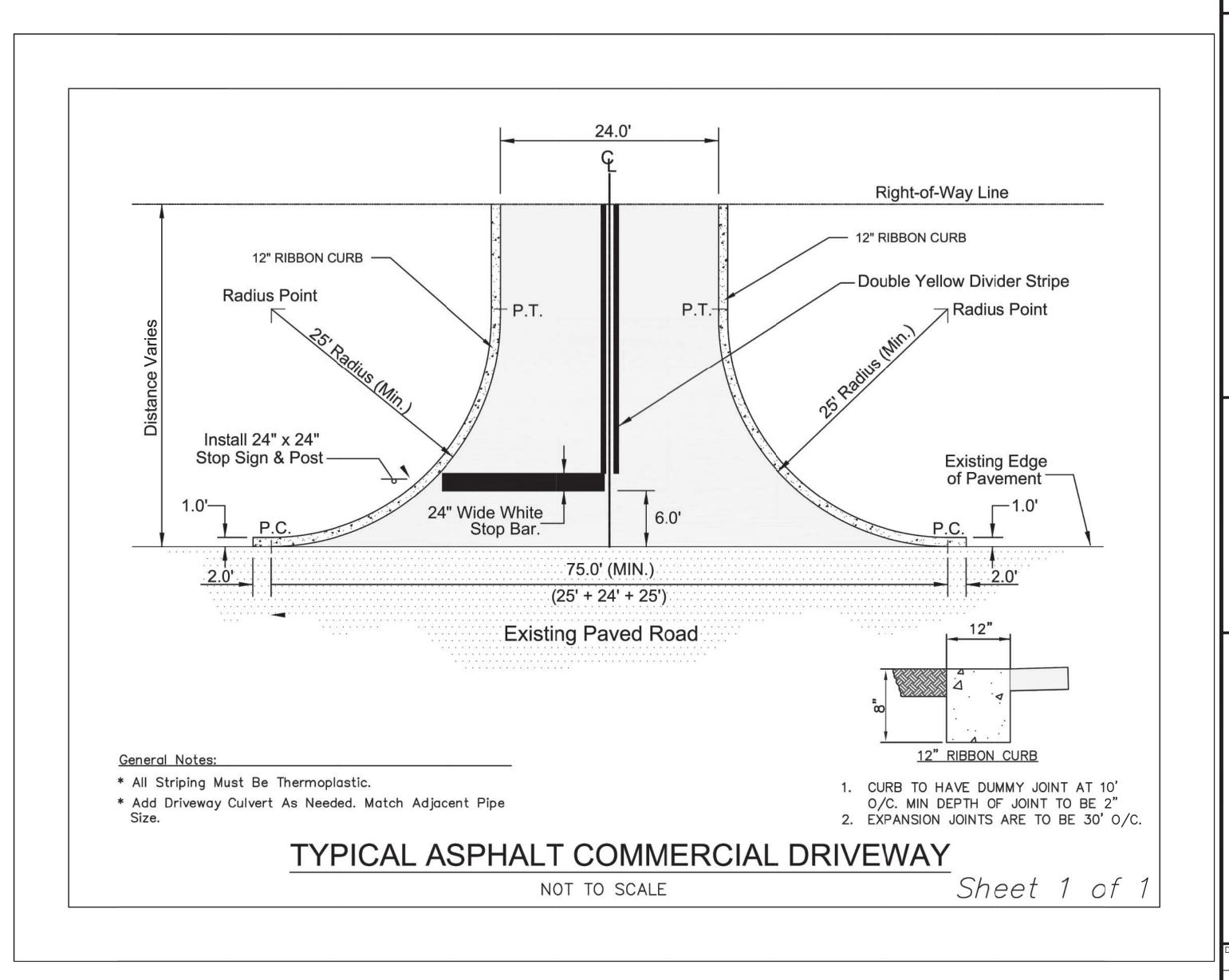
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9 & 16	WEST SPENCERFIELD RD & FL SR-10	PACE	SANTA ROSA COUNTY, FLORIDA

COSTORDE, LLC
CONSTRUCTION PLANS
FDOT DETAILS

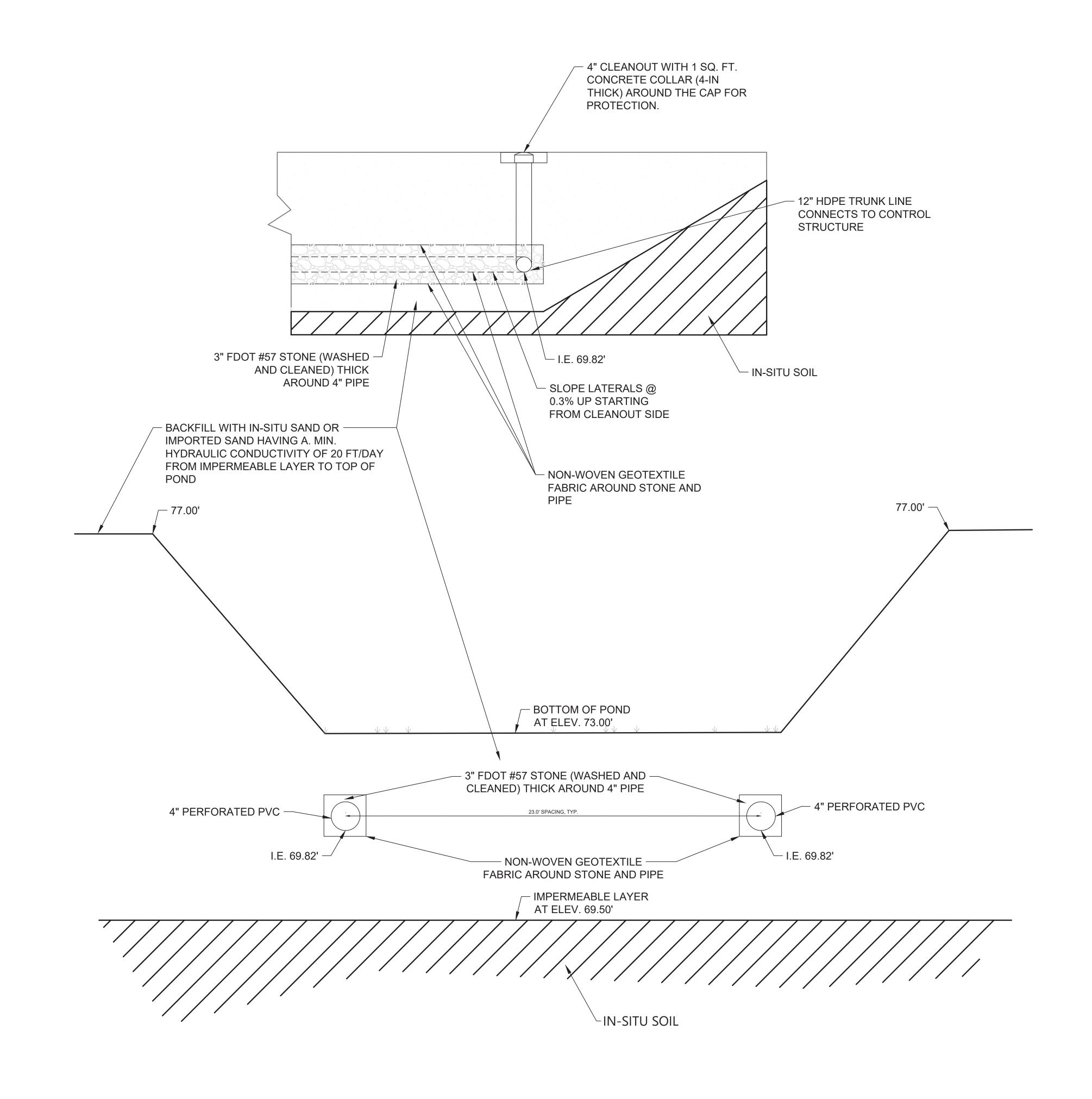
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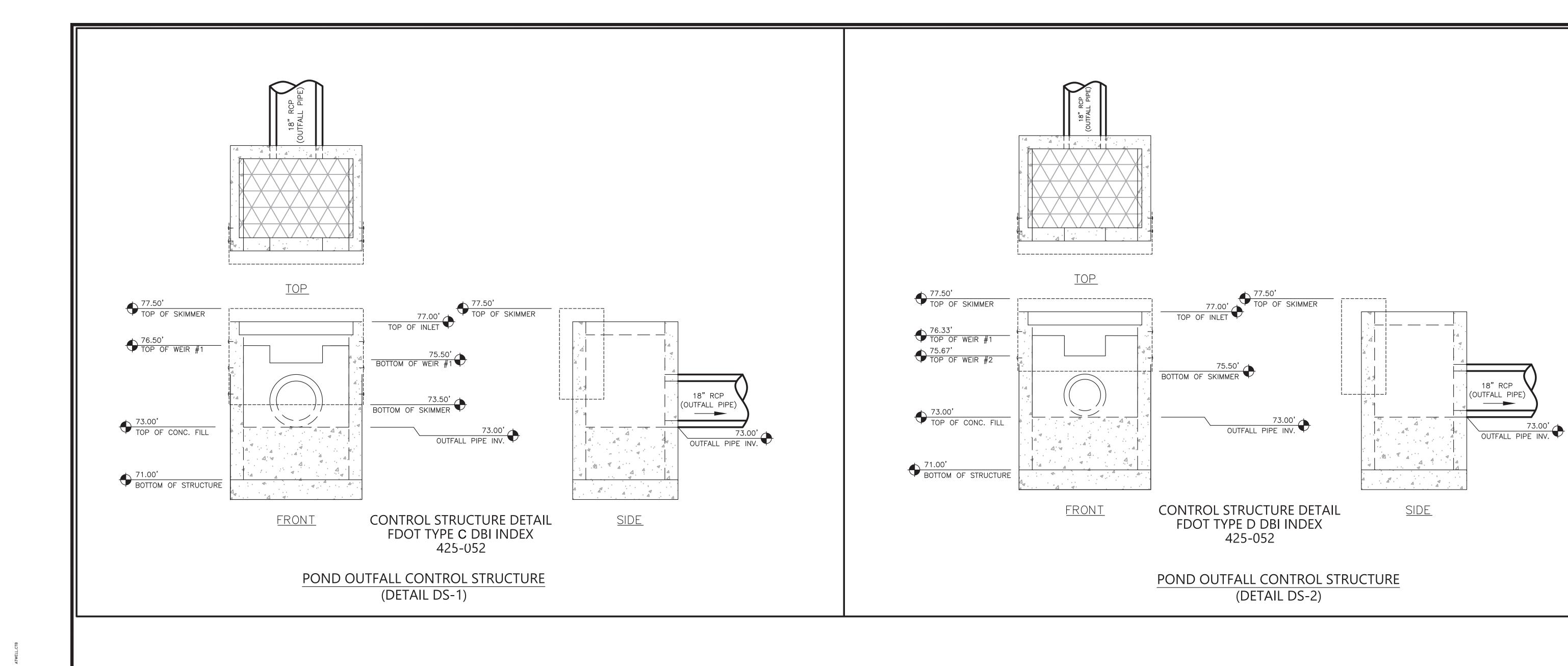
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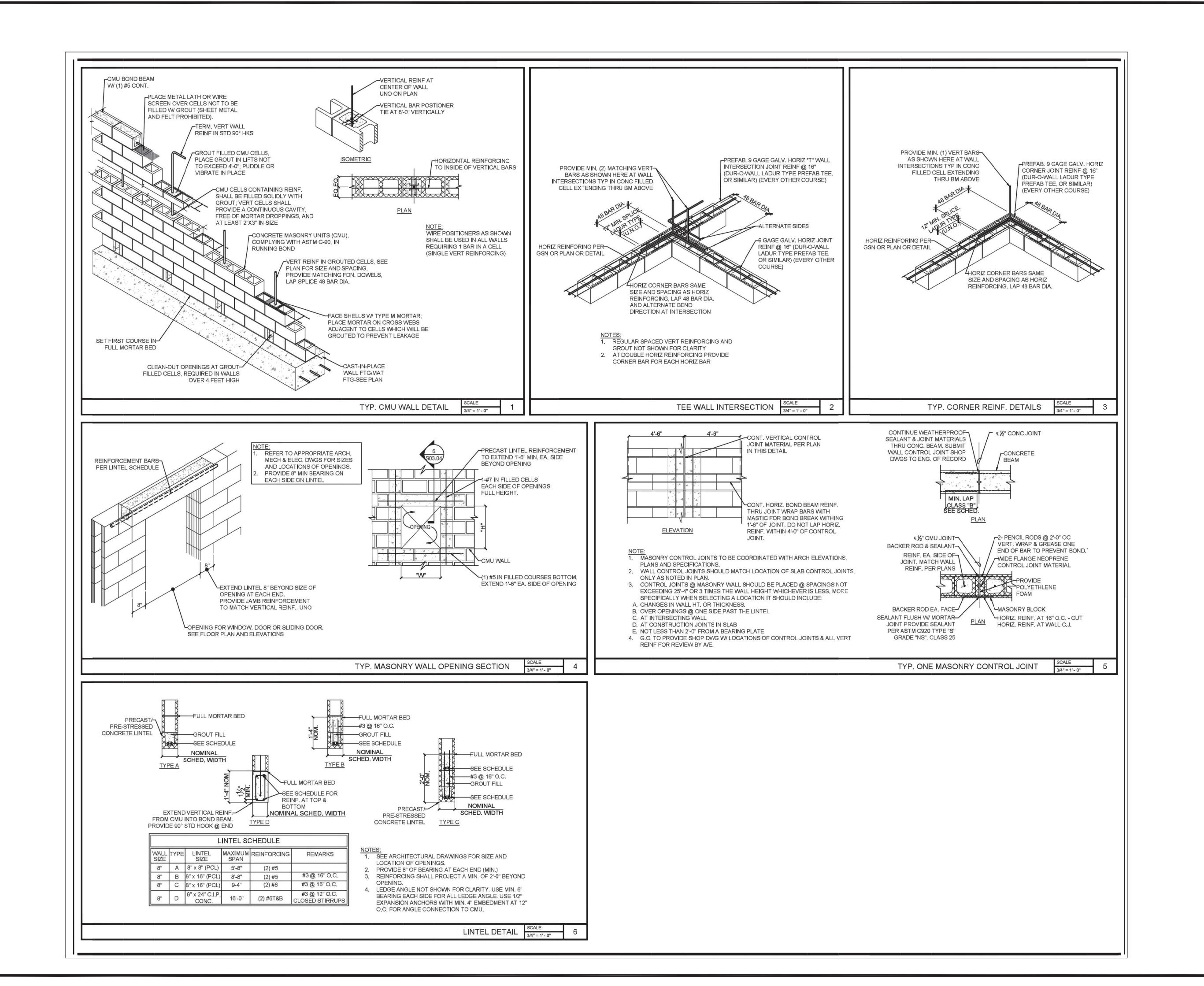
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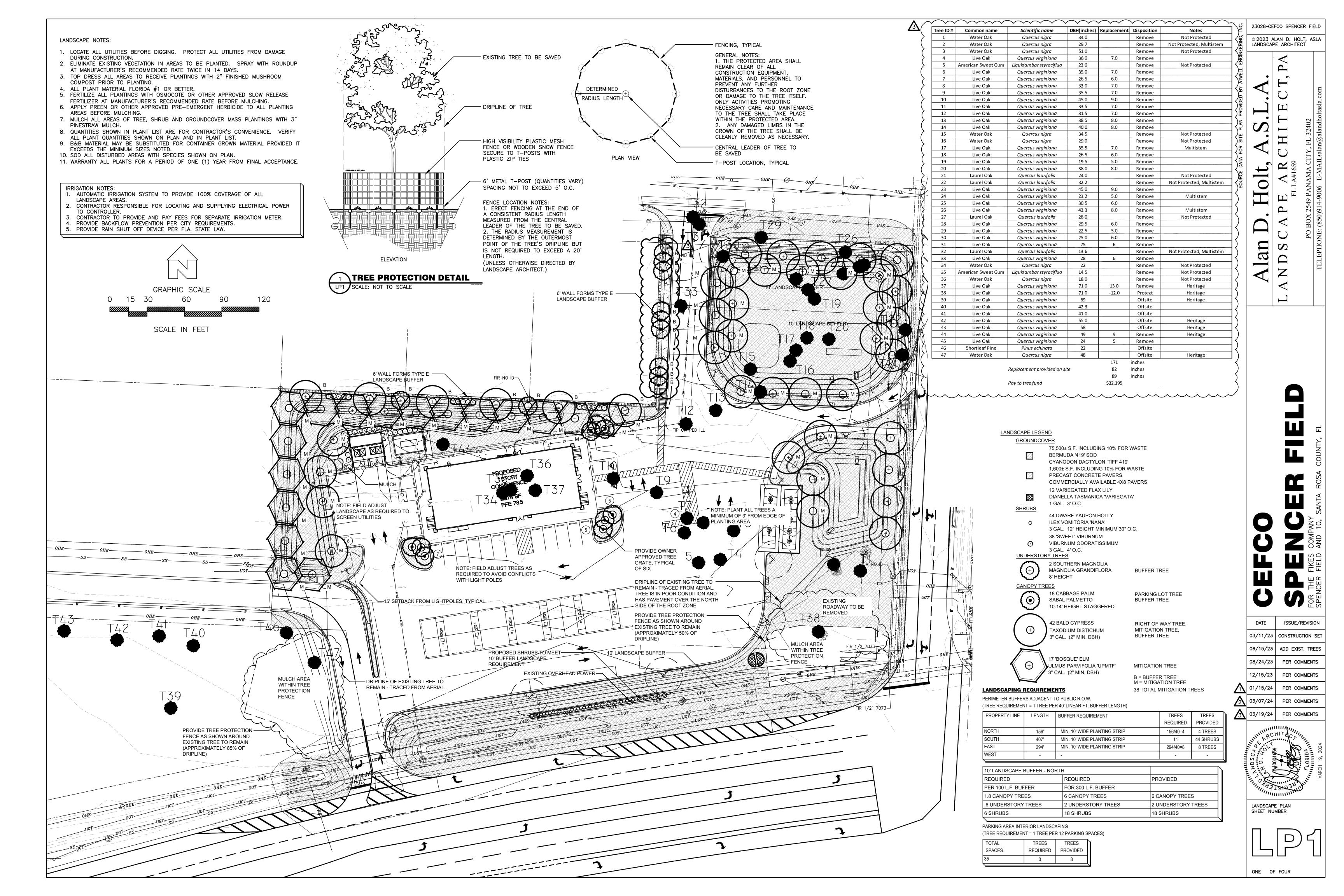
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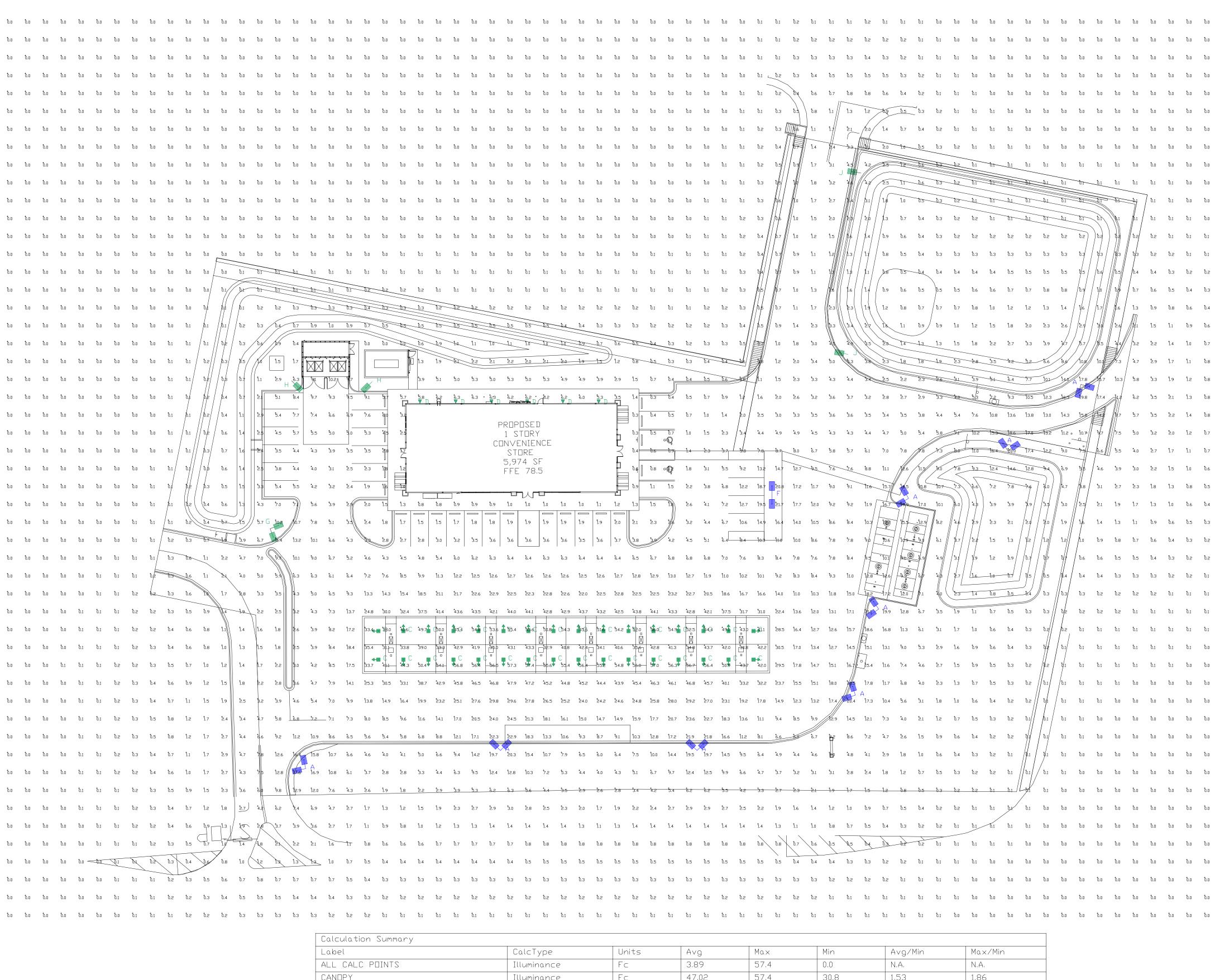
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Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALC POINTS	Illuminance	Fc	3,89	57.4	0.0	N.A.	N.A.
CANDPY	Illuminance	Fc	47.02	57.4	30.8	1.53	1.86
INSIDE CURB	Illuminance	Fc	11.31	47.9	0,2	56.55	239.50

### PHOTOMETRIC EVALUATION NOT FOR CONSTRUCTION

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

| Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts
<b>\$</b>	8	А	2 @ 90 degrees	SMA-LED-28L-ACR-FT-UNV-50-D90	22'POLE+3'BASE	1.000	1.000	54500	400
	32	С	SINGLE	CRUS-SCFT-LED-VHO-50-UE	17'	1.000	1.000	23269	152
	6	D	SINGLE	XWM-FT-LED-04L-50	12'	1.000	1.000	4386	30
	1	F	D180	SMA-LED-28L-ACR-5W-UNV-50-D180	22'POLE+3'BASE	1.000	1.000	56170	400
<	1	G	2 @ 90 degrees	SMA-LED-28L-ACR-FT-50-UNV-IHS-D90	22'POLE+3'BASE	1.000	1.000	33732	400
	2	Н	Single	SMA-LED-28L-ACR-FT-50-UNV-IHS-SINGLE	22'POLE+3'BASE	1.000	1.000	16866	200
	2	J	Single	SMA-LED-28L-ACR-3-UNV-50-SINGLE	22'POLE+3'BASE	0.500	0.500	28038	200

Total Project Watts Total Watts = 9844

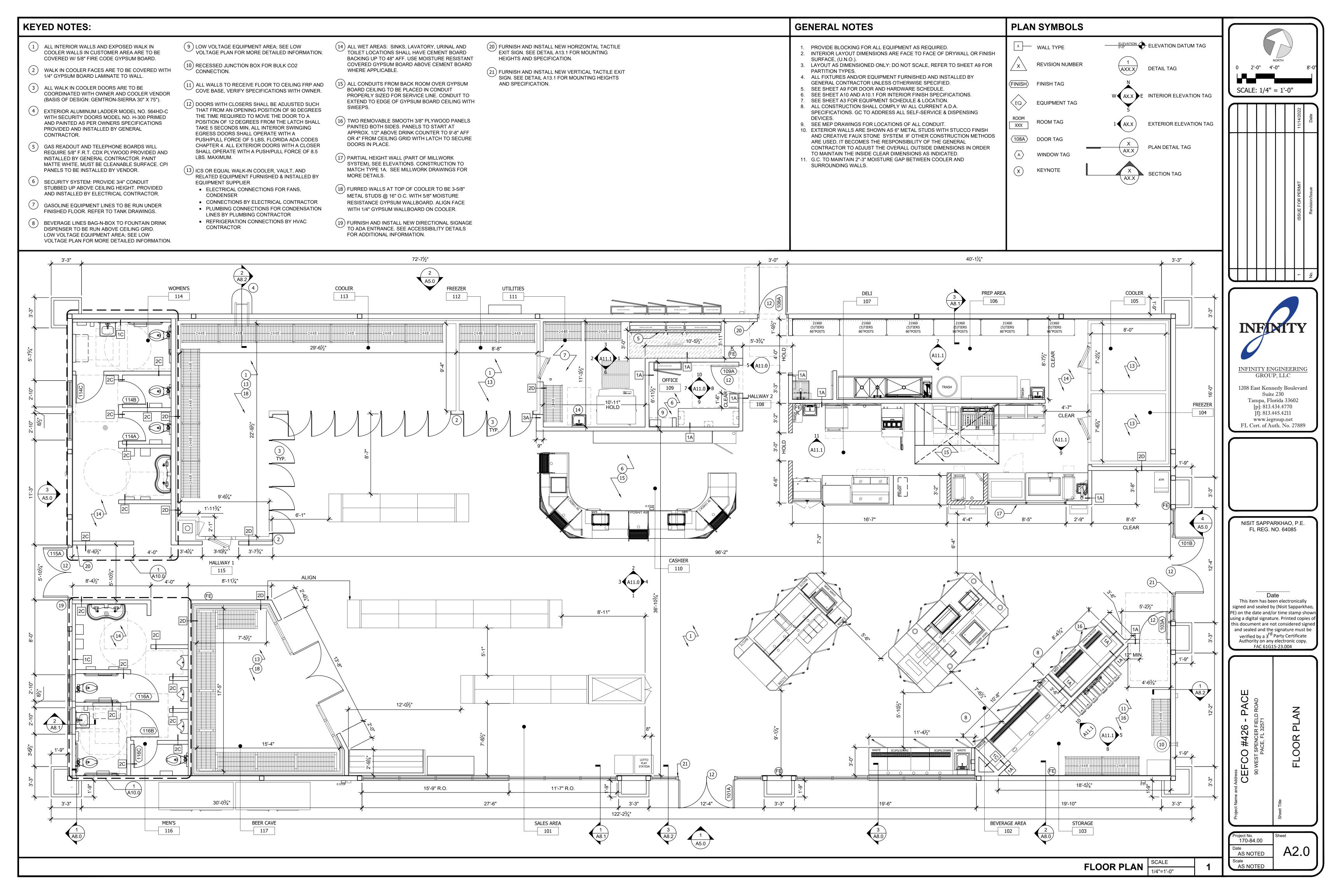


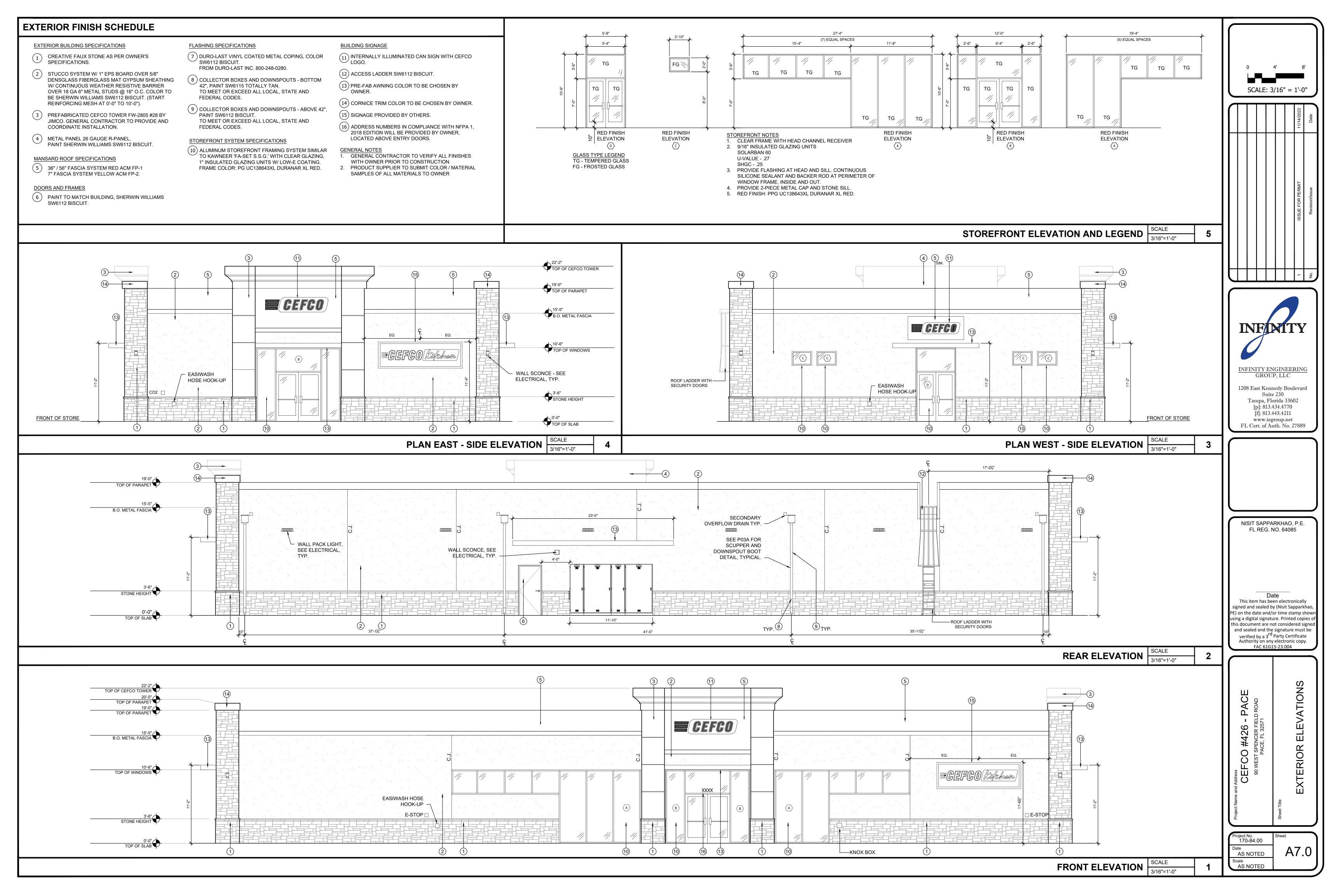


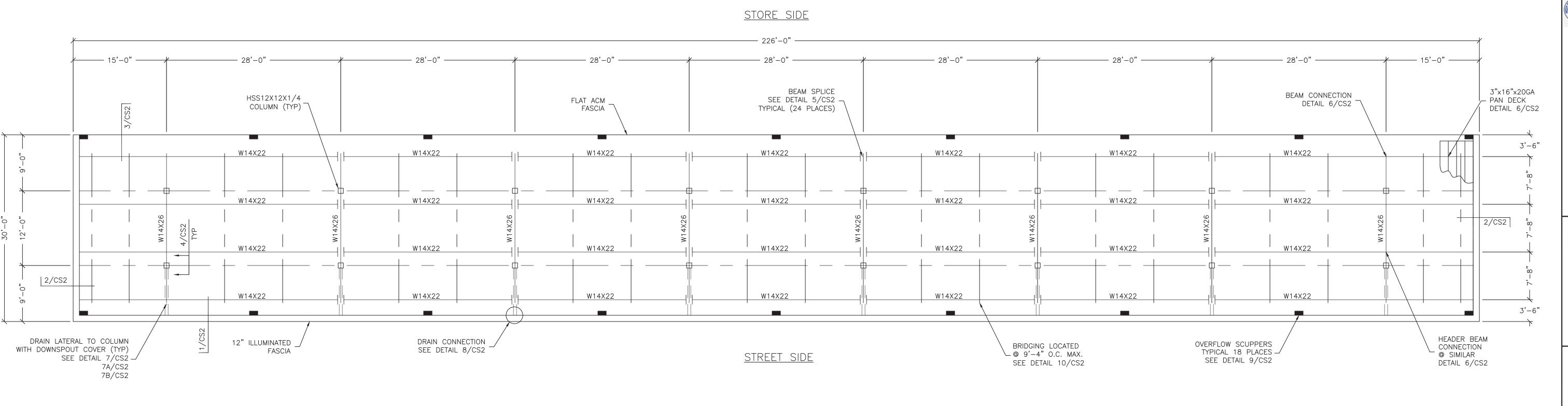
LIGHTING PROPOSAL LD-156782-3 CEFCO #426

90 W SPENCER FIELD PACE,FL

DATE:10-12-22 SCALE: 1"=30'

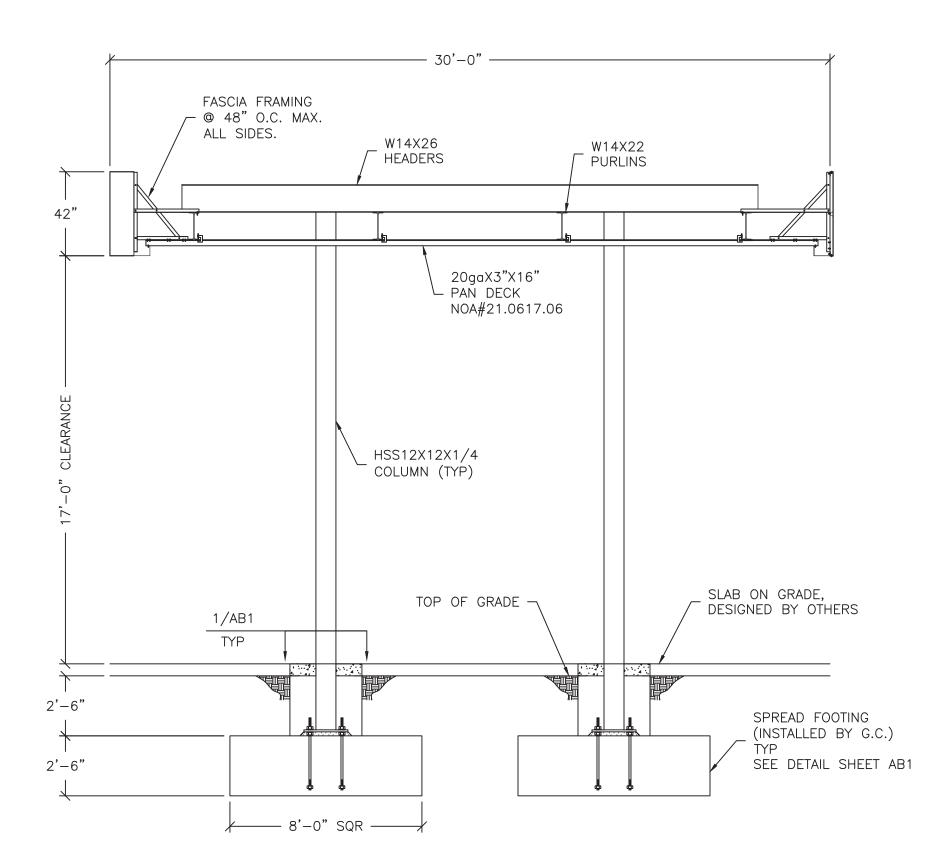






SPECIAL NOTE: ALL STEEL TO BE HOT DIPPED GALVANIZED.

FRAMING PLAN SCALE: 1/8"=1'-0"



SCALE: 1/4"=1'-0"

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#### SPECIAL INSPECTIONS FOR THE CANOPY

SPECIAL INSPECTIONS FOR THE CANOPY SHALL BE PROVIDED BY THE OWNER PER CHAPTER 17 OF THE IBC.

THE FOLLOWING SYSTEMS ARE SUBJECT TO THE SPECIAL INSPECTION REQUIREMENTS OF THE IBC CHAPTER 17. A. COLUMNS D. PURLIN BEAMS B. COLUMN BASE PLATE E. BEAMS

C. FOOTINGS UNLESS EXEMPT SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK.

- WELDING 1. PRIOR TO WELDING (TABLE N5.4-1, 360-16) 2. DURING WELDING (TABLE N5.4-2, 360-16) 3. AFTER WELDING (TABLE N5.4-3, 360-16) 4. NONDESTRUCTIVE TESTING (SECTION N5, 360-16) PER IBC 1705.2. SPECIAL INSPECTION IS NOT REQUIRED WHERE WELDING IS PERFORMED IN AN APPROVED SHOP. JIMCO SALES AND MANUFACTURING IS AN AISC APPROVED FABRICATOR (218031061-10INIT).
- BOLTING PRIOR TO BOLTING (TABLE N5.6-1, AISC 360-16): NOT REQUIRED IF ONLY SNUG TIGHT JOINTS ARE SPECIFIED.
- CONCRETE PER IBC 1705.3; EXCEPTION 1 SPECIAL INSPECTION IS NOT REQUIRED FOR ISOLATED SPREAD CONCRETE FOOTINGS FULLY SUPPORTED ON EARTH OR ROCK. \*THIS EXCEPTION DOES NOT APPLY IN THE STATE OF NEVADA.\*
- ANCHOR BOLTS PERIODIC SPECIAL INSPECTION OF ANCHORS CAST IN CONCRETE REQUIRED PER IBC TABLE 1705.3. ITEM 3
- STRUCTURAL OBSERVATIONS: NONE REQUIRED

#### SEISMIC FORCE RESISTING SYSTEM (SFRS)

- A. REFER TO AISC 341-16 SECTION A4 AND ASCE 7-16. B. DESIGNATION OF SFRS: G.2. STEEL ORDINARY CANTILEVER COLUMN SYSTEMS
- (ASCE 7-16 TABLE 12.2-1) SEE AISC 341-16 SECTION E5 (OCCS). C. R = 1.25, CS = 0.07
- . ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE MEMBERS AND CONNECTIONS THAT ARE PART OF THE SFRS:
- 1. COLUMNS 4. PURLIN BEAMS 2. COLUMN BASE CONNECTION 5. BEAMS 3. FOOTINGS
- F. PROTECTED ZONES: N/A G. SEE DETAILS AND NOTE FOR CONNECTION CONFIGURATIONS, MATERIALS
- SPECIFICATIONS AND SIZES. H. WELD FILLER MATERIALS FOR WELDS PART OF THE SFRS: 1. YEILD STRENGTH - 58 KSI MIN TENSILE STRENGTH - 70 KSI MIN 3. ELONGATION - 22% MIN
- 4. CVN TOUGHNESS 20 FT-LB MIN @ 0° F SEE DETAILS AND NOTES FOR OTHER WELDING REQUIREMENTS J. DEMAND CRITICAL WELDS - N/A K. LOWEST ANTICIPATED SERVICE TEMPERATURE - 0° F

_	
	CANOPY NOTES
	GENERAL NOTES:  A. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT T B. OBSERVATION VISITS TO THE SITE BY THE DESIGN ENGINEER SHALL NEIT CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.  C. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KE ON THE STRUCTURE WITHIN LIMITS OF DESIGN LOADS.  D. TYPICAL DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS SHOWN.
	1. BUILDING CODE: 2020 FLORIDA BUILDING CODE / 2018 INTERNATIONAL BUILDING CODE 2. USE GROUP: M, CONSTRUCTION TYPE — IIB 3. DESIGN LOADS:
	A. ROOF LIVE LOAD:  B. CANOPY DEAD LOAD:  C. GROUND SNOW LOAD Pg:  FLAT ROOF SNOW LOAD Pf:  RAIN ON SNOW SURCHARGE:  EXPOSURE FACTOR Ce:  IMPORTANCE FACTOR Is:  THERMAL FACTOR Ct:  20 PSF (REDUCIBLE)  10.60 PSF  0 PSF  0 PSF  1.0  1.0  1.0
	D. BASIC WIND SPEED V=150 MPH, Vasd=116 MPH BUILDING RISK CATEGORY: II EXPOSURE: C COMPONENT & CLADDING: ASCE 7—16 CHAPTER 30 ROOF DESIGN PRESSURES (PSF) C&C FIGURE 30.8—1
	ZONE 3         ZONE 2         ZONE 1           67         -63         67         -63         44         -41
	E. EARTHQUAKE DESIGN:  IMPORTANCE FACTOR:  Ss-0.083g  S1-0.056g  SITE CLASS:  D  SEISMIC DESIGN CATEGORY:  SEISMIC FORCE RESISTING SYSTEM: G.2 STEEL ORDINARY CANTILE
	COLUMN SYSTEM DESIGN BASE SHEAR: 5.09k SEISMIC RESPONSE COEFFICIENT: Cs = 0.07 RESPONSE MODIFICATION FACTOR: R=1.25 SEISMIC ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
	4. FOUNDATION DESIGN: ALLOWABLE BEARING PRESSURE: 1500 PSF PFR GFOTECHNICAL REPORT BY: NOVA FNGINFFRING AND FNVIRONMEN

LATERAL EARTH PRESSURE:

. CONCRETE AND REINFORCEMENT:

B. SLAB ON GRADE (BY OTHERS)

D. REBAR: ASTM A615 GRADE 60

6. STRUCTURAL STEEL:

MEMBERS".

D. STRUCTURAL STEEL GRADES:

HSS ROUND COLUMNS:

ANGLES ASTM A36

PIPE ASTM A53 GRADE B

. ASTM A572 GRADE 50

DATED: 15 JULY 2022 (PROJECT NO. 10116-2022107).

\* SITE SOILS SHALL BE PREPARED FOR THE FOUNDATION IN

ACCORDANCE WITH THE GEOTECHNICAL REPORT REFERENCED ABOVE.

CEMENT COMPRESSIVE STRENGTH OF f'c = 3000 p.s.i.

E. STIRRUPS AND TIES SHALL HAVE MINIMUM 4" HOOKS. F. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT:

FORMED CONCRETE EXPOSED TO GROUND---2"

FORMED CONCRETE NOT EXPOSED TO GROUND-1 1/2"

ELEVATIONS AS REQUIRED FOR UNDERGROUND PLUMBING AND

B. AISC "CODE OF STANDARD PRACTICE" EXCLUDING THE FOLLOWING

BASE PLATES, CAP PLATES AND CAP PLATE STIFFENÉRS ..

F. ALL BOLTED CONNECTIONS SHALL BE "SNUG-TIGHT", UNLESS NOTED

SPECIFIED (NO SPECIAL INSPECTION REQUIRED).

G. METAL PAN DECK SHALL BE 20ga ASTM A653 GRADE 50.

OTHERWISE IN ACCORDANCE WITH RCSC.

CONCRETE EXPOSED TO GROUND----3"

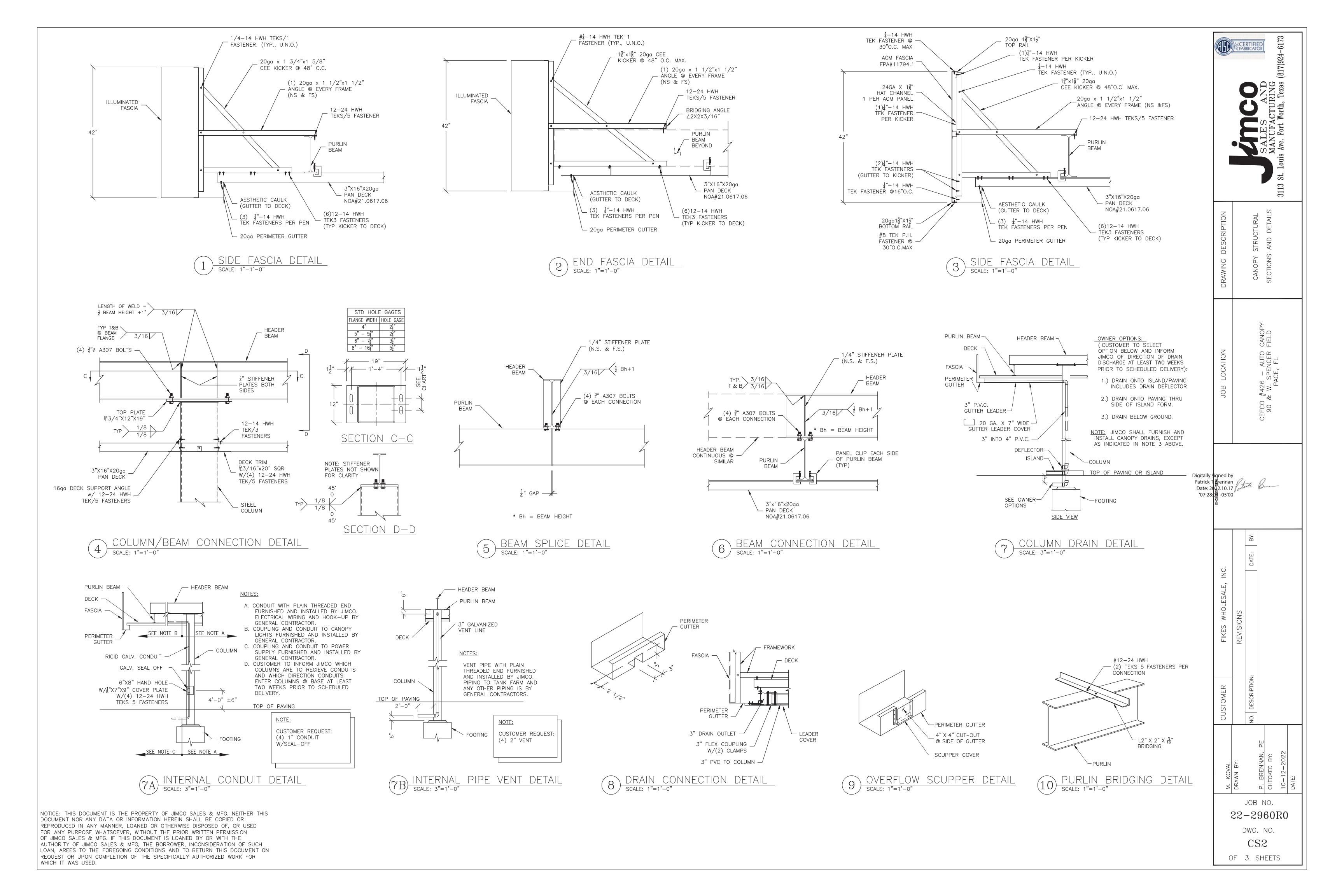
MANUFACTURERS RECOMMENDATIONS.

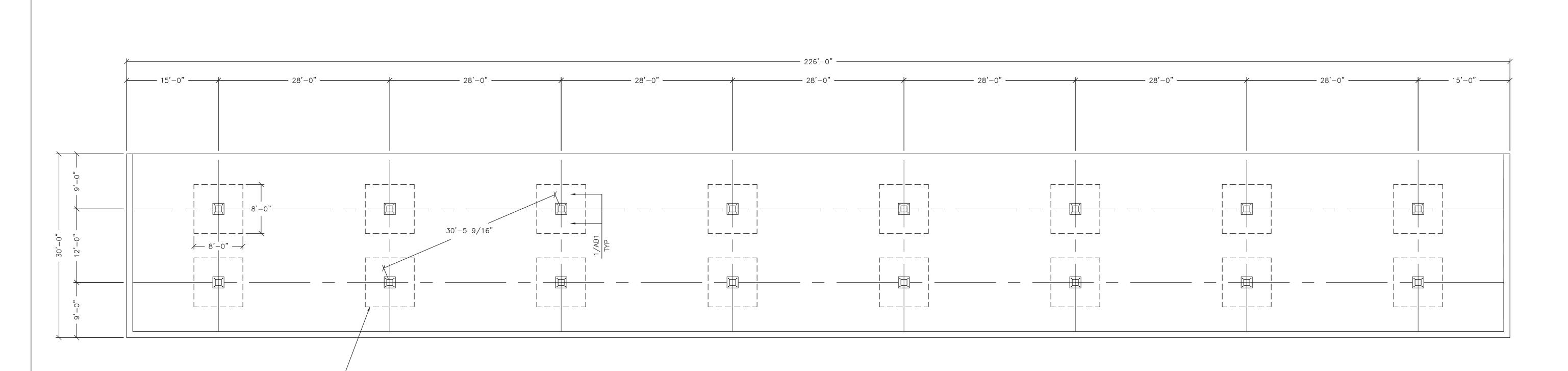
SECTIONS: 4.4, 4.4.1, 4.4.2, AND 7.15.

STEEL BEAMS ASTM A992 GRADE 50

IDITIONS AND DIMENSIONS AT THE SITE. DESIGN ENGINEER SHALL NEITHER BE DER AND/OR OWNER SHALL KEEP LOADS PPLY WHERE SPECIFIC DETAILS ARE NOT G.2 STEEL ORDINARY CANTILEVERED ENGINEERING AND ENVIRONMENTAL, A. CONCRETE FOOTINGS (EXPOSURE CLASSES FO, SO, WO, CO) TYPE II C. CONCRETE DESIGNED USING f'c =2500 p.s.i. OR ABOVE SHALL HAVE SPECIAL INSPECTIONS PERFORMED, UNLESS ISOLATED SPREAD FOOTINGS ARE UTILIZED. SEE SPECIAL INSPECTIONS FOR THE CANOPY CONCRETE G. GROUT UNDER COLUMN BASE PLATES SHALL BE NON-SHRINK GROUT COMPLYING WITH ASTM C1107, f'c=5000p.s.i. AND INSTALLED PER H. GENERAL CONTRACTOR IS RESPONSIBLE FOR LOCATING TOP OF FOOTING A. ALL STRUCTURAL STEEL SHALL COMPLY WITH AISC "SPECIFICATION FOR FOR THE DESIGN OF STRUCTURAL STEEL FOR BUILDINGS" 15TH EDITION. C. AISC "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STRUCTURAL Fy = 50,000 psiHSS SQUARE & RECTANGLES ASTM500 GRADE C Fy = 50,000 psi JOB NO. Fy = 46,000 psiFy = 35,000 psi22-2960R0 Fy = 50,000 psiFy = 36,000 psiDWG. NO. E. ALL BOLTED CONNECTIONS SHALL BE ASTM A307 BOLTS UNLESS OTHERWISE

OF 3 SHEETS



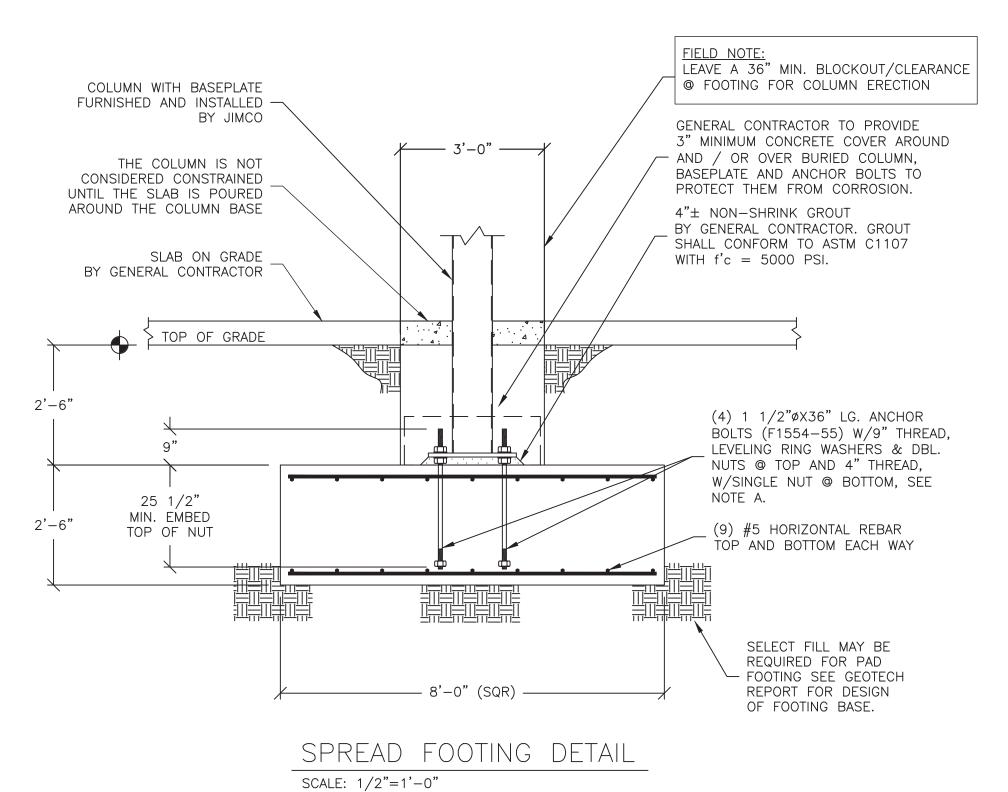


FOUNDATION PLAN SCALE: 1/8"=1'-0"

1 3/4"ø — HOLE STEEL COLUMN 1/2 1 1/2"X22"X22" BASE PLATE -

NOTE:

A) FOOTINGS INCLUDING CONCRETE, REBAR, FORMWORK AND ASSOCIATED EARTHWORK SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR EXCEPT ANCHOR BOLTS SHALL BE FURNISHED BY JIMCO AND INSTALLED BY GENERAL CONTRACTOR. B) SEE FOUNDATION, CONCRETE NOTES ON DWG CS1.



Digitally signed by Patrick 돛 'Date: 2022.10.17 07:27:02 -05'**0**任』//

JOB NO.

22-2960R0

DWG. NO. AB1

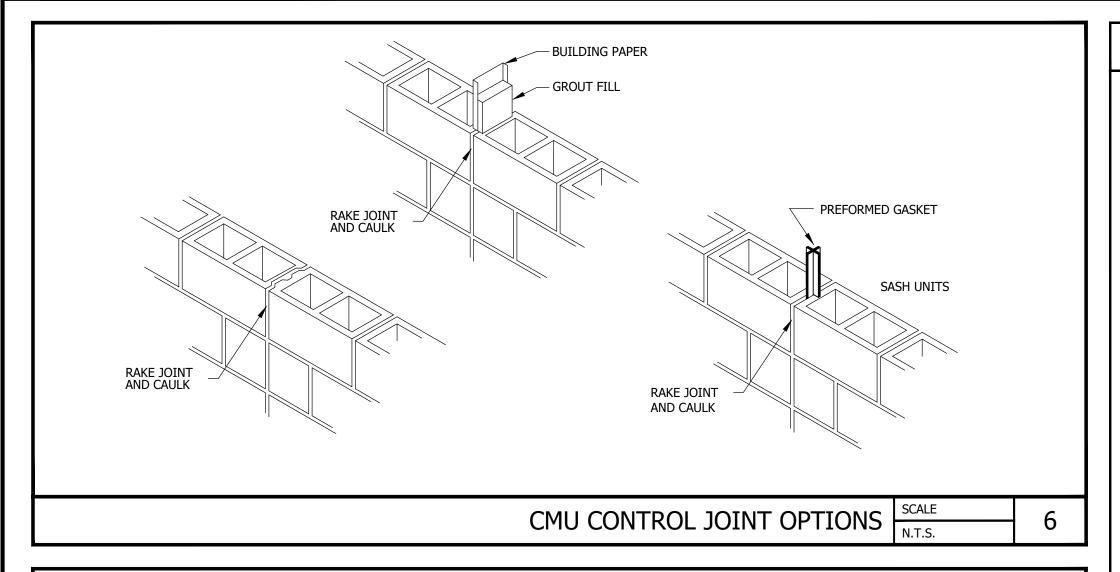
OF 3 SHEETS

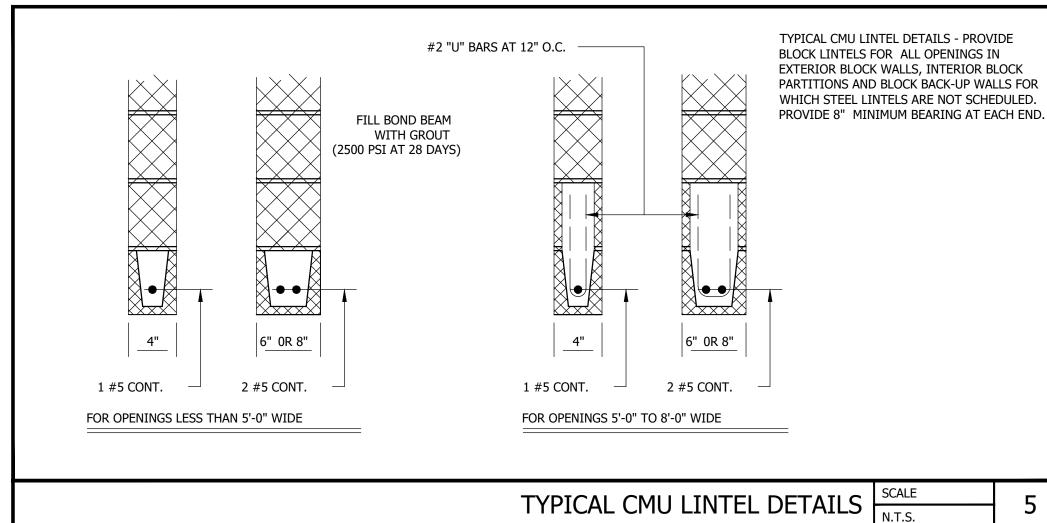
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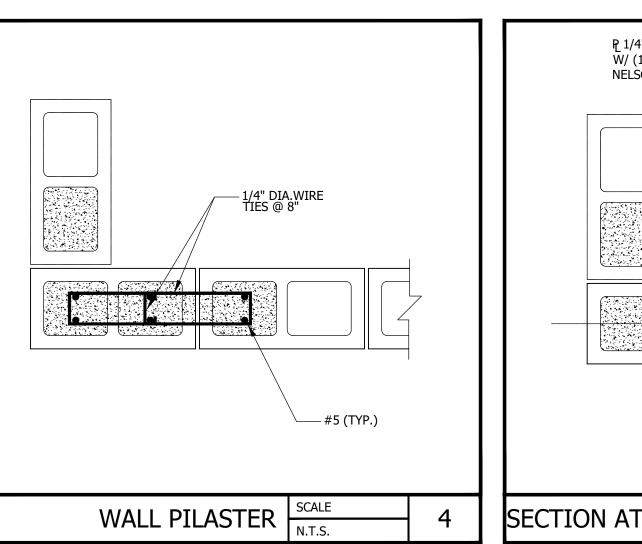
REQUEST OR UPON COMPLETION OF THE SPECIFICALLY AUTHORIZED WORK FOR

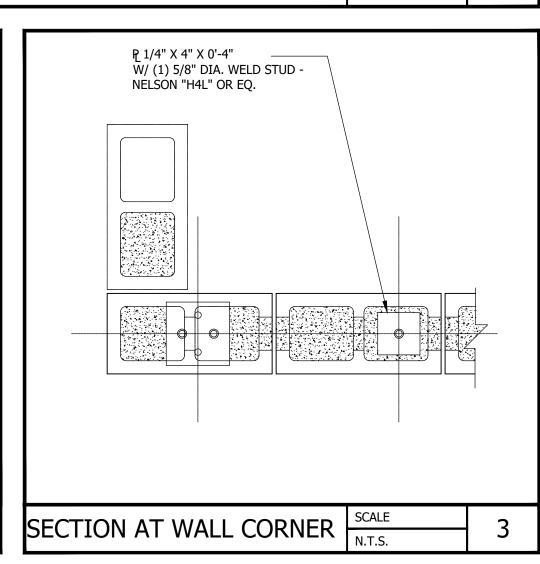
WHICH IT WAS USED.

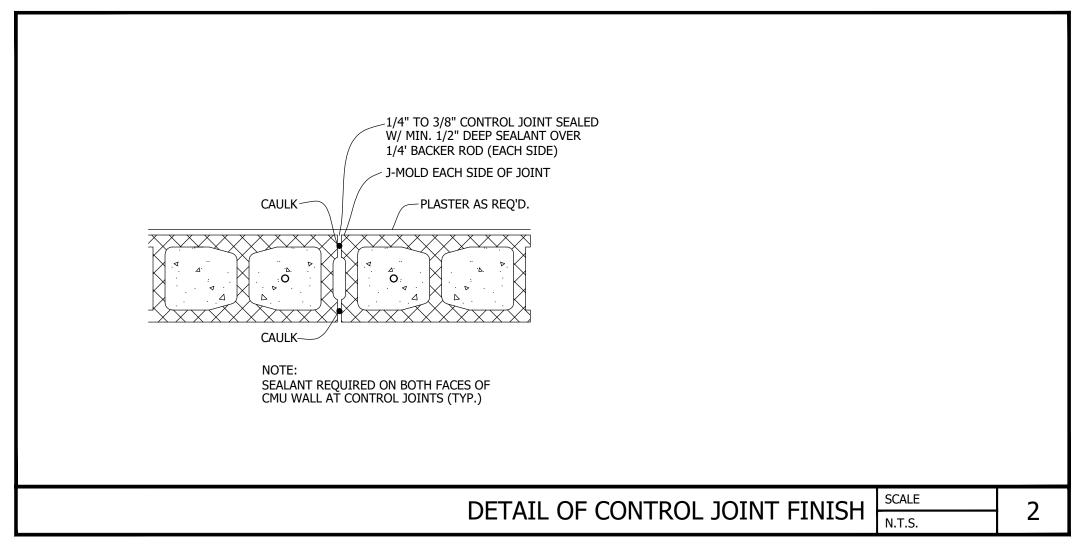
SPREAD FOOTING (TYP) \_ SEE DETAIL THIS SHEET











## FINISH SCHEDULE

FF-1 CONCRETE FLOOR

WF-1 INTERIOR FINISH - CMU BLOCK WALL TO BE PAINTED SHERWIN WILLIAM 6364: EGGWHITE

WF-2 CREATIVE FAUX STONE
AS PER OWNER'S SPECIFICATIONS

PT-1 SHERWIN WILLIAM 6115 (TOTALLY TAN)

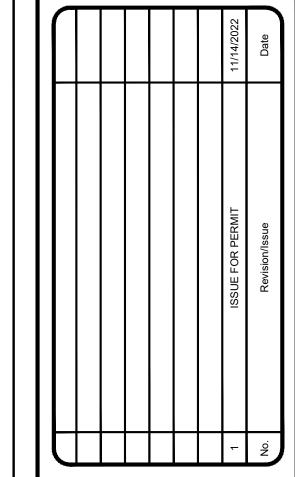
#### **GENERAL NOTES:**

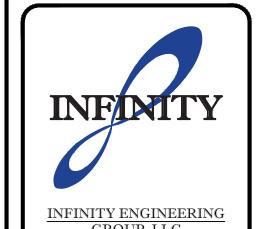
- 1. ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES AND STANDARDS INCLUDING ADA AND OR OTHER HANDICAP ACCESSIBILITY CODES.
- GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
- 3. THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.
- 4. THE DRAWINGS ARE NOT TO BE SCALED. FOR INFORMATION CONCERNING EXISTING CONDITIONS, ETC., VERIFICATION MUST BE DONE IN THE FIELD. LARGE SCALE DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE
- PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING ABOVE AND BELOW GRADE, UTILITIES, INCLUDING SANITARY SEWER, STORM SEWER, WATER, GAS, ELECTRICAL, TELEPHONE, ETC. ANY DISCREPANCIES IN UTILITY LOCATIONS SHALL BE BROUGHT TO THE IMMEDIATE
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL BUILDING DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY VARIANCE OR DISCREPANCY AFFECTING NEW CONSTRUCTION PRIOR TO PROCEEDING WITH WORK.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING IN WALLS FOR SUPPORT OF ALL EQUIPMENT, SHELVING, ACCESSORIES, SIGNAGE, AND OTHER DEVICES REQUIRED.
- 8. ALL PENETRATIONS SHALL RECEIVE CAULKING TO SEAL ANY TYPE OF ENERGY LOSS.
- 9. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL APPLICABLE DIMENSIONS OF FIXTURES AND EQUIPMENT SUPPLIED AND/OR INSTALLED BY OTHERS.
- 10. UPON COMPLETION OF PROJECT, OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS AND CERTIFICATES OF OCCUPANCY.
- 11. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE OWNER'S VENDORS ON SITE DURING
- 19. ALL EXTERIOR FLOOR PLAN DIMENSIONS ARE TO EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED. ALL INTERIOR FLOOR PLAN DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.
- 20. ALL PLYWOOD REFERENCES TO BE FIRE-RETARDANT TREATED PLYWOOD.

PLAN NOTES: X

1 FLOOR SLOPE = 1/2"

- 5"x5"x.25 THICK STEEL POST FILLED WITH CONCRETE AND STEEL WELDED CAP. SLOPE. PAINTED TO MATCH ADJACENT SURFACES
- GATE REFER TO EXTERIOR ELEVATIONS AND DETAILS GATE AND HINGE BY JIMCO MANUFACTURING
- ELECTRICAL AUTOMATIC TRANSFER SWITCH, CURRENT TRANSFORMER CABINET, AND METER BOX.





GROUP, LLC

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NISIT SAPPARKHAO, P.E. FL REG. NO. 64085

This item has been electronically signed and sealed by (Nisit Sapparkhao, E) on the date and/or time stamp showr using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3<sup>rd</sup> Party Certificate

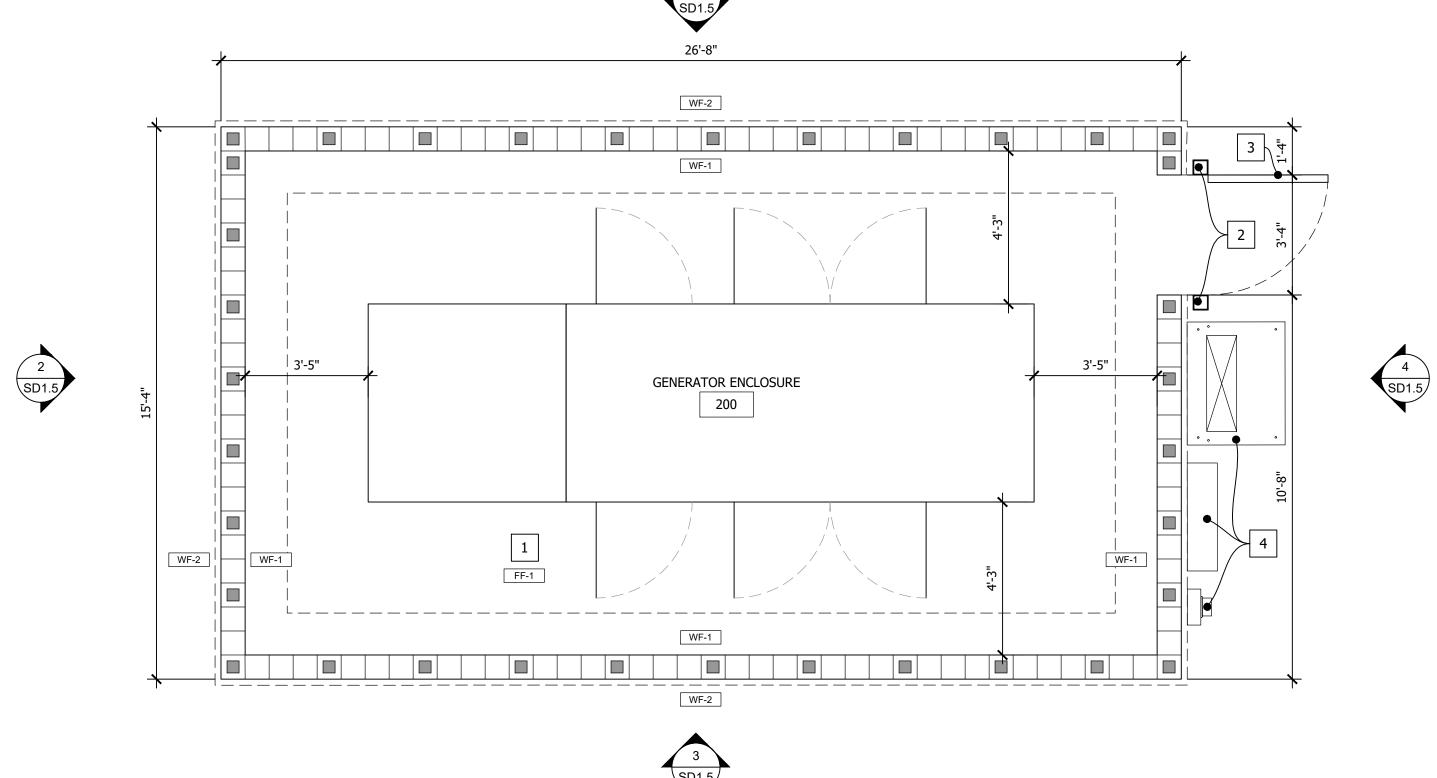
Authority on any electronic copy. FAC 61G15-23.004

GENERATOR ENCLOSURE FLOOR PLAN AND DETAILS Address

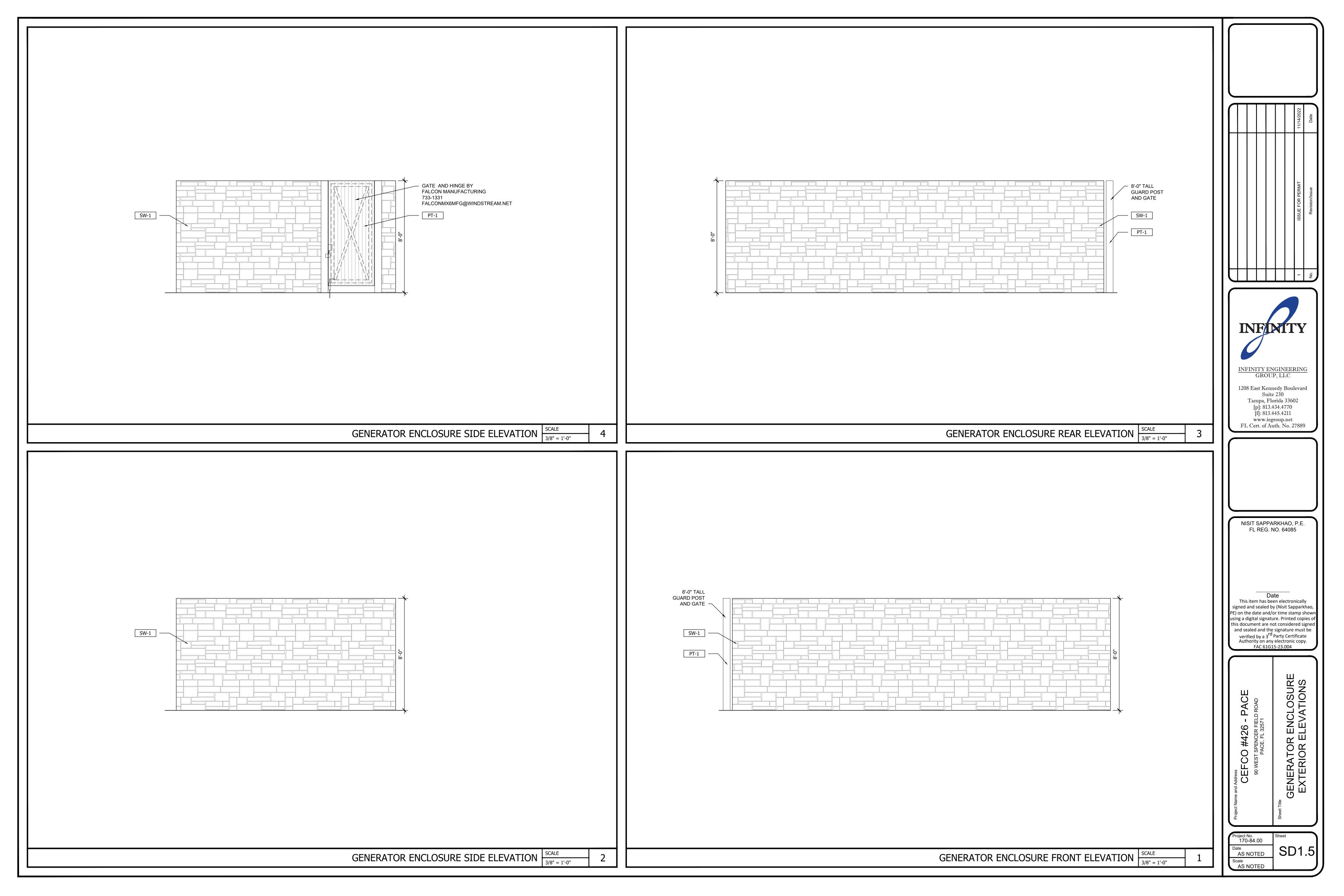
170-84.00 Date AS NOTED

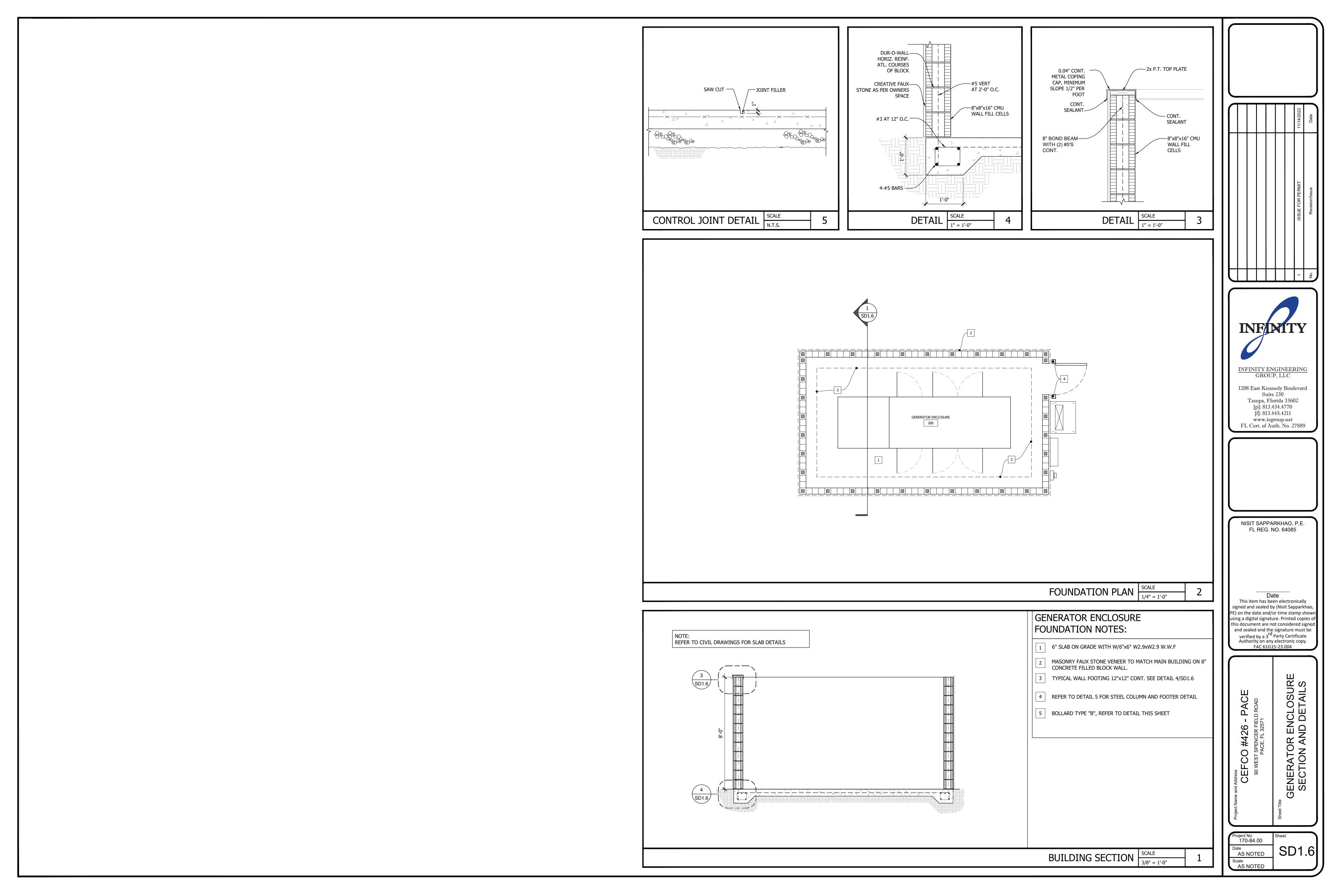
Scale AS NOTED

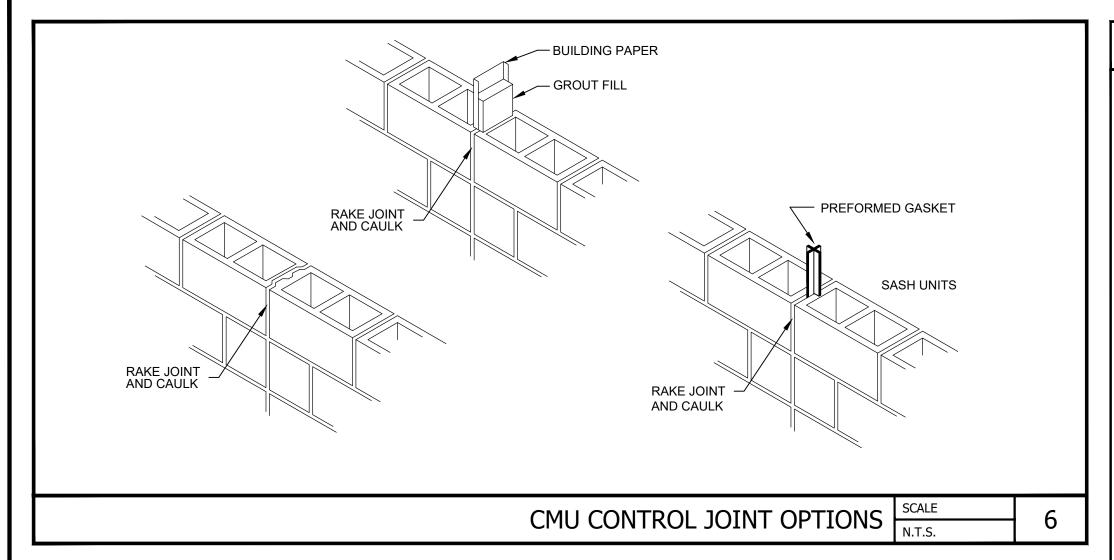
REFER TO CIVIL DRAWINGS FOR SLAB DETAILS

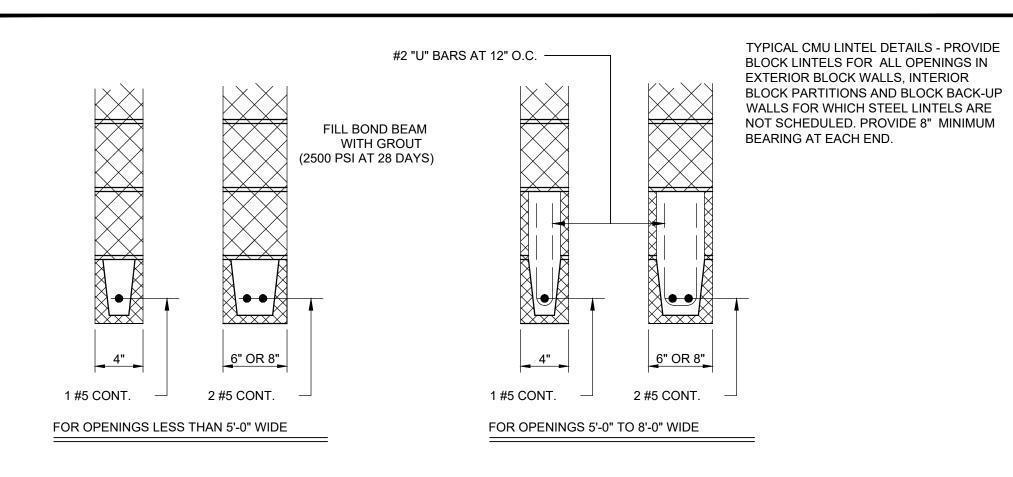


GENERATOR ENCLOSURE FLOOR PLAN

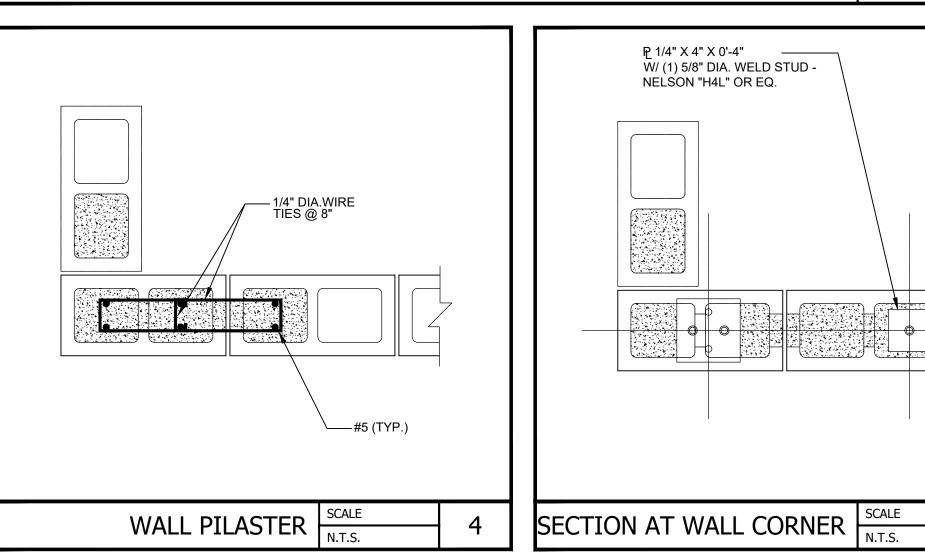


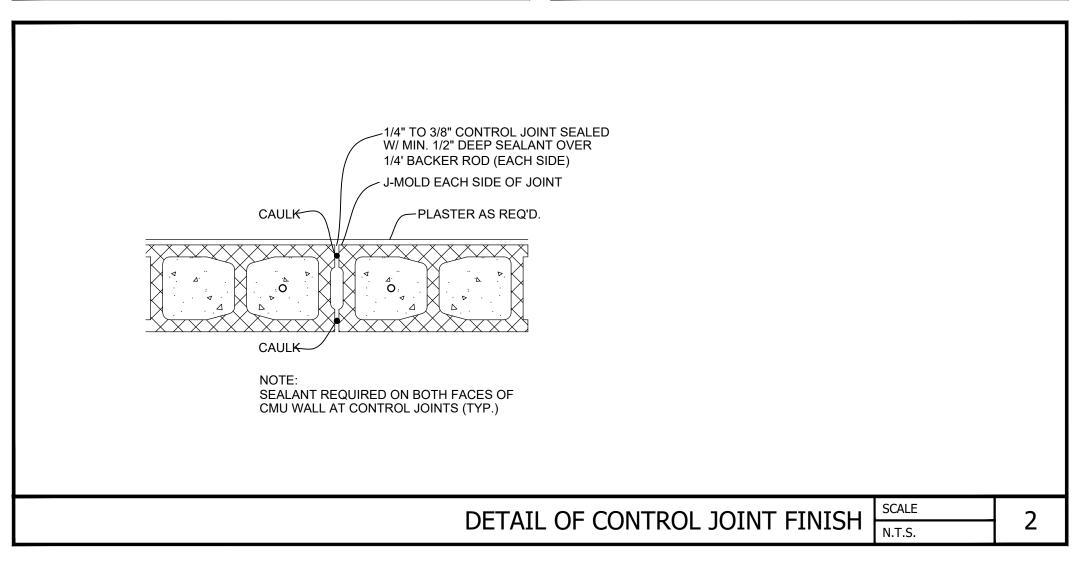






TYPICAL CMU LINTEL DETAILS | SCALE | N.T.S.





## EXTERIOR ELEVATION FINISH SCHEDULE

SW-1 CREATIVE FAUX STONE AS PER OWNER'S SPECIFICATIONS

PT-1 CONCRETE BLOCK WALL -── SHERWIN WILLIAM SW 6364

PT-2 SHERWIN WILLIAM 6115 (TOTALLY TAN)

MT-1 STANDING SEAM METAL ROOF -STANDARD SILVER

BOLLARD COLORS REFER TO DETAIL 5/SD1.3.

#### **GENERAL NOTES:**

- ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES AND STANDARDS INCLUDING ADA AND OR OTHER HANDICAP ACCESSIBILITY
- GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
- THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.
- 4. THE DRAWINGS ARE NOT TO BE SCALED. FOR INFORMATION CONCERNING EXISTING CONDITIONS, ETC., VERIFICATION MUST BE DONE IN THE FIELD. LARGE SCALE DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS.
- LOCATION OF ALL EXISTING ABOVE AND BELOW GRADE, UTILITIES, INCLUDING SANITARY SEWER, STORM SEWER, WATER, GAS, ELECTRICAL, TELEPHONE, ETC. ANY DISCREPANCIES IN UTILITY LOCATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL BUILDING DIMENSIONS PRIOR

TO BEGINNING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY VARIANCE OR

PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTENCE AND

- DISCREPANCY AFFECTING NEW CONSTRUCTION PRIOR TO PROCEEDING WITH WORK. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING IN WALLS FOR SUPPORT OF ALL EQUIPMENT,
- SHELVING, ACCESSORIES, SIGNAGE, AND OTHER DEVICES REQUIRED.
- 8. ALL PENETRATIONS SHALL RECEIVE CAULKING TO SEAL ANY TYPE OF ENERGY LOSS. 9. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL APPLICABLE DIMENSIONS OF FIXTURES AND
- 10. UPON COMPLETION OF PROJECT, OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS AND CERTIFICATES OF OCCUPANCY.
- 11. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE OWNER'S VENDORS ON SITE DURING CONSTRUCTION.
- 19. ALL EXTERIOR FLOOR PLAN DIMENSIONS ARE TO EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED. ALL INTERIOR FLOOR PLAN DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.
- 20. ALL PLYWOOD REFERENCES TO BE FIRE-RETARDANT TREATED PLYWOOD.

EQUIPMENT SUPPLIED AND/OR INSTALLED BY OTHERS.

## PLAN NOTES: X

1 | FLOOR SLOPE = 1/2"

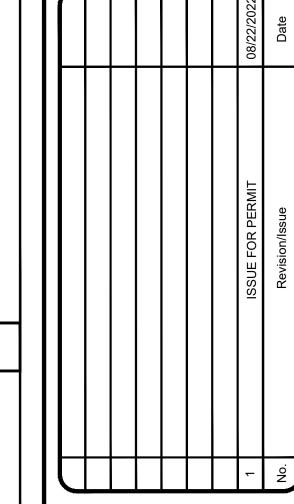
FINISH NOTES:

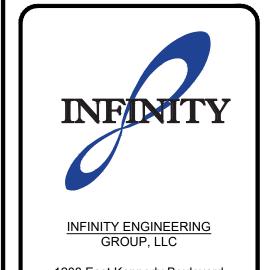
FF-1 CONCRETE FLOOR

WF-1 INTERIOR FINISH - CMU BLOCK WALL TO BE PAINTED

WF-2 EXTERIOR FINISH - STONE (MATCH MAIN STORE)

- 5"x5"x.25 THICK STEEL POST FILLED WITH CONCRETE AND STEEL WELDED CAP. SLOPE. PAINTED TO MATCH ADJACENT SURFACES
- GATE REFER TO EXTERIOR ELEVATIONS AND DETAILS GATE AND HINGE BY JIMCO MANUFACTURING.
- 4 BOLLARD TYPE "B", REFER TO DETAIL ON SHEET SD1.3





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Client Name and Address

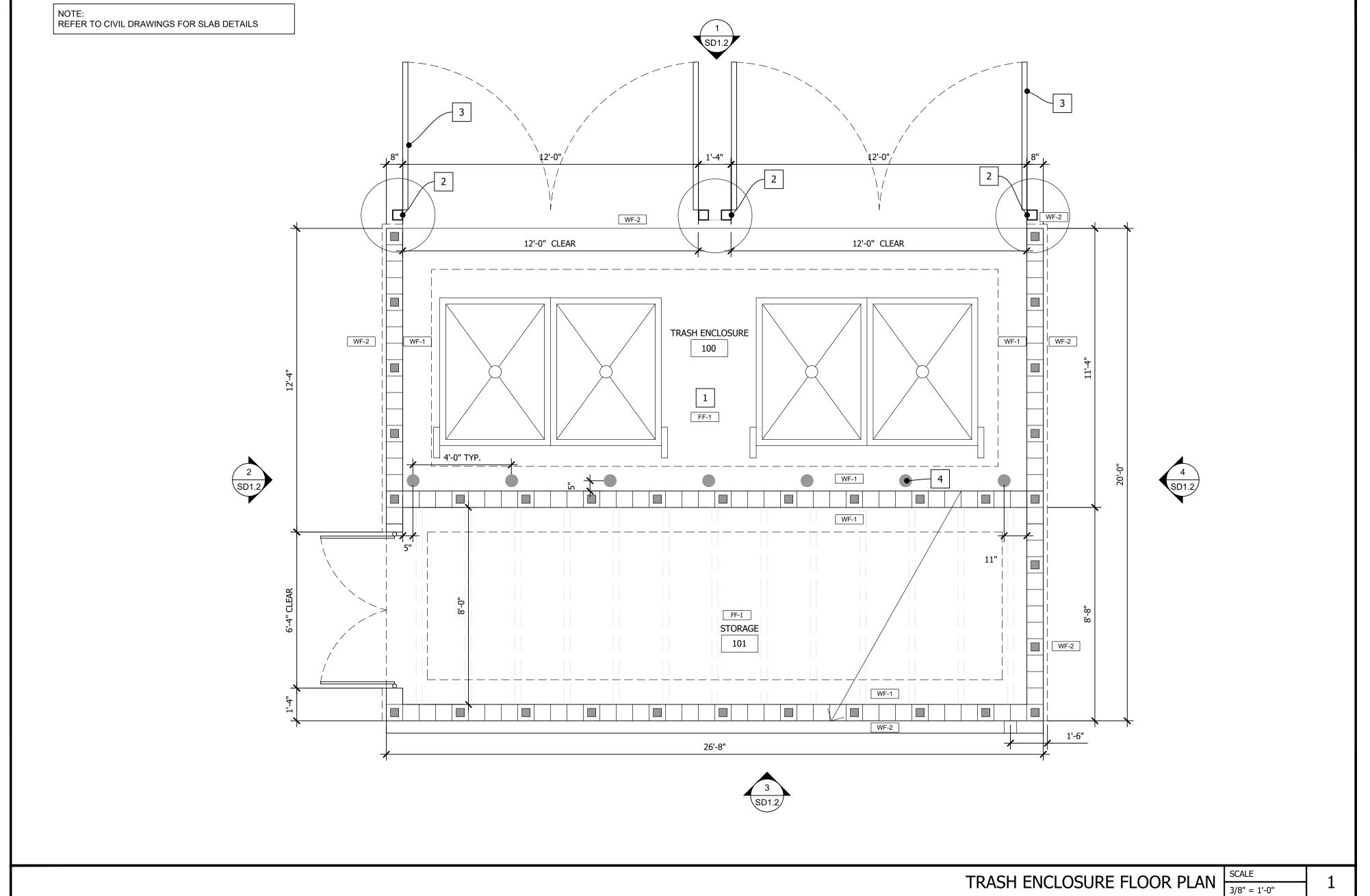


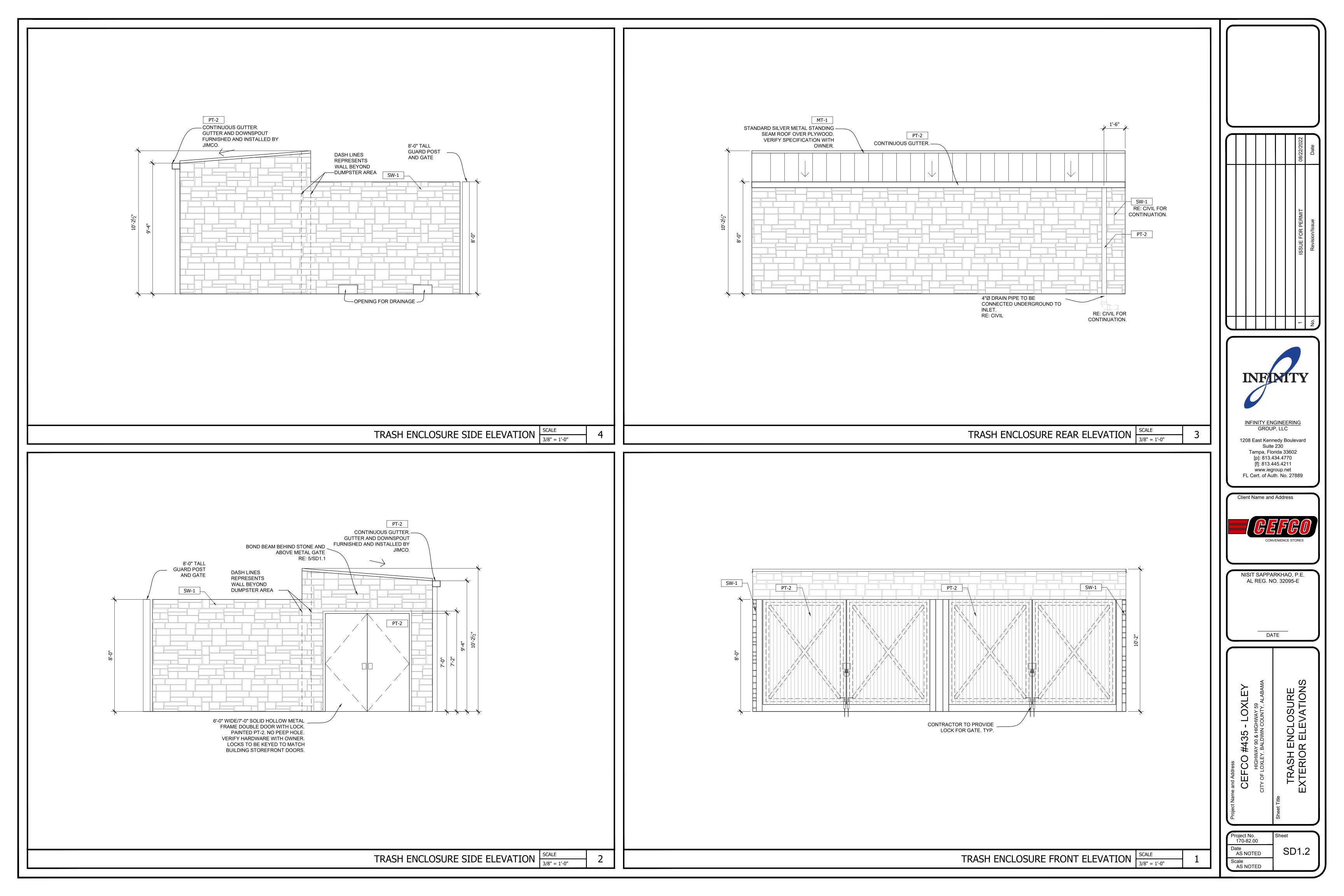
NISIT SAPPARKHAO, P.E. AL REG. NO. 32095-E

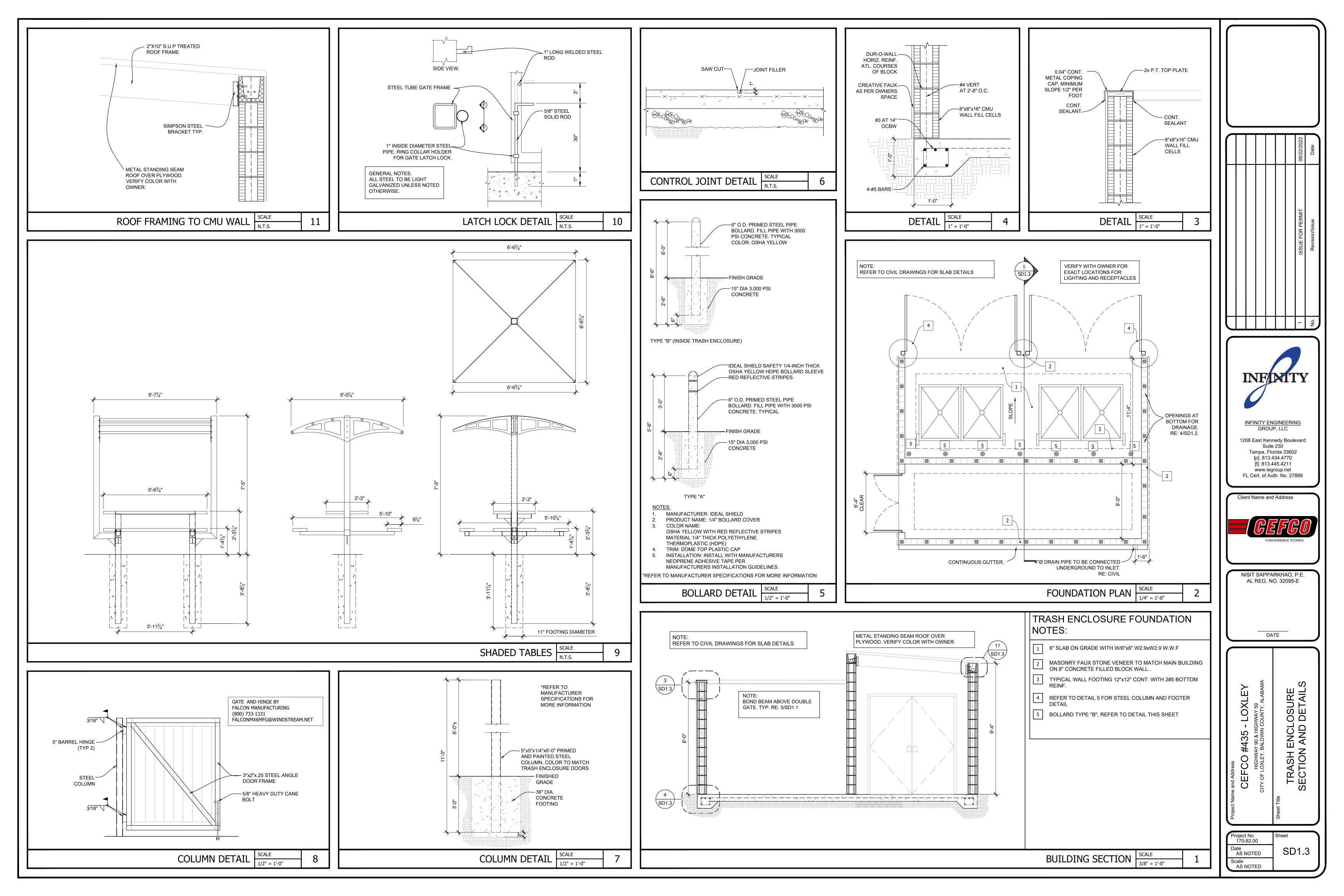
DATE

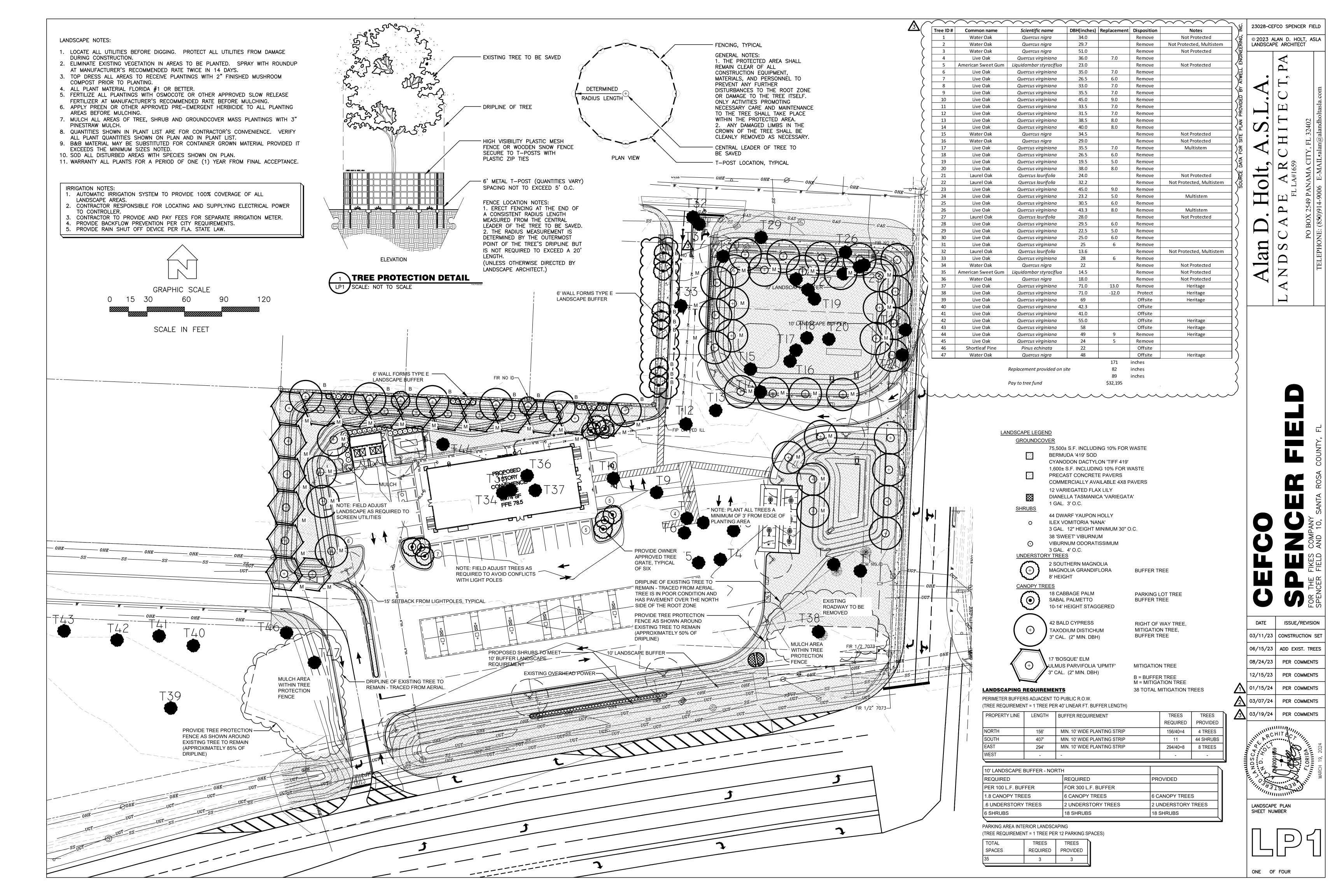
HENCLOSURE AN AND DETAILS

170-82.00 Date AS NOTED SD1.1 Scale AS NOTED









# PROPOSED CONSTRUCTION DOCUMENTS FOR

# CEFCO #426

90 WEST SPENCER FIELD ROAD PACE, FL 32571

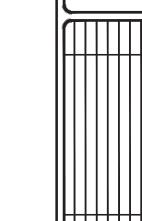
NOVEMBER 14, 2022

**GENERAL** 

INFINITY PROJECT #: 170-84.00



TANK DRAWING





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		THE THE PARTY OF T

STRUCTURAL

FLORIDA PRODUCT APPROVAL INFORMATION												
PRODUCT CATEGORY / SUBCATEGORY	MANUFACTURER	APPLICATION NUMBER										
STOREFRONT PANEL	OLD CASTLE BUILDING ENVELOPE, INC.	FL 20665.1 R3										
EXTERIOR DOOR / SWINGING EXTERIOR DOOR ASSEMBLIES	OLD CASTLE BUILDING ENVELOPE, INC.	FL 17692.1 R5										
EXTERIOR STEEL DOOR	QUALITY ENGINEERED PRODUCT CO. INC	NOA 19-0507.03										
FIXED WINDOW	EUROTECH INDUSTRIES, INC.	NOA 20-1203.09										
SINGLE PLY ROOFING SYSTEM	FIRESTONE BUILDING PRODUCT COMPANY	NOA 17-0727.01										

**OWNER** 

**DESIGN TEAM** 

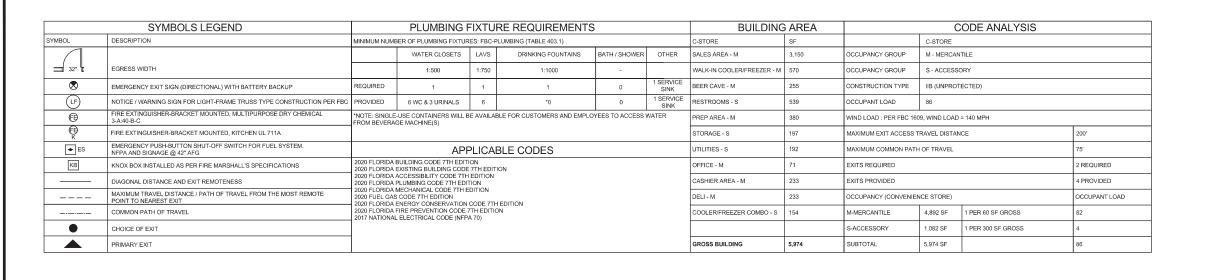
VICINITY MAP

PROJECT TEAM

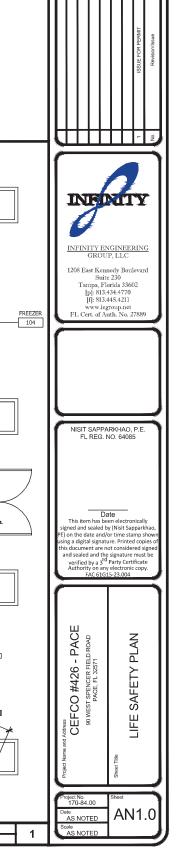
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		CS0.0	COVER SHEET	S1.0	STRUCTURAL GENERAL NOTES	M0.1 MECH	HANICAL NOTES AND SPECIFICATIONS	T0.1	FUEL PRODUCT SPECIFICATIONS		
		,		S1.1	STRUCTURAL GENERAL NOTES	M0.2 MECH	HANICAL LEGEND AND SCHEDULES	T0.2	FUEL PRODUCT SPECIFICATIONS		
		^ DO	LUTECTUDAL	S2.0	FOUNDATION PLAN	M0.3 MECH	HANICAL VENTILATION SCHEDULES	T1.0	FUEL SYSTEM SITE PLAN		
		ARC	HITECTURAL	S3.0	ROOF FRAMING PLAN	M1.0 MECH	HANICAL DETAILS	T2.0	FUEL PIPING LAYOUT		NRKHAO, P.E. NO. 64085
TI	ION I	A1.0	LIFE SAFETY PLAN	S4.0	BUILDING ELEVATIONS	M2.0 MECH	HANICAL PROPOSED PLAN	T3.0	LONGITUDINAL SECTION AND PIPING DETAIL	TERES.	140. 04000
H	ON	AN2.0	ADA DETAILS	S5.0	BUILDING ELEVATIONS	M3.0 MECH	HANICAL PROPOSED ROOF PLAN	T4.0	TANK INSTALLATION PLAN AND EQUIPMENT PLAN		
DDI	ICATION	AN2.1	ARCHITECTURAL INFORMATION	SD1.0	FOUNDATION DETAILS	MC0.1 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T5.0	TANK INSTALLATION PLAN AND EQUIPMENT PLAN		
		AN3.0	PERFORMANCE SPECIFICATIONS	SD1.1	TRASH ENCLOSURE FLOOR PLAN AND DETAILS	MC0.2 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T6.0	STANDARD TANK HOLD DOWN DETAILS & PIPING DETAILS		
L 20	0665.1 R3	AN3.1	PERFORMANCE SPECIFICATIONS	SD1.2	TRASH ENCLOSURE EXTERIOR ELEVATIONS	MC0.3 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T7.0	DETAILS		
L 17	7692.1 R5	A2.0	FLOOR PLAN	SD1.3	TRASH ENCLOSURE SECTION AND DETAILS	MC0.4 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T8.0	DETAILS		
ΙΟΔ :	19-0507.03	A3.0	EQUIPMENT PLAN AND SCHEDULE	SD1.4	GENERATOR ENCLOSURE FLOOR PLAN AND DETAILS	MC0.5 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T9.0	ELECTRICAL FUEL NOTES AND LEGEND		ato
		A3.1	LOW VOLTAGE CABLING PLAN	SD1.5	GENERATOR ENCLOSURE EXTERIOR ELEVATIONS	MC0.6 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T10.0	FUEL SYSTEM ELECTRIC SITE PLAN		en electronically
	20-1203.09	A4.0	REFLECTED CEILING PLAN	SD1.6	GENERATOR ENCLOSURE SECTION AND DETAILS	MC0.7 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T10.1	ENLARGED ELECTRICAL TANK PLANS		oy (Nisit Sapparkhao, 'or time stamp shown
IOA :	17-0727.01	A5.0	FINISH PLAN	SD2.0	STEEL FRAMING DETAILS	MC0.8 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T10.2	ENLARGED ELECTRICAL FUEL STATION PLANS	using a digital signat	ure. Printed copies of
		A6.0	ROOF PLAN	SD3.0	STEEL FRAMING DETAILS	MC0.9 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T11.0	TANK ELECTRICAL DETAILS	and sealed and the	ot considered signed e signature must be
		A6.1	ROOF DETAILS	SD4.0	ROOF FRAMING DETAILS	MC1.0 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T11.1	TANK ELECTRICAL DETAILS	verified by a 3 <sup>rd</sup> Authority on any	Party Certificate y electronic copy. 15-23.004
		A7.0	EXTERIOR ELEVATIONS	SD4.1	ROOF FRAMING DETAILS	MC1.1 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	T12.0	HAZARDOUS AREA CLASSIFICATION DETAILS	FAC 61G	15-23.004
		A7.1	BUILDING SECTION	SD5.0	LIGHT GAUGE DETAILS	MC1.2 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS				_
		A8.0	WALL SECTIONS	SD6.0	MISC. DETAILS	MC1.3 KITCH	HEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS			Ī	l '
		A8.1	WALL SECTIONS			· ·					
		A8.2	WALL SECTIONS								
		A8.6	WALL SECTION DETAILS							兴	
10	ECT TEAM	A9.0	DOOR SCHEDULE	EL ECTRICAL		DLLIMDIN	10	CAN	ODV	PACE	
JI	ECT TEAM	A9.1	PARTITION TYPES AND CONSTRUCTION DETAILS		CTRICAL	PLUMBIN	NG	CAN	OPY	<b>9</b> , 8, 9	
		A10.0	ENLARGED RESTROOM PLAN AND ELEVATIONS	E0.0	ELECTRICAL GENERAL NOTES AND LEGEND	P0.1 PLUMB	BING SPECIFICATIONS, LEGENDS AND NOTES	CS1	CANOPY STRUCTURAL NOTES AND PLANS		
		A11.0	INTERIOR ELEVATIONS	E0.1	ELECTRICAL SPECIFICATIONS	P0.2 PLUMB	BING DETAILS AND SCHEDULES	CS2	CANOPY STRUCTURAL SECTIONS AND DETAILS	26 ERFI	당
6		A11.1	INTERIOR ELEVATIONS	E1.0	ELECTRICAL SITE PLAN	P0.3 PLUMB	BING ISOMETRIC DIAGRAMS - SANITARY & VENT	AB1	CANOPY FOUNDATION SECTIONS AND DETAILS	# N	8
(11)		A11.2	INTERIOR ELEVATIONS MATERIAL LIST	E1.1	CANOPY LIGHTING PLAN	P0.4 PLUMB	BING ISOMETRIC DIAGRAMS - DOMESTIC WATER			O is	
ES ES	4	A12.0	GAS CANOPY PLAN AND ELEVATIONS	E2.0	CEFCO ELECTRICAL LIGHTING PLAN	P1.0 PLUMB	BING PROPOSED PLAN - SANITARY & VENT			O E	I ≥
		A12.1	GAS CANOPY DETAILS	E2.1	ELECTRICAL LIGHTING DETAILS	P2.0 PLUMB	BING PROPOSED PLAN - DOMESTIC WATER			L ™ > 06	I 8
Л	·	•		E3.0	CEFCO ELECTRICAL POWER PLAN	P3.0 PLUMB	BING PROPOSED ROOF PLAN				
1				E3.1	CEFCO UNDERSLAB ELECTRICAL PLAN	P4.0 PLUMB	BING PROPOSED PLAN - NATURAL GAS			V Pue	
				E3.2	CEFCO ELECTRICAL EQUIPMENT PLAN					a a	do do
	INFINITY ENGINEERING GROUP LLC			E4.0	CEFCO ELECTRICAL ROOF PLAN					ž g	E E
	1208 EAST KENNEDY BLVD, SUITE 230			E5.0	ELECTRICAL DETAILS					Proje	Shee
•	TAMPA, FLORIDA 33602			E5.1	ELECTRICAL DETAILS						
	P: 813.434.4770			E5.2	ELECTRICAL DETAILS					Project No. 170-84.00	Sheet
	F: 813.445.4211 WWW.IEGROUP.NET			E6.0	CEFCO ELECTRICAL RISER DIAGRAM					170-84.00	أممما
	CERTIFICATE OF AUTHORIZATION NO. 27899			E7.0	CEFCO ELECTRICAL PANEL SCHEDULES					AS NOTED	CS0.0
	ACTIONIZATION NO. 21099			E7.1	CEFCO ELECTRICAL PANEL SCHEDULES					Scale AS NOTED	] ,

SHEET INDEX

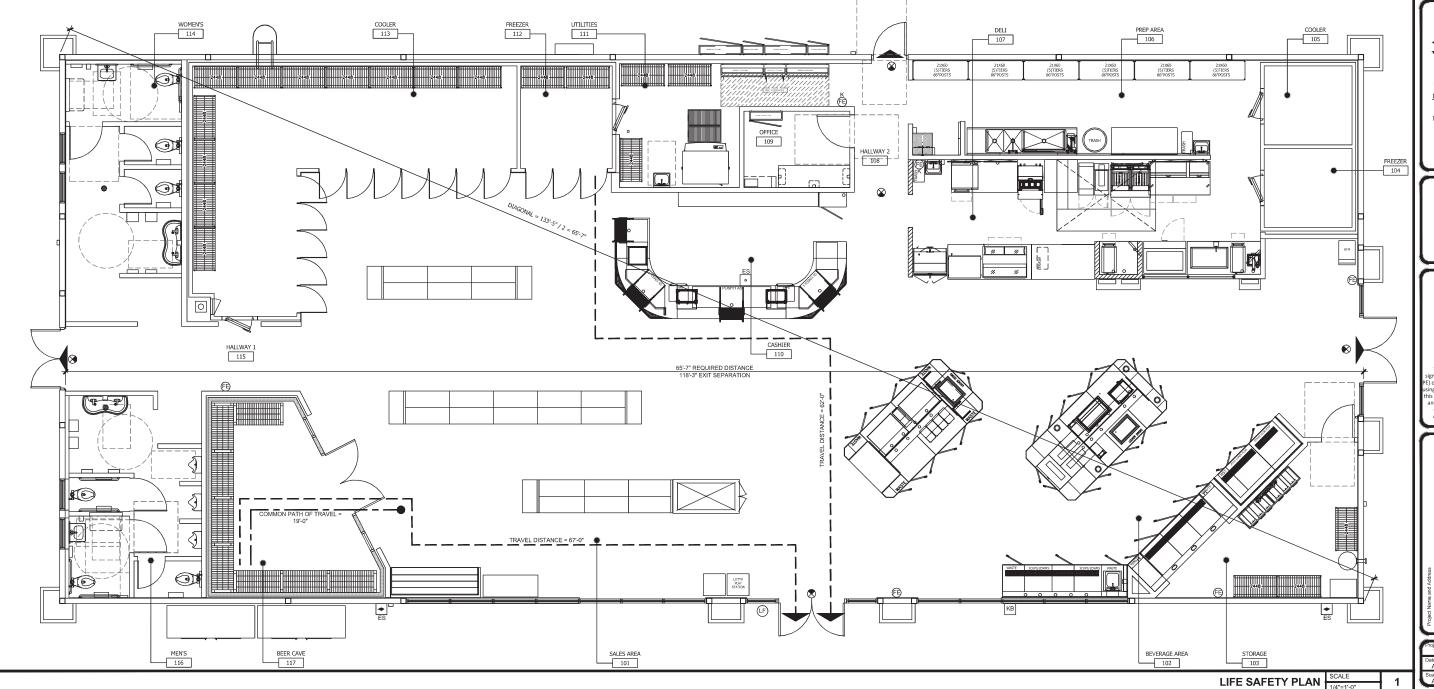
MECHANICAL

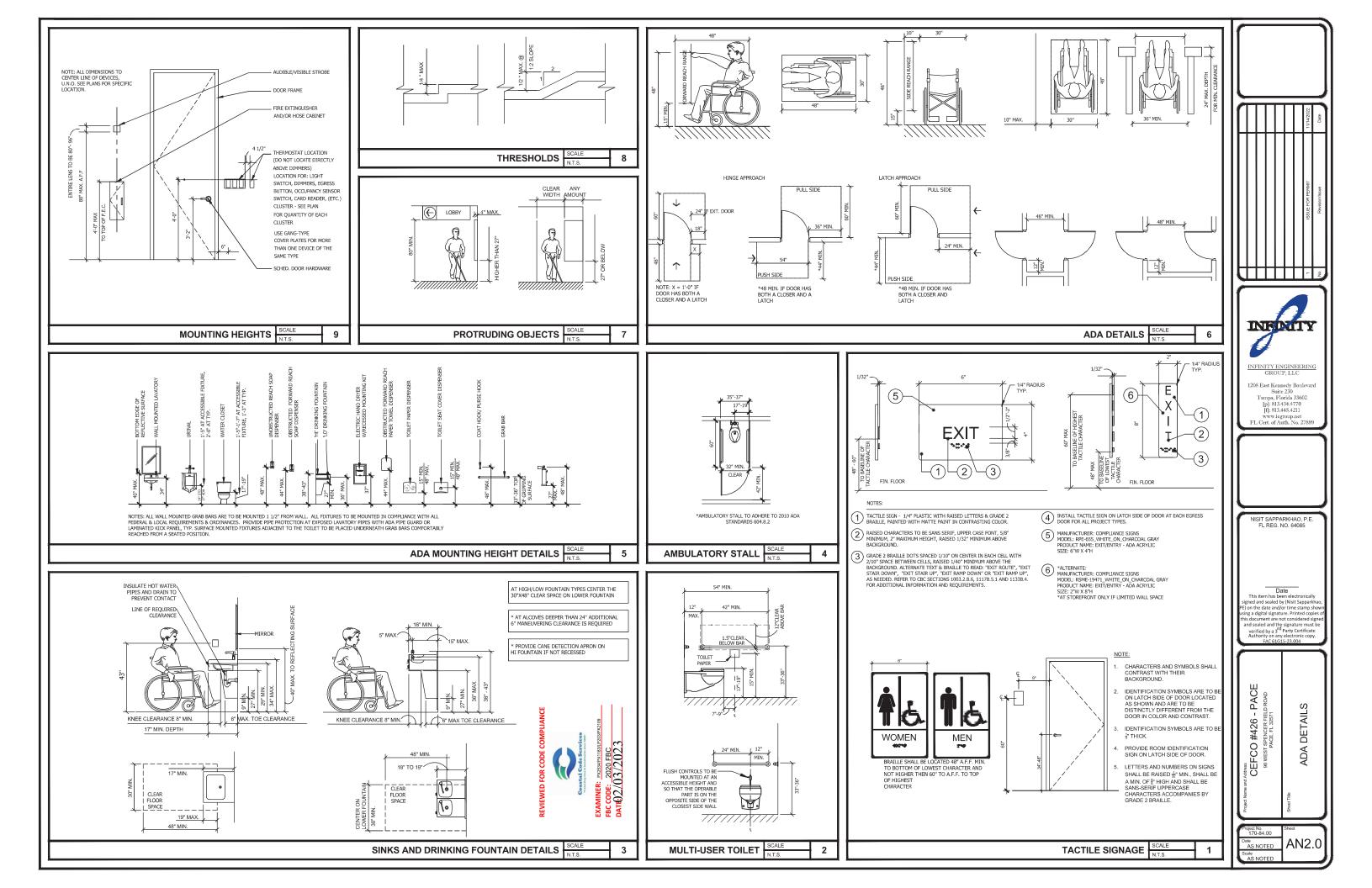






SCALE: 1/4" = 1'-0"





## **DEMOLITION NOTES**

- 1. CONTRACTOR TO DEMOLISH AND REMOVE ALL TRACES FROM SITE OF ALL EXISTING STRUCTURES ABOVE

- CONTRACTOR TO DEMOLISH AND REMOVE ALL TRACES FROM SITE OF ALL EXISTING STRUCTURES ABOVE GROUND (AND BELOW GROUND AS INDICATED ON DRAWINGS) NOT NOTED AS REMAINING OR RELOCATED. DISNEGARD THIS NOTE IF NO DEMOLITION IS INDICATED ON DRAWINGS.
   GENERAL CONTRACTOR TO PROVIDE AND MAINTAIN ALL FENCES, BARRICADES, LIGHTS, SHORTING AND OTHER PROTECTIVE DEVICES NECESSARY FOR THE SARETY OF WORKMEN, EQUIPMENT, THE PUBLIC AND PROPERTY AS REQUIRED BY STATE AND FEDERAL LAWS AND REGULATIONS AND LOCAL ORDINANCES. MAKE PROVISIONS TO CLOSE AND LOCK THE BUILDING AS SOON AS IT IS POSSIBLE TO DO SO. PROTECT ALL DOOR OPENINGS, WHEN NECESSARY, WITH TEMPORARY BATTEN DOORS. COVER WINDOWS AND OPENINGS WITH SUITABLE MATERIALS WHEN WEATHER CONDITIONS REQUIRED.
   THE SITE OF THIS OPERATION SHALL BE FULLY PROTECTED AS REQUIRED BY LOCAL AUTHORITIES. WARNING SIGNS, BARRICADES, FIC: SHALL BE PROVIDED BY THE CONTRACTOR.
   GENERAL CONTRACTOR TO PROVIDE SUFFICIENT FIRE EXTINGUISHERS ON THE JOB SITE DURING. THE COURSE OF CONSTRUCTION, OF THE TYPES AND SIZES RECOMMENDED BY THE RIPE IT OF CONTROL FIRES RESULTING FROM THE PARTICULAR HAZARDOUS WORK BEING PERFORMED. INSTRUCT EMPLOYEES IN THE USE OF EXTINGUISHERS AND PLACE THEM IN THE IMMEDIATE WICINITY OF THE HAZARDOUS WORK, AVAILABLE FOR IMMEDIATE USE: COMMENCE NO HAZARDOUS WORK UNTIL FIRE EXTINGUISHERS OF AN APPROVED TYPE AND CAPACITY ARE PLACED IN THE WORKING AREA, AVAILABLE FOR IMMEDIATE USE.
- FOR IMMEDIATE US.

  OF AN APPROVED TYPE AND CAPACITY ARE PLACED IN THE WORKING AREA, AVAILABLE FOR IMMEDIATE US.

  HE CONTRACTOR WILL BE VIGILANT AND RESPONSIBLE FOR MAINTAINING JOB SAFETY AND SECURITY. THE OCCUPATIONAL, SAFETY AND HEALTH ACT FEDERAL SAFETY REGULATIONS MUST BE FOLLOWED AT ALL TIMES.

# **INTERIOR NOTES**

- 1. ALL SURFACES SHALL BE PROPERLY PREPARED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS PRIOR TO THE INSTALLATION OF WALL COVERING. WALL FINISH TO BE SAMPLED FOR APPROVAL. FLAME SPREAD RATINGS FOR INTERIOR FINISHES ARE TO BE IN ACCORDANCE WITH APPLICABLE
- ALL WORK NOTED "N.I.C." OR "NOT IN CONTRACT" IS TO BE ACCOMPLISHED BY A CONTRACTOR OTHER
- THAN THE GENERAL CONTRACTOR AND IS NOT TO BE PART OF THE CONSTRUCTION AGREEMENT. THE GENERAL CONTRACTOR AND IS NOT TO BE PART OF THE CONSTRUCTION AGREEMENT. THE GENERAL CONTRACTOR SHALL COORDINATE WITH "OTHER" CONTRACTORS AS REQUIRED.

  CONTRACTOR SHALL COOPERATE AND COORDINATE ALL JOSO PEPRATIONS WITH THE OPERATIONS OF OTHERS DOING ADJACENT WORK, SO AS TO PREVENT DELAYS AND CONFLICTS, OR DAMAGES TO EITHER
- PARTY'S OPERATIONS OR MATERIALS.

  4. WHERE CLEARANCE PROBLEMS ARISE IN LOCATION OF LIGHT FIXTURES, RETURN AIR GRILLES, SUPPLY

- PARTY'S OPERATIONS OR MATERIALS.

  4. WHERE CLEARANCE PROBLEMS ARISE IN LOCATION OF LIGHT FIXTURES, RETURN AIR GRILLES, SUPPLY DIFFUSERS AND TROFFERS, ETC., AS SHOWN BY DRAWINGS, CONTRACTOR HAS THE OPTION TO RELOCATE BUILDING SYSTEMS WITHIN EACH ROOM AREA WITHOUT AFFECTING THE REQUIRED LIGHT LEVELS AND CFM AIR DISTRIBUTION TO WORK WITHIN THE SPECIFIED CONSTRUCTION CLEARANCES.

  PARTITIONS APE TO BE CONTINUOUS OVER DOORS, WHEN APPLICABLE, SIMILAR TO ADJACENT WALLS WHERE DRYWALL CONTINUES TO STRUCTURE ABOVE.

  10. PLANTING AREA TO BE CONTINUOUS OVER DOORS, WHEN APPLICABLE, SIMILAR TO ADJACENT WALLS WHERE DRYWALL CONTINUES TO STRUCTURE ABOVE.

  11. UNLESS NOTED OTHERWISE, ALL PARTITIONS SHALL BE TYPE "A".

  12. CONTRACTOR SHALL PROVIDE WOOD TREATED AND FLAME RETARDANT BLOCKING OR REINFORCING IN PARTITIONS THAT ARE COMMON FOR THE NEED OF SUPPORTING FIXTURES, CABINETS, EQUIPMENT, FURNITURE ETC., AS MAY BE REQUIRED OR SHOWN BY DRAWINGS.

  12. CONTRACTOR SHALL PROVIDE WATER RESISTANT GYPSUM BOARD AT ALL PLUMBING CHASES INDICATED AND BEHIND ALL COUNTERS WHICH ACT AS WET PROVE AREAS.

  13. THE SUSPENSION GRID CELLING SYSTEM SHALL RUN CONTINUOUS AND NO MAIN TEES MAY BE CUT FOR ANY REASON, UNLESS PRIOR WITTEN APPROVAL IS DETAINED FROM THE OWNER.

  10. ALL FLOOR MATERIALS AND COLOR CHANGES FROM ROOM TO ROOM SHOULD OCCUR AT THE CENTER LINE OF DOOR PANE, ENCASEMENT OPENING, OR AS INDICATED BY THE DRAWINGS.

  11. CONTRACTOR TO CONFIRM ALL INDIVIDUAL LOCK SETS AND THEIR KEYING REQUIREMENTS, THE QUANTITY AND MASTERING SYSTEM WITH THE OWNER.

  12. ALL HEIGHTS ARE MEASURED FROM THE TOP OF SLAB UNLESS INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL PROVIDE PULL STRING. TELEPHONE OR COADAL CABLE REQUIRED TO BE LOCATED IN AN EXTERIOR OR INTERIOR WALLS THE ELEPHONE OR CORONAL CABLE REQUIRED TO BE LOCATED IN AN EXTERIOR OR INTERIOR WALLS SILL BELLOW A GLASS PANEL OR AN OPEN ENCASEMENT OF THE WALLS SHALL BE ACCESSED WITH THE MEANS OF CONDUIT AND PULL STRING.
- 14. ALL TELEPHONE LINES SHALL BE TEFLON COATED AND MEET WITH THE LATEST CODE REQUIREMENTS IN
- 15. CONTRACTOR SHALL PROVIDE 3/4" PLYWOOD PANEL PAINTED TO MATCH ADJACENT WALL. FOR
- CONTRACTOR SHALL PROVIDE 3"4 PLYWOOD YAMBEL PAINTED TO PRICE ADJACENT WALL, FOR
  TELEPHONE EQUIPMENT. MOUNT PARIE, SIZE AND LOCATION, AS SHOWN IN DRAWNINGS.
   ALL OCCUPANT FURNITURE, EQUIPMENT AND MISCELLANEOUS WILL BE PROVIDED AND INSTALLED BY
  EQUIPMENT CONTRACTOR. THE EQUIPMENT LISTED IN DRAWNINGS SHOULD BE INSTALLED ACCORDING TO
  THE MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL REVIEW EQUIPMENT AND ARCHITECTURAL RAWINGS IN ORDER TO VERIEY ANY DISCREPANCIES, ERRORS, OR OMISSIONS WITHIN THE CONTRACT DOCUMENTS. INDICATE ANY AND ALL CONFLICTS TO THE ARCHITECT BEFORE COMMENCEMENT OF THE
- 17. MATERIALS WHICH ARE CUSTOM-ORDERED FOR THE PROJECT AND WHICH CANNOT BE RETURNED ARE TO BE SUBMITTED FOR SAMPLE APPROVAL PRIOR TO SHIPMENT OF MATERIAL. ARCHITECT IS TO BE NOTIFIED IMMEDIATELY OF ANY ITEMS WITH LONG DELIVERY TIMES.
- 18. SAMPLES OF CUSTOM PAINT COLORS ARE TO BE SUBMITTED FOR ARCHITECTS APPROVAL PRIOR TO
- PURCHASE OF MATERIALS.

  19. THE GENERAL CONTRACTOR AND THE SUBCONTRACTORS SHALL DOCUMENT AS-BUILT CONDITIONS WHEN DIFFERENT FROM THE CONSTRUCTION DOCUMENTS, AND SHALL PROVIDE SAID DOCUMENTATION TO THE ARCHITECT UPON COMPLETION OF THE WORK.

## MILLWORK NOTES

- 1 THE CONTRACTOR SHALL PROVIDE FOR THE MILL WORK TO CONFORM TO THE DETAILS SHOWN ON THE DRAWINGS AND SHALL BE FABRICATED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORKING INSTITUTE AND THEIR REQUIREMENTS FOR CUSTOM GRADE QUALITY CONSTRUCTION, UNLESS NOTED
- PROVIDE ALL FINISHES AS REFERENCED ON THE DRAWINGS AND ELEVATIONS AND AS NOTED IN THE
- PROVIDE ALL PRINSHES AS REFERENCE ON THE DEVANINGS AND ELEVATIONS AND AN OFFICIAL THE SPECIFICATION OF THE STATE OF THE SPECIFICATION OF THE STATE O
- VENEER EXCEPT FOR FIR PLYMOOD, WHICH SHALL BE EDGE BANDED WITH FAS CLEARGUM. MITER EDGING AT CORNERS AND GLUE SURPACES SOLIDLY.

  5. INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS, ALL DIMENSIONS, PROFILES, JOINTS AND REVEALS SHALL BE HELD EXACT. INSTALL CABINET DOORS AND DRAWERS SO THEY FIT OPENINGS PROPERLY AND ARE PROPERLY ALIGNED ADJUST HARDWARE TO CENTER DOORS AND DRAWERS IN OPENINGS AND TO PROVIDED UNENCUMBERED OPERATION, COMPLETE THE INSTALLATION OF HARDWARE AND ACCESSORY ITEMS AS INDICATED.

  6. CONTRACTOR SHALL SUBMIT SHOP DRAWING SHOWING THE LOCATION OF EACH ITEM, DIMENSIONED PLANS AND ELEVATIONS, LARGE SCALE DETAILS, ATTACHMENT DEVICES AND OTHER RELATED COMPONENTS, CONTRACTOR TO SUBMIT ONE (1) SEPIN AWLAR OF EACH ORIGINAL AND THREE (3) BLUE LINE PRINTS OF EACH ORIGINAL FOR ARCHITECTS APPROVAL.

## MILLWORK HARDWARE

UNLESS NOTED OTHERWISE, ALL CABINETS SHOWN IN DRAWINGS AND WHICH ARE APPLICABLE TO THE PROJECT SHALL RECEIVE THE FOLLOWING HARDWARE. REFER TO CABINET ELEVATIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PULLS: "STANLEY 4484" / US 26

MAGNETIC CATCHES: STANLEY NO. 41 / ONE PER DOOR PANEL. TWO PER DOOR PANEL 4'-0" HIGH OR HIGHER.

DRAWER GLIDES: GRANT NO. 329 - ONE PAIR PER DRAWER.

HINGES: "STANLEY 335" / US 26 - EQUALLY PLACED AT TOP, MIDDLE, AND BOTTOM.

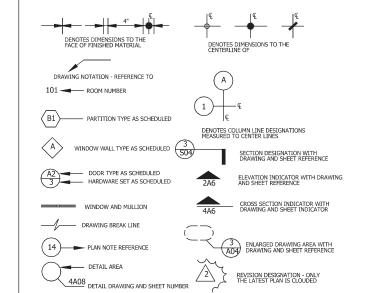
LOCKS: "CORBIN 15760" / US 26

CABINET SHELF STD. AND BRACKETS: K AND V 255NP AND 256NP, MAXIMUM 5'-0" FOR SHELF LENGTH, 4 PER

OPEN SHELVING STD. AND BRACKETS: K AND V 80 PLUS 180 MANUFACTURER STANDARD "WHITE" PAINTED

IN CASE OF SUBSTITUTION, CONTRACTOR SHALL SUBMIT TO ARCHITECT SAMPLES OF PROPOSED MILLWORK HARDWARE WITH PRIOR APPROVAL OF OWNER FOR ARCHITECTS FINAL APPROVAL

## GENERAL GRAPHIC SYMBOLS



# ARRDEVIATIONS OF TEXT

ARRK	EVIATIONS OF I	EXI			
ACST	ACOUSTICAL	ID	INSIDE DIAMETER	SATC	SUSPENDED ATC
ARCH	ARCHITECTURAL	INSF	INSULATING FILL	SECY	SECRETARY
ATC	ACST CEILING TILE	INSUL	INSULATION	SHLV	SHELVING
		114002	11002111011	SHWR	SHOWER
BD	BOARD	JT	JOINT KIT KITCHEN	SO	SENIOR OFFICER
BLK(G)	BLOCK(ING)	21	JOINT RETRETER	SPC	SUSPENDED PLAS CLG
BOL	BOLLARD	KP	KICK PLATE		
BR	BEDROOM	KS	KITCHEN SINK	SR	SENIOR
BSMT	BASEMENT	K2	KITCHEN SINK	STC	SOUND TRANMS COEFF.
DOM	DASEMENT		I ADODATION!	STG	SEATING STOR STORAGE
CAB	CABINET	LAB	LABORATORY	SUB	SUBCONTRACTOR
CER		LAM	LAMINATE	SYM	SYMMETRICAL
	CERAMIC	LAV	LAVATORY		
CHBD	CHALK BOARD	LVR	LOUVER	TKBD	TACK BOARD
CJ	CONSTRUCTION JOINT			T&G	TONGUE AND GROOVE TB
CJT	CONTROL JOINT	MLD	MOLDING		TILE BASE
CLO	CLOSET	MTFR	METAL FURRING	TZ	TERRAZZO
CLRM	CLASSROOM	MUL	MULLION	THR	THRESHOLD
CLWC	CLEAR WIRE GLASS	MWK	MILLWORK	TRWLD	TROWEL LED
COMP	COMPUTER			UNFN	UNFINISHED
CORR	CORRIDOR	NO.	NUMBER	US	UNLESS
CPL	CEMENT PLASTER	NST	NON-SLIP TREAD		
CPT	CARPET	NTS	NOT TO SCALE	VCT	VINYL COMPOSITION TILE
CT	CERAMIC TILE			VB	VINYL BASE
		OFF	OFFICE	VCB	VINYL COVE BASE
DC	DOOR CLOSER	OPH	OPPOSITE HAND	VWC	VINYL WALL COVERING
DEPT.	DEPARTMENT	OPENING	OPENING	VP	VISION PANEL
DJ	DUMMY JOINT			**	VISION ITALE
DR	DOOR	PBD	PARTICLE BOARD	WDW	WINDOW
DWR	DRAWER	PLAS	PLASTER	WGL	WIRE GLASS
		PLYWD	PLYWOOD	WHSE	WAREHOUSE
EF	EACH FACE	PREP	PREPARATION	WLCOV	WALL COVERING
EJC	EXPANSION JOINT COVER	PT	PAINT(ED)	WSCT	WAINSCOT
EJT	EXPANSION JOINT	PW	PASS WINDOW	WW	WINDOW WALL
EXEC	EXECUTIVE		1A33 WINDOW	VV VV	WINDOW WALL
Dicc	EXECUTIVE	QT	QUARRY TILE		
FAS	FASTEN	QTY	QUANTITY		
FJT	FLUSH JOINT	QII	QUANTITI		
FL(G)	FLOOR(ING)	RB	RUBBER BASE		
FRM	FRAME	RECEP	RECEPTION		
LINE	HOAFIL	REFL	REFLECTED		
GDR	GUARD RAIL	REFL			
GL	GLASS		ROOF HATCH		
GWB	GYPSUM WALL BOARD	RH	RIGHT HAND		
		RLG	RAILING		
GYP	GYPSUM	RT	RUBBER TILE		
LIDIU	HADDWADE	RVS	REVERSE		
HDW	HARDWARE				
HM	HOLLOW METAL				
HPT	HIGH POINT				

## MANUFACTURERS STANDARDS

AMERICAN PLYWOOD ASSOCIATION

1119 A STREET TACOMA, WASHINGTON 98401

AWI ARCHITECTURAL WOODWORK INSTITUTE 5035 SOUTH CHESTERFIELD ROAD ARLINGTON, VIRGINIA 22206 (703) 671-9100

BHMA BUILDERS HARDWARE MANUFACTURERS ASSOCIATION 60 EAST 42ND STREET NEW YORK, NEW YORK 10017 (212) 682-8142

CRI
THE CARPET AND RUG INSTITUTE
310 HOLIDAY DRIVE
BOX 2040
DALTON, GEORGIA 30720
(404) 278-3176

DOOR AND HARDWARE INSTITUTE 1815 N. FT. MYER DRIVE SUITE 412 SULLE 412 ARI INGTON, VIRGINIA 22209 (703) 527-2069

GYPSUM ASSOCIATION 1603 ORRINGTON AVENUE EVANSON, ILLINOIS 60201 (312) 491-1744

HPMA
HARDWOOD PLYWOOD MANUFACTURERS ASSOCIATION BOX 6246 ARLINGTON, VIRGINIA 22206 (703) 671-6262

NPA
NATIONAL PARTICLE BOARD ASSOCIATION
2306 PERKINS PLACE
SILVER SPRINGS, MARYLAND 20910
(301) 587-2204

NPCA
NATIONAL PAINT AND COATING ASSOCIATION
1500 RHODE ISLAND AVENUE N.W.
WASHINGTON, D.C. 20005
(202) 462-6272

TCA
TILE COUNCIL OF AMERICA, INCORPORATED
BOX 326
PRINCETON, NEW JERSEY 08540
(609) 921-7050

UL
UNDERWRITERS LABORATORIES INCORPORATED 207 FAST OHIO STREET CHICAGO, ILLINOIS 60611 (312) 642-6969

WOOD AND SYNTHETIC FLOORING INSTITUTE 1000 PTCK WTCK AVENUE GLEN VIEW, ILLINOIS 60029 (312) 724-7700

WOODWORK INSTITUTE OF CALIFORNIA 850 S VAN NESS SAN FRANCISCO, CALIFORNIA 94109





INFINITY ENGINEERING GROUP, LLC

1208 East Kennedy Boulevar Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 www.iegroup.net FL Cert. of Auth. No. 278

Date

ned and sealed by (Nisit Sappark on the date and/or time stamp sh and sealed and the signature must l verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic conv

ORMATION PACE Ä #426 ARCHITECTURAL Address CEFCO #

AN2.1 Date AS NOTEI

SECTION 01010 - SUMMARY OF WORK

A. SCOPE: The Work, as defined in the general conditions as described in the

Construct a single story retail facility with metal stud frame construction, reinforced piaster wall panels, metal shell standard facca, single ply membrane roof, or metal decloring, aluminum windrows and entrances, interior dywall partitions, millhooth, hollow metal doors and frames, acoustic callings, ficors, millhooth, findlew metal doors and frames, acoustic callings, ficors, milly other productions and production of the control of t plumbing and electrical work

B. RELATED WORK PROVIDED BY THE OWNER

C. PRIOR ENTRY.

1. Owner reserves the right to prior entry to completed and partially completed areas for performance of other work to be performed under other contracts.

2. Confine construction operations, materials, and equipment storage, apparatus, temporary construction, equipment, and other construction related activities to such limits and portions of the Project Site, as designated by the owner.

activities to such limits and portions of the Project Site, as designated by the owner and indicated on the drawings.

3. Do not use adjacent properties including private properties and that of public domain, for material and equipment storage or for construction operations without the specific written approval of any and all authorities having full and proper instruction.

A. COPIES OF CONTRACT DOCUMENTS: The owner will supply to the contractor one set of contract documents, free of charge, for construction purposes. Additional sets will be available to the Contractor if he pays for the cost And the content of th

SECTION 01025 - MEASUREMENTS AND PAYMENT

A. PROGRESS SCHEDULE AND COST BREAKDOWN: Within 21 days after the A resolution of the Contract, submit, in acceptable form, anticipated progress schedules stating subdivision of contract, submit, in acceptable form, anticipated progress schedules stating subdivision and protes as a basis for computing value to owner or structure. The progress is a basis for computing value to owner of permanent reussable parts of a facility to be paid for on monthly estimates. When the part of the progress is a schedule has been submitted and proved.

B. PROGRESS PAYMENTS: Monthly payments will be made of the value of completed work, and materials stored at the site, less retainage. Owner will not pay for materials stored of site. Payment of owner will be made in reasonable time of the date the application was received. Contractor will pay for all permits, fees, local and

state taxes.

1. RETAINAGE: Retainage of 10 % of amount due to the Contractor will be held by the owner until 30 days after substantial substantial completion.

#### SECTION 01070 DEFINITIONS

A. THE CONTRACT DOCUMENTS: The Drawings are those enumerated in the "List of Drawings" and identified in the contract. The drawings in many instances are schematic and do not define exact locations of every part and piece of this work terms farmished may vary in dimension and in other ways vary from specific items called for in the Contract Documents. In some cases determine the exact location of each part by measurements, drawings from equipment manufactures, and coordination with other work.

B. SPECIFICATIONS:

1. The format of the Specifications divides the work into Major Divisions and Work Sections attempts to group the work in each section by source of material or by trade, solely for the convenience of the users. No trade jurisdictions are intended or inclined.

 Implied.
 The outline form and imperative voice are typically used to omit repetitious. 2. The dualite born and impeliative voice are typicary used to thirt repeated of the use of words or word groups (such as "furnish and install", "Contractor shall" and other similar statements), and to call for the type of materials and methods and limit the use in the briefest possible manner. Such words omitted from the text shall be construed to be included just as if they were repeated each time.

# C. MINIMUM COMPLIANCE STANDARDS AND INDUSTRY

SPECIFICATIONS

Materials and operations specified by reference to published specifications of a manufacturer, a society, an association, a code, or other referenced standard, shall comply with the current requirements of referenced document, officially published on or before the date of the receipt of bids.

SECTION 01410 - TESTING LABORATORY SERVICES

A An independent testing laboratory may be selected by the owner to inspect and test the materials and methods of construction as hereinantier specified for the property of t

contract document.

C. STRUCTURAL CONCRETE:

1. AGGREGATE TEST: Check the proposed aggregate in accordance with the

ASTM C 33

2 MX DESIGN. Check the proposed mixes for proportions, water cement ratio and stump in accordance with ACI 613 and 318.

3 SLUMP TEST: Take stump test ASTM C 143 at the beginning of each days pouring operations and whenever water adjustments are noticeable of stump occurs

4 SAMPLING.

D. Make five standard cylinders at the beginning of each placement. Take extra

D. Make five standard cylinders at the beginning of each placement. Take extra samples at noticeable change in the concrete makeup.

E. Take four additional test cylinders for every one hundred cubic yeards or fraction thereof. Cure of ASTM C 192.

F. Perform sampling in control with ASTM C 172.

F. Perform Sampling in control with ASTM C 172.

A LABORATORY CURE 2 cylinders for compression in accordance to ASTM C 39.

S. PIELD CURNO: manining cylinders in accordance with ASTM C 192.

F. PIELD CURNO: manining cylinders in accordance with ASTM C 31.

C. Test Cylinders two cares and day, and the day thereight days averaging test results. Testing remarking cylinders at fifty sk days.

#### SECTION 01510 - TEMPORARY FACILITIES

A. CONSTRUCTION FACILITIES: Provide the following facilities for the use of all personnel, subcontractors and all authorized personnel.

1. TOILET FACILITIES: Provide sanitary and adequate facilities to meet the

legal requirements.

2. DRINKINS WATER: provide clean drinking water with disposable paper cups and containers for the used cups.

3. ELECTRIC Provide connections and controls for 115V, single phase power with control within 200 feet of locations used.

4. LIGHTINS 2-rovide 50 foot-cardies for construction purpose where

4. LIGHTINS: Provide of businesses on a consistency of the decision used.
6. CONSTRUCTION WITE consistency as a consistency of the decision used.
6. HOSTING FORCHITES: Provide hosting equipment as necessary, for light construction material complying with jurisdictional safety codes.

 B. FIELD OFFICE:
 Provide and maintain a weathertight building with lockable door and 2. Provide and maintain a weatheringin building with lockable boor and windows to serve as job office available to the contractor, subcontractor and owner. Provide light, air-conditioning and heating as needed. Provide a drawing table with lockable doors and a drafting bench. Remove office from the premises when one can be set up inside the building.

## A. STORAGE FACILITIES:

A STORAGE FACILITIES:

A) Provide and maintain a weatherlight storage facilities raised with a six inch minimum above the ground with sides and tops enclosed, and lockable doors.

4. Replace materials improperly stored and damaged by normal or predicted weather conditions. Remove storage facility when materials can be properly stored in a weatheright condition.

D. GRAPHICS:
4. JOB SIGN:
8. SIZE: nominal 64 square feet
b. MATERIAL: % inch APA exposure 1 or exterior plywood A-C grade

or MD overlay.

c. POSTS: 4 inches by 4 inches, 2 required

d. FRAMING AND BRACES: 2 inches by 4 inches.

e. LETTING: Name of job, owner, contractor.

Project sign will be done by a professional sign pointer

1. LAYOUT AND COLOR SELECTION: As selected solely by the

E. RESTORATION OF SIGNS: No advertising signs may be installed anywhere on the sight

SECTION 01600 - MATERIALS AND EQUIPMENT

A SUBSTITUTIONS:

1. Submit all proposed substitutions after the award of the contract in writing with sufficient information samples and differences in cost of evaluation. Do not make substitutions unless approved in writing.

2. Prepare quadetions for processed changes in the vent in a "treat down" form giving the number of units, unit cost material, hours of labors, bourly cost of labors, bod costs, overhead and profit, reflecting credit as well extrass.

B. USE MATERIALS THAT ARE:

1. New and high quality suited to the use of intended except wherein noted as

used.

2. Suitable for the function intended.

3. Corresponding in quality to related materials in the absence of a definitive

3. Corresponding in quality for relates instrument in the second of the profit and in the profit and present and properties.

6. Planilly marked and felievered to the site in original unopened containers when the nature of container is suitable for containers.

C. WORK BY OTHERS: Arrange to accommodate N.I.C. work. When information is adequate request more information before proceeding.

D. Follow manufactures instructions. When such instructions are in conflict with the Contract Documents make request for clarification before proceeding. Keep a copy of the manufacturers instructions on the job.

E. Perform high quality professional workmanship. Join material to uniform, accurate fit so that they meet with straight lines, free of snears or overlap, install exposed materials appropriately leveluci, plumb, and accurate right angles or flush in adjoining naterials. Altuch metalisis with sufficient severgit, number and spacing of attachments that with not fail until materials joined and are broken or permanently, determed.

SECTION 01700 CONTRACT CLOSE-OUT

A SUBSTANTIAL COMPLETION:

1. When the contractor determines that the Work is substantially complete, the contractor will send a written notice to the owner that the project is substantially complete and requests an inspection of the work.
2. Within a reasonable time after receipt of the contractors notice claiming substantial completion, the owner will make an inspection of the work to determine the state of completion and will prepare a punch list of items requiring completion or connection.

or correction.

3. If during the course of inspection the owner determines the work substantially complete, he will discontinue the inspection and will notify the contractor that the work does not comply with requirements of substantial

completion.

I immediately after the receipt of notice that the work is not substantially complete the contractor shall correct the deficiencies and send a second written notice to the owner as specified above.

5. When the cowner fees the work meets the requirements of substantial completion. All notices the covernment of substantial completion. All

Document G704.

6. The contractor shall prepare and submit to the owner a list of items to be completed or corrected within the time constraints established on the certificate of intentional dependation.

ubstantial completion.

7. The owner will review and amend the list of items to be completed or prected and append the complete list to the certificate of substantial completion.

B. MANUALS, INSTRUCTIONS AND KEYS:

1. The contractor shall assemble and deliver to the owner printed or bypewritten, operating servicing and maintenance and cleaning instructions and part list for all items of equipment provided as part of the contract. Include names and lated anderess of local prepensative of each until of equipment index manuals of equipment containing items of different equipment. 2. Provide two copies of each required manual including mechanical and

2. Provide two copies of each required manual including mechanical and electricial portions of work.
3. The contractor shall provide services of skilled and compared pressured to instruct the owners personnel in operating equipment and systems provided as part of the contract.
4. Upon compellation of work, the outbractor shall cellevia all keys including manual fively and any special keys and two provided as part of the contract of the other contracts.

C RELEASE OF LIENS:

The contractor shall deliver to the owner a blanket release of liens covering all work performed under this contract, including that of subcontracts, subsubcocharactors, vendors and other supplies of netaries and labor. Execute the release of liens on the documents similar to AIA bocument 0769 "Contractors affidient of payment of debtors and delivers and 07694". Orontactors affidient of payment of debtors and delivers and 07694".

release of liens."

2. The forms will be executed by authorized officer and notatized. All required attachments will be included as noted on AIA document G705. If exceptions are statisticated to the control of the co

. GUARANTEES, BONDS, AND INSPECTION CERTIFICATES non required by the contract document executed in the owners name. 2. Prior to making the application to final payment, the contractor shall collect and assemble all required guarantees and bonds and deliver them to the owner 3. The contractor shall collect and assemble all required guarantees and bonds and deliver them to the owner. The contractor shall collect and assemble all required confidence of inspection, testing, approval, and celeber them to the owner required confidence of inspection, testing, approval, and celeber them to the own them.

Furnish written warranties to the owner including specific items in each product warranty stipulated in the individual section.
 Secure and transmit required inspeciation certificates, under warranty, when damages result from faulty metalis and negligient workmanship.
 Warrant that modifications or substitutions suggested by the contractor will give satisfactory results and that they will be equal or supported to the specified item or method unless shortcoming are specifically listed in the request for modification or substitution.

It. Hiven the work has been completed fully in accordance with the requirements of the contract, the contractor shall send a written notice claiming final completeness and shall specify each note on the punch list as being complete or any incomplete feer.

2. The contractor shall submit final application for payment indicating adjustment and accounts including original contract sum, additions and deductions as included on charge orders, cash allowances, deductions on incorrect work, and other requirements listed in the documents contract, including the Consent of Surety Company to final payment, AA Document Conjudician or completion the owner will perform a faint inspection, not if the work is fully completed in accordance with the requirements of the document contract, the owner will issue a certificate of completion, and as conflicted for final payment.

G. TERMINAL INSPECTION:

Immediately prior to expiration of the one year guarantee period, the contractor shall make an inspection of the project in the company of the owner. The owner shall not be given less than five days notice prior to the anticipated date of

owner shall not be given less than tive days notice prior to the anticipated date of the interminal inspection, of the work has been proven to be defective and requires replacement, repair, or adjusting, the contradors shall immediately provide materials and labor necessary to repair such defective work and shall execute work until completed and to the satisfaction of the owner even though that the date of completion has part the expiration date of the guarantee period.

3. The contrador shall not be responsible for work that has been damaged due to neglect or above by the owner not the replacement parts necessiblated by promating the production of the contrador shall not be responsible for work that has been damaged due.

SECTION 01710 - CLEANING

A. PERIODIC CLEANING:

A PERIODIC CERVINOS.

A PERIODIC CULETIONS: Provide a garbage can at each location on the site as used as an eating area. Pick up all garbage not deposited in cans daily. If garbage is left overinglist cover cans. Renove garbage from cans weekly. Keep the site free from garbage, tests, and vermin infestation.

2. TRASH REMOVAL: Clean the work area of trash once a week. When rapid accumulation occurs semove trash more frequently. Remove highly confusibility tests when the provided in the provided provided in the provided provided in the provided provided in the provided pro

B. FINAL CLEANING:

The work area shall be thoroughly cleaned inside and outside. Cleaning includes removal of smudges marks and stains, fingerprints, soil dirt spots, dust lint, and any other foreign matter from finished and exposed surfaces.
 Remove all temporary facilities.

SECTION 02110 - SITE CLEARING AND GRUBBING

A. VEGETATION PRESERVATION: Do not remove trees or shrubs without the specific approval of the architect. Damaged vegetation will be replaced.

B. REQUIREMENTS OF REGULATORY AGENCY: Adhere to state and local code requirements for the disposal of trees and shrubs removed from site.

C. OWNERSHIP OF REMOVED MATERIALS AND VEGETATION: Unless noted otherwise, removed property become property of the contractor. D. PROTECTION OF VEGETATION: Rope or fence off vegetation that is to remain to prevent damage.

E. Grubbing: Grubb construction depth to a minimum of one foot to the existing

SECTION 02200 - EARTHWORK

A. the surface report governs existing subsurface conditions.

B. CONCEALED CONDITIONS: Variations form the contract document for conditions not apparent at the start of the work will be adjusted as described in the contract conditions.

C. SOIL STIFFNESS: When soil concerning subsurface soil stiffness is not available assume an angle of repose 45 degrees under optimum moisture condition. No angle of repose can be assumed when soil is under adverse condition. Where concrete is shown vertical or steeper than the angle of repose forms are required.

D. GOVERNING DOCUMENTS: The following documents governs the work.

Occupational safety and Health administration, reco

XVII , 1926.625 2. IN TEXAS: Texas trench laws, HB 662 and HB 665

E. EXCAVATION INSPECTION: Do not place concrete in footing excavations without the architects inspection.

F. FILL AND BACK FILL MATERIAL: Select fill material under placed under slabs foundation and paving shall comply with the following requirements. Materials may be provided it is made to comply with the use of admixtures sand or

lime.

1. LIQUID LIMIT: 30 to 45.

2. PLASTICITY INDEX: 7 to 20.

3. LINEAR SHRINKAGE: 10 % maxim

4. PURITY: No stones or debris larger than 3

COMPACTING: Provides 90 % maximum density under walks and grassy areas, 95% minimum anywhere elsewhere. Add water or dry out to maintain optimum moisture content. AASHTO compassion test method 1-99, performed at polinium moisture. Place fill in layer not to exceed 6 inches after completion.

H. COMPACTING OF GRANULAR FILL: Compact treches under slabs as follows: 1. 12 INCHES OR LESS: provide granular material soft enough to compact

readily by water saturation.

2. BETWEEN 12 AND 36 INCHES: compact by water saturation to within two feet of the surface. The final 2 feet and 0 layers shall be compacted by six inchI ayers. 3. OVER 36 INCHES: compact at 6 inch layers starting at the bottom.

I SAND LAYER:

LOCATION: Where sand cushion is noted under concrete slabs.
 MATERIAL: well graded inorganic mineral sand in loose non stratified deposits per ASTM D 2488.
 THICKNESS: Z inches under walks and 4 inches elsewhere.
 COMPACTING: Compact to support concrete without settlement during

J. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

SECTION 02246 - SOIL STABILIZATION

A. Coordinate the requirements of the structural drawings with the requirements of this section. If a conflict exist notations on the structural drawings take precedence. Refer to the soil reports and survey for existing subsurface conditions.

SECTION 02284 - TERMITE CONTROL

A. MINIMUM COMPLIANCE STANDARDS: Comply with all applic governmental standards, unauthorized use of these chemicals is a

B. Warrant the work herein for five years. Defects shall include but not be limited to the following:

1. termite activity

2. Damage of building material caused by termites

C. Include replacement of materials caused by termites within the

D. APPLICATOR: Applicator shall be bonded to reform this type of work. Where local licensing is available or required, applicator shall be licensed to perform this type of work.

E. POISON DILUTENT: Potable water

F. Provide EPA approved chemicals of the following types:

1. ORGANPHOSPHATES: Dursban TC, Dow chemicals USA, Midland MI

 Ord-ANN-HOSPHA LS: Dursban TC, Dow chemicals USA, Midland MI 48674 (517) 898-100.
 PYRETHOIDS:
 Dragnet FT: FMC Corp. Agricultural chemical group Philadelphia, PA. 19103 (215) 299-8000. 19103 (2/15) 299-6000.
 b. Demon TC: ICI Americas Inc. Wilmington DE 19899 (303) 575-3000.
 c. Torpedo: ICI Americas Inc. Wilmington DE 19899 (303) 575-3000.
 d. Tribute: Velsical chemical Corp. Rosemont III 60018 (312) 698-9700.

G. QUANTITIES OF WORKING SOLUTION: Provide one gallon per 10 square feet under the building slab, and 2 gallons per 5 linear feet at the slab perimeter.

H. PROCEDURES: Notify the supervising authority before commencing work. do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

SECTION 02510 - CONCRETE CURBS WALKS AND PAVING

A. WORK GOVERNED BY OTHER SECTIONS: The actual work of this segment remains within this section, but subject to the applicable requirements of division 3 - Concrete. B. MINIMUM COMPLIANCE STANDARDS: Work in accordance with the

following: 1. ACI 316 and ACI 325 2. Portland cement Assoc. PA017 and PL136 3. ACI 302

C. CONCRETE MATERIALS: Provide 3000 PSI gray concrete with air in training and water reducing with accelerating and retarding compounds. D. PAVING AND CURB JOINTER FILLING: Provide 3/4 inch thick clear heart construction grade redwood with dowels as detailed on the drawings.

E. PAVING JOINT SEALING COMPOUND: Provide a single component, rubberized, hot applied sealing compound similar to allied NO. 9005 complying with F.S. SS-S-1401B.

F. SLOPE FOR DRAINAGE: Slope walks, driveways, paving and gutters.

3. TOOLING:

1. EDGINS: Edge walks and paving edges to 3/8 inch radius at expansion inits and where needed to for a neat appearance.

2. JOINTING: Where shown on the drawing as control joints or tool joints. 3. CONTROL J gnment
. TOOLED JOINT DEPTH: 1/4 inch unless otherwise specified
5. WORKMANSHIP: Remove marks and tooling from the surface: H. FINISH: light broom or belt finish with lines perpendicular to traffic

SECTION 06100 - ROUGH CARPENTRY

GENERAL REQUIREMENTS FOR LUMBER:
1.STANDARDS: PS-20-70 American softwood lumber standard and PS- 1-83

soft plywood.

2. GRADING: SFPA, SPIB, WWPA, WCLB, AND APA

3. MARKING: Stamp each piece with grade assoc.

4. SPECIES: Douglas Fur and Southern Yellow Pine

5. FINISH: Provide S4S firsh unless otherwise specified

6. SEASONING REQUIREMENT: Kiln Dy or Air Dy to 15

ontent.

7. GRADES: comply with the minimum grades for each specific use as pecified by the specific grading assoc, such as southern pine use guide.

1. GHALLES: comply with the minimum grades for each specific use as specified by the specific grading saces, such as southern pine use guide. Table 2 as specified in the structural guide. B. WOOD TREATMENT FOR THE ABOVE GROUND LOCATIONS: Stamp each pinc of lumber with the type of treatment and amount of retention. Reading valer born treatment 10 9 5, and stamp S DTW.
1. APPLICATION: apply pressure or vacuum treatment. comply with the VAIGO and Control of the Control of th

NPB standards. : LOCATIONS: Provide treated wood at the following locations:

2. LDUA INDN: From the design of the control of th

e. roof cutting
3. CUT TREATMENT: treat cuts by dipping in preservatives C. PLYWOOD: Provide PS-1-83 softwood plywood marked with APA grade trademarks indicating quality of wood. Only plywood with APA stamp will be

D. PLYWOOD ROOF SHEATHING: Mark each piece with APA grade trademarks

D. PLYWOOD ROOF SHEATHING: Mark each piece with APA gri as noted above. Maintain a 1/8 inch gap between cross gaps. 1. PLYWOOD THICKNESS: 1/2 to 1 inch, use 8d common nails 2. SPACING: 6 inches at edges and 12 inches at field

E. INSTALLATION:

1. set wood framing accurately and neatly, brace well and nail securely.

Frame on 16 inches from the center or as indicated on the drawing.

2. Set wood grounds for attachments of work specified in other sections.

3. Use washers on bolts to attach wood, use galvanized treated bolts and weekens.

washers.

4. Use galvanized metal framing anchors beam seats and clips where indicated SECTION 06190 - WOOD TRUSSES

A. MINIMUM COMPLIANCE STANDARDS: the following documents govern the work except where more restrictive requirements are specified.

1. AMERICAN INSTITUE OF TIMBER CNSTRUCTION

2. TRUSS PLATE INSTITUTE.

B. APPROVED MANUFACTURES:

1. Automated building Systems; Dept. T, Lafe Cox Drive BOX 537, Johnson

3. All Pan Inc.; Southwest; 4707 south Westmoreland, Dallas TX, 75237 3. All Pan Inc.; Southwest Houston TX, 77054-4602

C. LOADING: unless noted otherwise comply with the strongest combination of

ne following: 1. building code 2. max deflection of 1/240 of a span with the ceiling

max deflection of 1/360 of a span with the ceiling live load refer to the drawing





#### SECTION 06220- MILLWORK

- A. MINIMUM COMPLIANCE STANDARDS: "Quality Standards of the Architectural Woodwood Industry (AWI)
- B. PLASTIC LAMINATE: Submit full range of colors, patterns.
- otherwise.

  I. "Nevamar", Exxon Chemical Co.
- C. SOLID STOCK:

  1. MOISTURE CONTENT: 8 %-13 % at time of installation.

  2. NATURAL FINISH HARDWOOD: Comply with AWI
- "Premium" Grade.
  3. PAINT GRADE HARDWOOD: Any species without coarse
- D. SOFTWOOD PLYWOOD: PS-1-83

- E. MATERIAL THICKNESSES: The following thickness shall apply except when shown thicker on the Drawings:

  1. BOTTOMS, ENDS, DIVISIONS: 3/4 Inch thick.

  2. FACE PLATES: Equal to door thickness with 3/4 Inch

- minimum.
  3. WEB FRAMES: 3/4 inch minimum.
  4. BACKS AND DRAWER BOTTOMS: 1/4 inch plywood, over 2/4 inches wide require center bottom support. Limit backs with braces to 12 square feet.
  5. DRAWER FRONTS: 3/4 inch.

- DRAWER FRONTS: 34 Inch.
   DRAWER BACKS AND SIDES: 1/2 Inch.
   SHELVES: Unsupported, exposed shelves 3/4 Inch thick to 36 Inches and 1 Inch minimum to 5/2 Inches.
   BASES: Design to space 3 inches deep x 4 Inches high x 1/2 Inch deep recessed base across exposed ends.
   DOORS: 3/4 Inch minimum thickness, except when shown greater on the Drawings.
- F. CABINET HARDWARE: Prepare the millwork for the installation of the hardware.
- G. INSTALLATION: Place level, plumb, and at right angles to adjacent work. Where field cutting or trimming is necessary, perform in a neat , accurate, professional manner without damaging the products and adjacent work. Attach securely so the products will perform to their maximum ability without damage
- H. TYPICAL CABINETS: AWI "Custom: grade with plastic

#### SECTION 07160 - DAMPPROOFING

- A. WARRANTY: Warrant the Work specified herein for one year against becoming unserviceable or causing an objectionable appearance resulting from either defective or noncolforming materials and workmanship. Defects shall include, but not be limited to, the following:

  1. Leaking water or bitumen.

  2. Releasing from the substrate.
- B. PRODUCT DATE: Submit schedules, charts, literature, and illustrations to indicate the performance, fabrication procedures product variations and accessories.
- C. DAMPROOFING MATERIALS:

- C. DAMPROOFING METRIALS:

  1. DAMPPROOFING MEMBRANE: "Tyvet" polyester film; or

  2. FELT: TD 226 Type 1, No. 15 asphalt coated felts.

  3. Allach damproofing to surface in single feshion, starting at the base fleating with adhlesse.

  4. Inshed damproofing into adhlesive as necessary to securely hold in place. Stagle sited into plywood at the top of each sheel 8 inches on center and lap the next atheet over the staples and imbed in adhlesive.
- SECTION 07175- WATER REPELLEN
- A. PRODUCT DESCRIPTION:
   GENERAL: Water clear , fast drying, penetrating, water
- VEHICLE: Water- alcohol formulation.
   SOLIDS: Siloxane formulation.

- B. PROPERTIES. No water penetration on surface as evidenced by absence of ved discoloration.

  ADMESION: No interference with the achiesion of sealant. If tests show interference, mask off sealant areas, or apply repellent after sealant are installed.

  SIEEN: Zoro sheen.

  Discoloration: No change in color or tone.

  SIESTATION: TO HOUSEPHOLD CHEMICALS: ASTM D 1308; no change in color, finish or adhesion.

- on first names Manufacturer. Other approved manufacturers mus meet or exceed this standard. 1. "CP-500", Chemical Products, Oklahoma City, OK. (800) 624-4366. "Chem-Trete-BSM". Trocal. Rocklingh. NJ 07647 (800) 631-
- 10b8.
  3. "Dural Treat", Dural International Corp., Deer Park, NY.
  11729 (516) 588-1655.
  4. "Duxbac", Clover Chemical Corp. Houston, TX 77181 (713)
  880-5447.
- 880-5447.
  5. "Siloxane" Weather Seal, ProSoCo, Inc. Kansas City, KS 66177 (913) 281-2700.
  6. "Chemstop SMS-250", Tamms Industries Co., Itasca, IL. 60134 (312) 773-1870.
- SECTION 07211 BATT AND BLANKET INSULATION
- A MINIMUM COMPLIANCE STANDARDS: The following Documents govern the Work except where more restrictive items are specified: 1. Federal Specifications HH-I-521F, Type III. 2. American Society of Heading, Refrigeration, and Air Conditioning Engineers. 3. National Environmental Systems Contractors Association.

- B. INSULATION: Mineral wool or glass fiber batts or blanket conforming to E.P.A. energy conservation requirements and F.S. HH-H-521F, Type III.

  1. UL RATINS: Maximum flame spread of 25, fuel contributed of 50, and smoke developed of 50 when tested per ASTM E 84.
- THERMAL RESISTANCE: "R" values are listed in the ASRAE Guide for batt and blanket insulation. Provide 6 inch R-23 for roof and 6 inch R-19 for walls. Provide aluminum foil laminated to one side with flanges for stapling application.
- C. INSTALLATION: Positively attach edges an ends to preven
- gaps or openings in the vapor barrier. Install blankets with the vapor barrier to the warm side. Butt sides and edges of blankets together to avoid gaps in insulation. Do not cover insulation until the installation has been inspected and approved.
- SECTION 07420 ALUMINUM COMPOSITE MATERIAL PANELS
- OUALITY ASSURANCE:
   Composite Panel Manufacture shall have a minimum of 5 years experience.
   Fabricator Installer shall be acceptable to composite panel manufacturer.
   Meanimum deviation from vertical and horizontal alignment of erected peniels shall not exceed 6 mm in 6 m.
- B. SUBMITTALS: Submit two samples of each type of assembly
- C. MATERIALS:

  1. COMPOSITE PANELS: Provide aluminum composite material panets, "Alpolic" as manufacturer by Mitsubishi Kasei America, Inc. or "Reynobond" as manufactured by Reynold Metals Co.

- a. Thickness: 3mm (0.118 inches).

  2. FINSHES: Manufacturer's custom colors as approved by Owner, in location as indicated on drawings.

  a. Silver-metallic finish.

  b. Red. -gloss finish.

  3. Humkild y Resistance:

  a. Test Method ASTIM D-1735

  b. Cooking shall receive a rating of 8 per ASTM D-1654 after by Cooking shall receive a rating of 8 per ASTM D-1654 after Cooking shall receive a rating of 8 per ASTM D-1654 after by Cooking shall receive a rating of
- No. color change greater than 5 NBMS units measured per
- Shall not chalk in excess of 8 when rated per ASTM D-659.
- D. ACCESSORIES- Provide non-corrosive, concealed fasteners and fastening systems as recommended by panel manufacturer and shown on the drawings. SECTION 07425- REINFORCED POLYMER COMPOSITE
- A. WARRANTY: Warranty the Work specified herein for one year against becoming unserviceable or causing an objectionable appearance resulting from either defective or roncordoming materials and workmanship. Defects shall include, but not be intented to, the following:

  1. Warping, cracking, corrosion, delamination, or releasing from the substrate.

  2. Loss of aggregate finish, discoloration, or fading.

  3. Loskage of water into the building or within the construction.

- B. SUBMITTALS: Provide shop drawings indicating typical fasteners, details, etc. All outside corners to be mitered and sealed: inside corners to be butt-joined and sealed. Provide 2' x 2' sample for approval.
- 8" stacked bond pattern, with color-matched fasteners, size and placement per mig.'s recommendation. Treat exposed face with protective UV coating. Routed joints shall be coated with a high gloss protective film. Standard panel thickness is 5/16". Materia shall comply with the following:
- Flexural Strength: 6900 PSI per ASTM D -790.
   Compressive Strength: 9700 PSI per ASTM D -695.
   Tensile Strength: 2400 PSI per ASTM D-638.
   Modulus of Elasticity: 871,000 PSI per ASTM D-790.
- SECTION 075423- THERMOPLASTIC POLYOLEFIN (TPO) ROOFING
- A. WARRANTY: Warrant the Work specified herein for one A WARNAYI Y, wataria toe Yuxi, speciated testern of one year against becoming unserviceable or causing an objectionable appearance resulting from either defective or nenconforming materials and workmarship. Defects shall include, but not be limited to, the following.

  1. Peeling, cracking, blistering, alligatoring, or releasing from the
- ubstrate.

  Softening or becoming tacky.

  Leakage of water into the building or within the construction.
- B. PRECONSTRUCTION CONFERENCE: Prior to commencing work meet with following parties to discuss the roof materials, conditions and installation procedures,.

  1. Construction Superintendent.
- Roof Material Manufacturer's Representatives.
- C.1 MATERIALS: Adhered Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, internally fabric or scrim reinforced, uniform, floyible TPD cheet
- Piexble TPO sheet.

  1. MANUFACTURER: Firestone Building Productis Company

  2. THICKNESS: 60 mils, nominal.

  3. EXPOSED FACE COLOR: White (Comply with Solar Reflectance
- as membrane.

  5. BONDING ADHESIVE: Manufacturer's standard solvent-based bonding adhesive for membrane, and solvent-based bonding adhesive
- bonding adhesive for memorane, and document of the see flashings.
  6. METAL TERMINATION BARS: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8" thick; with 7 FASTENERS: Factory-coated steel fasteners and metal or plastic
- anchors.

  anchors: NERSC Featury-caused seed features and metal or peature in the control of the

- 1. MANUFACTURER: Georgia Pacific Corporation or United States Opposition Co.
  Opposition Co.
  On PREPARATION: Clean substance of dask, debris, moisture, and of PREPARATION: Clean substance of dask, debris, moisture, and supstant manufacturer's written instructions. Returnes what projections.
  1. Prevent materials from entering or clogging roof drains and conductors and from spilling lint or algorithm vitral returns in Storecasted.
  2. Complete terminations and base filtshings and provide temporary seals to prevent water from entering completed sections at the end of the provided of the pr
- 2. Install tapered insulation under area of roofing to conform to slopes indicated.
  3. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 Inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of revivous layer a minimum of finches in each direction.
  4. Install insulation with long joints of insulation in a continuous straight line with end joint staggered between rows, abutting odges and ends between boards. fill gaps exceeding 1/4 inch with insulation. Doors straight lines with end joints staggered between rows, offset joints of insulation below a minimum of 8 inches in each direction. Loosely but cover boards together and fasten to roof deck.

  A. Fasten cover boards according to requirements in "RoofNac" for specified Windsorm Resistance Classification.
  D.3 ADHERED MEMBRANE INSTALLATION:
  1. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system's manufacturer's written instructions.
  2. Start installation of membrane roofing in presence of membrane rooming was membrane.

- rooting system mundculure's technical personnel.

  3. Accurately align membrane rooting and maintain uniform side and end laps of minimum dimensions per manifacturer. Stagger end laps.

  4. Bonding Althesive. Apply to substrate and underside of membrane rooting at riter septiant del ymantifacturer. Stagger end laps.

  4. Bonding Anthesive. Apply to substrate and underside of membrane rooting at riter septiant del ymanufacturer. Do not apply to splice area of membrane rooting.
- area of membrane as instanted by manufacturer. Do not apply to s area of membrane roofing.

  5. In addition to adviering, mechanically fastern membrane roofing securely at terminations, ponertations and perimeter of noding.

  6. Seams: Clean seam areas, overlap membrane roofing, and hot-air week side and not aliaps of membrane roofing and sheet flashings according to manufacturer's written instructions.
- SECTION 07620 BUILDING SHEET METAL
- A. MINIMUM COMPLIANCE STANDARDS: The following Documents govern the Work except where more restrictive requirements are specified.

  1. Sheet Metal Manual of the Sheet Metal and Air Conditioning Contractor's National Association (SMACNA). B. WARRANTY: Warrant the work specified herein for one year against becoming unserviceable or causing an objectionable appearance resulting from either defective or nonconforming materials and workmanship. Defects shall include, but not be limited to the following:
- Leaking.
   Wrinkling.
   Breaks or tears caused by restraint of expansion and

- C. SHOP DRAWINGS: Indicate size, material, and finish. Show locations and installation procedures. Include details or oins, attachments, and clearances.
  - GALVANIZED SHEET STEEL MATERIAL:
    OUALITY STANDARD: ASTM A 257, coating designation

  - S 90. .
    FINISH:
    I. METAL PREPARATION: Prepare surface for painting in compliance with ASTM D 2090 recommendations.
    Prefinish sheet metal with polyester enamel finish 1 mil ninimum thickness.
  - . GALVANIZED SHEET GAUGES: 24 gauge minimum. . Clips used for attachment shall be two gauges thicker than the piece they retain.
    2. FASTENERS: Galvanized, cadmium, and stainless steel.
  - F. MATERIAL COMPATIBILITY: Provide mutually compatible materials and fastening where in contact. If not available, isolate proposalible, materials to prove telephologie.
  - G INSTALLATION: Prime flanges and other metal in contact with roofing membrane.

    2. Bed sheet metal flanges on roof membrane with flashing cement.
  - SECTION 07655- BASE FLASHING
  - A. MATERIALS: Provide a synthetic elastomeric compound waterprofing material with thermopisatic flores added for extra tensile strength and tear ensistance, laminated to a 7 ml vinyl film. Provide Phox Cypy-Flash as manufactured by Phox Enterprises, Inc. 11210 S. Post Oak Rd., Houston, Texas 77035 (713) 726-1800.
  - B. PREPARATION: Clean surfaced free of dust, loose rust, plaster, mortar, paint droppings, and other materials that may prevent permanent adherence to the substrate. Apply primer with brush or lambs wool roller at the rate of 250 to 250 square feet per gallon. Allow primer to dry a minimum of 1 hour. Remmer to dry a minimum of 1 hour. Remmer do dry the manufacturer.
  - C. INSTALLATION: Install tage at locations requiring base flashing to channel water out of weep holes. Extend membrane within 1 inch of face of masonny, and a minimum of 8 inches up the vertical substrate. Lap vertical joints of flashing tape a minimum of 2 inches. Iap horizontal joints of flashing tape a minimum of 2 inches in direction of water flow.
  - SECTION 07721 ROOF CURBS
  - A. MANUFACTURERS:

    1. The Pate Company, Broadview, IL 60153 (312) 681-1920, model SCEB solid top and other types as shown on the Drawings.

    2. ThyBar Corp. Addison, IL 60101 (312) 543-503.

    3. Custom Curb, Inc. Chattanooga, TN 37407 (615)629-6241.

  - B. Refer to Drawings for necessary sizes.
  - C. COMPONENTS:

    1. WALLS: GALVANIZED STEEL.

    2. WOOD NAIL FRS: Factory installed

  - Install curb assemblies in accordance with manufacturer's specifications.
  - SECTION 07920 SEALANTS AND CAULKING

  - A WARRANT's Warrant the Work's specified herein for 2 years against becoming unserviceable or causing an objectionable appearance resulting from either defective or nonconforming materials and workmanship.

    Defects shall include, but not be limited to:
    a Stamming from abunting materials or illustration of the stamming from abunting materials.
    C unsightly safeta deformation by actuates other than movement.
    d. Excessive color change, chalking, or dust pic-up.
    Falling adherely or orchesively. "% over stated hardness.
    2. Warrant hat sealants acrosced to windloads will resist the strength factor on the sealant of 20 psi with a safety factor of 6 to 1.
  - B. PRODUCT DATA: Submit schedules, charts, literature and illustrations to indicate the performance, fabrication procedures, product variations, and accessories.
  - EXTERIOR SEALANTS AND SEALANTS FOR MOVING C. EXTERIOR SEALANTS AND SEALANTS FOR MOVING JOINTS: Curing type, two part bluic compounds conforming to F.S. TT-S-00227E (3), or one part conforming to F.S. TT-S-001543A. Provide compounds that cure or polymerize by solven release, moisture absorption, or catalyst. J. APPROVED BASIC INGREDIENTS: Polysulfide, silicone, polyurethane, or polytremdyne, terpolymer.
  - NON-ACCEPTABLE: Linseed oil or other oil base caulks, asphaltic, or coal tar types. Acrylic, hypalon, and butyl base
  - asphaltic, or coal war types— types. 3. SOLIDS: 96 % minimum by volume. 4. CHERD HARDNESS: (Shore A durometer) Maximum of 30. D. INTERIOR SEALANTS: All exterior sealants plus the
  - ollowing types.

    Skinning type, bulk compounds conforming to F.S. TT-S-001657 or ASTM C834, with active ingredients of butyl rubber scrylic, hypaton, and other similar paintable compounds. E. CONCEALED SEALANTS: Non-skimming, resilient (soft) performed, or bulk compounds, conforming to NAAMM SS-IA, SS-Ib, or SS-Ib or whit basic ingredients of polybutene synthetic resins, oleoresinous compounds, or similar noncuring compounds. In SEALANT TABLE Performed or extunded non-curing butly with or without reinforcement.

  - F. SEALANT COLORS: White, black, gray aluminum, limestone and brown. Provide clear silicone for glass jo
  - G. SEALANT MANUFACTURERS: JOEALANT MANUFACTURERS:
     Dow Corning Corp, Midland, MI. 48840 (800)248-2345.
     General Electric Co. Waterford, NY 12188 (518) 237-3330.
     Pecora Corp, Harlesville, PA 19438 (215) 723-6051.
     Tremco, Cleveland, OH 44104 (216) 228-3000.

  - H. ACESSORY MATERIALS: BACK UP FILLERS: not absorbent nonstaining expanded closed cell rubber compatible with sealeants used

  - COMPRESSOR FILLER:
     Will Seal, ILLbruch USA Troy MI 48084
     Emseal, USA, Stamford Conn. 3. PRIMERS CLEANERS AND TOPCOATS: Use only materials listed as suitable in sealant manufacturers instructions. Test for staining compatibility and or proceeding.

    I. SECTION 09510 - ACOUSTICAL CEILINGS

  - SECTION 09510 ACOUSTICAL CELLINGS
     A EXPOSED GRID SYSTEM: Provide direct hung suspension system complying with ASTM C 635, intermediate duty main runners and minimum 10 b. himsel foot cross tess, with smooth matte white painted finish.
     WALL MOLDINGS: 15/16 inden angle moldingas manufactured by the suspension system manufacturer.
     ANALYNIET: 2 gauge amnealed.
     ALXOSED FINISH: factory flat white enamel.
     APPROVED FINISH: factory flat white enamel.
     APPROVED MANUFACTURES. Use only one manufacturer's products.
     a. Dom Corp., Westlake, OH 44145 (216)871-1000.
  - B. EDGE TRIM SYSTEM: Provide edge trim system for suspended ceiling system consisting of 4" x 9116" metal pans curve to inside and outside rad from 18" to 288" and sweeping through included angle from 15 degrees to
  - degrees.

    1. Manufacturer: USG Interiors, Inc., Chicago, Illinios.

    2. Trim. 4" COMPASSO Irim. 4" wide face, 9/16" horizontal legs with hems formed for attachment to the COMPASSO mounting clip: commercial quality cold rolled 24 gauge steel, factory finished in baked ename paint finish. 3. Spice plate: steel in finish to match trim pans; formed for snap-fit into 4. Attachment clips: hot dipped galvanized steel in finish to match pans formed for snap-fit into 4" pan and attached to ceiling suspension system

- 5. for specific project details and bill of materials, see USG Interioristrawings provided by USG Interiors sales representative. USG Interiors shall submit complete installation drawings including all timp loops. attachment clips, spike plates and comer pieces, installation of related lighting and air distribution components, access requirements, and sound absorption requirements.
- C. ACOUSTIC CEILING BOARD: Mineral board, non-directional fissurer

- 2. ACUUS II.U CELIUMS DUTUL.

  Medium Motulum Control

  medium Motulum Control

  service of the Finish Schedule.

  2. SIZE. 24 izen. X4 izen. X60 or 344 izen.

  2. SIZE. 24 izen. X4 izen. X60 or 344 izen.

  3. NISIES REDUCTION COEFICIENT 0.509 0.80 type 7 mounting.

  4. SOUND TRANSMISSION CLASS: Minimum 35 to 39 db.

  5. FLAME RESTANCE: Class A immorbituatible per F. S. SS-3-118A.

  6. FLAME SPREAD: Class 1 (0-25) per ASTM E 84.
- D. APPROVED MANUFACTURES: Use only one manufacture's product 1. Armstrong World Industries, Inc., Atlanta, QA. 30339 (404)955-1688. 2. The Celotex Corp., Tampe, Fl. 33607 (813)871-4554. 3. United States Gypsum Co., Chicago, Il. 00006-4385 (312)321-4000.
- E. Install suspension System in accordance with manufacture's relevant specifications and ASTM C 636.
- E SPACING AND SUPPORT:
- F. SPACING AND SUPPORT:

   Space hangers minimum 6 inches from end and 4 feet between ends.
   Provide additional hangers for items to be supported by ceiling suspensior system to prevent eccentric deflection or rotation of support.
   Support main runners directly from hangers; do not bear on walls or certifices.
- partitions.

  A. Space main runners to support acoustic panels and other Work resting in or on the ceiling.

  S. Interfock cross-runners with main runners.

  6. Adjust suspension system every 20 feet to plus or minus 1/4 inch from module in both directions.
- G. ACOUSTIC CEILING BOARD:
- SECTION 09665 SYNTHETIC RUBBER SHEET FLOORING
- A. WARRANTY: Warrantee the Work specified herein for one year against becoming unserviceable or causing an objectionable appearance resulting from either defective or renconforming materials and workmanship. Defects shall include, but not be limited to the following:

  1. Releasing from substrate.

  2. Opening up at joints.

  3. Failure to comply with NFPA Bulletin No. 56.
- Fainte to Compy with NPFA Bulletin No. 36.
   APPROVED MANUFACTURES: Specifications are based on first named manufacturer. Other approved manufacturers must meet or exceed these requirements.
   Flexco Division of Textile Co., Inc., Tuscumbia, AL. 35674 (205)383-
- 7474. . Nora Flooring Division of Robus Products Corp., Madison, IN 47250
- o 12/213-1802. . Jason/Pirelli Industrial Inc., Fairfield, NJ 07006 (201)227-4904.
- 3. Jason/Hrtent mousteen inc., remean, a. S. Jason/Hrtent mousteen inc., a. S. Jason L.
  3. THICKNESS: 1/8 inch
  4. STUDS: 1 /s inch in diameter raised. 0.25
  5. IZE: 13\*18
  6. FRAME SPREAD: class A ASTM E 84
  7. COLOR AND MODEL: light gray and RGT 754
  8. ADHESIVE: same brand as flooring material
- A. Warrant the work herein specified for one year against becoming unservice or causing an objectionable appearance resulting from either defective or nonconforming materials and workmanship. Defects shall include but not be limited to the following:
- warping, buckling shrinking or cracking softening or discoloring . coming loose
- 1. MATERIALS: rubber SIZE: 1/8 inch thick height shown on drawing
   COLOR; as selected by architect from full manufacturers rang
- C. APPLICATION:
- butt end to hairline fit, avoid stretching
   place base with joints under compression and so toe continually touches.
- Warrant the work herein specified for one year against becoming unservice or causing an objectionable appearance resulting from either defective or limited.
- to the following: B. SUBMITTALS: Submit full range of colors patterns textures and finishes available including the following:
- 1. COLOR CHIPS: Provide a complete set of color chips for the color election. . SMALL APPLIED COLORS: Provide pieces of actual material on which paint will occur.

  3. SHEEN SAMPLES: provide full range of varying sheen when sheens are
- controllable by mixing.

  4. MATERIAL LIST: Give the manufacturers name, product no., and generic description of each proposed product.
- C. COLORS: Refer to finish schedule.
- Protection Work: Arrange procedures and devices to protect other work from disfigurement and physical damage. Repair and replace materials damaged as a result of the work of the section.
   Steel and from Remove grease oil and dust and touch up chipped and absorbed places on times that these been primed using same type of primer.
   Concrete Masonry: Check for high moisture and alkal content. If high A. Substrated posensity and some process provided under other sections of work. Excessive patching or treatment is not permitted.
- MANUFACTURER'S INSTRUCTIONS: Follow the manufacturer's preprinted instructions as a minimum requirement for the use and installation products,
- APPEARANCE: Provide uniform color texture and sheen.

  NEATNESS: Do not smear splatter or run coating over adjoining
- F. PAINT THICKNESS: Provide the minimum dry film thickness per coat

- J. Interior 1 ml. 2. Exterior:

  b. Enamels on Metals: 1 mil c. Aryfic Urethane: per manufacturers recommendation.

  d. Latex Paint: 1 mil c. Metal Primers: 1.5 mil f. Under Coats: 1.5 mil g. Ol Paint: 1.5 mil h. Traffic Lines: 2.5 mil
- G. COMPATIBILITY OF PAINT TYPES: Verify the compatibility of each type of finish coat with shop primers and between field coats. When necessary switch paint types or use a block coat to avoid interference between paints.
- H. TYPICAL EXTERIOR SYSTEM: Galvanized Metals:
   one coat zinc dust and primer or epoxy ester
   two coats semi gloss enamel
- Steel or Iron:
   coat touch up primer
   coat iron oxide primer
   coats semi gloss enamel . Thickness Test: Use visual observation gauge.
- I. TYPICAL EXTERIOR SYSTEMS: Painted wood:
   coat oil base ename!
   coat satin ename!
   coat satin ename!
   coat satin ename!
   coat sealer and prime?
   coats fat taltex or oil base ename!
   Steel:
   coats fat ouch up primer
   coats semi gloss ename!

- SECTION 10536 ILLUMINATED FASCIA SINAGE SYSTEMS
- A. PRODUCT DATA: submit schedules, charts, data, and illustrations to indicate the performance fabrication and procedure produce variations and accessories.

  8. APPROVED MANIECACTIERS:

#### SECTION 10810 - TOILET ROOM ACCESSORIES:

- A. A. PRODUCT DATA: submit schedules, charts, data, and illustrations to indicate the performance fabrication and procedure produce variations and
- accessories.
  3. MINIMUM COMPLIANCE STANDARDS: the following documents govern he work except where more restrictive items are specified.
  5. APPROVED MANUFACURERS:
- D. MOUNTING LOCATIONS: refer to drawings, when not shown submit
- proceeding.

  E. INSTALLATION: Securely fasten each item to prevent dislocation or vandalism. Attach each item plumb and level in the locations indicated.



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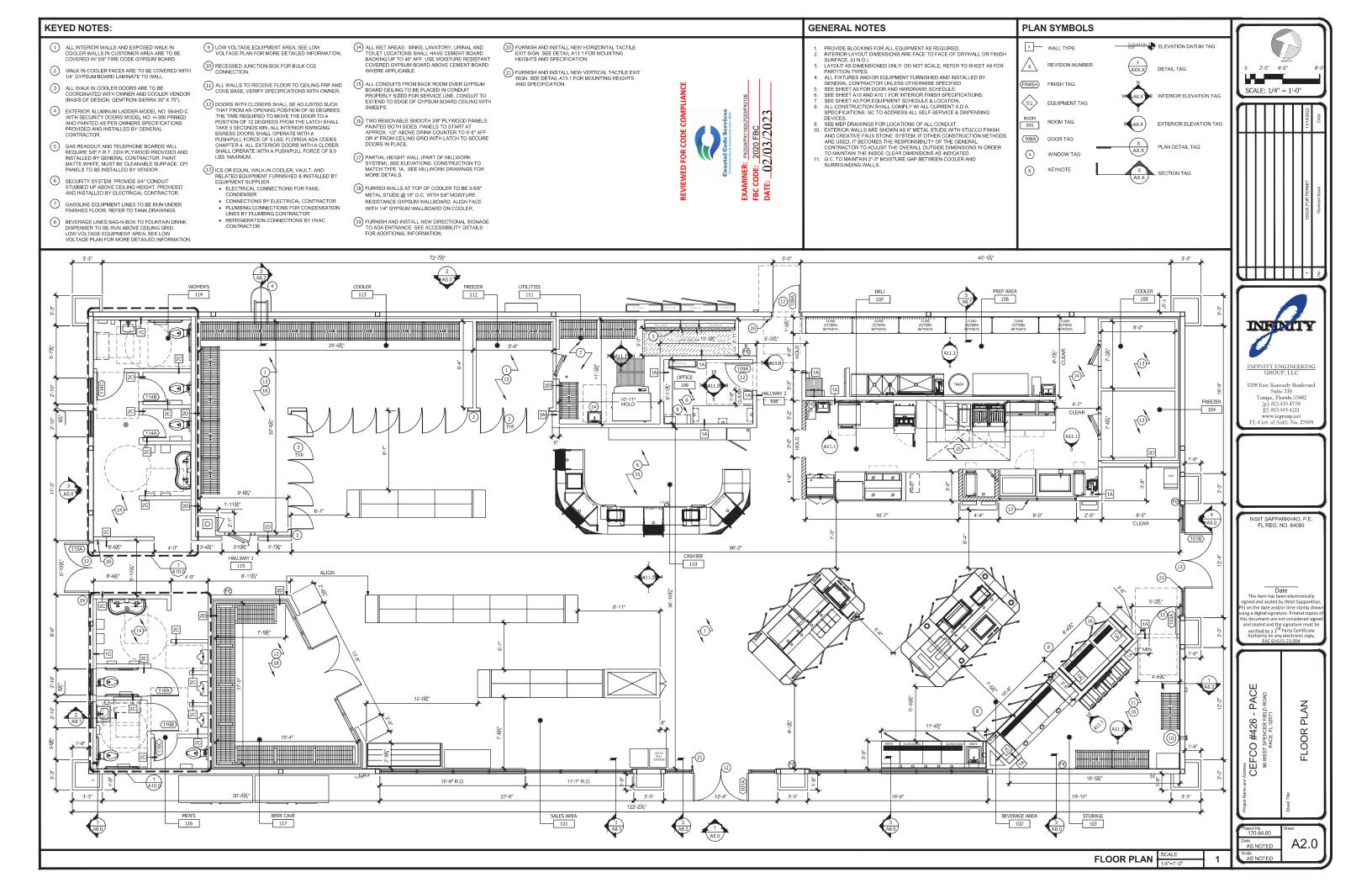
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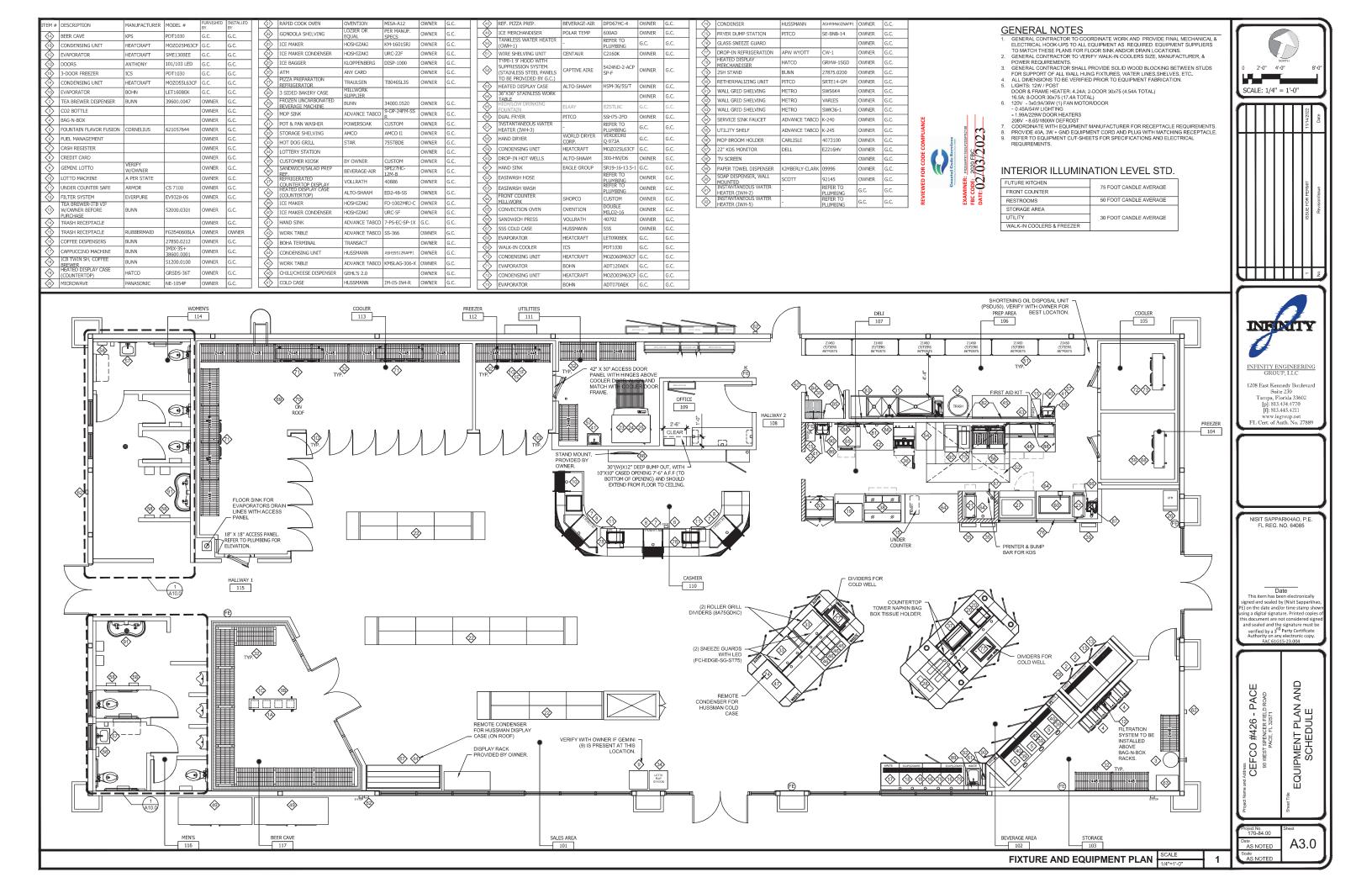
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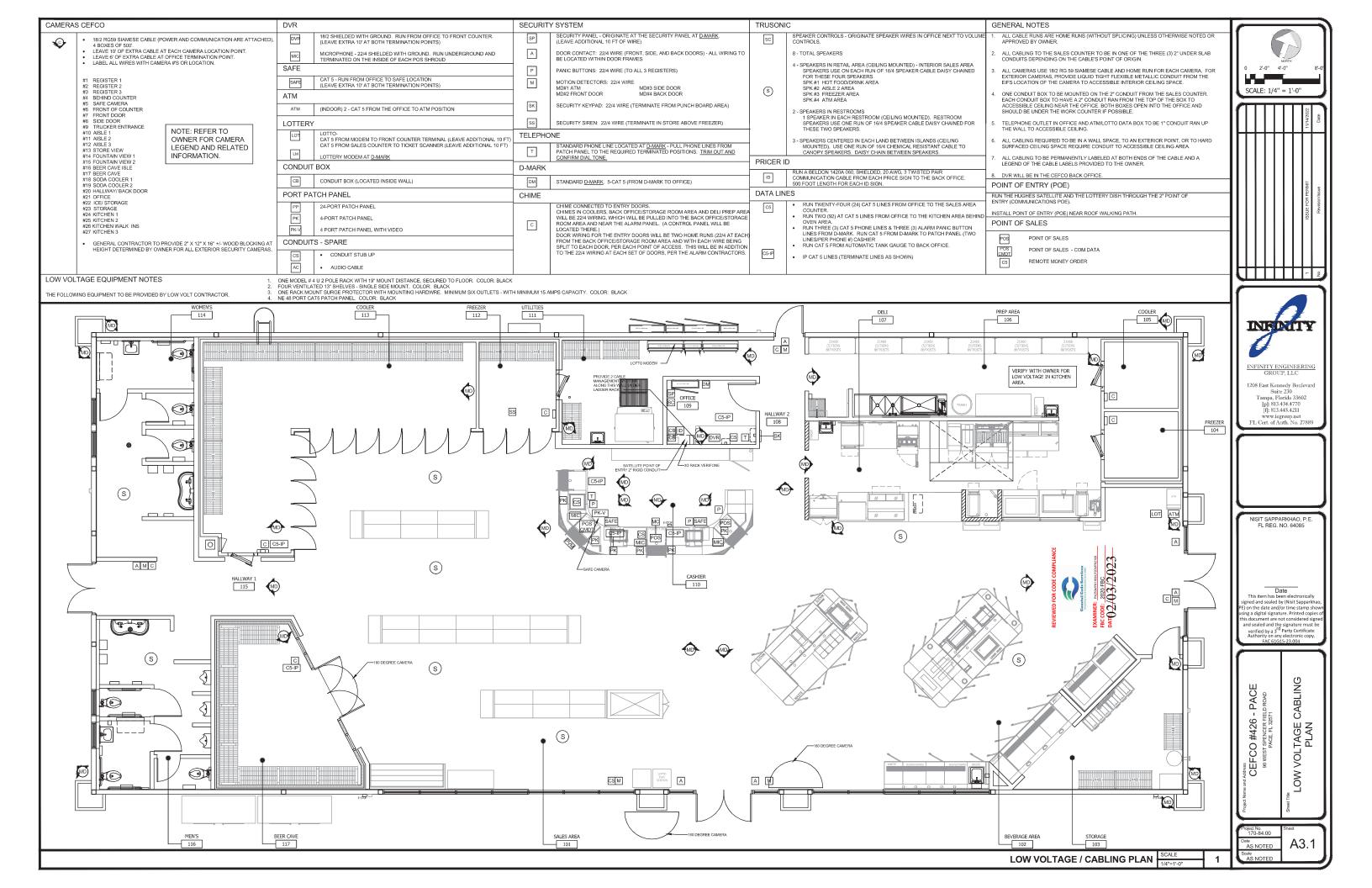
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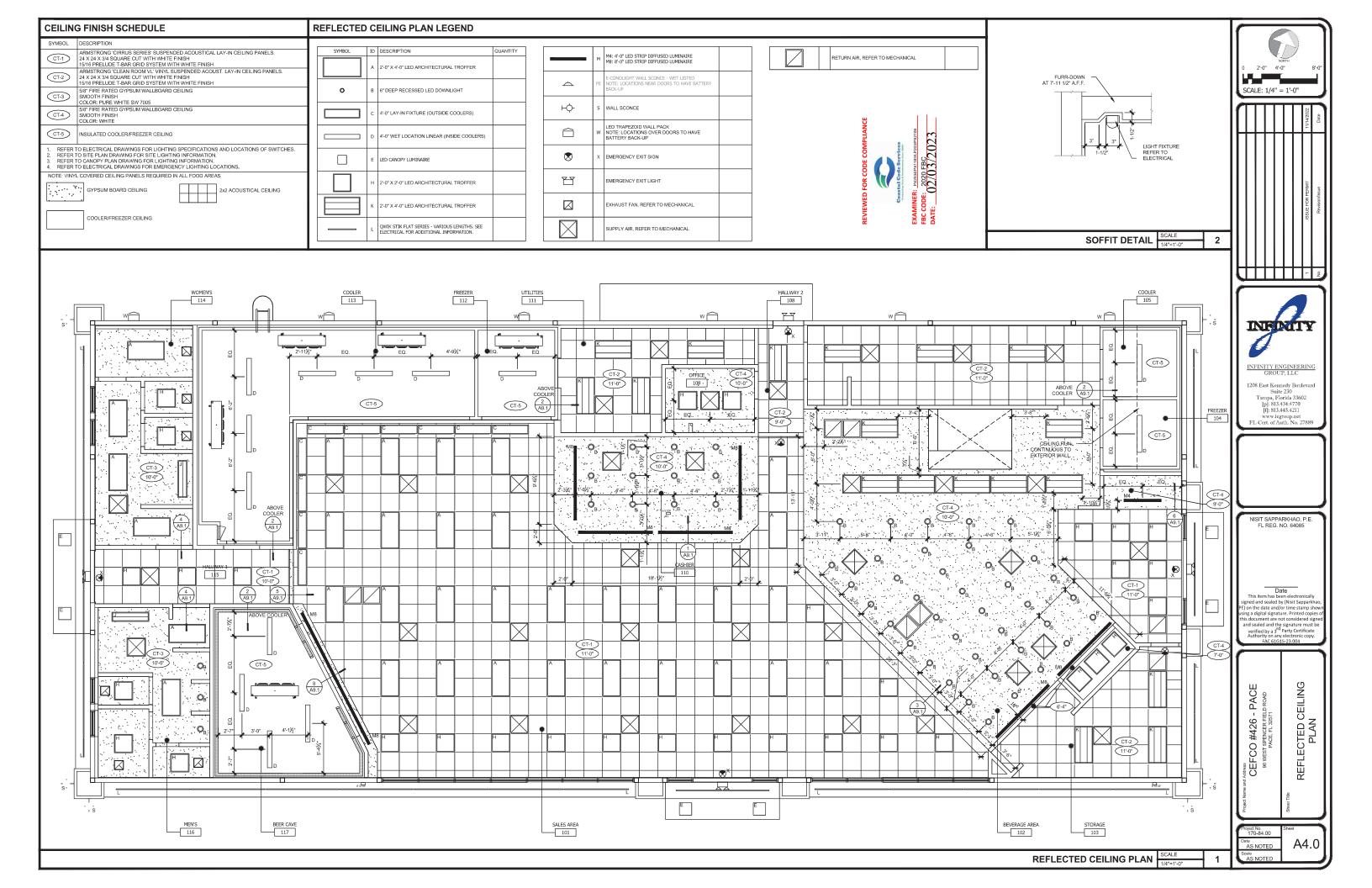
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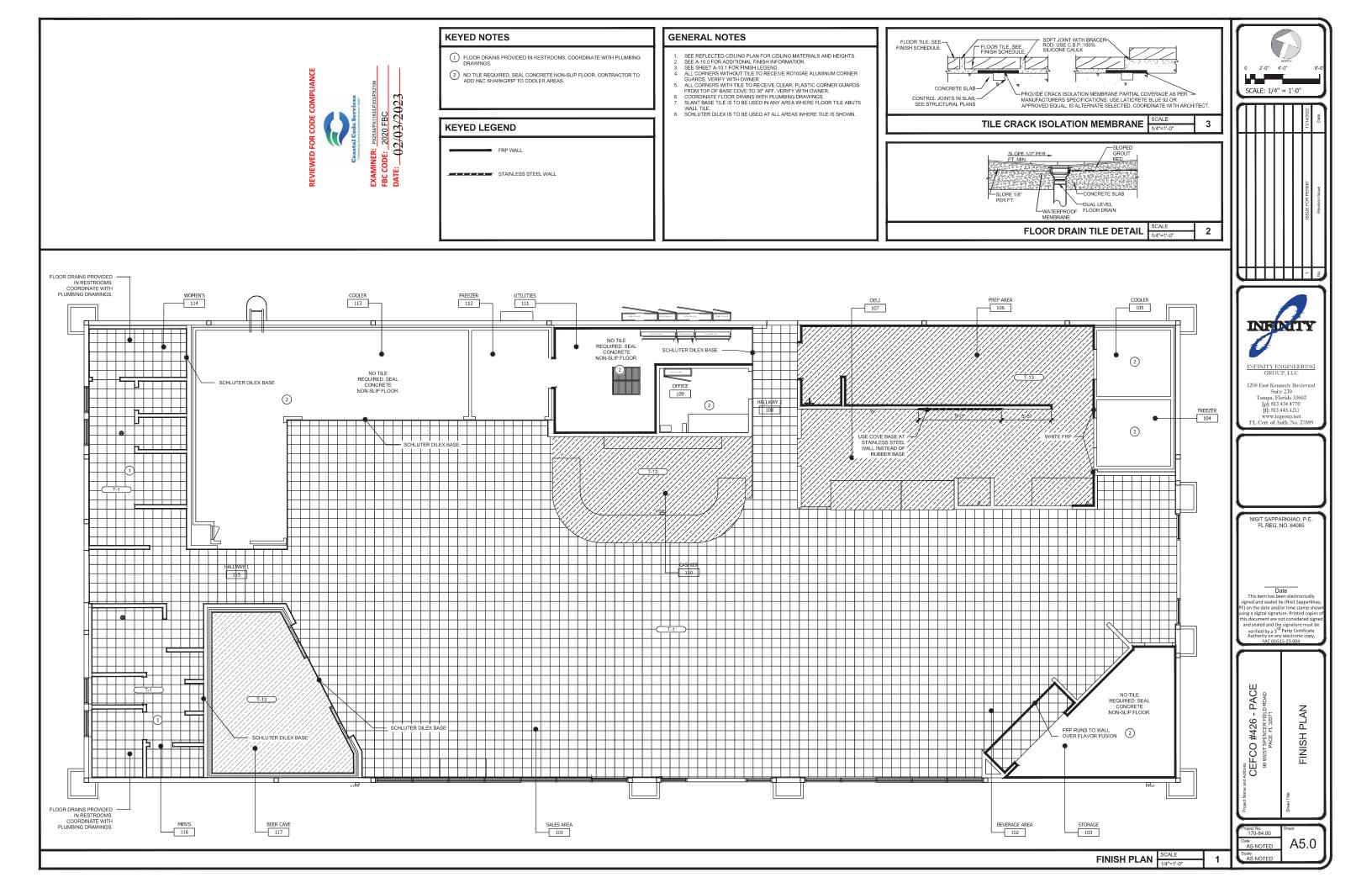
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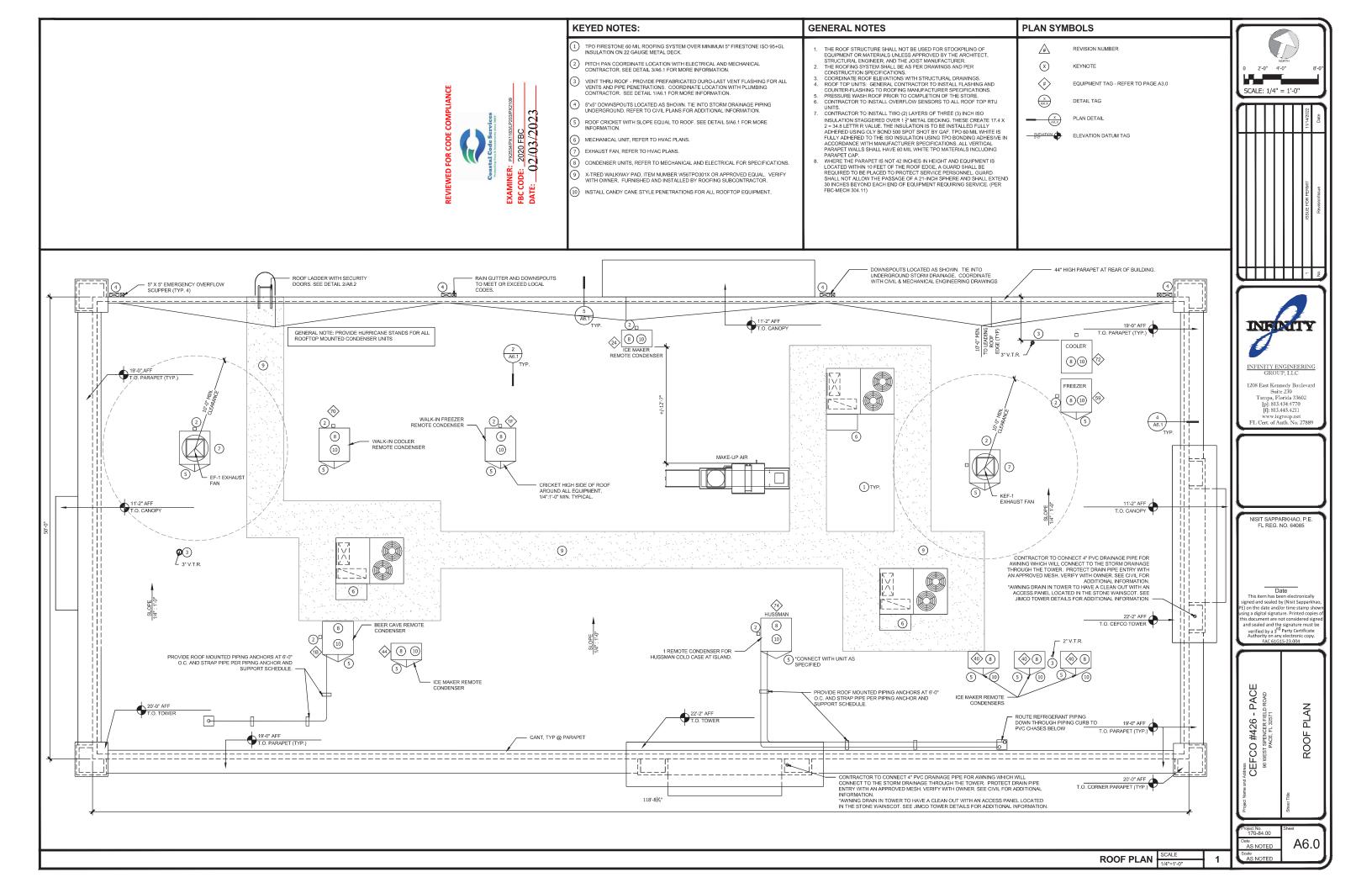




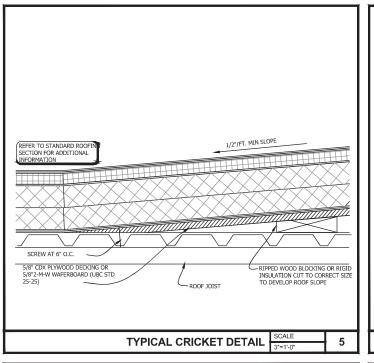


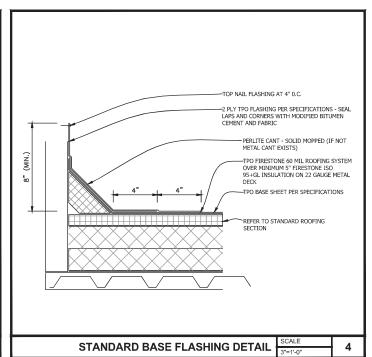


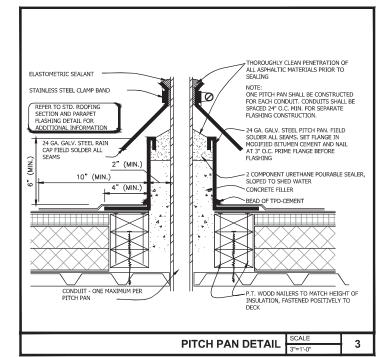


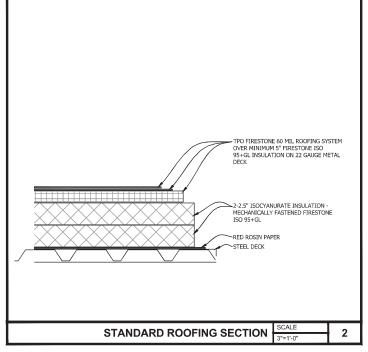


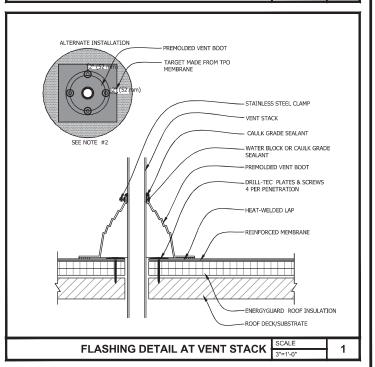
















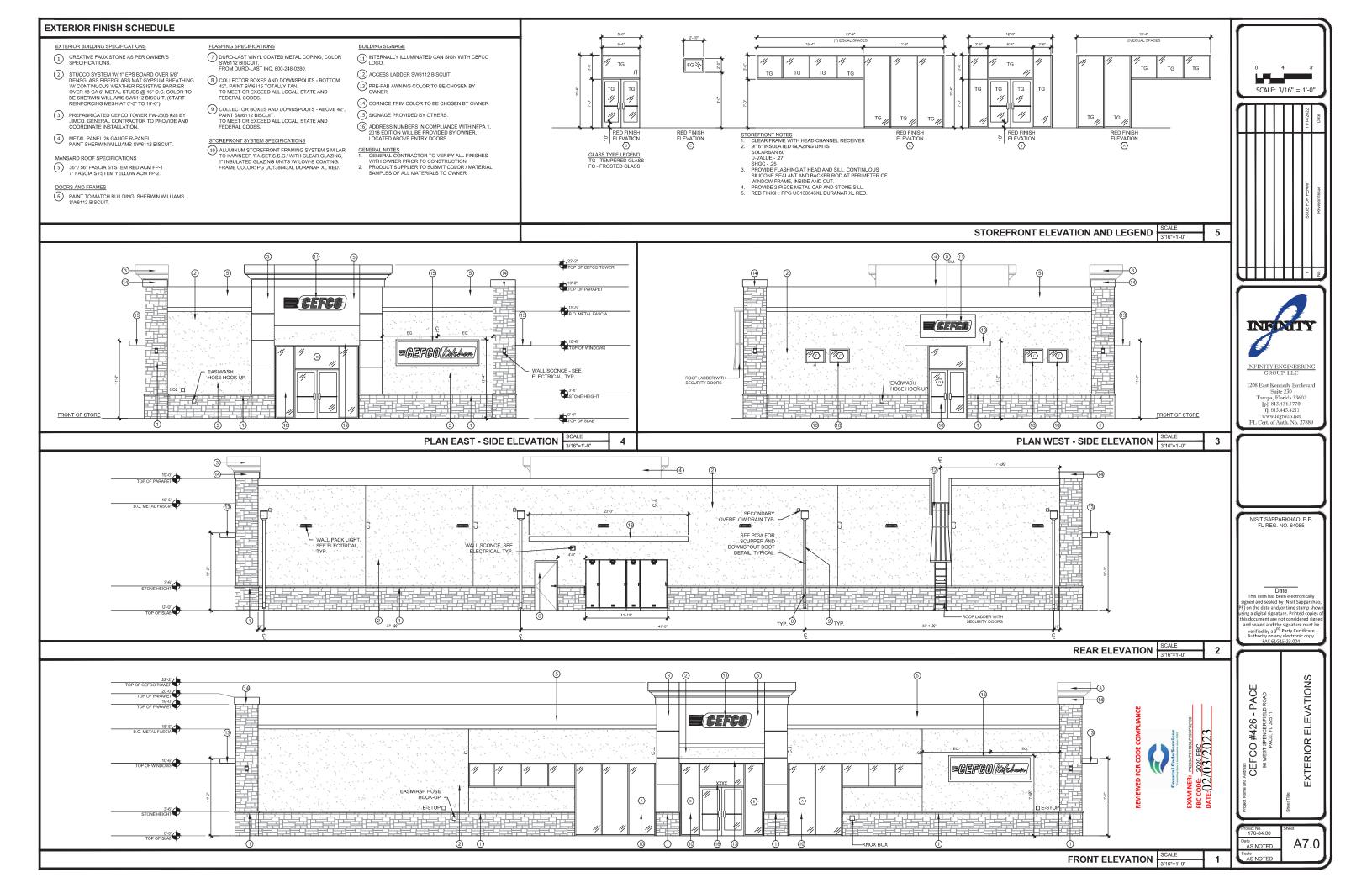
1208 East Kennedy Boulevard Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 www.iegroup.net FL Cert. of Auth. No. 27889

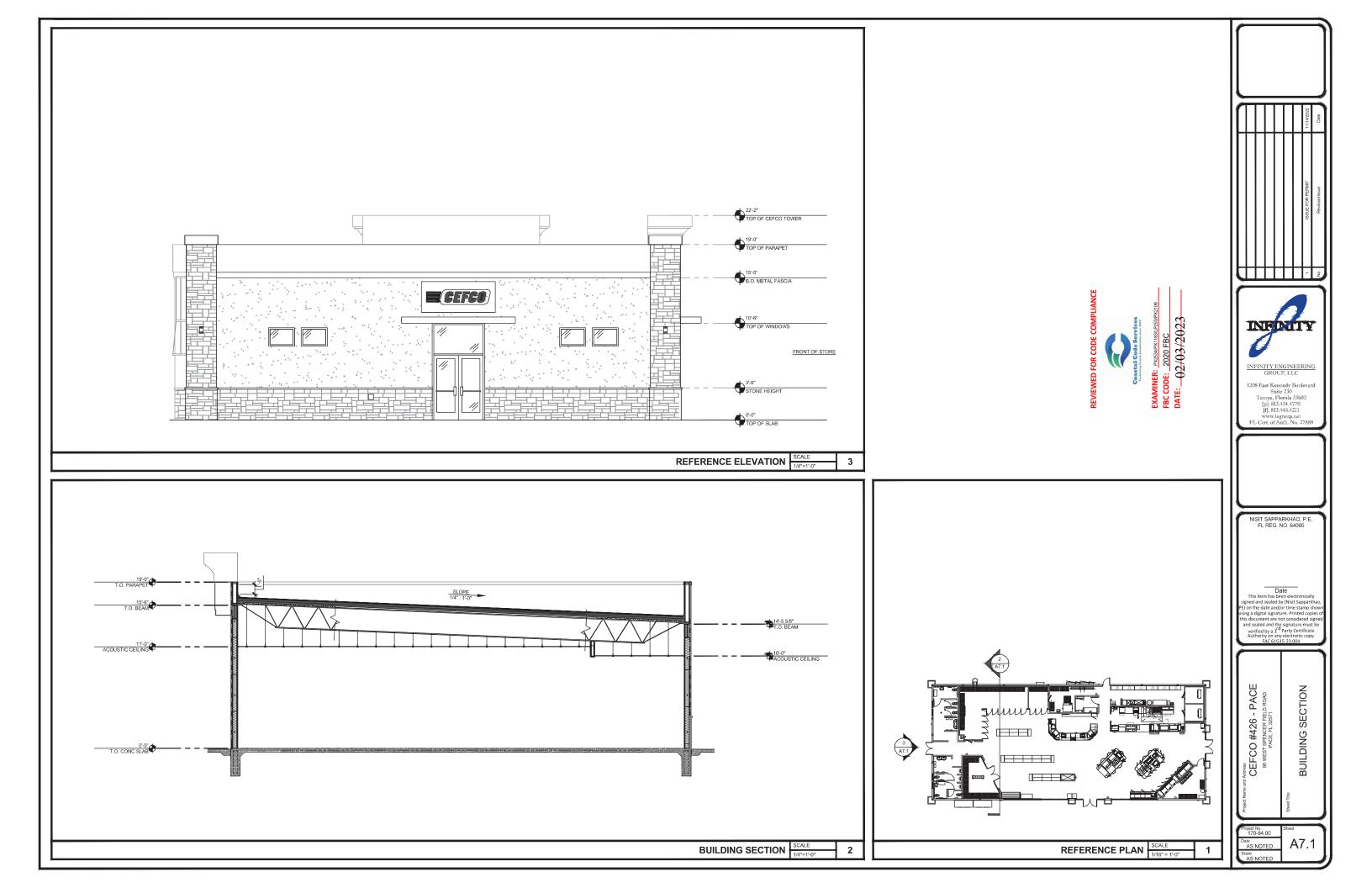
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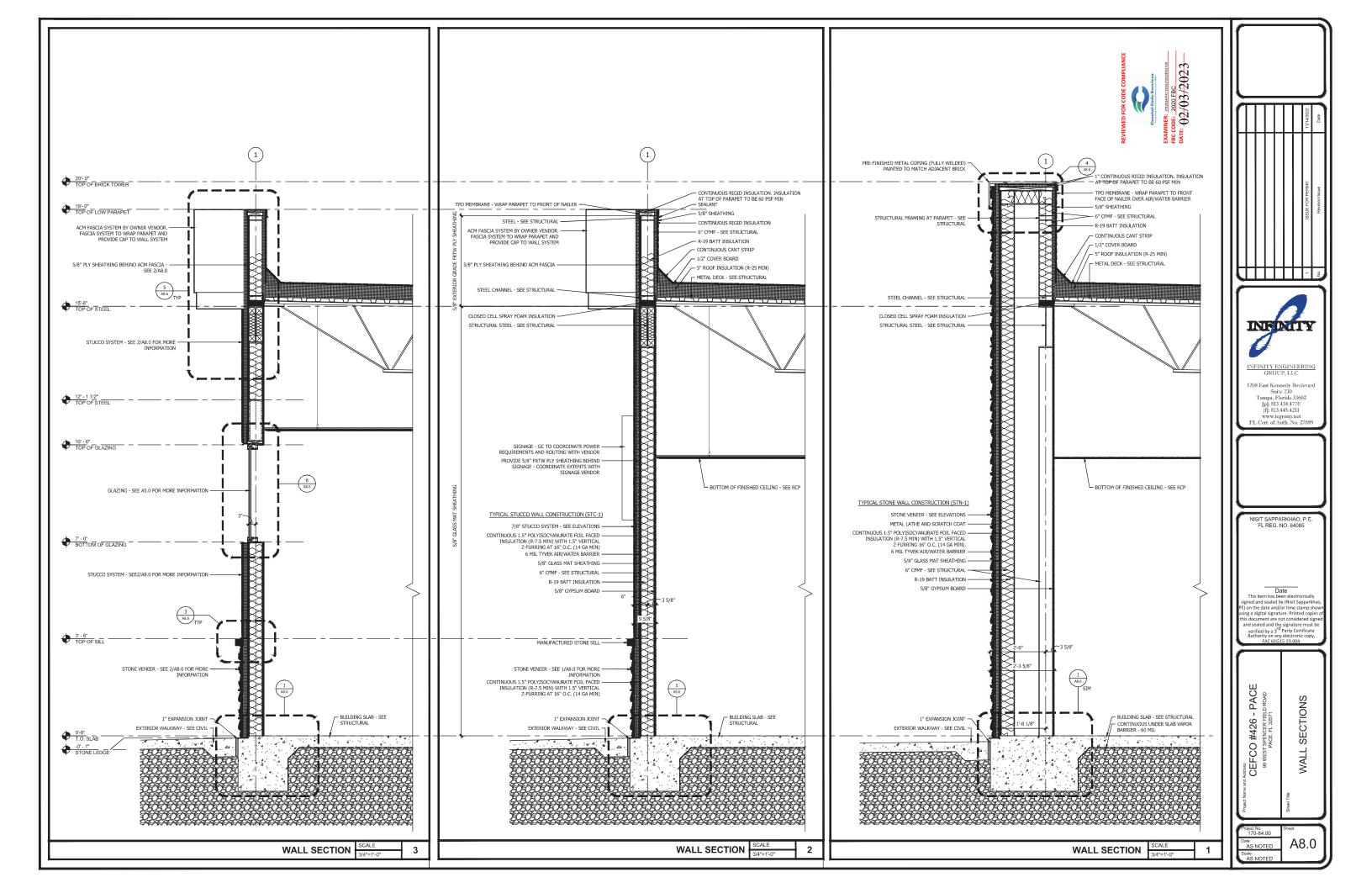
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signed and sealed by (Nisit Sapparkha
PE) on the date and/or time stamp,
using a digital signature. Printed copies
this document are not considered sign
and sealed and the signature must be
verified by a 2<sup>rd</sup> Party Certified
Authority on any electronic copy.
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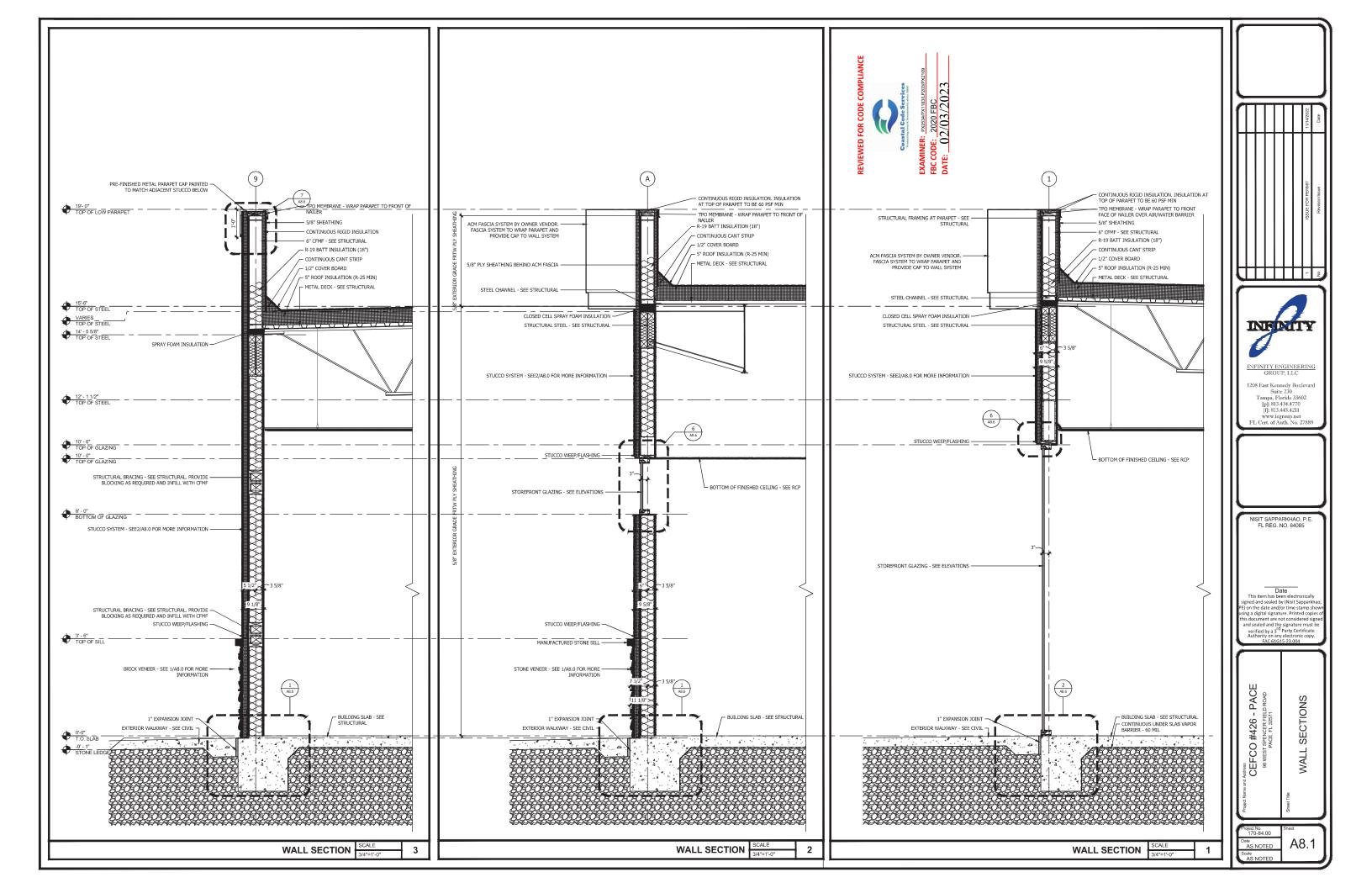
Project Name and Address CEFCO #426 - PACE 90 WEST SPENCER FIELD ROAD PACE, FL 32571	ROOF DETAILS
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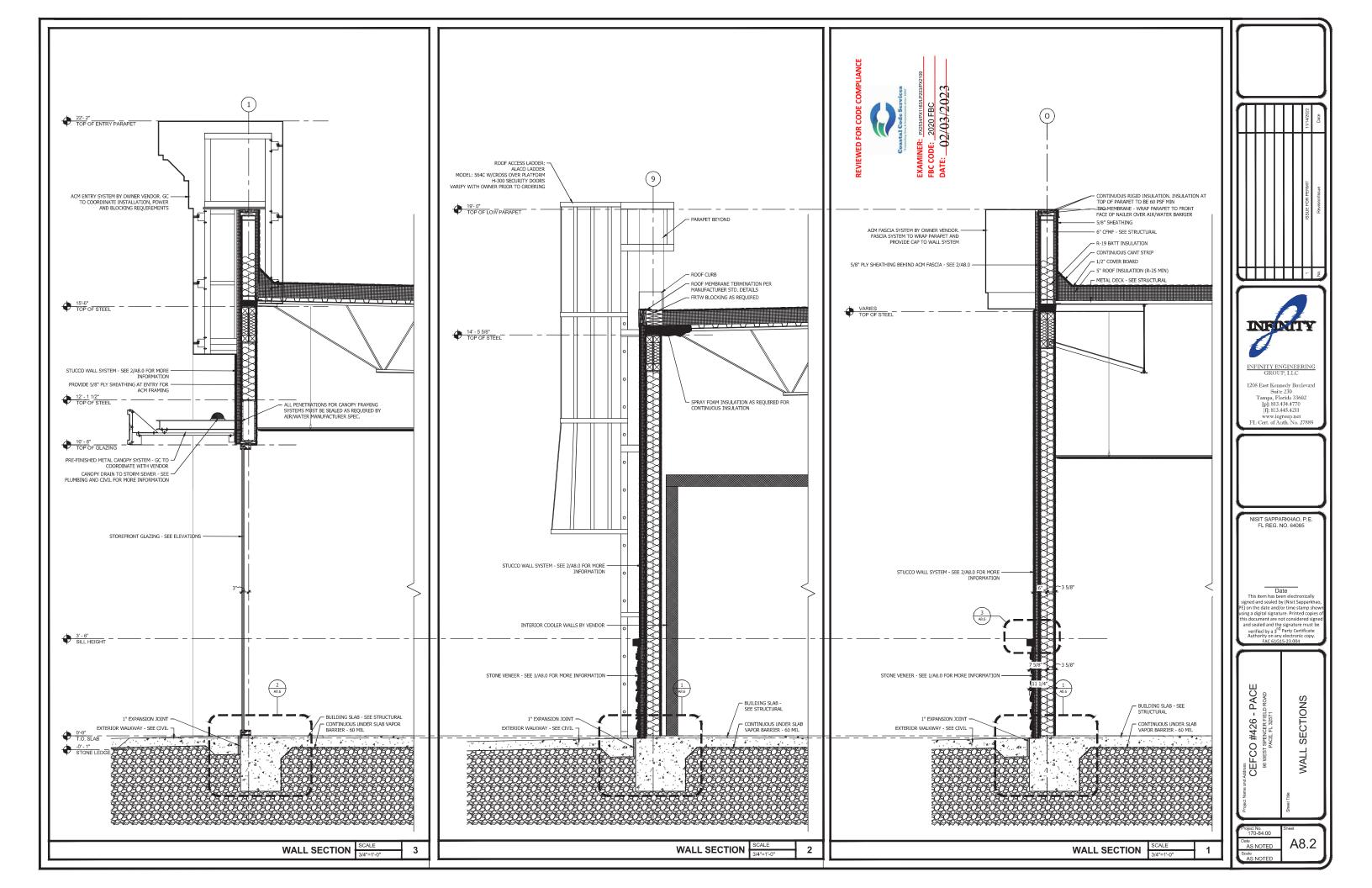
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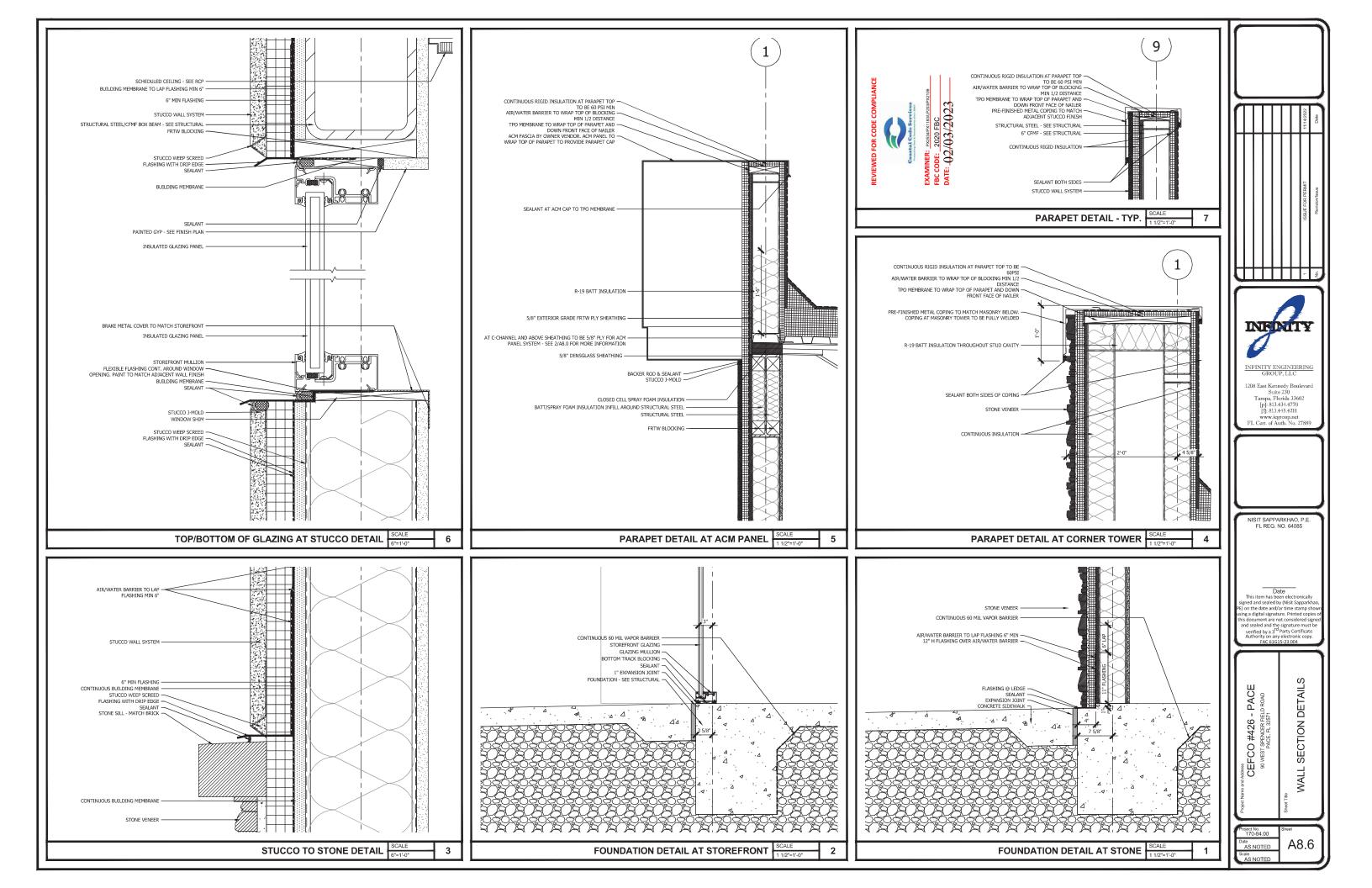


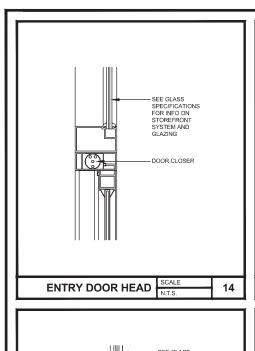


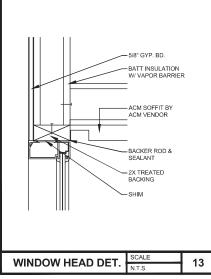


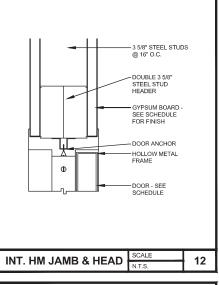


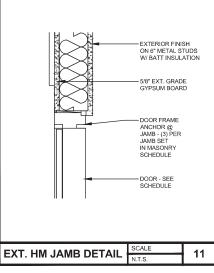


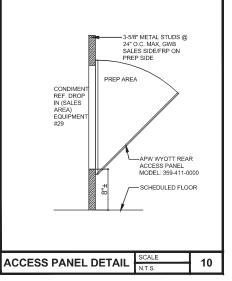


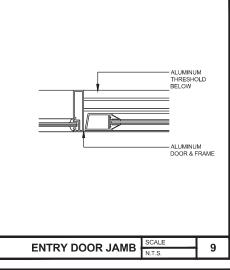




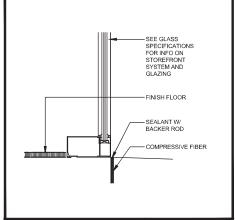


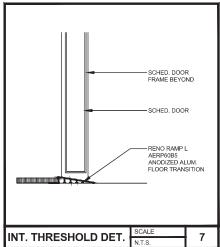


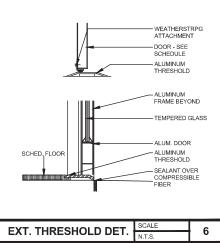


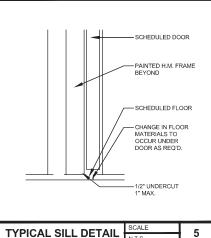


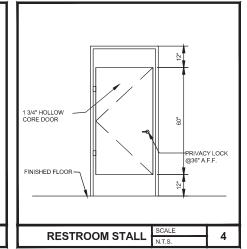


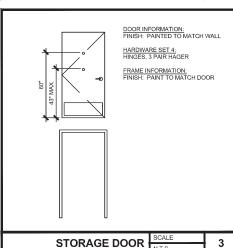














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Date

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on the date and/or time stamp shing a digital signature. Printed copie

and sealed and the signature must l verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic copy.

DOOR	SCHEE	DULE	=								
DOOR#			DOOR				FR/			DOOR	
			MAT'L	TYPE	THK.	MAT'L	SILL	JAMB	HEAD	HDW	REMARKS
101A	PR 3'-0"	7'-0"	AL/GL			AL/GL	6	9	14	3	TEMPERED GLASS
101B	PR 3'-0"	7'-0"	AL/GL			AL/GL	6	9	14	5	TEMPERED GLASS
103A	3'-0"	7'-0"	HM	FLUSH	1 3/4"	НМ	7	12	12	6	STORAGE
108A	3'-0"	7'-0"	HM	FLUSH	1 3/4"	HM	5	11	11	2	EXTERIOR DOOR
109A	3'-0"	7'-0"	HM	FLUSH	1 3/4"	НМ	7	12	12	4	OFFICE
114A	2'-6"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM STALL
114B	2'-6"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	- - 14		RESTROOM STALL
114C	3'-0"	5'-0"	HM	FLUSH	1 3/4"	НМ					RESTROOM ADA STALL
115A	PR 2'-8"	7'-0"	AL/GL	FLUSH	1 3/4"	НМ	6	9			TEMPERED GLASS
116A	3'-0"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM AMBULATORY
116B	3'-0"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM ADA STALL
116C	2'-6"	5'-0"	HM	FLUSH	1 3/4"	НМ	-	-	-	1	RESTROOM STALL

8

ER TO SHEET A13.1 FOR ADA STANDARDS AND REQUIREMENTS. GENERAL NOTES

1. ALL EXTERIOR DOORS TO HAVE WEATHER STRIPPING AND SWEEP.

- ARL BATERIOR DOORS OF HAVE WEATHER STRIFFING AND SWEET.

  HARDWARE TO BE COORDINATED AND APPROVED BY OWNER PRIOR TO INSTALLATION.

  HARDWARE TO MEET ALL LOCAL, STATE AND NATIONAL BUILDING CODES.

  ALL HARDWARE IS SCHLAGE D SERIES UNLESS NOTED OTHERWISE.
- HARDWARE FINISH AS INDICATED IN HARDWARE SCHEDULE

STOREFRONT DETAIL

- TRANSMANDE INITION AS INVICATED IN TRANSMAND SCHEDULE.

  HARDWARE SUPPLIER TO SUBMIT HARDWARE SCHEDULE TO G.C. FOR APPROVAL PRIOR TO CONSTRUCTION.

  ALL LOCKS TO BE ON MASTER KEY SYSTEM.

  VERIFY ALL DOOR SPECS WITH OWNER BEFORE HAND.

1	RESTROOM A
1	RESTROOM S

- HARDWARE
  BUTTS
  B-1 MCKINNEY, TA2714, 4-1/2" X 4-1/2", US26D
  B-2 MCKINNEY, TA2314 NRP, 4-1/2" X 4", DARK OXIDIZDE COPPER US32D B-3 MCKINNEY SPRING HINGE 1502 4-1/2" X 4-1/2"

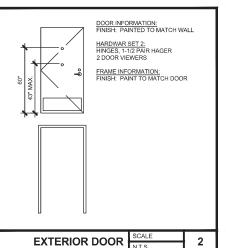
- B-3 MCKINNEY SPRING HINGE 1502 4-1/2" X 4-1/2" CLOSERS
  C-1 YALE 2701
  C-2 KAWMEER, SAM-11, SINGLE ACTING MANUAL
  CONCEALED OVERHEAD CLOSER
  LOCKSETS
  L-1 LOCKSET, SCHLAGE ND40S, RHO, 626
  L-2 DEADBOLT, SCHLAGE, KTYDE BOTH SIDES, B252PD
  L-3 LOCKSET OYLINDER, KABA LLCO, 7181TK1-26D
  STOPS, SILENCERS, ETC.
  S-1 SILENCERS, ROCKWOOD 608-RKW, GRAY
  S-2 DOOR STOP, TRIMCO, 1213ES, US26D
  PULLS
  P-1 KAWNEER, STYLE C09, US32D

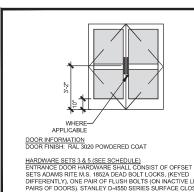
HDW	BUTTS		TS		os	LO	CKS	3	ST	STOPS		PUL	니	MISCELLANEOUS											REMARKS
SET NO.	B-1	B-2	B-3	C-1	C-2	2	L-2	53	S-1	S-2	S-3	P-1	1	-W	Z-IM	ς. Σ	Α	M-5	9-W	7-M	M-8	6-W	M-10	PB-21	
1			3			1			3					Т	Т						1				RESTROOM STALLS
2		3		1					3				Τ	1	Т	1	1	1					2		H.M. EXTERIOR DOOR
3	П	6			2							2	Т	T	T	1			2				П	2	ALUM. & GLASS ENTRANCE DOUBLE DOORS
4	3			1		1			3	1	1		Т	Т	1	I		1			1	1	2		INTERIOR DOOR W/ PRIVACY LOCKSET
5		6			2			1				2		T					2					2	ALUM. & GLASS ENTRANCE DOUBLE DOORS
6	3			1		1	1		3	1	1		T	T	1	1		1				1	2		INTERIOR DOOR W/ PRIVACY LOCKSET

- MISCELLANEOUS
  M-1 SARGENT ALARMED PANIC BAR, #5304
  (OUTSIDE KEY CONTROL)
  WITH FULL TRIM SCHLAGE CYLINDER
  M-2 WALL STOP, ROCKWOOD 404, US28D
  M-3 THRESHOLD, PEMKO 2005AT X 36", ALUM,
  M-4 STANDARD PERIMETER GASKET, PEMKO ASTRAGAL
  303AV X 84"
  M-5 KICK PLATE, 12" HIGH X DOOR WIDTH LESS 2"
  STAINLESS STEEL, IVES 8400-826D
  M-7 FLOOR STOP, ROCKWOOD 445, US28D (NOT USED)
  M-7 FLOOR STOP, ROCKWOOD 445, US28D (NOT USED)
  M-8 COLATHOOK, BOBRICK B-233
  M-9 WRAP AROUND DOOR EDGE GUARD
  ENTRY MORO, DONLO 4-S-CW
- M-9 WRAP AROUND DOOR EDGE GUARD ENTRY AMOR, DON-JO 4-S-CW M-10 PEEP HOLE DS2000 PB-21 PUSH BAR, STANDARD 1" TUBULAR PUSH BAR.

- DOORWAYS SHALL HAVE A MIN. CLEAR OPENING OF 32" WITH THE DOOR OPEN 90 DEGREES, MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP.
- 4.13.8 ENSURE COMPLIANCE: THRESHOLDS AT DOORWAYS SHALL NOT THRESHOLDS AT DOORWATS SHALL NOT EXCEED \$\frac{1}{2}\$. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
- 4.13.10 ENSURE COMPLIANCE: THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.
- 404 2.9 DOOR AND GATE OPENING FORCE: INTERIOR HINGED DOORS AND GATES SHALL HAVE A MAX OPENING FORCE OF 5LBS.

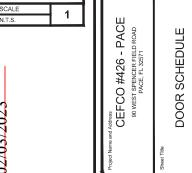
EXTERIOR HINGED DOORS AND GATES SHALL HAVE A MAX OPENING FORCE OF 8.5LBS.



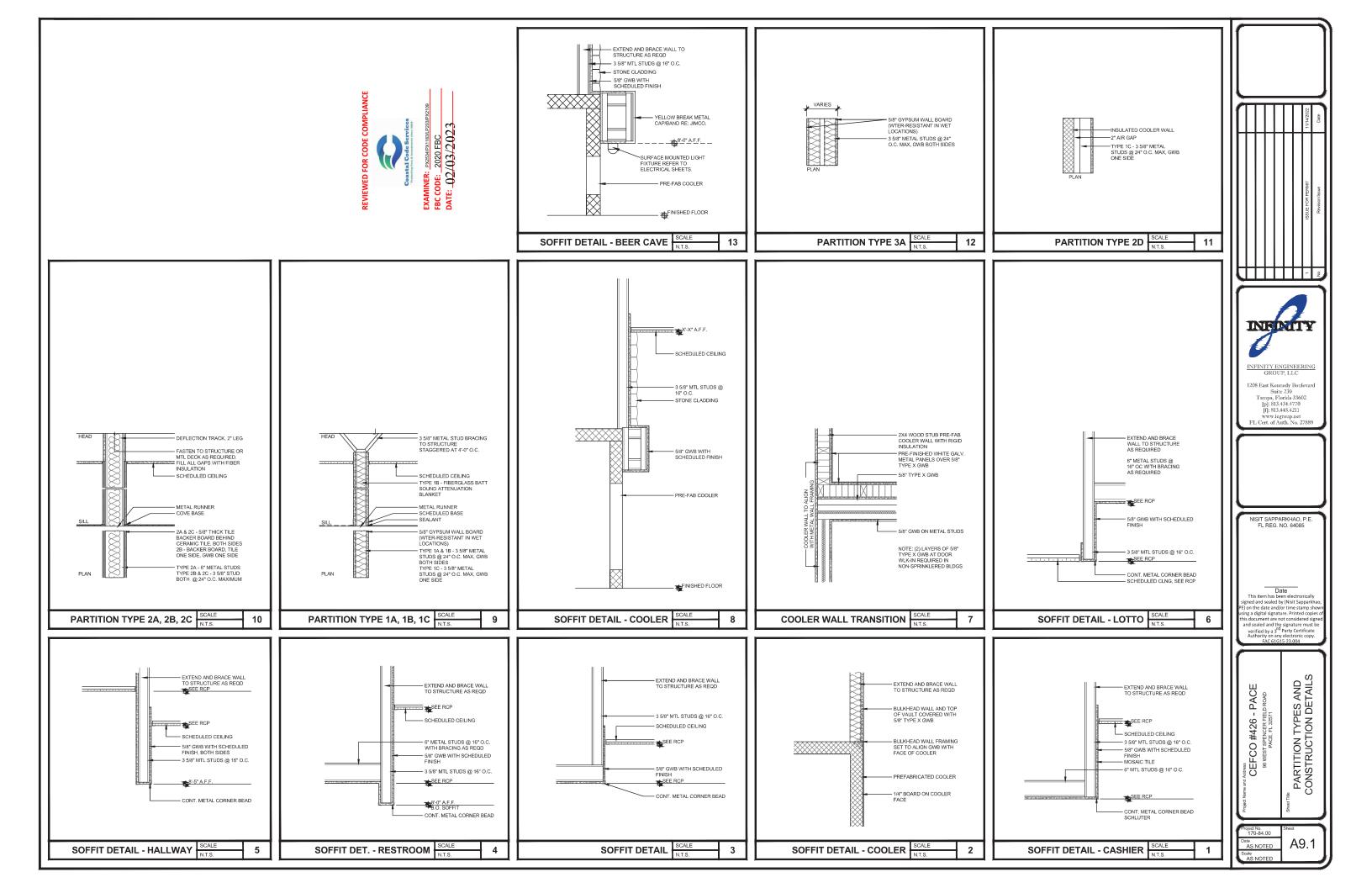


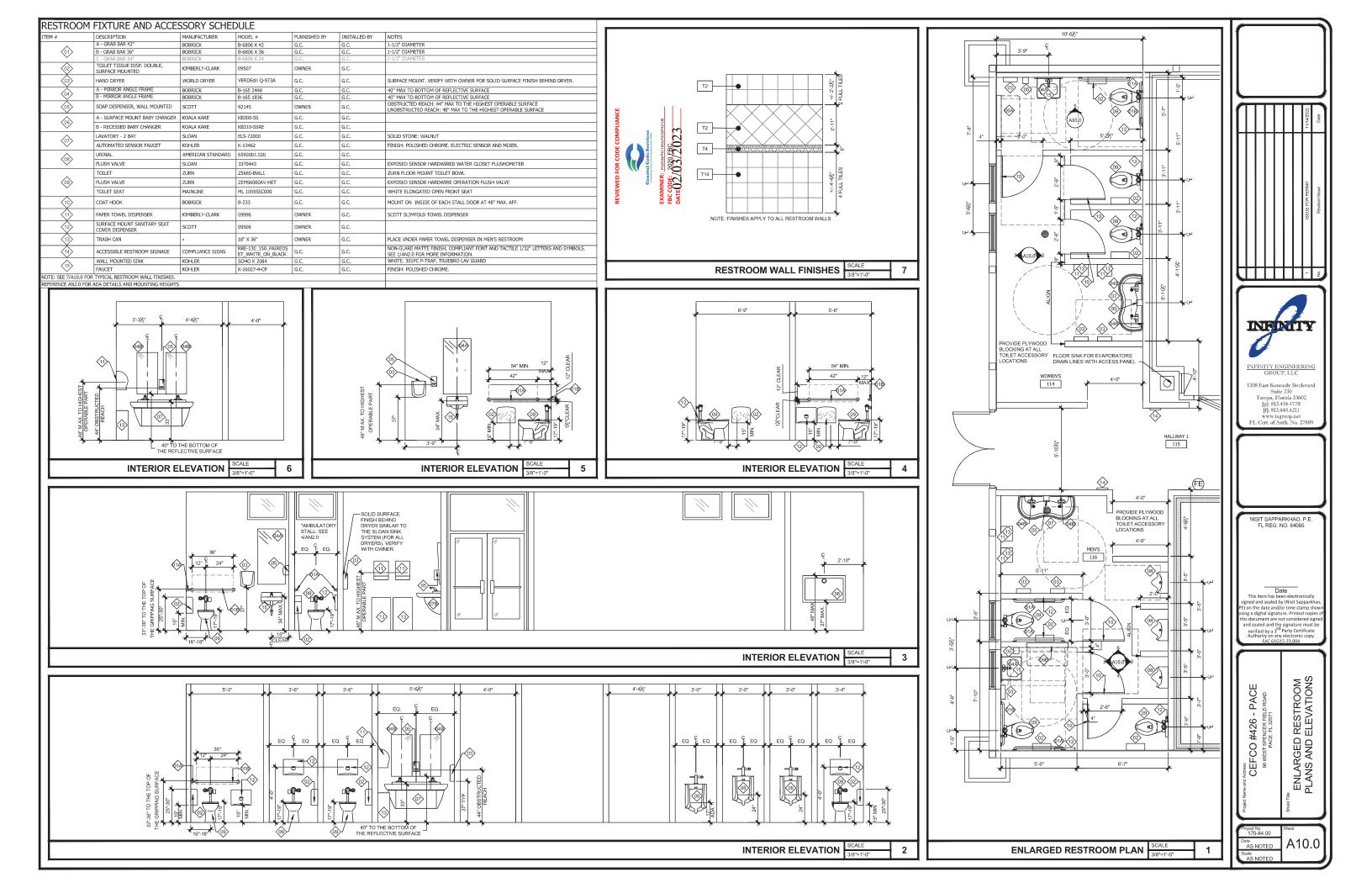
HARDWARE SETS 3 & 5 (SEE SCHEDULE)
ENTRANCE DOOR HARDWARE SHALL CONSIST OF OFFSET PIVOTS, 2
SETS ADAMS RITE M.S. 1852A DEAD BOLT LOCKS, (KEYED
DIFFERENTLY), ONE PAIR OF FLUSH BOLTS (ON INACTIVE LEAF OF
PAIRS OF DOORS), STANLEY D-4550 SERIES SURFACE CLOSER WITH
MODEL: D-455-O-DA-EDA-689-SN, 9" CLASSIC'S STRAIGHT DOOR PULLS IN
ANODIZED ALUMINUM AND STANDARD THRESHOLDS. FINISH: RAI 3020 POWDERED COAT

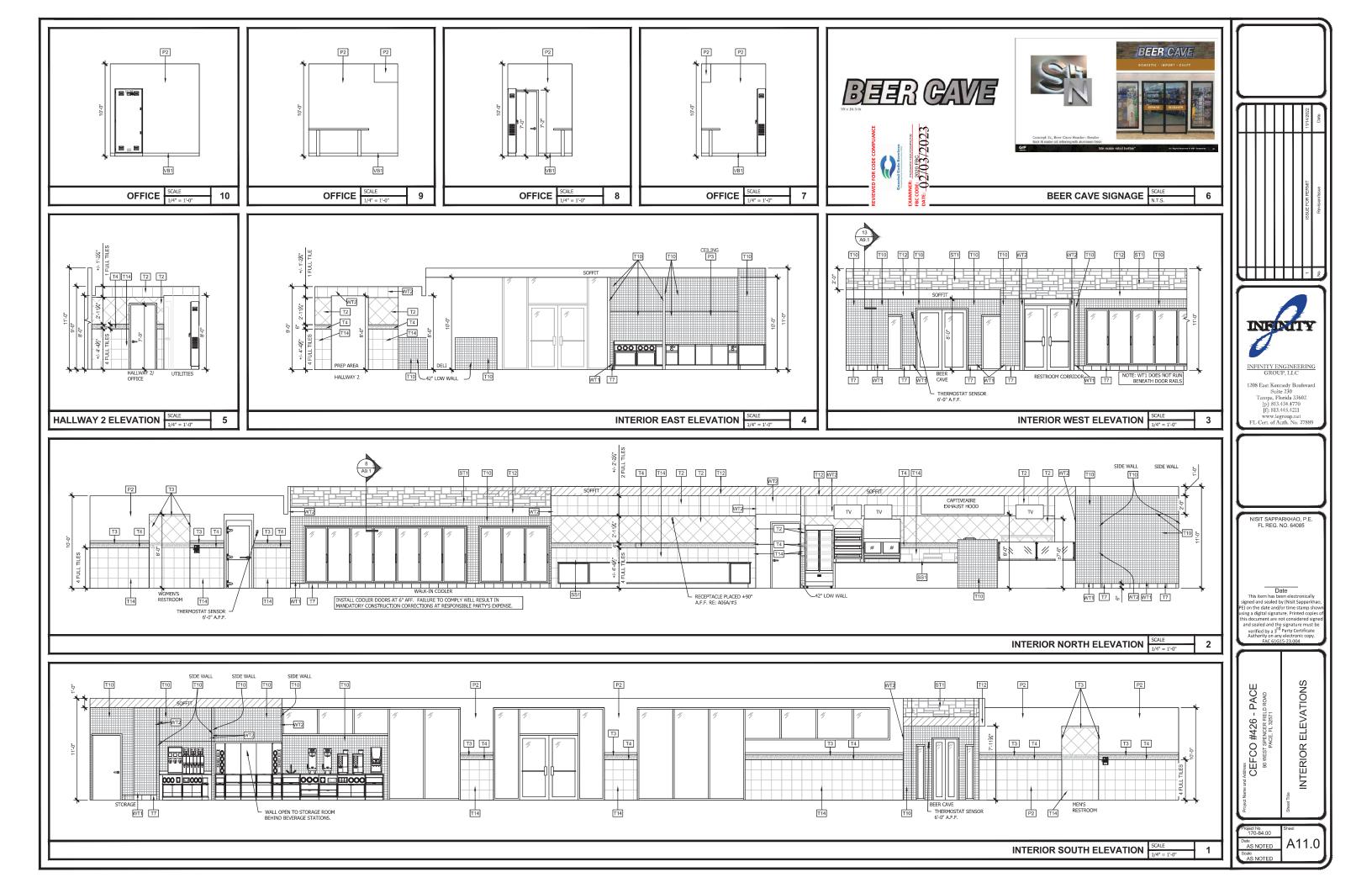
ALUMINUM ENTRY DOORS N.T.S.

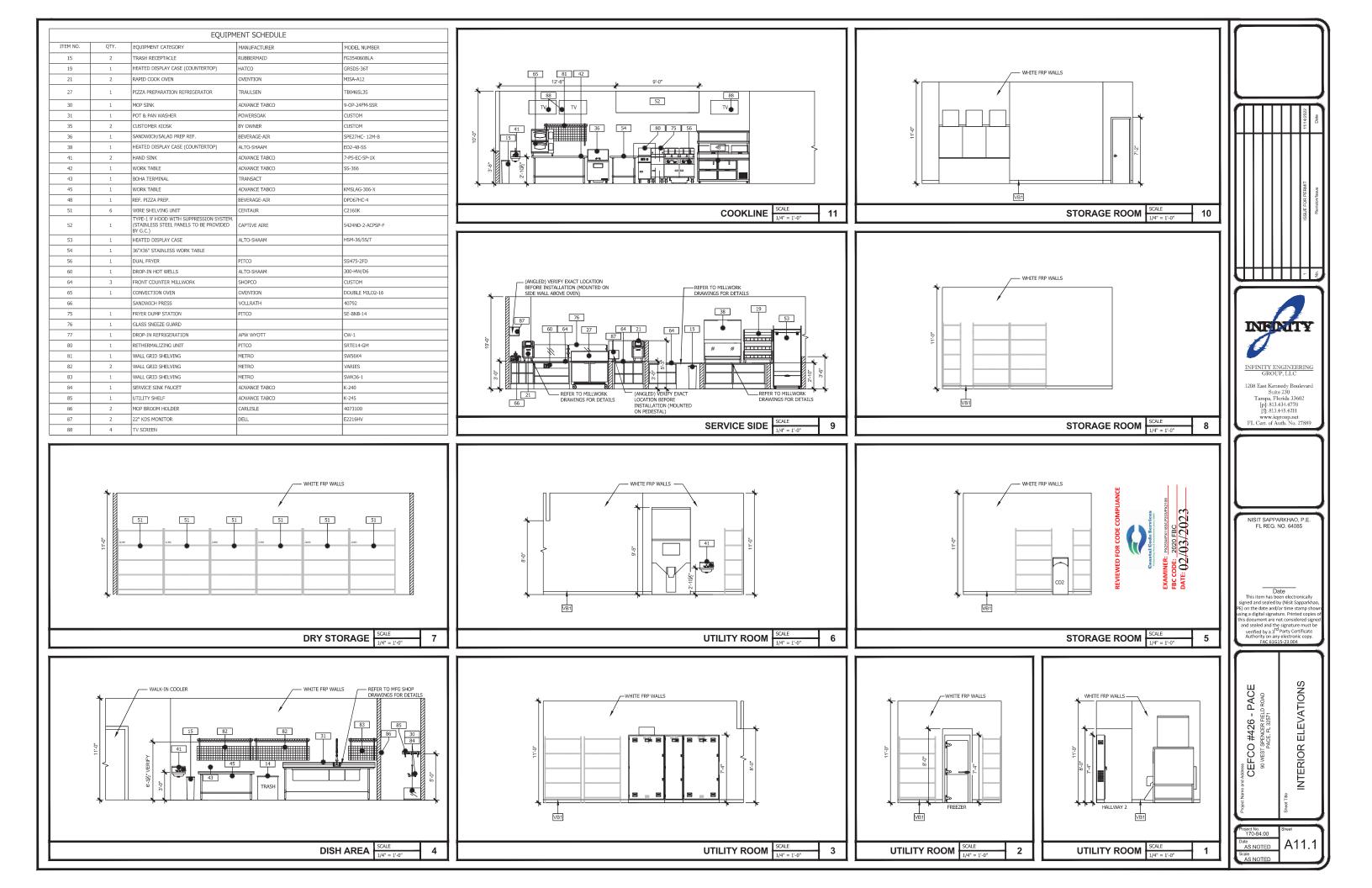


Date AS NOTED A9.0











INTERCERAMICS 20" X 20" - MONTREAUX - BRUN. USE CUSTOM BUILDING PRODUCTS #145 LIGHT SMOKE GROUT COLOR. WILSON ART QUARTZ (COFFEE HOUSE Q6005 - 2 CENTIMETERS) INTERCERAMICS 13" X 13" - MONTREAUX - BLANC. GROUT COLOR SELECTED BY OWNER. WALL BOARD (USED IN ALL STORAGE AREAS) AVONITE - 1/2" SOLID SURFACING - K3-8490-SATIN - COPPERMINE INTERCERAMICS 3" X 13" - MONTREAUX - BRUN - <u>BULL NOSE</u>. USE CUSTOM BUILDING PRODUCTS #145 LIGHT SMOKE GROUT COLOR. INTERCERAMICS - 6" AMALFI STONE - DECORATIVE ACCENTS, BRICKLAY MOSAIC - COLOR: CREMA VASARI. USE CUSTOM BUILDING PRODUCTS #145 LIGHT SMOKE GROUT COLOR. COOLER DOORS COOLER DOORS AND FRAMING TO BE FACTORY FINISHED WITH BLACK ON POLISHED ALUMINUM DECORATOR TRIM FINISH, AND VANGARD BRIGHT SILVER WITH BLACK T5 6" X 6" DAL-TILE "SURETREAD" GOLDEN BROWN SURETREAD #0075. GROUT COLOR SELECTED BY OWNER. **EQUIPMENT & GONDOLA SHELVING** INTERCERAMICS 20" x 20" - STRATA GRAFITE GC TO CUT TILE TO FIT UNDER COOLER DOORS. GROUT JOINTS TO ALIGN WITH FLOOR GROUT JOINTS, EVERYWHERE T7 IS APPLICABLE USE LIGHT GRAY GROUT COLOR WITH 1/8" GROUT LINE. FACTORY PAINT ALL FLOOR MERCHANDISING EQUIPMENT WHITE. INTERCERAMICS 6 1/2" X 13" BASE - MONTREAUX - BLANC. GROUT COLOR SELECTED SHELVING USED ON INTERIOR STORE DESIGN IS BY LOZIER STORE FIXTURES. INCORPORATED. FACTORY PAINT ALL GONDOLA SHELVING BLACK. 6" X 6" DAL-TILE "SURETREAD" GOLDEN BROWN SURETREAD #P-3665 6" X6 6" COVE BASE TILE, #PB-3665 COVE CORNER 3/4" X 6" ALL INSIDE CORNERS, #PCR-L-3665 COVE CORNER 6" X 6" ALL OUTSIDE CORNERS, USE BUILDING PRODUCTS #60 CHARCOAL GROUT COLOR. MENU BOARD MI - (3) PANEL INTERNALLY ILLUMINATED MENU BOARD SYSTEM. MENU BOARD IF REQUIRED IS "MAINSTREET" BRAND. 2"x2" HEX INTERCERAMIC WALL TILE (FOUNDATION WHITE, USE LIGHT GRAY GROUT COLOR WITH 1/8" GROUT LINE WITH SL BASE TRIM PIECE ALONG THE BOTTOM FLOOR TRANSITION 3" X 6" DAL-TILE BRICK JOINT TILE, #DH50 SUNFLOWER RITTENHOUSE SQUARE, USE LATICRETE #44 BRIGHT WHITE GROUT COLOR WITH 1/8" GROUT LINE AND DESIGNBASE SL DBSL80AE (ANODIZED ALUM.) FLOOR TRANSITION BAR RENO-RAMP K SCHLUTER T12 12" BREAK METAL 25 GA. COLOR TO BE POWER COAT YELLOW ACM FP-2 OR EQUAL **GENERAL NOTES** USE "EVERCLEAN" FLAT LATEX PAINT ON ALL PAINTED INTERIOR WALL SURFACES.
USE CLEAR PLEXIGLASS WALL CORNER GUARDS IN ALL HI-TRAFFIC AREA.
CHANNEL ALL ELECTRICAL COMPONENTS FOR DECORATIVE LICHTING TO NOT BE VISIBLE TO
STORE CUSTOMERS VIEW.
G.C. TO VERITY ALL FINISHES WITH OWNER PRIOR TO CONSTRUCTION.
G.C. TO SUBMIT COLOR SAMPLES OF ALL MATERIALS TO OWNER FOR APPROVAL.
ALL DOOR KICK PLATES TO MATCH DOOR HARDWARE.
ALL DOOR HARDWARE TO BE BRUSHED ALUMINUM FINISH UNLESS OTHERWISE NOTED. SEE
SHEET A08A FOR DOOR SCHEDULE AND FINISHES. T13 EPOXY COATED FLOOR SYSTEM BY FLOWCRETE-FLOWFRESH SL. COLOR IS MID GRAY T14 INTERCERAMICS 13" X 13" - MONTREAUX - BRUN. USE CUSTOM BUILDING PRODUCTS #145 LIGHT SMOKE GROUT COLOR. VINYL BASE VB1 4" VINYL COVE BASE, COLOR: GRAY - TO MATCH SEALED CONCRETE BY RUBBERMITE - MANUFACTURED BY BURK-MERCER. **GRAPHIC DETAILS** FLOOR TILE NOTES:

1. ALL WALL TILE TO BE REINFORCED WITH MOISTURE RESISTANT COVERED GYPSUM BOARD. AREAS, INCLUDED: RESTROOMS, COOLER, AND BEVERAGE AREAS.

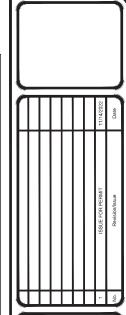
2. RESTROOM AREA - US E CEMENT BOARD BACKING IN ALL WET AREAS UP TO 48" AFF. SE MOISTURE RESISTANT COVERED GYPSUM BOARD ABOVE CEMENT BOARD.

3. USE PRE-MANUFACTURED CORNER TILE PIECE OF BULL NOSE AS REQUIRED ON ALL EXPOSED CORNERS ON FLOOR BASE AND WALLS. 1/2" WOOD SIGN TO BE CONSTRUCTED WITH CHAIN ACCENTS ON TOP AND BOTTOM; SURFACE TO BE L1. MEN'S AND WOMEN'S RESTROOM SYMBOLS TO BE ON SIGN. REFERENCE ELEVATIONS FOR DIMENSIONS. COLOR OF SYMBOLS - BLACK. 1/2" SOFFIT TO EXTEND 8" FROM WALL PAINTED P4 AND CEFCO GREEN. WALL COVERING: PAINT CEFCO LOGO TO BE PRINTED AND APPLIED TO VERTICAL SURFACE. SHERWIN-WILLIAMS #SW7582 SALUTE, EGGSHELL 1/2" WOOD SIGN TO BE CONSTRUCTED SUSPENDED FROM CEILING BY CHAIN. SURFACE TO BE L1. SHERWIN-WILLIAMS #SW7686 HINOKI, EGGSHELL SHERWIN-WILLIAMS #SW7709 COPPER POT, EGGSHELL FRESH EATS DELI TO BE SIGN IN FONT STYLE "ADOBE GARAMOND PRO". FONT COLOR: GOLDENROD YELLOW. SHERWIN-WILLIAMS #SW6898 SOCIAL BUTTERFLY, EGGSHELL LIFESTYLE IMAGES TO BE PRINTED AND FRAMED. SHERWIN-WILLIAMS WHITE, EGGSHELL P6 SHERWIN-WILLIAMS #SW6108 LATTE, EGGSHELL SHERWIN-WILLIAMS #SW 6825 IZMIR PURPLE NOT USED WALL COVERING: STONE FRESH YO LOGO TO BE PRINTED AND APPLIED TO VERTICAL SURFACE. ST1 FAUX STONE VENEER - CREATIVE SONE CEFCO RUSTIC RUBBLE FRESH YO GRAPHIC ON CABINETS LOGO TO BE PRINTED AND APPLIED TO VERTICAL SURFACE. MILLWORK LAMINATES GRAPHIC ON WALL LAMINATED PLASTICS BY FORMICA #758-58 BLOSSOM CHERRYWOOD WALL COVERING: VINYL GRAPHIC LAMINATED PLASTICS BY FORMICA #909-SP BLACK LAMINATED PLASTICS BY FORMICA #448 FEATHERED COPPER VINYL GRAPHIC - BY OWNER LAMINATED PLASTICS BY FORMICA #3517-58 SAND CRYSTAL WALL CORNER USE RONDEC RO60AE AT BATHROOM AND FRESH YO/BEVERAGE AREA LAMINATED PLASTICS BY FORMICA #5488-NT SMOKY BROWN PEAR L6 LAMINATED PLASTICS BY FORMICA #444 FEATHERED ALUMINUM SOFFIT EDGE WILL HAVE SCHULTER-RONDEC (AE) WITH SCHIENE RADIUS SCHLUTER (AE) FOR ALL RADIUS EDGES. (ABOVE SALES COUNTER) WALL TRANSITION WT1 ALUMINUM SCHLUTER STRIP - RONDEC, STAINLESS STEEL - VERIFY WITH OWNER ALUMINUM SCHLUTER STRIP - VERTICAL 90 DEGREE 1" - ECK-E, STAINLESS STEEL VERIEY WITH OWNER

INTERIOR FINISH MATERIALS LIST

SOLID SURFACE COUNTER TOP

FLOOR, BASE AND WALL TILE





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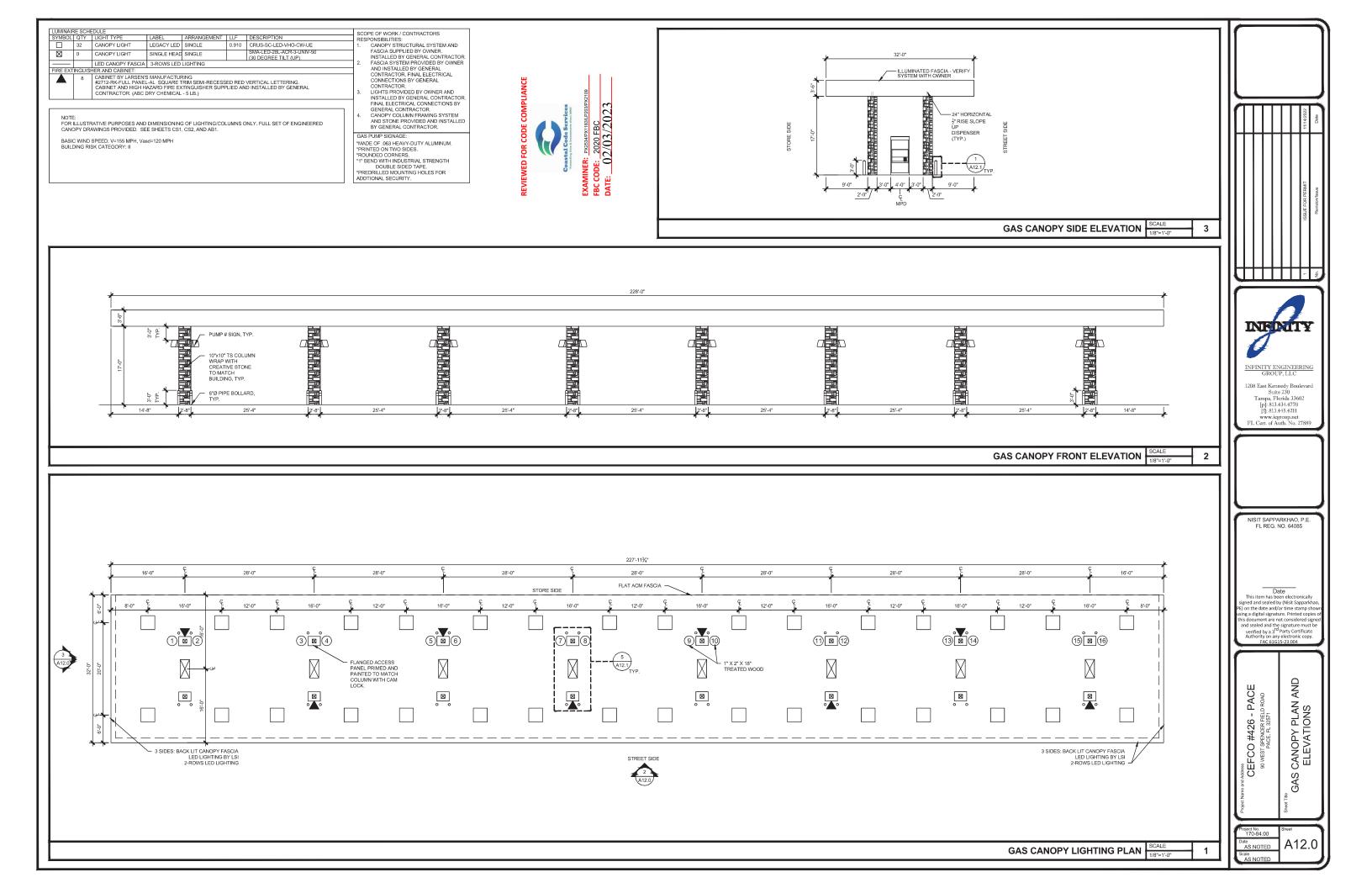
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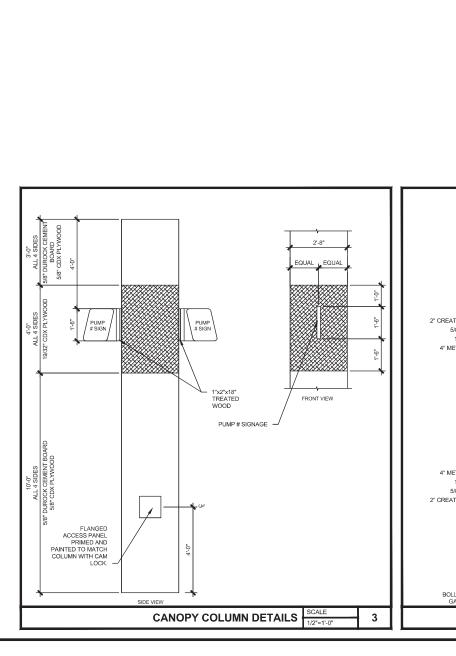
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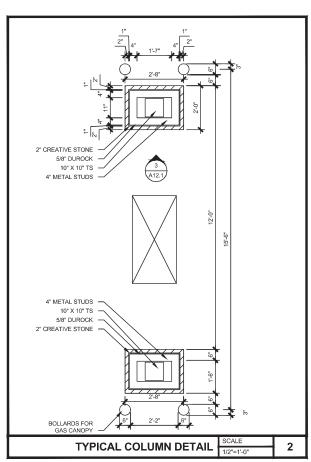
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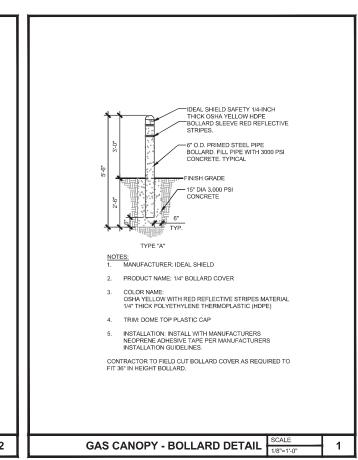
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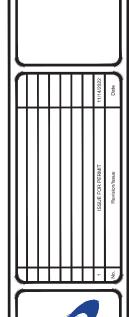
A11.2 AS NOTED













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DETAILS CEFCO #426 - PACE CANOPY PLAN GAS (

A12.1 Date AS NOTED

#### **GENERAL NOTES** STRUCTURAL STEEL STEEL STUD NOTES THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON STRUCTURAL STEEL ROLLED SHAPES SHALL CONFORM TO ASTM A-992. MATERIALS: THE JOB SITE PRIOR FOR ERECTOR STARTING WORK GRADE 50. FY = 50 KSI ANY DEVIATIONS FROM THESE DRAWINGS DUE TO FIELD CONDITIONS SHALL BE 2. SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500. BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD GRADE B. FY = 46 KSI THE GENERAL CONTRACTOR SHALL PROVIDE PEDESTRIAN PROTECTION 3. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B, FY = 35 KSI DURING THE CONSTRUCTION TO COMPLY WITH LOCAL CODES, FEDERAL, AND 4. CHANNELS, ANGLES AND PLATES ASTM A36 OSHA REGULATIONS 5. STRUCTURAL STEEL DESIGN SHALL BE DONE IN ACCORDANCE WITH AISC THE GENERAL CONTRACTOR SHALL GRADE, BACKFILL, LEVEL AND OTHERWISE PREPARE THE JOBSITE FOR SAFE WORKING CONDITIONS PRIOR TO ERECTION OF 6. ALL STRUCTURAL STEEL TO BE PAINTED ONE SHOP COAT OF RUST INHIBITIVE ANY KIND NO STEEL SHALL BE ERECTED ON THE FOUNDATIONS / FOOTINGS UNTIL THE PAINT OR EQUAL TO RUSTOLEUM CONCRETE HAS CURED A MINIMUM OF (3) DAYS 7. STRUCTURAL STEEL FABRICATIONS AND ERECTION SHALL BE DONE IN ALL ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE NEC, AND ACCORDANCE WITH THE AISC LA TEST CODE OF STANDARD PRACTICE FOR PERFORMED BY A LICENSED ELECTRICIAN. STEEL BUILDINGS AND BRIDGES. A TYPICAL FOUNDATION DESIGN WILL BE PROVIDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT SOIL CONDITIONS AT THE **ANCHOR BOLTS** SITE ARE ADEQUATE FOR TYPICAL FOUNDATIONS PROVIDED, UPON REQUEST, ANCHOR BOLTS SHALL BE ASTM A325N MATERIAL THE ENGINEER OF RECORD WILL PROVIDE THE REQUIRED DESIGN LOADS AND 2. INSTALLATION OF ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH THE ANSI ANCHOR BOLT PATTERNS FOR A CUSTOM FOUNDATION DESIGNED BY OTHERS. CODE OF STANDARD PRACTICE, SECTIONS 7.5. THE GENERAL CONTRACTOR SHALL PROVIDE ALL THE NECESSARY MEANS FOR GARBAGE AND DEBRIS REMOVAL WELDING SITE CONDITIONS STRUCTURAL WELDING SHALL CONFORM TO AWS D1.1. 2. STRUCTURAL LIGHT GAUGE WELDING SHALL CONFORM TO AWS 1.3. PROVIDE A DRIVE ACCESSIBLE TO WITHIN 15' OF THE PERIMETER OF THIS STRUCTURE IN ORDER TO UNLOAD MATERIALS AND PERFORM WORK. 3. STRUCTURAL WELDING SHALL BE DONE IN THE SHOP OF A LICENSED FILL ALL OPEN TANK HOLES AND TRENCHES WITHIN 15' OF THE PERIMETER OF THIS STRUCTURE FROM THE TIME THAT THE STRUCTURE ANALYSIS UNTIL 4. ALL STRUCTURAL FIELD WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER THE JOBSITE MUST BE DRY ENOUGH FOR VEHICLES AND PERSONNEL TO 5. AWS E70XX ELECTRODES SHALL BE USED FOR ALL STRUCTURAL WELDS PERFORM WORK. IF NECESSARY, THE GENERAL CONTRACTOR SHOULD LAY EXCEPT FOR SPECIAL CLIPS. GRAVEL IN EXCESSIVELY MUDDY AREAS TO ENSURE ADEQUATE WORKING 6. ALL STRUCTURAL WELDS TO BE 1/4" FILLET, FULL PENETRATION WELDS CONDITIONS UNLESS OTHERWISE SPECIFIED POURED CONCRETE PAVING UNDER AND AROUND THE PERIMETER OF THE STRUCTURE TO BE EXCLUSIVELY FOR WORK SPACE AND STAGING OF MATERIALS. **BOLTS** ALL OVERHEAD OBSTRUCTIONS ARE TO BE REMOVED PRIOR TO THE ARRIVAL ALL BOLTS SHALL BE ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED FORM, SET, AND POUR FOUNDATIONS AS PER PROVIDED FOUNDATION PLAN. ALL OTHERWISE ON THESE DRAWINGS FORMS SHALL BE REMOVED PRIOR TO ARRIVAL OF MATERIALS AND ALL ANCHOR HIGH STRENGTH BOLTS SHALL BE INSTALLED USING THE "TURN OF BUT" BOLT THREADS SHALL BE FREE OF DEBRIS / DUST AND SHALL BE ACCESSIBLE. TIGHTENING METHOD. BOLTS SHALL BE BROUGHT TO THE SNUG TIGHT ALL ANCHOR BOLTS (WITH NUTS INSTALLED) SHALL BE SET AT THE PROPER CONDITION AND THEN TIGHTENED 1/3 TURN ELEVATIONS WITH NO MORE THAN 1/4" TOLERANCE PROVIDE TEMPORARY POWER SOURCE (110 VOLTS) WITHIN 100 FEET OF THE **SCREWS** STRUCTURE FOR THE ERECTORS USE. SHEET METAL SCREWS SHALL BE MADE FROM CARBON STEEL WIRE OBTAIN ALL REQUIRED PERMITS FROM LOCAL AUTHORITIES AND ARRANGE ALL 2. SIZE AND SPACING SHALL BE INDICATED ON DETAIL SHEETS. LOCAL INSPECTIONS UNLESS PROVIDED BY THE ENGINEER OF RECORD. **ERECTORS NOTES** POP RIVETS 1. ALL POP RIVETS SHALL BE THE BREAK MANDREL BLIND RIVET TYPE AND SHALL VERIFY ALL ITEMS UNDER THE SITE CONDITIONS IF THESE ITEMS HAVE NOT CONFORM TO IFI STANDARD 114. BEEN ADDRESSED. CONTACT YOUR SUPERVISOR PRIOR TO UNLOADING 2. FINISHES SHALL BE ALUMINUM OR STAINLESS STEEL 3. SIZE AND SPACING SHALL BE INDICATED ON THESE DRAWINGS VERIFY DIMENSIONS OF ALL FOOTING LOCATIONS PRIOR TO UNLOADING 4. POP RIVETS SHALL NOT BE USED IN STRUCTURAL APPLICATIONS UNLESS SPECIFICALLY CALLED FOR BY THE DESIGN CALCULATIONS. DESIGNATE A SAFE AND SECURE STAGING AREA AND UNLOAD ALL MATERIALS. **ROOFING NOTES** SET LEVELING NUTS TO PROPER ELEVATIONS. 1. ROOFING MATERIAL SHALL BE ATTACHED PER MANUFACTURERS NOTE: ALL LEVELING NUTS TO BE AT THE SAME ELEVATION. SPECIFICATIONS TO MEET THE DESIGN CRITERIA PRESCRIBED IN THESE PLANS. SET COLUMNS IN PLACE. LEVEL, PLUM, AND TIGHTEN NUTS ON ALL COLUMNS ROOF TO BE PITCHED A MINIMUM OF 1/4" PER FOOT. PRIOR TO PROCEEDING INSTALL ALL OVERHEAD STEEL FRAMING ONCE ALL FRAMING HAS BEEN FOUNDATION NOTES INSTALLED. SQUARE UP FRAMING BY VERIFYING LATER DIMENSIONS. 4.1 FURNISH (2) PRINTS OF EA. SHOP AND ERECTION DRAWINGS FOR REINFORCING 1. SOIL TO BE COMPACTED TO AT LEAST 95% MAX. DRY DENSITY AS DETERMINED CLEAN ALL DECKING PRIOR TO INSTALLATION. INSTALL ALL FASTENERS AT THE BY ASTM - 1557 (MODIFIED PROCTOR). CENTERLINES OF THE DECK RIBS 2. FOUNDATIONS ARE DESIGNED BASED ON A PRESUMPTIVE MINIMUM SOIL INSTALL OVERFLOW SCUPPERS AND WATERPROOF ENTIRE GUTTER.. 9.INSTALL BEARING PRESSURE OF 2000 PSF. WINDOWS AND DOOR NOTES DECK SUPPORTS AT COLUMNS WHERE DECK RIBS WERE CUT FOR 3. FOOTINGS SHALL BE PLACED ON COMPACTED SOIL FREE OF ORGANIC DEBRIS. WINDOWS, DOORS, SHUTTERS, AND ALL COMPONENTS SHALL BE DESIGNED INSTALLATION PURPOSES 4. ASSUMED BEARING CAPACITY OF SOIL = 2000 PSF AND INSTALLED PER THE MINIMUM DESIGN PRESSURES AS PRESCRIBED IN WATERPROOF THE ENTIRE STRUCTURE AND CLEAN ALL PRE-FINISHED MATERIALS. TOUCH UP ALL EXPOSED FASTENERS ALL WINDOWS ARE TO BE INSTALLED ON 2X PRESSURE TREATED BUCKS, AND CLEAN UP ALL DEBRIS AND REMOVE FROM JOBSITE (EACH DAY AT THE COMPLETION).

REMOVE ALL METAL SHAVINGS FROM CANOPY

# 1.1 STUDS AND TRACKS: 16 GA & 18 GA. STUDS. TRACKS TO MATCH GAUGE OF 1.1.1. ASTM A446 GRADE D, FY - 50 KSI MIN. 2. ALL WELDING TO BE DONE BY A CERTIFIED WELDER. 3. CONNECTIONS 3.1 FIELD BOLTED / TEK SCREWED W/ #14 x $\frac{3}{4}$ " GALV. TEK SCREWS (4 MIN. PER 3.2. ALL MATERIAL IS GALVANIZED COATED IN ACCORDANCE WITH ASTM 525-G60. 3.3 APPLY ZIN RICH COATING TO ALL FIELD WELDS SUBMIT SHOP DRAWINGS FOR ALL STUD MATERIAL PRIOR TO FABRICATION. ALL EXTERIOR STUDS ARE TO BE 6" WIDE, 16 GA, MIN @ 16" O.C. ALL STUD MEMBERS AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR/ INSTALLER FOR A HORIZONTAL WIND LOAD NOTES IN THESE DESIGN PARAMETERS, PROVIDE CALCUALTIONS STMAPED AND SIGNED BY A REGISTERED ENGINEER IN THE STATE WHERE PROJECT IS LOCATED. DEFLECTION LIMIT IS L/240OR L/360 FOR PLASTER APPLICATIONS. WELD SIZES ARE TO BE 1/8" MIN. WITH AWS TYPE 6013 OR 7014 FILLER PROVIDE CONTINUOUS BRIDGING @ 4'-0" O.C. MAX. FOR ALL WALLS. 10. BRIDGING FOR ROOF JOISTS SHALL BE 8'-0" O.C. MAX. STEEL ROOF DECK NOTES 1. DECK SHALL BE 1-1/2", 22 GA. GALV. (G60), TYPE F. 2. DECK ENDS MAY BE EITHER BUTTED OR LAPPED OVER SUPPORTS. 3. ON JOIST FRAMING, APPROPRIATE END LAPS SHALL OCCUR OVER A TOP CHORD SUPPORT ANGLE FOR ANCHORAGE 4. ATTACH METAL DECK TO STRUCTURAL STEEL WITH A 5/8" DIA. PUDDLE WELD @ 6" O.C. AT THE EDGES AND 10" O.C. IN THE FIELD 5. FASTEN SIDE LAPS WITH #12 X 3/4" GALV. TEK SCREWS @ 6" O.C. STEEL BAR JOIST NOTES 1. FABRICATION AND ERECTION PER SJI REQUIREMENTS. JOIST BRIDGING: 2.1 THE NUMBER OF ROWS AS SHOWN ON THE CONTRACT DRAWINGS. 2.2 SHOULD NOT BE LESS THAN REQUIRED BY SJI. 2.3 USE HORIZONTAL BRIDGING FOR K-SERIES. 2.4 USE DIAGONAL ROW NEAREST TO THE MID SPAN WHERE 4 OR 5 ROWS ARE REQUIRED BY S.II. 2.5 DIAGONAL BRIDGING TO BE BOLTED TO THE JOISTS AT THEIR POINT OF 2.6 ENDS TO BE ANCHORED W/ HORIZ, BRIDGING 2.7 HORIZ. BRIDGING MAY BE IN NO MORE THAN (2) CONSECUTIVE BAYS TO PROVIDE PASSAGE FOR DUCT WORK. 3.1 WELD ALL JOISTS TO THE SUPPORTING STEEL W/ (3) INCHES OF 1/8" FILLET 3.2 JOIST TO BE FIELD BOLTED NEAR OR ON THE COLUMN LINES 3.3 IF THERE IS NO JOIST @ COLUMN LINE, FIELD BOLT CLOSEST TO THE COLUMN 3.4 EXTEND BOTTOM CHORDS OF THE SAME JOISTS AND WELD THEM W/ 1/4" WELDS TO THE BEAM OR COLUMN 3.5 EXTEND ALL JOISTS 1" MIN. PAST THE CENTERLINE OF THE SUPPORTING STEEL MEMBERS (WHERE POSSIBLE). 3.6 BEARING LOCATION TO BE PER SHOP DRAWINGS ACCORDING TO THE STANDARD PROVISIONS OF SJI. SHOP DRAWINGS

# SHOP DRAWINGS

- SHOP DRAWINGS ARE TO BE SUBMITTED FOR ALL STRUCTURAL ELEMENTS OF THE BUILDING FOUNDATION FTC. FOR REVIEW IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- 1.1 DRAWINGS SHALL BE LEGIBLE AND CLEARLY MARKED WITH MATERIAL SIZE, SPECIFICATION, ETC.
- 1.2 ALLOW A MINIMUM OF 2 WEEKS FOR SHOP DRAWING REVIEW
- 1.3 CONTRACTOR IS RESPONSIBLE FOR CLEAR AND CONCISE SHOP DRAWING SUBMITTAL FOR REVIEW TO THE ENGINEER OF RECORD
- 1.3.1 ALL DIMENSIONS, SIZES, DESIGN COMPLIANCE, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BEFORE DRAWINGS ARE SUBMITTED TO THE ENGINEER OF RECORD FOR FINAL REVIEW.
- 1.4 IF THERE ARE ANY DISCREPANCIES BETWEEN THE SHOP DRAWINGS AND STRUCTURAL DRAWINGS. THE STRUCTURAL DRAWINGS SHALL GOVERN.
- PROVIDE SUBMITTALS FOR THE FOLLOWING MATERIALS:
- 2.1 CONCRETE MIX DESIGN
- 2.2 CURING COMPOUND
- 2.3 REINFORCING STEEL AND ALL STRUCTURAL STEEL
- 2.4 METAL DECKING 2.4.1 LAYOUT, TYPES, ANCHORAGE, CHANNELS, OPENINGS, ACCESSORIES, ETC.

#### CONCRETE NOTES

ENGINEER OF RECORD MUST BE NOTIFIED WITHIN 48 HOURS OF PLACING

CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF

- ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE STRUCTURAL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 301
- AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS OF 3000 PSI UNLESS OTHERWISE NOTED.
- CONCRETE, WHEN PLACED, SHALL HAVE A SLUMP OF 4" PLUS OR MINUS 1".
- PROVIDE A MINIMUM OF 6 MIL. VAPOR BARRIER AT ALL AIR CONDITIONED SPACES AND GARAGES. HOLES IN VAPOR BARRIER ARE NOT PERMITTED AROUND ALL SEAMS AND CUT-OUTS
- ALL REINFORCING SHALL CONFORM TO ASTM A615 FOR GRADE 60, STEEL/WELDED WIRE MESH TO CONFORM TO ASTM A-185
- 6.1. PROVIDE CHAIRS AND BOLSTERS.
- 6.1.1. BOLSTERS TO HAVE PLASTIC COATED LEGS AND FEET (IF EXPOSED TO EXTERIOR ELEMENTS
- 6.2 ENSURE MESH IS EMBEDDED 1" FROM THE TOP SLAB. LAP JOINTS @ 8" AND TIE.
- WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 AND SHALL BE ADEQUATELY SUPPORTED @ 3'-0" O.C. EACH WAY.
- THE MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS: CAST AGAINST EARTH: 3" EXPOSED TO EXTERIOR ELEMENTS: 1"
- FORMED SURFACES: 1'

STEEL, STRUCTURAL STEEL, STEEL JOISTS, AND MISC. STEEL TO STRUCTURAL

AS PER MANUFACTURERS SPECIFICATIONS UNLESS OTHERWISE NOTED

ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION

- CONSTRUCTION JOINTS DESIGN AND LOCATIONS SHALL CONFORM STRICTLY TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. ANY CONSTRUCTION OR CONTROL DESIRED OR PREFERRED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION OF THOSE
- CHECK ALL DRAWINGS AND APPLICABLE MANUFACTURER'S SHOP DRAWINGS FOR LOCATION OF ALL EMBEDDED ITEMS SUCH AS PIPE SLEEVES, ANCHOR BOLTS, ETC., PRIOR TO PLACING CONCRETE
- 10. REINFORCEMENT FOR CONTINUOUS FOOTINGS SHALL BE CONTINUOUS AND SPLICED WITH A FULL 30" LAP. PROVIDE CORNER BARS.
- 11. CONTRACTOR SHALL PROVIDE SAWCUTS IN SLAB @ A MAX. SPACING OF 20'-0" ON CENTER EACH WAY OR 400 S.F. AND AT ALL RE-ENTRANT CORNERS. SAW CUT SHALL BE 1/4 OF THE SLAB DEPTH AND SHALL BE PERFORMED AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM DISLODGING BY THE SAW BLADE. THIS IS AN EFFORT TO CONTROL THE STRESSES. AN INHERENT PROPERTY OF CONCRETE WHICH SOMETIMES RESULTS IN CRACKS (WHICH IS NOT UNCOMMON).
- 12. CONCRETE FOR SLABS ON GRADE AND ELEVATED SLABS SHALL HAVE 3/4" LARGE AGGREGATE. "PEAROCK" IS NOT PERMITTED FOR SLABS.
- 13. ELEVATED SLABS SHALL BE TEMPORARILY SHORED UNTIL FULLY CURED.
- 14. ALL CONCRETE THAT IS ALTERED (WATER, ADDITIVES, ETC.) SHALL BE TESTED TO ENSURE STRENGTH REQUIREMENTS ARE MET.

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# CONCRETE NOTES (CONT'D)

- 15. TERMINATE ALL VERTICAL REINFORCING AT THE TOP AND BOTTOM WITH 10" ACI
- 16. SOILS SHALL BE TREATED.

## LIGHT GAUGE STEEL

- 1. STRUCTURAL LIGHT GAUGE STEEL SHALL CONFORM TO ASTM A1003/A1003M WITH MIN. FY = 33 KSI
- 2. BUYOUT LIGHT GAUGE STEEL SHAPES SHALL CONFORM TO MANUFACTURERS SPECIFICATIONS AS CALLED OUT IN THE DESIGN CALCULATIONS/DRAWINGS.
- 3. DESIGN OF LIGHT GAUGE STRUCTURAL STEEL SHALL BE DONE IN ACCORDANCE WITH THE ANSI COLD FORMED STEEL DESIGN MANUAL.

## DESIGN PARAMETERS FOR WIND LOAD COMPLIANCE

- RISK CATEGORY II
- 2. FLORIDA BUILDING CODE SEVENTH EDITION (2020) AND ASCE 7-16
- BUILDING DESIGN IS ENCLOSED
- MEAN ROOF HEIGHT IS 15'- 0"
- ROOF PITCH 1/4":12" DEGREES
- 6. INTERNAL PRESSURE COEFFICIENT ± 0.18
- 7. WIDTH OF END ZONE A = 5'-3"
- 8. WIND SPEED (VULT) 155 MPH 3-SECOND GUST (VASD) 120 MPH 3-SECOND GUST
- 9. WIND EXPOSURE CLASSIFICATION: C
- 10. ADJUSTMENT FACTOR FOR EXPOSURE AND HEIGHT = 1.21

WIND COMPONENTS AND CLADDING PRESSURES (PSF)														
	EFF. AREA	ROOF WALL												
	(SQ.FT.)	ZONE 1'	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5							
	< 10	+21.30/-45.01	+21.30/-78.41	+21.30/-103.39	+21.30/-140.90	+52.39/-56.81	+52.39/-70.12							
	20	+19.90/-45.01	+19.90/-73.20	+19.90/-96.73	+19.90/-127.65	+50.03/-51.83	+50.03/-61.40							
	50	+18.21/-45.01	+18.21/-66.37	+18.21/-87.91	+18.21/-110.05	+46.83/-51.30	+46.83/-51.30							
	100	+16.82/-45.01	+16.82/-61.23	+16.82/-81.31	+16.82/-96.74	+44.53/-48.94	+44.53/-48.94							

ALL THESE WIND PRESSURES ARE MULTIPLIED WITH ADJUSTMENT FACTOR FOR BUILDING AND HEIGHT AND REDUCED PRESSURES PER FBC /IBC WITH

MULTIPLYING FACTOR: 0.6

THE DESIGN WIND PRESSURE FOR C&C OF BUILDINGS SHALL NOT BE LESS THAN A NET PRESSURE OF 16 LBS/SQ. FT. ACTING IN EITHER DIRECTION NORMAL TO THE SURFACE.

11. LOADS:

ROOF / DEAD : 25 PSF ROOF / LIVE: 30 PSF

## DESIGN PARAMETERS FOR SEISMIC LOAD COMPLIANCE

- 1 IMPORTANCE FACTOR = 1.0 2. OCCUPANCY RISK CAT. II
- 3. SPECTRAL RESPONSE ACCELERATIONS

 $S_1 = 0.056$ 

4. SITE CLASS D

SPECTRAL RESPONSE COEF.

Sds = 0.088

 $Sd_1 = 0.09$ 

- SEISMIC DESIGN CAT. B
- SEISMIC FORCE RESISTING SYSTEM STEEL ORDINARY CONCENTRICALLY
- BRACE FRAMES R=3.25
- 8. ANALYSIS PROCEDURE
  - EQUIVALENT LATERAL FORCE

9. SEISMIC BASE SHEAR 3.8% OF W

LATERAL FORCE-RESISTING SYSTEMS SHALL MEET SEISMIC DETAILING REQUIREMENTS AND LIMITATIONS PRESCRIBED IN ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A, EVEN WHEN WIND LOAD EFFECTS ARE GREATER THAN SEISMIC LOAD EFFECTS, ALL STRUCTURAL FRAMING SHALL MEET ULTIMATE WIND SPEED REQUIREMENTS AS SET FORTH IN CHAPTER 16, IBC 2015

GEOTECHNICAL REPORT:

NOVA JOB NO.: 10116-2022107

PROVIDED BY NOVA ENGINEERING & ENVIRONMENTAL LLC. DATE: 07/15/2022, SUGGESTED TO USE 2FT. SOIL FILL W/ LOW PLASTICITY SELECT FILL. PROOF ROLLED & PROPERLY COMPACTED BEFORE ANY FOUNDATIONS POURED. SEE GEOTECHNICAL REPORT & CIVIL FOR MORE INFORMATION







FL REG. NO. 64085

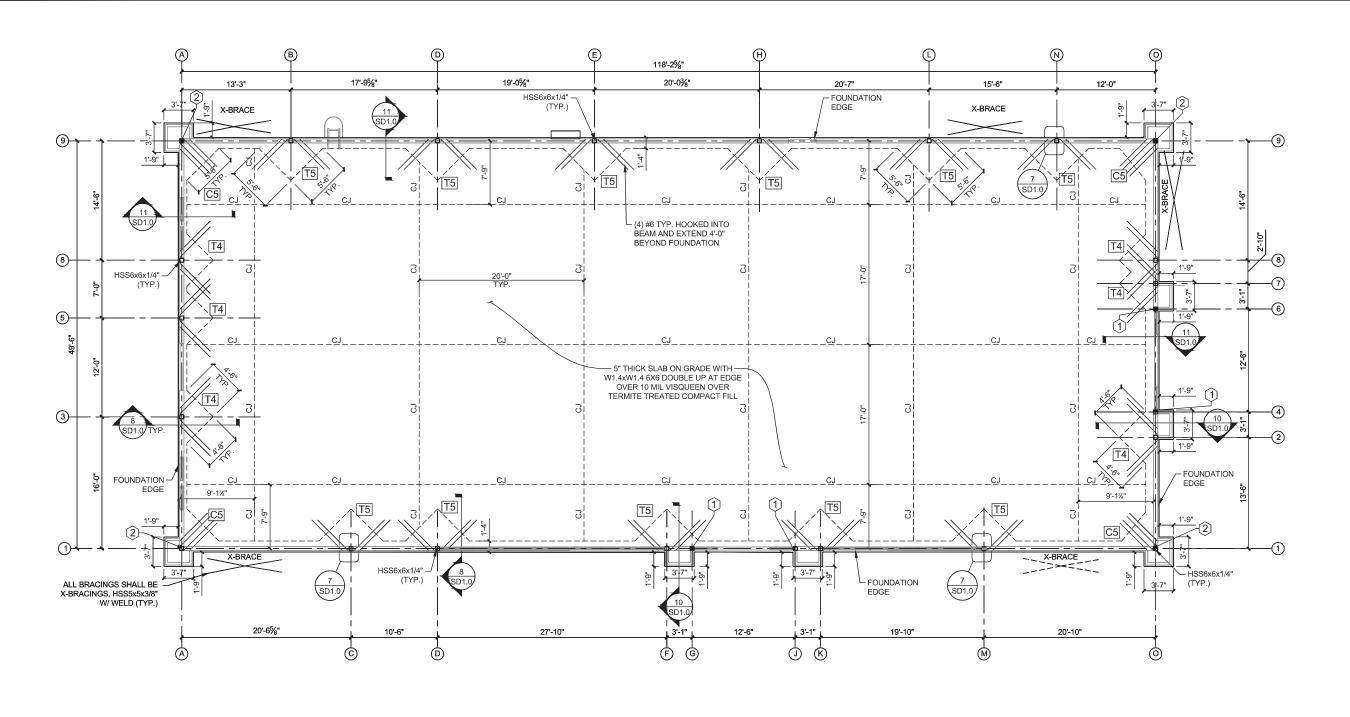
STRUCTURAL DRAWING LIST STRUCTURAL GENERAL NOTES S1.0 STUCTURAL GENERAL NOTES FOUNDATION PLAN S3.0 ROOF FRAMING PLAN S4.0 BUILDING ELEVATIONS BUILDING ELEVATIONS SD1.0 FOUNDATION DETAILS SD1.1 TRASH ENCLOSURE FLOOR PLAN AND DETAILS TRASH ENCLOSURE EXTERIOR ELEVATIONS TRASH ENCLOSURE SECTION AND DETAILS GENERATOR ENCLOSURE FLOOR PLAN AND SD1.4 GENERATOR ENCLOSURE EXTERIOR ELEVATIONS SD1.5 SD1.6 GENERATOR ENCLOSURE SECTION AND DETAILS STEEL FRAMING DETAILS SD3.0 STEEL FRAMING DETAILS SD4.0 ROOF FRAMING DETAILS ROOF FRAMING DETAILS SD5.0 LIGHT GAUGE DETAILS SD6.0 MISCELLANEOUS DETAILS

Date ed and sealed by (Nisit Sappar and sealed and the signature verified by a 3<sup>rd</sup> Party Certi Authority on any electronic CEFCO #426 - PACE

AS NOTED S1.1

RUCTURAL GENERAL NOTES

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- FOUNDATION NOTES:

  1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EMBEDMENT, PLUMBING, FIXTURES, AND DRAINS.
- REFERENCE ARCHITECTURAL PLANS FOR ALL DIMENSIONS AND VERIFY.
- SEE SHEET S1.0 & S1.1 FOR ALL MATERIAL SPECIFICATIONS. FOOTING SIZES REFERENCED IN THE PLAN:
- - C5: 5'-6" W x 5'-6" L x 2'-0" D CEE FOOTING
  - T4: 4'-6" W x 4'-6" L x 2'-0" D TEE FOOTING
  - T5: 5'-6" W x 5'-6" L x 2'-0" D TEE FOOTING
  - T6: 6'-0" W x 6'-0" L x 2'-0" D SPREAD FOOTING
- PROVIDE 1/2" DENSGLASS OVER METAL STUD FRAMING. FASTEN PER MANUFACTURERS INSTRUCTIONS.
- ALL COLUMNS ARE HSS6x6x1/4", U.N.O., INCLUDING BRACING COLUMNS.
- ALL COLUMNS SHALL EXTEND TO TOP OF PARAPET, U.N.O.

## KEYNOTE:

- 1 TOP OF COLUMN TO BE AT B.O. STOREFRONT BEAM
- (2) SEE DETAIL 1/SD1.0 FOR BASE PLATE & ANCHOR BOLTS. (TYP.)



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FOUNDATION PLAN

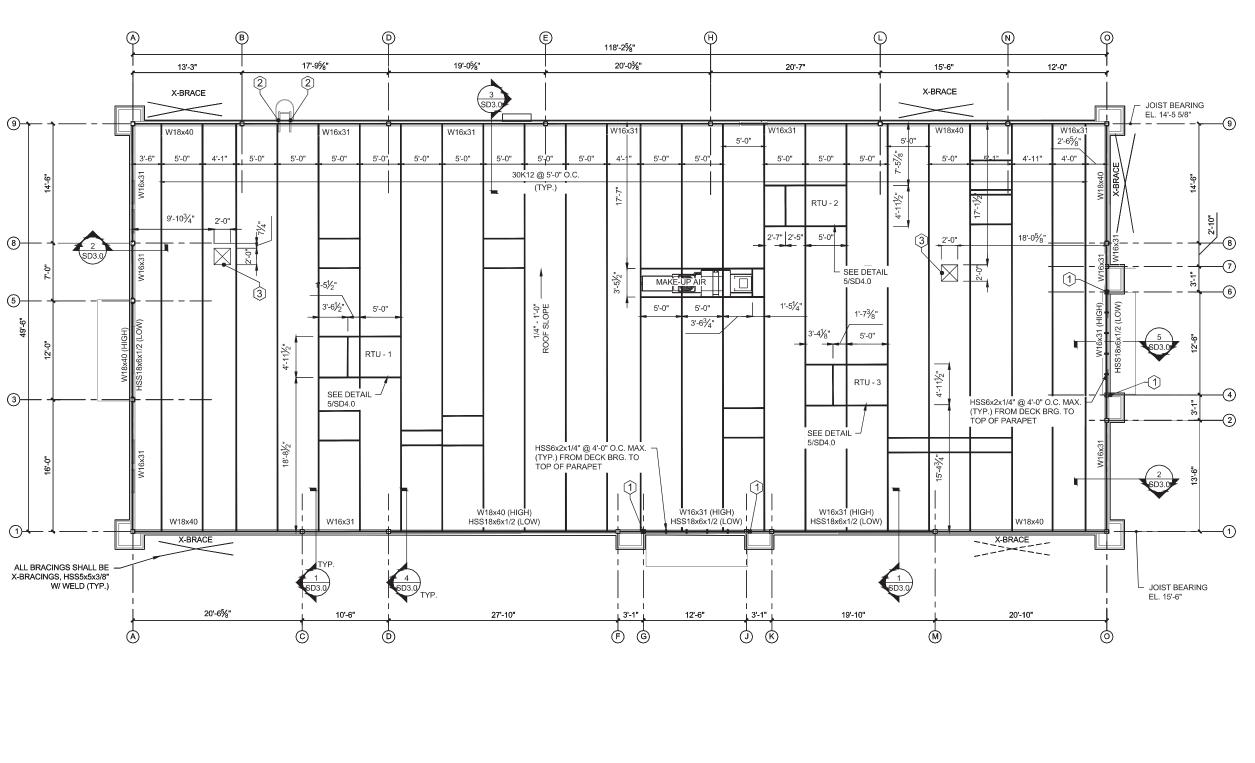
S2.0

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ROOF FRAMING NOTES:

1. THE ROOF STRUCTURE SHALL NOT BE USED FOR STOCKPILING OF EQUIPMENT OR MATERIALS UNLESS APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND THE JOIST MANUFACTURER. THE ROOFING SYSTEM SHALL BE AS PER DRAWINGS AND PER CONSTRUCTION SPECIFICATIONS.

COORDINATE ROOF ELEVATIONS WITH ARCH. AND STRUCTURAL DRAWINGS. ROOF TOP UNITS: GENERAL CONTRACTOR TO INSTALL FLASHING AND COUNTER-FLASHING TO ROOFING MANUFACTURER SPECIFICATIONS.

ALL COLUMNS SHALL BE HSS6x6x1/4", U.N.O.

ALL COLUMNS SHALL EXTEND TO TOP OF PARAPET (19'-0" TYP.) U.N.O. SEE S1.0 & S1.1 FOR ADDITIONAL NOTES.

CEFCO TOWER INFILL FRAMING AND METAL STUD WALL FRAMING BY OTHERS.

 ALL PARAPET BEAMS TO BE HSS6X2X3/16, U.N.O. REFER TO ELEVATIONS FOR MORE INFORMATION.
 THE JOIST MANUFACTURER SHALL DESIGN THE JOISTS FOR ADDITIONAL RTU LOADS AS MENTIONED BELOW:

RTU - 1 800LBS 1200LBS RTU - 3 1200LBS MAKE-UP AIR 1200LBS 11. ▶ DENOTES MOMENT CONNECTION

1 TOP OF COLUMN TO BE B.O. STOREFRONT BEAM

(2) G.C. TO PROVIDE DOUBLE STUDS AT LADDER VERTICAL CONNECTION (TYP.). TO BE DESIGNED

3 REFER TO DETAIL 2/SD4.1 FOR MECHANICAL EQUIPMENT OPENING



FRAMING PLAN CEFCO #426 -S3.0

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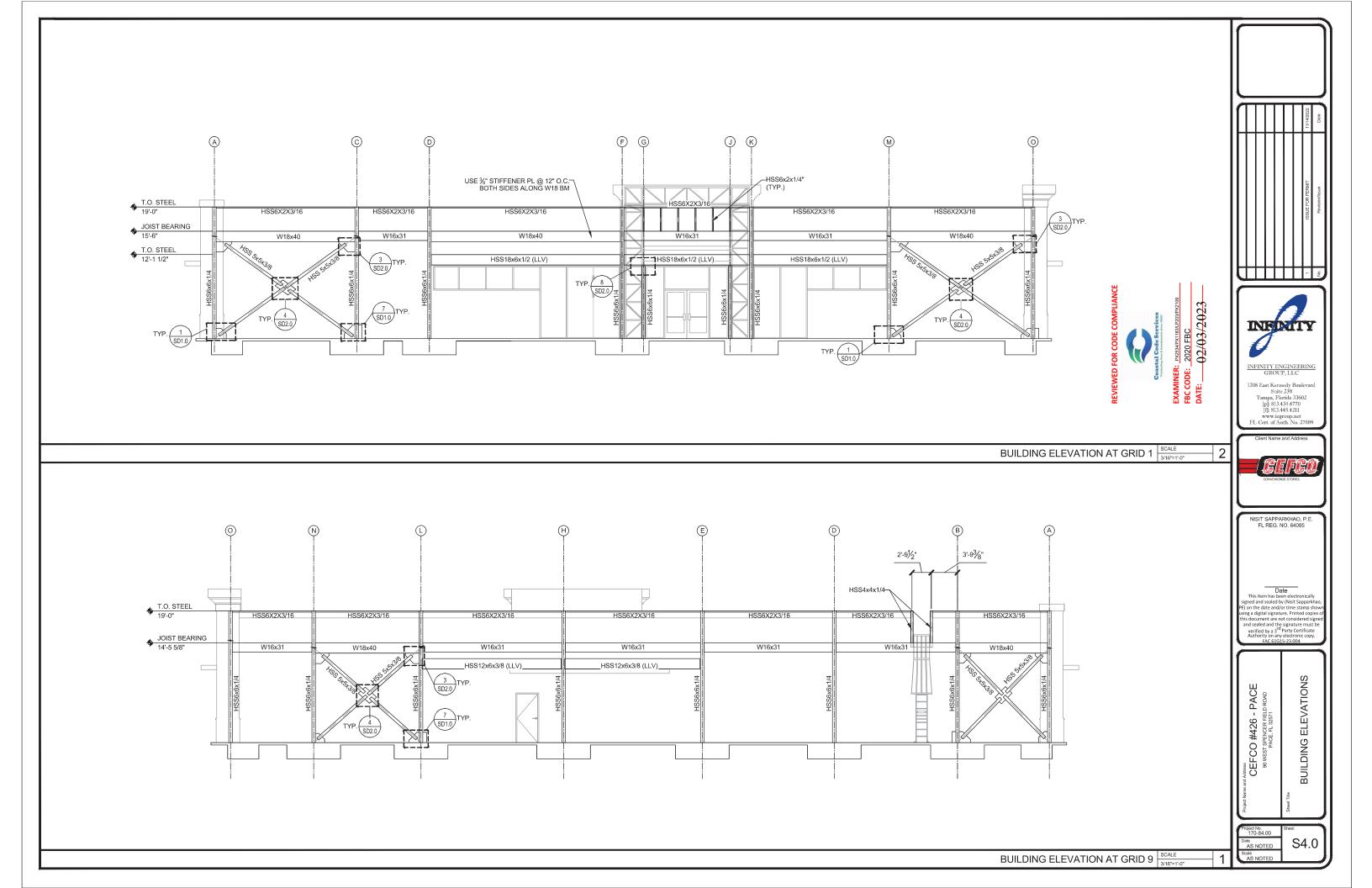
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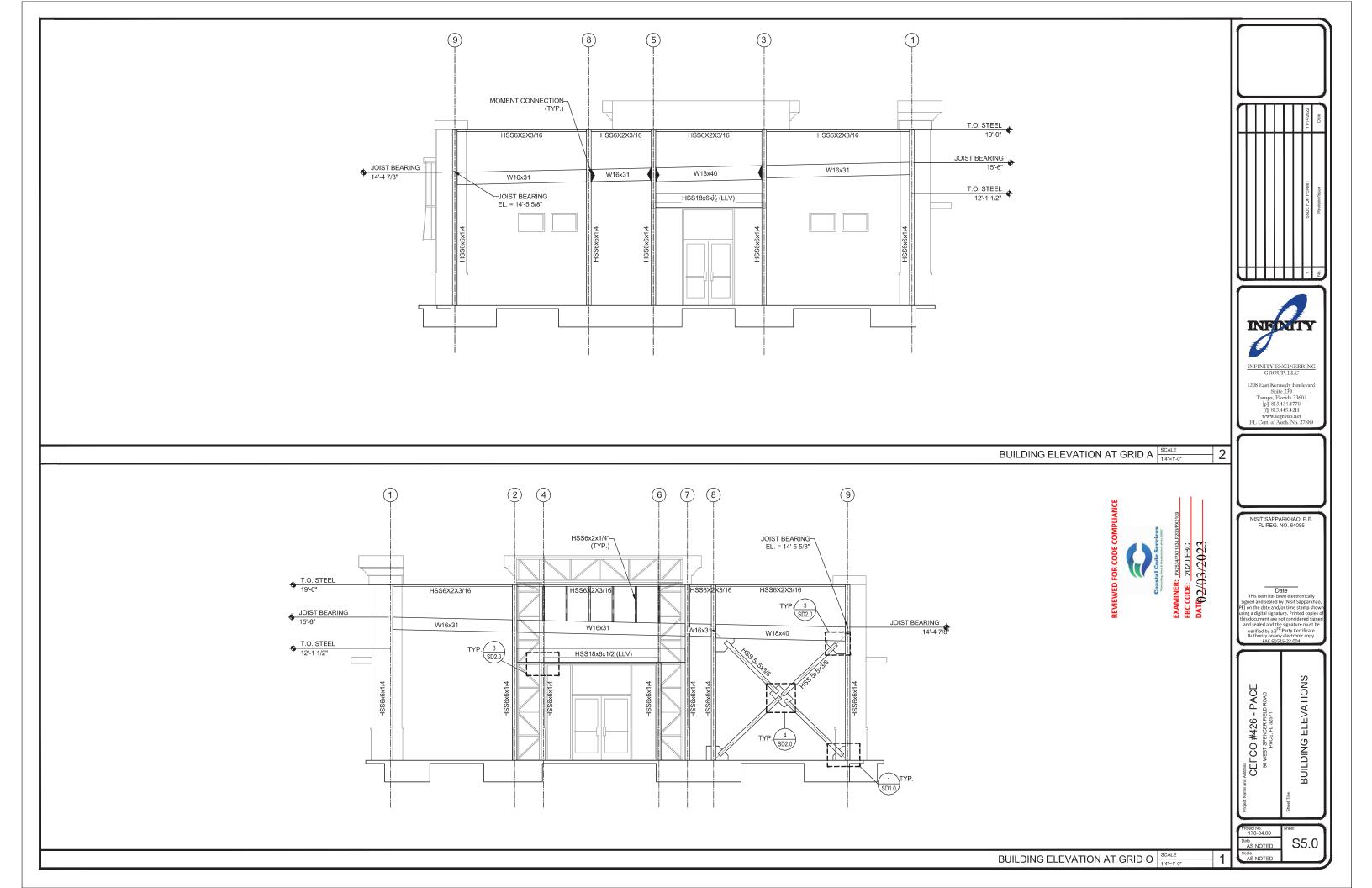
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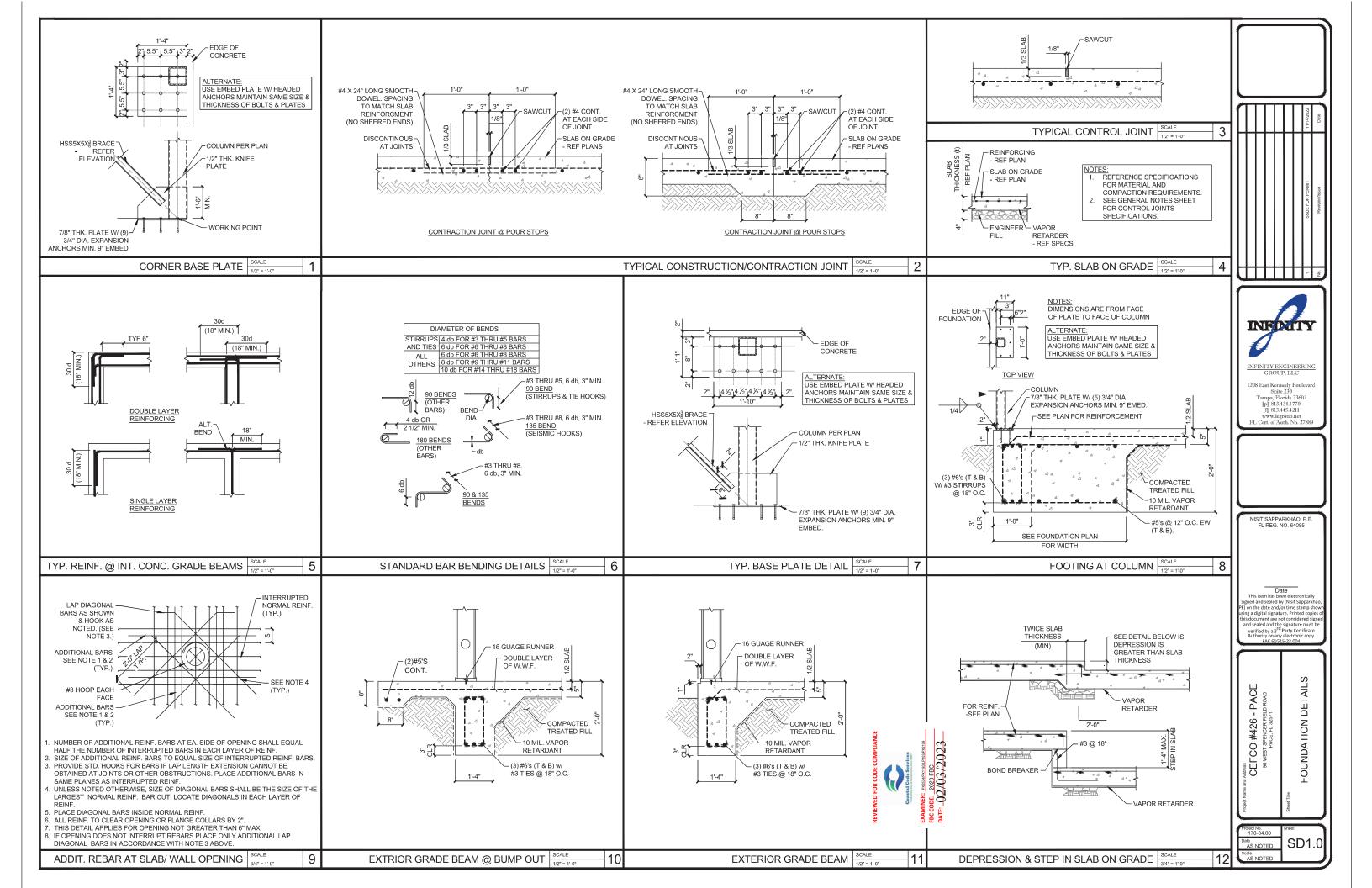
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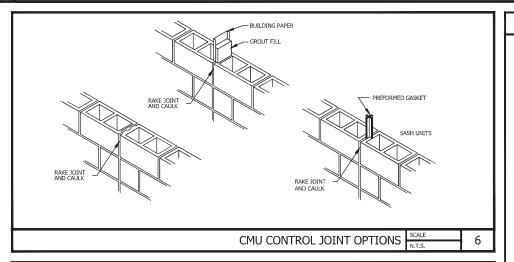
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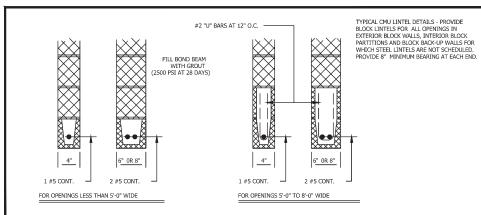
ROOF FRAMING PLAN SCALE

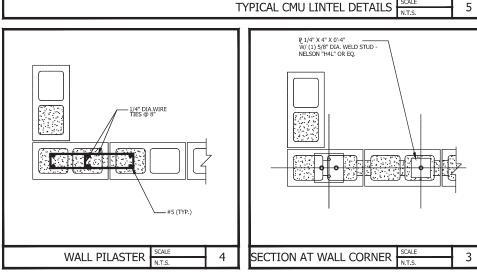


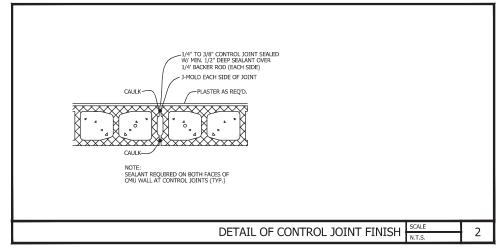


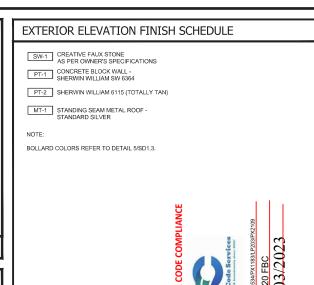






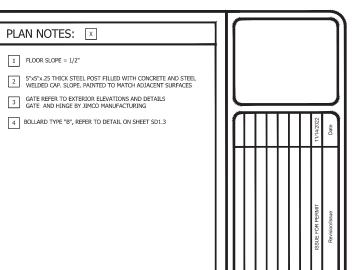






# GENERAL NOTES:

- ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES AND STANDARDS INCLUDING ADA AND OR OTHER HANDICAP ACCESSIBILITY CODES.
- GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
- THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.
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- CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING IN WALLS FOR SUPPORT OF ALL EQUIPMENT, SHELVING, ACCESSORIES, SIGNAGE, AND OTHER DEVICES REQUIRED.
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- 10. UPON COMPLETION OF PROJECT, OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS AND CERTIFICATES OF OCCUPANCY.
- 11. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE OWNER'S VENDORS ON SITE DURING CONSTRUCTION.
- ALL EXTERIOR FLOOR PLAN DIMENSIONS ARE TO EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED. ALL INTERIOR FLOOR PLAN DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.
- 20. ALL PLYWOOD REFERENCES TO BE FIRE-RETARDANT TREATED PLYWOOD.





INFINITY ENGINEERING GROUP, LLC

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> NISIT SAPPARKHAO, P.E FL REG. NO. 64085

> > Date

Date
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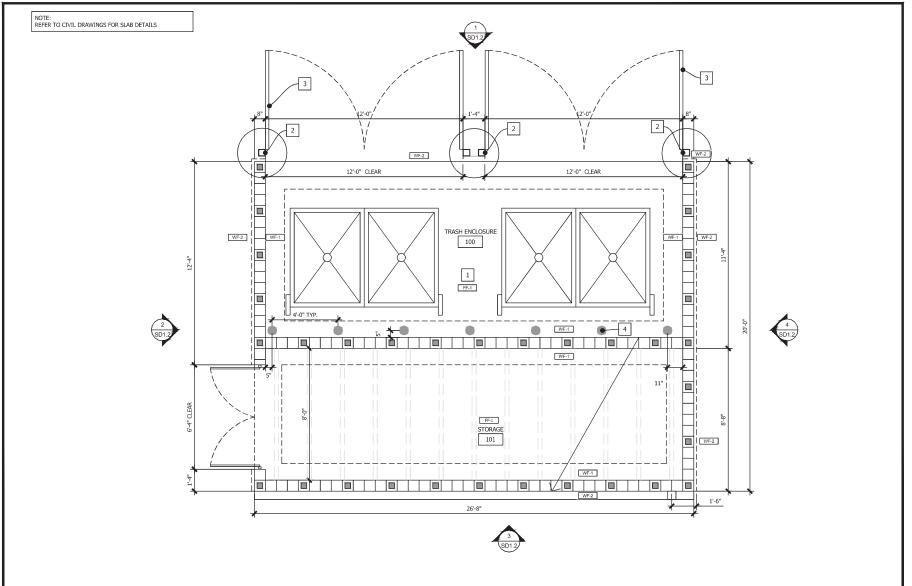
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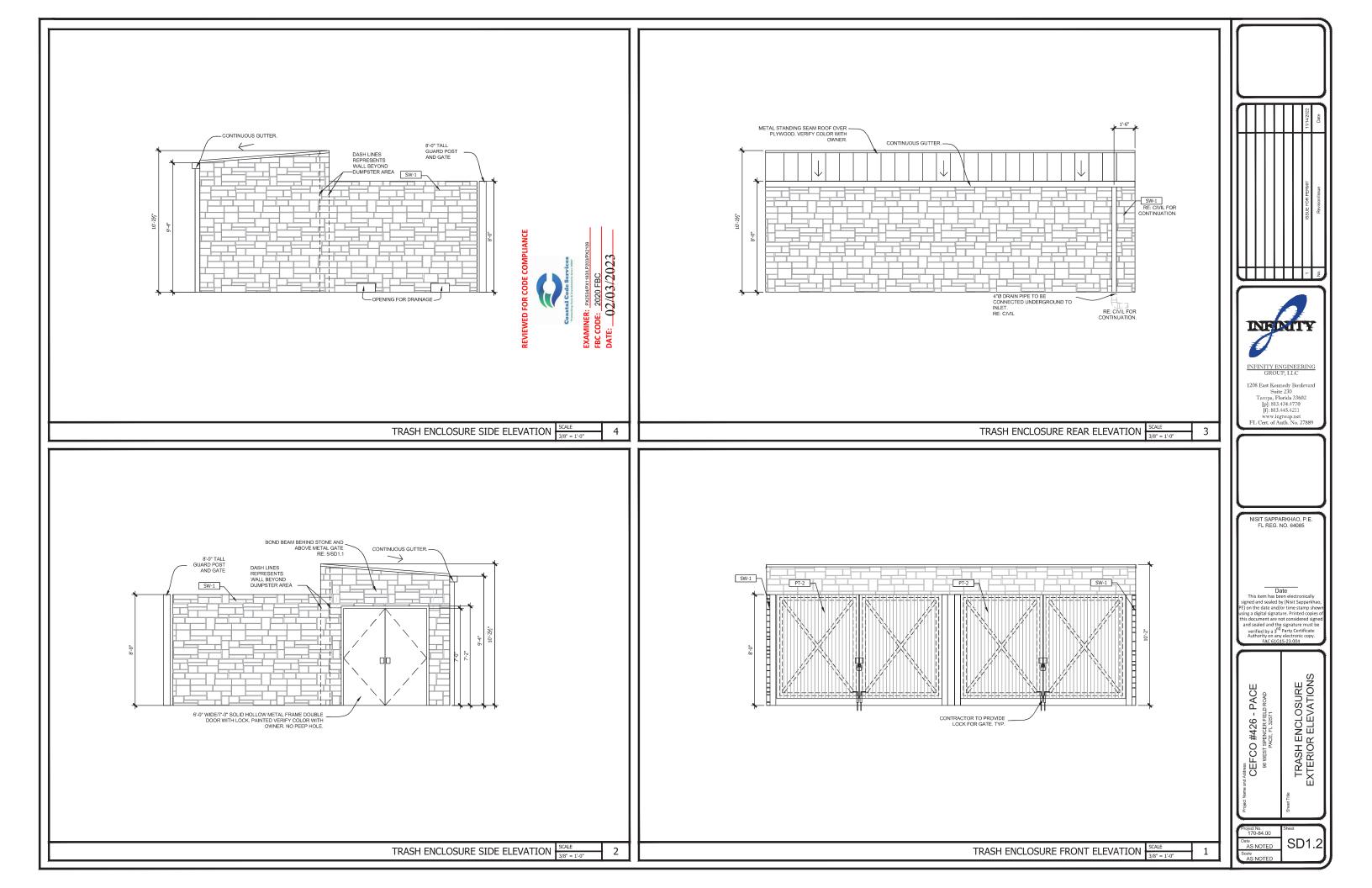
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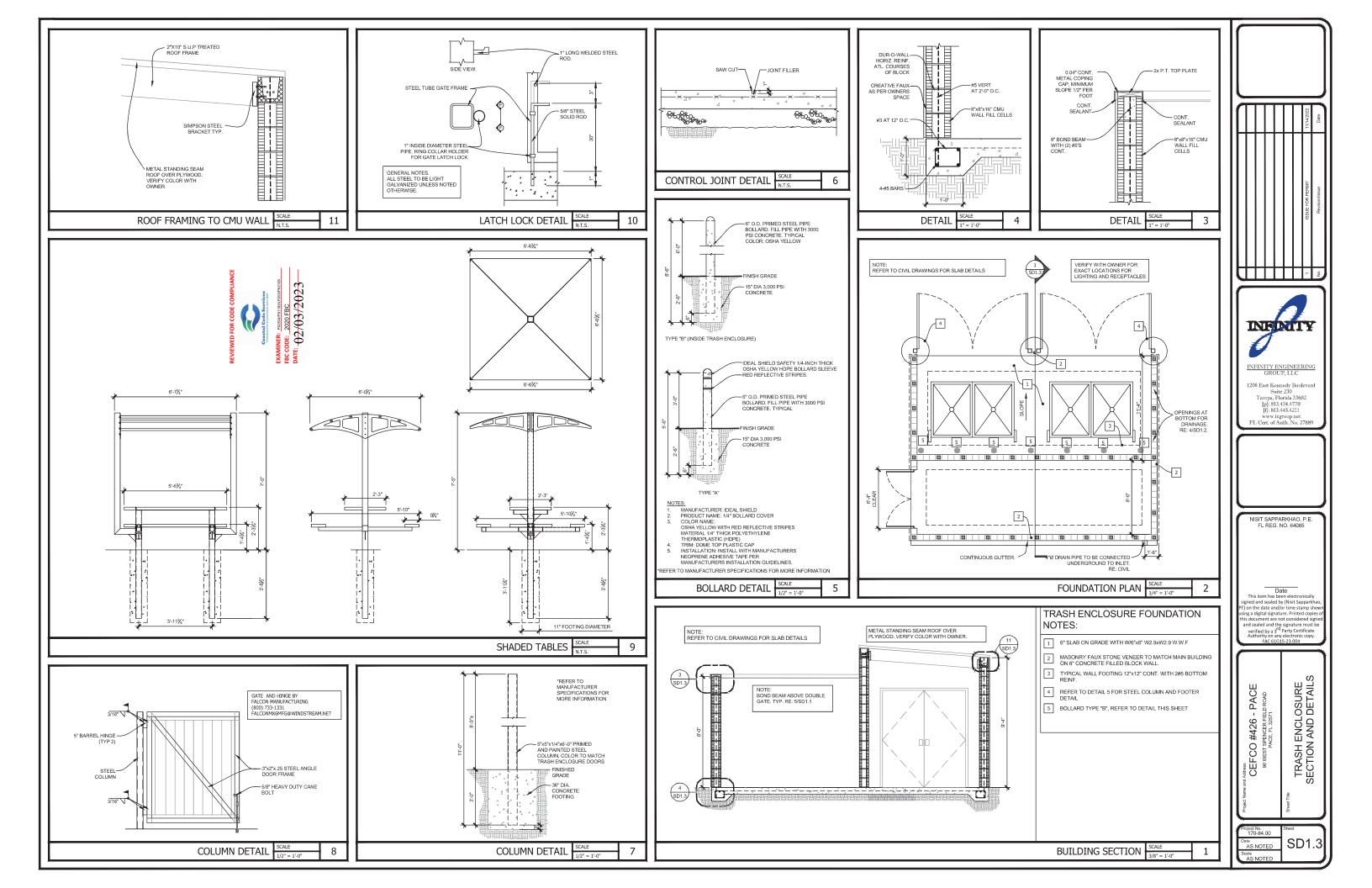
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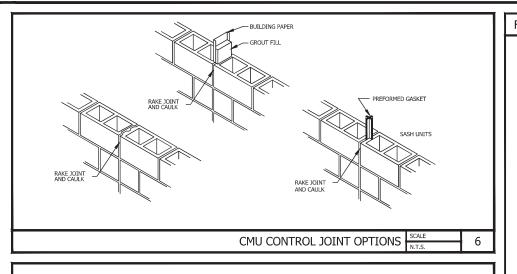
TRASH ENCLOSURE
FLOOR PLAN AND DETAILS

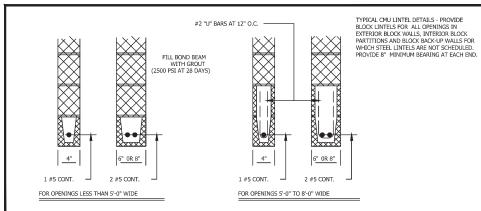
TRASH ENCLOSURE FLOOR PLAN

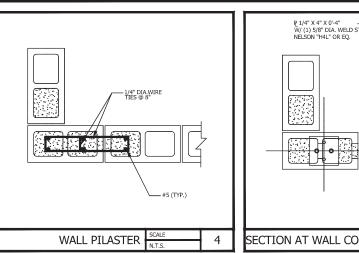


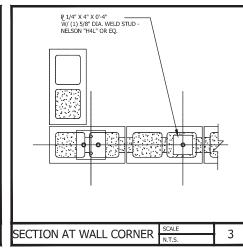






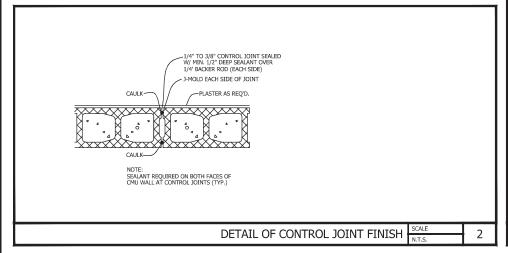






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TYPICAL CMU LINTEL DETAILS



# FINISH SCHEDULE FF-1 CONCRETE FLOOR WF-1 INTERIOR FINISH - CMU BLOCK WALL TO BE PAINTED SHERWIN WILLIAM 6364: EGGWHITE WF-2 CREATIVE FAUX STONE AS PER OWNER'S SPECIFICATIONS PT-1 SHERWIN WILLIAM 6115 (TOTALLY TAN)

#### **GENERAL NOTES:**

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- 20. ALL PLYWOOD REFERENCES TO BE FIRE-RETARDANT TREATED PLYWOOD.

PLAN NOTES: X 1 FLOOR SLOPE = 1/2" 5"x5"x.25 THICK STEEL POST FILLED WITH CONCRETE AND STEEL WELDED CAP. SLOPE. PAINTED TO MATCH ADJACENT SURFACES GATE REFER TO EXTERIOR ELEVATIONS AND DETAILS GATE AND HINGE BY JIMCO MANUFACTURING 4 ELECTRICAL AUTOMATIC TRANSFER SWITCH, CURRENT TRANSFORMER CABINET, AND METER BOX.



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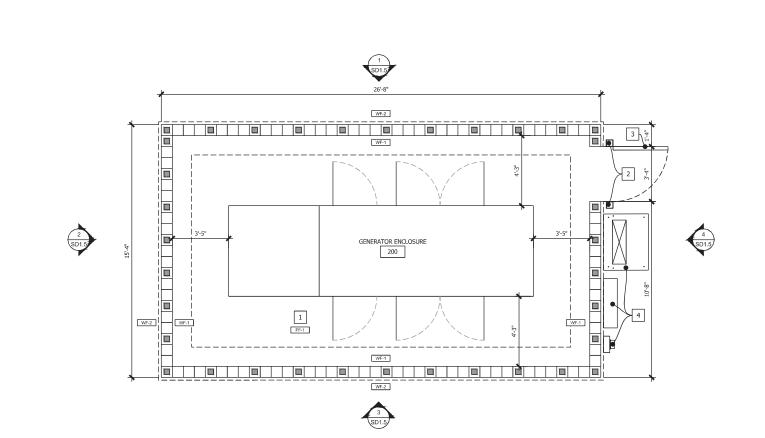
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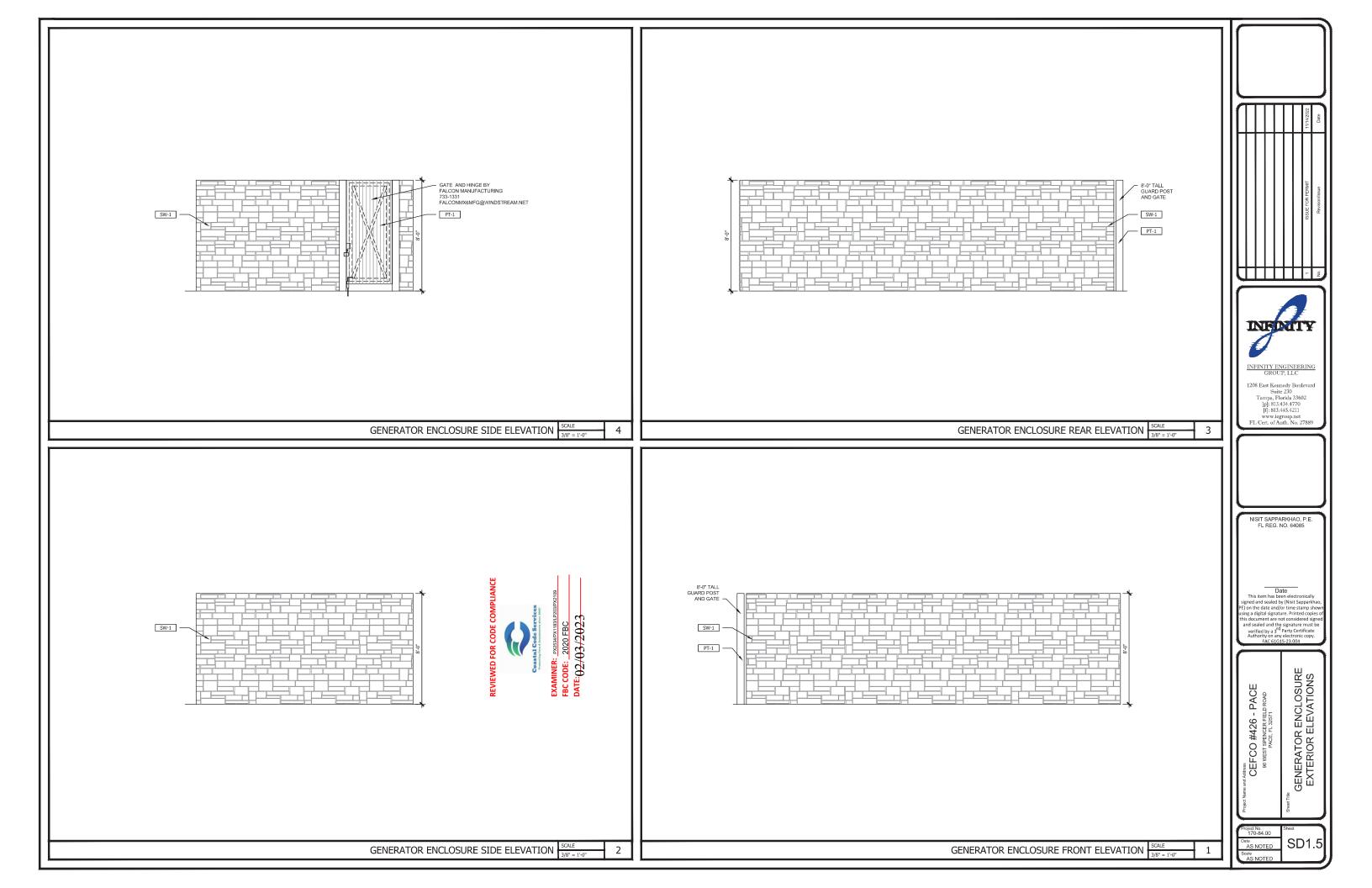
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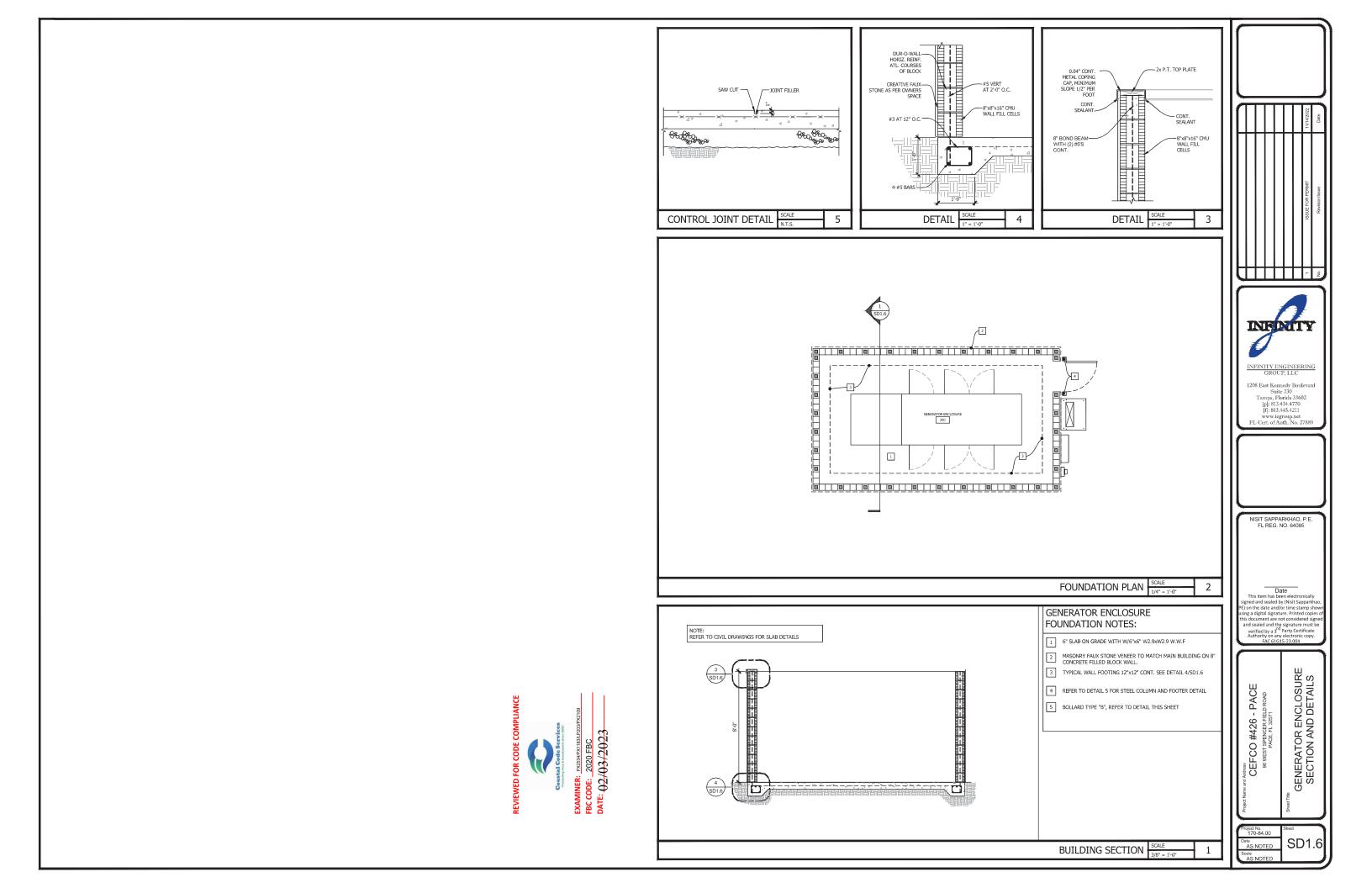
ENCLOSURE AND DETAILS - PACE CEFCO #426

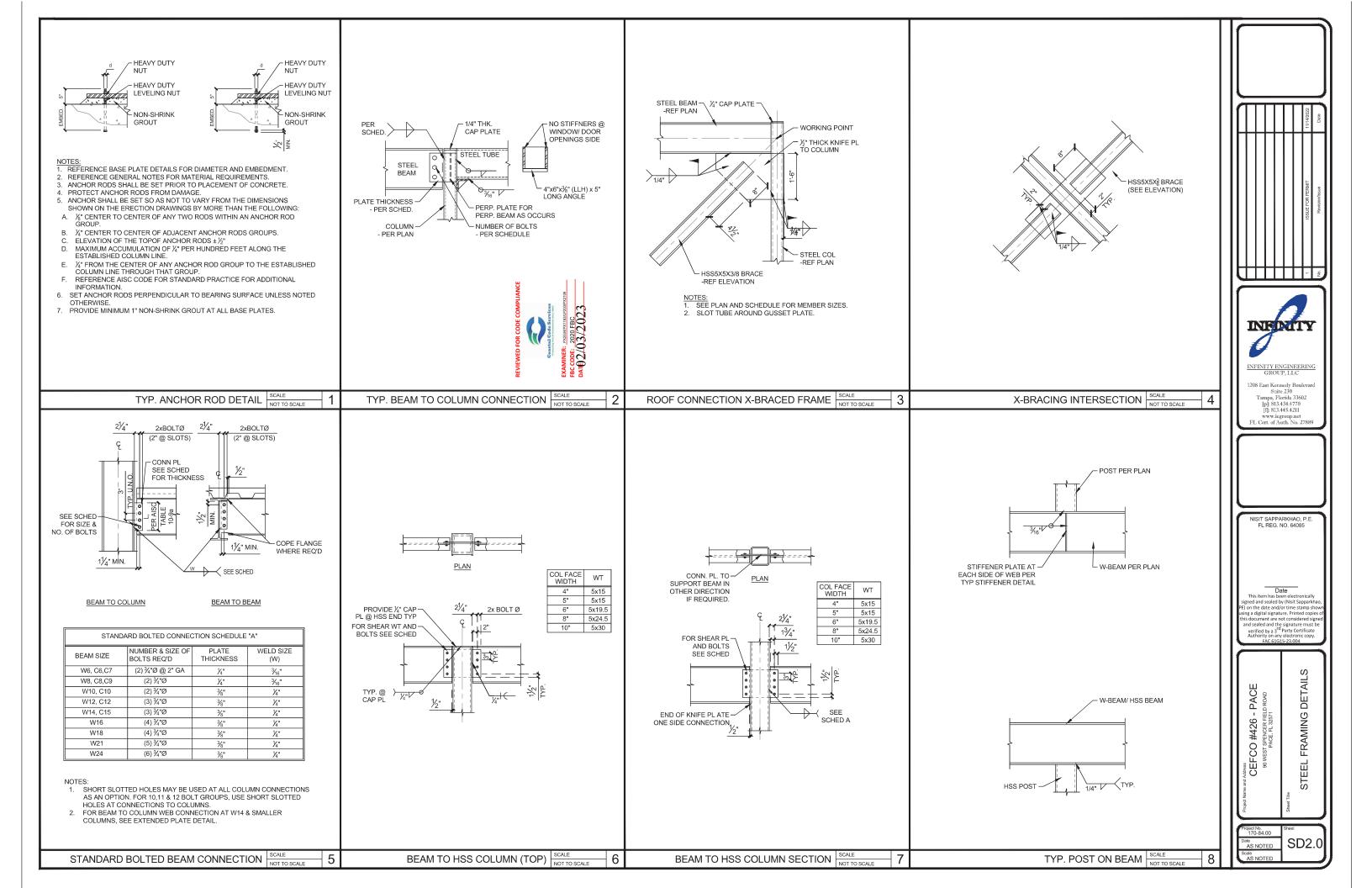
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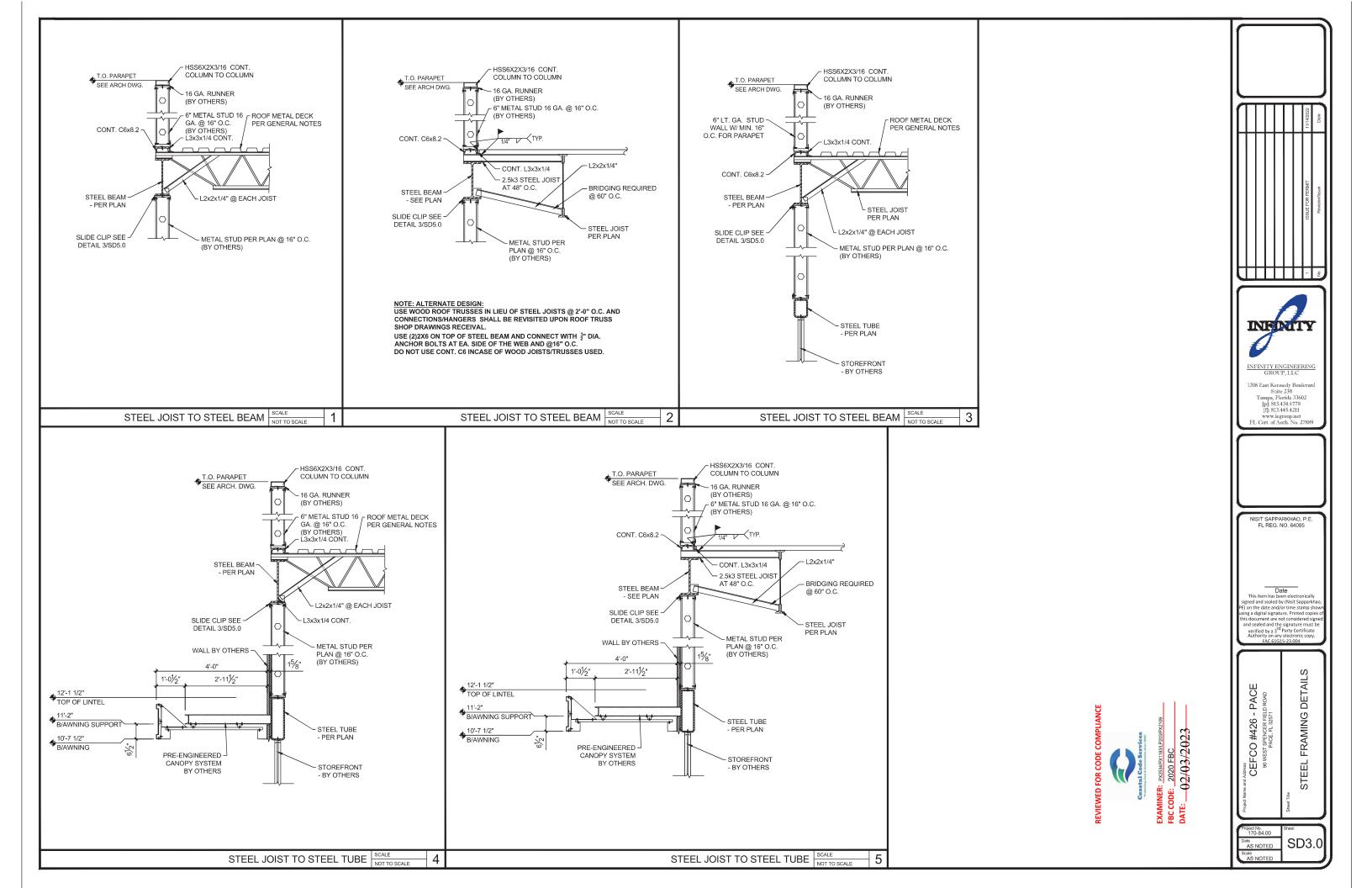


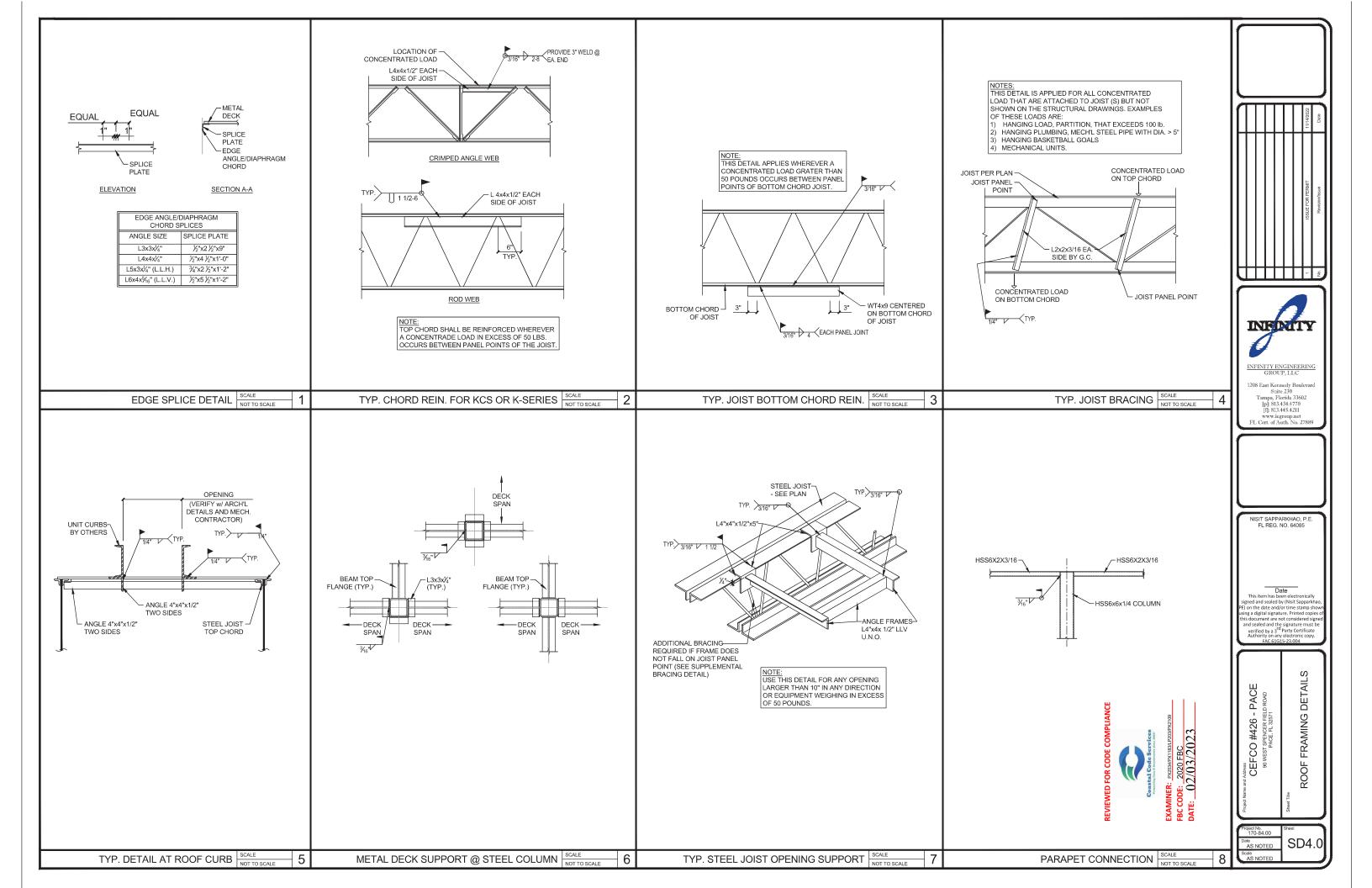
GENERATOR ENCLOSURE FLOOR PLAN

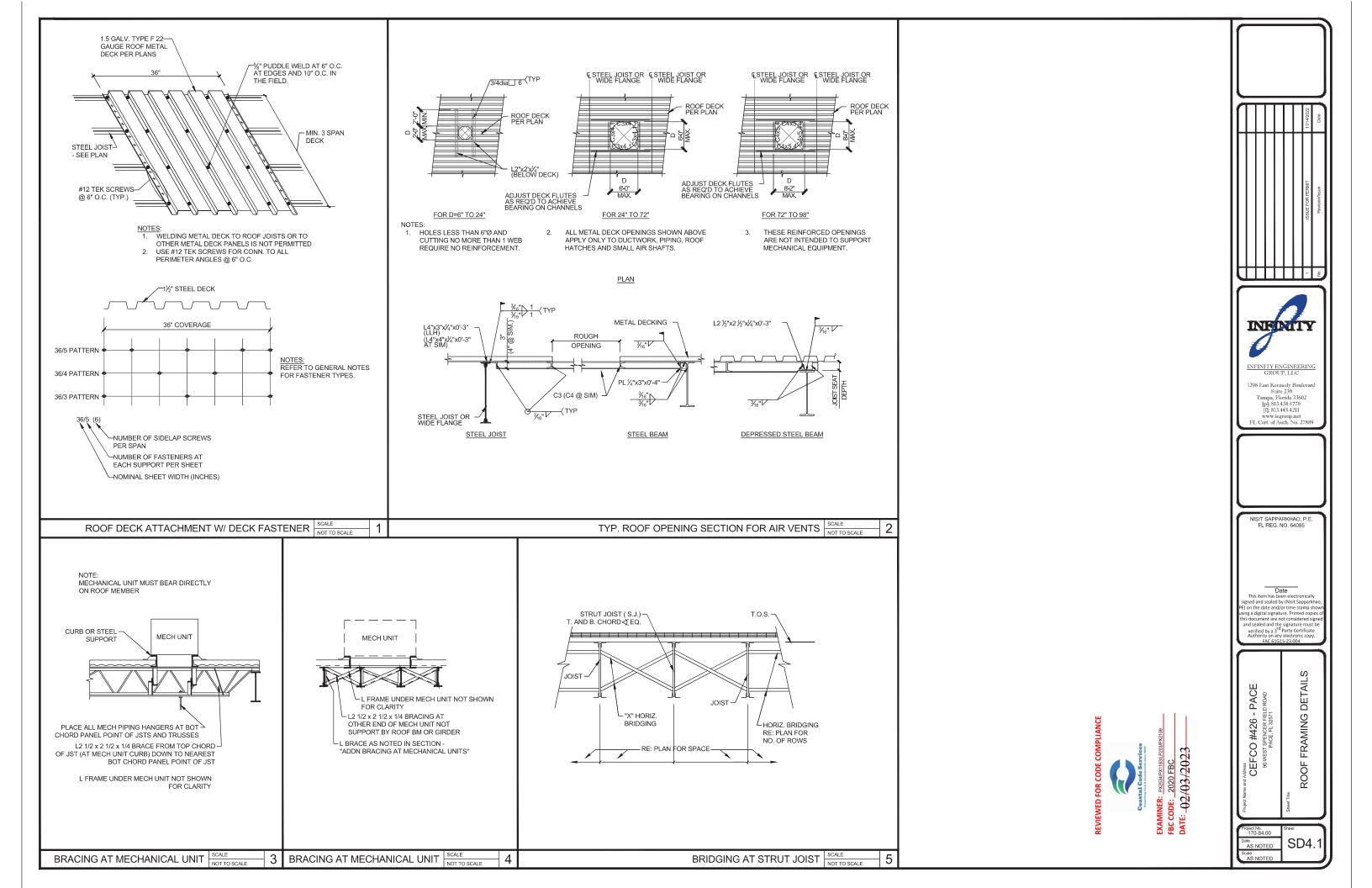


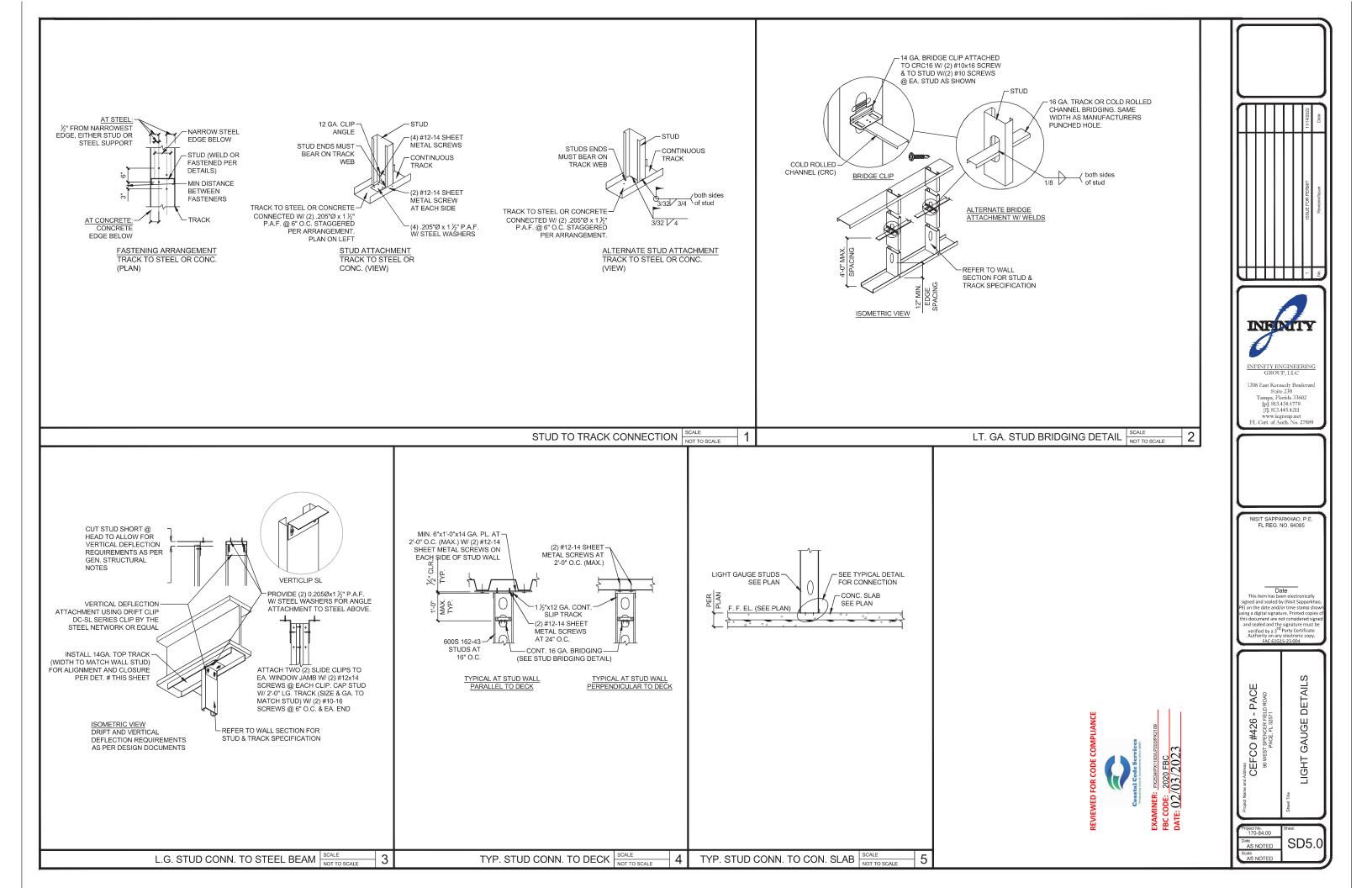


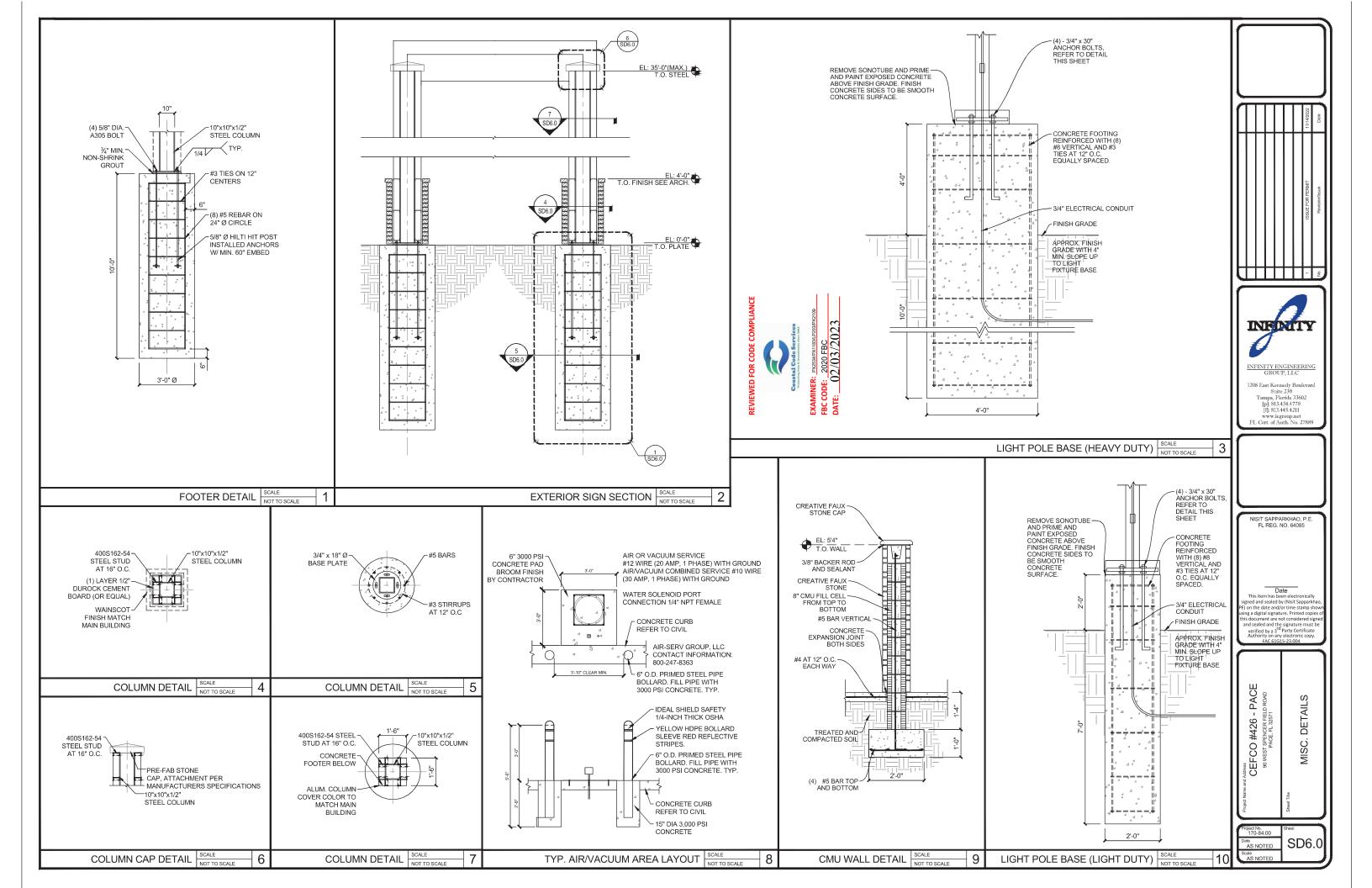












#### MECHANICAL SPECIFICATIONS:

#### PART 1 - GENERAL

#### 1.1 SUBMITTALS

A PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

#### 1.2 WARRANTY

A. WARRANT NEW AND MODIFIED DUCTWORK FOR PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF JOB. AGAINST NOISE AND VIBRATION UNDER FULL RANGE OF OPERATING

#### PART 2 - PRODUCTS

#### 2.1 METAL DUCTS

- A. CONTINUOUS HOT-DIP MILL GALVANIZED. MINIMUM COATING OF G60, LOCK-FORMING QUALITY STEEL SHEETS IN ACCORDANCE WITH ASTM A653.
- B. GALIGES: SHEET METAL GALIGE AS SPECIFIED IN SMACNA - HVAC DUCT CONSTRUCTION STANDARDS BUT NOT LESS THAN THE FOLLOWING:
- 1. RECTANGULAR DUCT: 26 GAUGE FOR ALL SIZES.
- 2. ROUND DUCT: PRIME GRADE STEEL SHEET.
- a. 14 INCH DIAMETER AND SMALLER: 26 GAUGE.
- b. 15 INCH DIAMETER THRU 26 INCH DIAMETER: 24 GAUGE.
- C.ROUND DUCT SHALL BE SPIRAL SEAM WHERE EXPOSED AND NOT INSULATED. IN ALL OTHER AREAS SPIRAL OR LONGITUDINAL SHALL BE USED.

#### 2.2 TURNING VANES

- A.MANUFACTURED TURNING VANES FOR METAL DUCTS: CURVED BLADES OF GALVANIZED SHEET STEEL: SUPPORT WITH BARS PERPENDICULAR TO BLADES SET; SET INTO VANE RUNNERS SUITABLE
- B GENERAL REQUIREMENTS: COMPLY WITH SMACNA . DENERAL REQUIREMENTS: COMPLY WITH SMACNA
  "HVAC DUCT CONSTRUCTION STANDARDS - METAL
  AND FLEXIBLE": FIGURES 4-3 "VANES AND VANE
  RUNNERS," 4-4, "VANE SUPPORT IN ELBOWS."

#### 2.3 SEALANT AND GASKET

A. GENERAL SEALANT AND GASKET REQUIREMENTS A GENERAL SEALANT AND GASKET REQUIREMENTS SURFACE-BURNING CHARACTERISTICS FOR SEALANTS AND GASKETS SHALL BE A MAXIMUM FLAME-SPREAD INDEX OF 25 AND A MAXIMUM SMOKE- DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO UL 723; CERTIFIED BY AN NRTL

#### 2.4 HANGERS AND SUPPORTS

- A.HANGER RODS: CADMIUM-PLATED STEEL RODS AND NUTS.
- B. STRAP AND ROD SIZES: COMPLY WITH SMACNA'S 'HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" TABLE 5-1." RECTANGULAR DUCT HANGERS MINIM SIZE." AND TABLE 5-2 "MINIMUM HANGER SIZES FOR ROUND DUCT '
- C. STEEL CABLES FOR GALVANIZED STEEL DUCTS GALVANIZED STEEL COMPLYING WITH ASTM A 603. D STEEL CABLE END CONNECTIONS: CADMIUM
- PLATED STEEL ASSEMBLIES WITH BRACKETS SWIVEL AND BOLTS DESIGNED FOR DUCT HANGER
- E. DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS, OR SELF-TAPPING METAL SCREWS; COMPATIBLE WITH DUCT MATERIALS.

#### 2.5 MECHANICAL EQUIPMENT

- A. PROVIDE EQUIPMENT INDICATED ON DRAWINGS.
- B. PRODUCTS REQUIRING ELECTRICAL CONNECTION: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES, INCORPORATED, AND ACCEPTABLE TO THE AUTHORITY HAVING SDICTION AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED
- C OPERATION AND MAINTENANCE DATA: INCLUDE MANUFACTURER'S DESCRIPTIVE LITERATURE.

  OPERATING INSTRUCTIONS, MAINTENANCE AND MECHANICAL EQUIPMENT

#### 2.6 CONTROLS

- A.PROVIDE COMPLETE CONTROLS SYSTEM INCLUDING STEP-DOWN TRANSFORMERS FOR 24 VAC CONTROL RELAYS RELAY BOARDS RELAY VAC CONTROL, RELAYS, RELAY BOARDS, RELAY BASES, PRINTED CIRCUIT BOARDS, THERMOSTATS, TIMERS, SENSORS, INDICATORS, ACTUATORS, AND OTHER NECESSARY DEVICES REQUIRED FOR COMPLETE INSTALLATION INCLUDING ENCLOSURES FOR EQUIPMENT, LOCATIONS AND TYDES OF THERMOSTATES TIMEDS AND OTHER CONTROLS EQUIPMENT ARE INDICATED ON DRAWINGS
- B. POWER SUPPLIES: TRANSFORMERS WITH CLASS 2 CURRENT-LIMITING TYPE OR OVERCURRENT PROTECTION: LIMIT CONNECTED LOADS TO 80 PERCENT OF RATED CAPACITY, DC POWER SUPPLY SHALL MATCH OUTPUT CURRENT AND OLTAGE REQUIREMENTS AND BE FULL WAVE

#### 1. TEMPERATURE SENSORS

a ACCURACY: PLUS OR MINUS 0.36 DEG F OR

#### MECHANICAL SPECS. (CONT):

- b. WIRE: TWISTED SHIELDED PAIR CABLE.
- c. OUTSIDE AIR SENSORS: WATERTIGHT INLET FITTING. SHIELDED FROM DIRECT SUNLIGHT
- 2 PROGRAMMABLE THERMOSTAT
- a. ELECTRIC, SOLID STATE. MICROCOMPUTER-BASED ROOM THERMOSTAT WITH REMOTE SENSOR.
- b. AUTOMATIC SWITCHING FROM HEATING TO
- 3. LOW VOLTAGE ON OFF THERMOSTATS
- a. 24-VAC. BIMETAL-OPERATED. SNAP-ACTING. 24-VAC, SIME IAL-OPERATED, SNAP-ACTIN MERCURY FREE, WITH ANTICIPATION HEATER, SET-POINT ADJUSTMENT, AND 3 DEG F MAXIMUM DIFFERENTIAL.

#### D.LOW VOLTAGE CONTROL WIRING

- JACKETED, INDIVIDUALLY SHIELDED TWISTED PAIRS OF STRANDED INSULATED TINNED COPPER CONDUCTORS.
- 2. STRANDED TINNED COPPER DRAIN WIRE B. PLENUM-RATED JACKET FOR PLENUM
- CONDUCTOR SIZES BASED ON 10% MAXIMUM VOLTAGE DROP.
- 5. MINIMUM WIRE SIZE: 22 AWG, MAXIMUM WIRE
- SIZE: 14 GAUGE.

#### PART 3 - EXECUTION

#### 3.1 GENERAL

- A. UNLESS OTHERWISE DICTATED BY APPLICABLE CODES OR THE AUTHORITY HAVING JURISDICTION ALL MATERIALS WITHIN RETURN AIR PLENUM MUST BE NONCOMBUSTIBLE AND/OR HAVE A FLAME PREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 IN ACCORDANCE WITH ASTM E 84 TESTING.
- B PROTECT WORK FOLIPMENT AND MATERIAL TO 5. PROTECT WORK, EUDIPMENT AND MATERIAL ID PREVENT OBSTRUCTION, DAMAGE OR BREAKAGE. CLOSE PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. COVER AND PROTECT EQUIPMENT AGAINST DIRT, WATER, CHEMICAL OR MECHANICAL INJURY, AT THE COMPLETION OF WORK, THOROUGHLY CLEAN ALL EQUIPMENT AND DELIVER THE ENTIRE SYSTEM IN AN UNBI EMISHED CONDITION
- C. MAKE CHANGES IN PULLEYS, BELTS, DUCTWORK AND DAMPERS AS REQUIRED FOR CORRECT BALANCE AS RECOMMENDED BY AIR BALANCE
- D. PROVIDE PENETRATION EIRESTOPPING THAT IS FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENING, AND WITH PENETRATING ITEMS IF ANY.
- COORDINATE SIZING OF SLEEVES, OPENINGS CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE PENETRATION FIRESTOPPING
- 2. INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLIS SS FOR PRODUCTS AND APPLICATIONS

#### 3.2 DUCT INSTALLATION

- A.INSTALL DUCTS ACCORDING TO SMACNA STANDARDS.
- B PROTECT DUCT INTERIORS FROM MOISTURI CONSTRUCTION DEBRIS, AND OTHER FOREIGN MATERIALS.
- C.FABRICATE, ERECT, AND INSTALL DUCTWORK FOR HEATING, VENTILATING, AND AIR CONDITIONING REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- D.MAKE JOINTS AIR TIGHT ON ALL DUCTWORK. SEAL EXHAUST DUCTWORK WITH EXTERIOR SEAL AS REQUIRED TO ASSURE POSITIVE SEAL, COMPLY WITH SMACNA DUCT CLASS A
- E. INSTALL FACTORY FABRICATED FITTINGS FOR CHANGES IN DIRECTION, SIZE, AND SHAPE AND FOR BRANCH CONNECTIONS

- A. COMPLY WITH SMACNA STANDARDS.
- B. INSTALL HANGERS AND SUPPORTS WITHIN 24" OF EACH ELBOW AND WITH 48" OF EACH BRANCH INTERSECTION.
- C.DO NOT USE FASTENERS THAT PENETRATE ROOF

3.4 MECHANICAL EQUIPMENT

A.INSTALL PER MANUFACTURER'S

RECOMMENDATIONS. 3.5 CONTROLS

- A COORDINATE LOCATION OF THERMOSTATS HUMIDISTATS, AND OTHER EXPOSED CONTR SENSORS WITH PLANS AND ROOM DETAILS BEFORE INSTALLATION.
- B. CONNECT AND CONFIGURE EQUIPMENT AND SOFTWARE TO ACHIEVE SEQUENCE OF OPERATIONS.
- C.LOW VOLTAGE CONTROL WIRING.
- 1. COMPLY WITH NECA 1.

#### MECHANICAL SPECS. (CONT):

- 2. COMPLY WITH TIA/EIA-568-B.1
- 3 BUNDLE AND HARNESS MULTICONDUCTOR INSTRUMENT CARLE IN PLACE OF SINGLE CABLES WHERE SEVERAL CABLES FOLLOW A
- NUMBER-CODE OR COLOR-CODE CONDUCTORS NOMBER-CODE OR COLOR-CODE CONDUCTORS
  FOR FUTURE IDENTIFICATION AND SERVICE OF
  CONTROL SYSTEM, EXCEPT LOCAL INDIVIDUAL
  ROOM CONTROL CABLES.
- 6. CONCEAL CABLE, EXCEPT IN MECHANICAL ROOMS AND AREAS WHERE OTHER CONDUIT AND PIPING ARE EXPOSED.
- 6. INSTALL PLENUM-RATED CABLE IN ENVIRONMENTAL AIR SPACES INCLUDING PLENUM CEILINGS.
- . WIRING WITHIN ENCLOSURES
- a. BUNDLE, LACE, AND TRAIN CONDUCTORS TO TERMINAL POINTS WITH NO EXCESS. b. INSTALL CONDUCTORS PARALLEL, WITH OF
- AT RIGHT ANGLES TO SIDES AND BACK OF ENCLOSURE. D. AFTER ELECTRICAL CIRCUITRY HAS BEEN
- ENERGIZED, START LINITS TO CONFIRM PROPER UNIT OPERATION REMOVE AND REPLACE MALFUNCTIONING UNITS AND RETES
- E. TEST EACH SYSTEM FOR COMPLIANCE WITH SEQUENCE OF OPERATION.
- OCCUPANCY ADJUSTMENTS, WHEN REQUESTED WITHIN 12 MONTHS OF DATE OF SUBSTANTIAL COMPLETION, PROVIDE ON-SITE ASSISTANCE IN ADJUSTING SYSTEM TO SUIT ACTUAL OCCUPIED CONDITIONS. PROVIDE UP TO THREE VISITS TO PROJECT DURING OTHER THAN NORMAL OCCUPANCY HOURS FOR THIS PURPOSE
- 3.6 EQUIPMENT LABEL INSTALLATION
- A.INSTALL OR PERMANENTLY FASTEN LABELS ON EACH MAJOR ITEM OF MECHANICAL EQUIPMENT.
- B. LABEL ACCESS DOORS TO INDICATE THE PURPOSE OF ACCESS DOOR.
- C.LOCATE EQUIPMENT LABELS WHERE ACCESSIBLE AND VISIBLE.
- . WHERE EQUIPMENT, SUCH AS A VAV BOX, IS CONCEALED BY ACCESSIBLE DROP OR LAY-IN CEILINGS OR OTHER ACCESSIBLE BARRIER ATTACH LABEL TO CEILING GRID OR A VISIBLE LOCATION TO IDENTIFY LOCATION OF HIDDEN
- 3.7 TESTING, ADJUSTING, AND BALANCING
- A. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THIS SECTION AND THE PROCEDURES CONTAINED IN ONE OF THE FOLLOWING
- I. AABC'S "NATIONAL STANDARDS FOR TOTAL NERR'S "PROCEDURAL STANDARDS FOR
- TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS." B. COMPLY WITH REQUIREMENTS IN ASHRAE 62.1 SECTION 7.2.2 - "AIR BALANCING."
- C. AIRFLOW VALUES ARE TO BE ADJUSTED TO PLUS OR MINUS 5% OF DESIGN FLOW.
- D. SET DAMPERS TO FAIL SAFE POSITION BEFORE TESTING, ADJUSTING, AND BALANCING. . MARK EQUIPMENT AND BALANCING DEVICES, INCLUDING DAMPER-CONTROL POSITIONS, VALVE POSITION INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES. WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL TO SHOW FINAL SETTINGS
- F. ADJUST FANS TO DELIVER DESIGN AIRFLOW WITHIN THE DESIGN FAN SPEED LISTED BY FAN MANUFACTURER.
- G AFTER TESTING AND BALANCING IS COMPLETE . AF IER TESTING AND BALANCING IS COMPLETE,
  OPERATE EACH SYSTEM AND RANDOMLY CHECK
  MEASUREMENTS TO VERIFY THAT THE SYSTEMS
  ARE OPERATING IN ACCORDING TO THE FINAL
  TEST AND BALANCE READINGS.
- 3.8 OPERATION PRIOR TO ACCEPTANCE
- A CONTRACTOR MAY OPERATE ANY FOUIPMENT EQUIPMENT AND THE FULL MANUFACTURER'S WARRANTY REMAINS UNAFFECTED FROM THE TIME OF OWNER'S POSSESSION.

#### **GENERAL NOTES:**

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS AS SPECIFIED AND AS REQUIRED BY CODE.
- CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
- INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS

#### GENERAL NOTES (CONT):

- PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING
- PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS) THROUGHOUT MECHANICAL EQUIPMENT ROOMS. DO THE SAME FOR SUPPORTS OF STEAM MAINS THIN 50 FEET OF BOILER OR PRESSURE
- SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILERS AND PRESSURE REDUCING VALVES.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES EFFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
- COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL STRUCTURAL CIVIL ELECTRICAL WORK ETC.
- MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
- ALL TESTS SHALL BE COMPLETED BEFORE ANY ECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED
- LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY
- TESTING ADJUSTING AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL IRONMENTAL BALANCING BUREAU (NEBE ESTING, ADJUSTING, AND BALANCING SHALL BE ERFORMED IN ACCORDANCE WITH THE AABC
- M. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED. THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
- REINFORCEMENT DETAILING AND PLACEMENT OF CONCRETE SHALL CONFORM TO ASTM 315
  AND ACI 318. CONCRETE SHALL CONFORM TO
  ASTM C94. CONCRETE SHALL CONFORM TO
  ASTM C94. CONCRETE WORK SHALL CONFORM TO
  ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS." COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 3.000 PSI. TOTAL AIR CONTENT O EXTERIOR CONCRETE SHALL BE BETWEEN 5 AND PERCENT BY VOLUME SLUMP SHALL BE TWEEN 3 AND 4 INCHES, CONCRETE SHALL BE CURED FOR 7 DAYS AFTER PLACEMENT
- COORDINATE ALL FOLIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS.
  COORDINATE AND PROVIDE ALL DUCT AND PIPIN RANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
- ALL CONTROL WIRE AND CONDUIT SHALL COMPLY ITH THE NATIONAL ELECTRIC CODE AND VISION 16 OF THE SPECIFICATION.
- Q. CONCRETE HOUSEKEEPING PADS TO SUIT MECHANICAL EQUIPMENT SHALL BE SIZED AND LOCATED BY THE MECHANICAL CONTRACTOR MINIMUM CONCRETE PAD THICKNESS SHALL BE 6 INCHES, PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 6 INCHES ON EACH SIDE CONCRETE HOUSEKEEPING PADS SHALL BE SIDE. CONCRETE HOUSENEEPING PADS SHALL PROVIDED BY THE GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE SI. AND LOCATION OF CONCRETE HOUSEKEEPING PADS WITH GENERAL CONTRACTOR.
- ALL MECHANICAL ROOM DOORS SHALL BE A MINIMUM OF 4'-0" WIDE.
- WHERE BEAMS ARE INDICATED TO BE WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK OR PIPING, COORDINATE DUCTWORK AND PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS. COORDINATION SHALL BE DONE PRIOR TO FABRICATION OF DUCTWORK, CUTTING OF PRIOR TO PARTICATION OF PARTICATIO OF PIPING, OR FABRICATION OF BEAMS.
- WHEN MECHANICAL WORK (HVAC, PLUMBING, WHEN MEGHANICAL WORK (IVAC, PLOWINDS, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINAT PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION

#### GENERAL NOTES (CONT.):

- THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
- ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR
- PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS AND OTHER CONCEALED MECHANICA EQUIPMENT, ACCESS PANELS SHALL BE TURNED ER TO GENERAL CONTRACTOR FOR
- ALL EQUIPMENT, PIPING, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED, SPECIFIED, AND REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION.
- ALL DUCTWORK, PIPING AND FOUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, PROVIDE BEAM CLAMPS MEETING MSS STANDARDS, WELDING TO STRUCTURA MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED
- MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM METAL
- ALL ROOF MOUNTED EQUIPMENT CURBS FOR EQUIPMENT PROVIDED BY THE MECHANICAL CONTRACTOR SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR
- AR LOCATIONS AND SIZES OF ALL FLOOR WALL AND ROOF OPENINGS SHALL BE COORDINATED WIT ALL OTHER TRADES INVOLVED.
- DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL
- AD ALL AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH AIR HANDLING LINIT AND LINES FROM EACH AIR HANDLING UNIT AND ROOFTOP UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET, WITH "P" TRAP, AND PIPED TO NEAREST DRAIN, SEE DETAILS SHOWN ON THE DRAWINGS OR THE CONTRACT SPECIFICATIONS FOR DEPTH OF AIR CONDITIONING CONDENSATE
- AE. REFER TO TYPICAL DETAILS FOR DUCTWORK. PIPING, AND EQUIPMENT INSTALLATION
- AF INSTALL WORK AS INDICATED ON THE DRAWINGS VERIEY EXACT LOCATION AND ELEVATIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. MAKE NECESSARY CHANGES IN ELEVATION, FITTINGS OR OFFSETS TO ACCOMMODATE OBSTACLES OR INTERFERENCES. ALL DIMENSIONS ARE TO BE FIELD VERIFIED BEFORE START OF WORK.
- AG. CONTRACTOR MUST REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. IF MODIFICATIONS TO THESE PLANS IS NECESSARY TO PROPERLY TO THESE PLANS IS NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH OTHER TRADES IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL FOR THE CHANGES FROM BOTH THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S DESIGNATED REVIEW CONSULTANT. THE CONTRACTOR MUST MAKE NOTE OF ANY FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS, AND PROVIDE A SET OF AS-BUILT DRAWINGS ONCE COMPLETE
- CONTRACTOR TO VERIEV ALL MEASUREMENTS CON HACTOR TO VERIFY ALL MEASUREMENTS BEFORE ORDERING MATERIALS OR DOING ANY WORK. NO EXTRA COMPENSATION OR CHANGE ORDERS WILL BE ISSUED DUE TO DIFFERENCES BETWEEN THE ACTUAL MEASUREMENT AND THE DIMENSIONS ON THE DRAWINGS. CONTRACTOR SHALL LAY OUT ALL EQUIPMENT PRIOR TO FABRICATION OR INSTALLATION TO ASSURE PROPER FIT AND AVOIDANCE OF OBSTRUCTIONS AND SHALL THOROUGHLY COORDINATE WORK AND SHALL THOROUGHLY COORDINATE WORK
  WITH ALL TRADES AND DETERMINE EXACT
  ROUTE AND LOCATION OF EACH ELEMENT AND
  PIECE OF EQUIPMENT BEFORE FABRICATION AND INSTALLATION.
- ALL DEFECTS IN EQUIPMENT OR MATERIALS, OR ERRORS IN THE DRAWINGS DISCOVERED DURING THE PERFORMANCE OF THE WORK SHALL BE REPORTED PROMPTLY TO THE ARCHITECT. IN NO. EVENT SHALL THE WORK PROCEED LINTIL
- COMPLY WITH ALL LAWS, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK. BOTH ON AND OFF SITE, IF ANY OF THE CONTRACT DOCUMENTS ARE AT VARIANCE THEREWITH IN ANY RESPECT, CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT IN

#### GENERAL NOTES (CONT.):

- AK. THE CONTRACTOR IS TO PROTECT FURNISHINGS EQUIPMENT, ETC., AND PROPERLY STORE MATERIAL UNTIL COMPLETION OF THE PROJECT.
- AL. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE GENERAL WORK AREA CLEAN AND FREE OF DIRT AND CONSTRUCTION MATERIALS, AND FOR CLEANING THE AREA AT THE END OF EACH DAY. ANY DAMAGE TO THE WALLS, CEILINGS, FLOOR, ETC., THAT OCCURS DURING THE WORK SHALL BE REPAIRED. IF THE SPECIFIC METHOD OF REPAIR IS IN QUESTION, THE CONTRACTOR WILL CONFER WITH THE ARCHITECT BEFORE COMMENCING THE REPAIR.
- AM. ALL MATERIALS AND EQUIPMENT ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
- BID FOR DUCT CLEANING EXISTING TO REMAIN BRANCH AND MAIN DUCTWORK. MECHANICAL CONTRACTOR SHALL VERIFY EXISTING CONDITION OF EXISTING TO REMAIN DUCTWORK AND COORDINATE WITH G.C. ENTRY POINTS FOR DUCT CLEANING PRIOR TO COMMENCEMENT OF

#### MECHANICAL DRAWING LIST:

- M0.1 MECHANICAL NOTES & SPECIFICATIONS
- M0.2 MECHANICAL LEGEND & SCHEDULES
- M0.3 MECHANICAL VENTILATION SCHEDULES M1.0 MECHANICAL DETAILS
- M2.0 MECHANICAL PROPOSED PLAN
- M3.0 MECHANICAL PROPOSED ROOF PLAN MC0.1 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS
- MC0.2 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS MC0.3 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS
- MC0.4 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS MC0.5 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS
- MC0.6 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS
- MC0.7 KITCHEN EXHAUST HOOD AND MAKEUP AIR UNIT DETAILS MC0.8 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS
- MC0.9 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS MC1.0 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS
- MC1.1 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS MC1.2 KITCHEN EXHAUST, HOOD, AND MAKEUP AIR UNIT DETAILS

MC1.3 KITCHEN EXHAUST HOOD, AND MAKEUP AIR UNIT DETAILS



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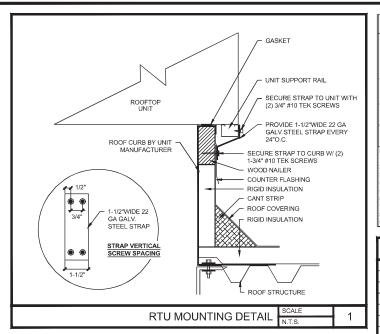
RICHARD KIMBALL, P.I FL REG. NO. 79067

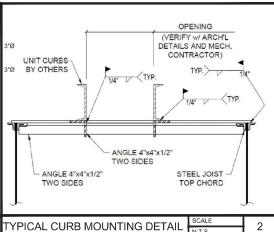
Date ed and sealed by (Richard Kimball using a digital signature. Print and sealed and the signature verified by a 3<sup>rd</sup> Party Cert Authority on any electronic

AND PACE NOTES / #426 MECHANICAL N SPECIFICA<sup>-</sup> CEFCO 3

M0.1 AS NOTE







# ROOFTOP AIR HANDLING UNITS

					NOMINAL	SUPPLY	MINIMUM			FAN N	MOTOR	COOL	ING CAPA	CITY	HEAT	TING CAPA	ACITY		ELECTRIC	AL/W HE	AT			BASE	
TAG	AREA	MFG.	MODEL	ROOM TEMP	SIZE (TONS)	AIR FLOW (CFM)	OUTDOOR AIR FLOW	FAN TYPE	(IN W.C.)	RPM		SENSIBLE COOLING LOAD (MBH)		MEDIA	TOTAL HEATING CAPACITY (MBH)	NOMINAL POWER (KW)	MEDIA	VOLT	PH	HZ	MCA/MOCP	EER	SEER	WEIGHT (LBS)	NOTES
RTU-1	STORE- WEST	CARRIER	50HCBB0 6B2M5	75°F SUMMER 50% RH	5	2000	255	CENTRIFUGAL	0.80	1,100	1/4	45.6	56.9	R-410A	41 OUTPUT	12	ELECTRIC	208	3	60	53/60	12.45	15.3	610	1,2,3,5,6, 7,8,9
RTU-2	FOOD PREP	CARRIER	50HCBD0 9B2M5	75°F SUMMER 50% RH	8.5	3,400	285	CENTRIFUGAL	D.80	1,100	1/4	78.60	97.8	R-410A	63.5 OUTPUT	18.6	ELECTRIC	208	3	60	74/B0	12.2	14.8	925	1,2,4,5,6, 7,8,9
RTU-3	STORE- EAST	CARRIER	50HCBD0 9B2M5	75°F SUMMER 50% RH	8.5	3,400	375	CENTRIFUGAL	0.80	1,100	1/4	78.60	97.8	R-410A	63.5 OUTPUT	18.6	ELECTRIC	208	3	60	74/80	12.2	14.8	925	1,2,4,5,6, 7,8,9
OTES:																									

COOLING PERFORMANCES ARE RATED AT 105degF AMBIENT, 80degF ENTERING DRY BULB, 67degF ENTERING WET BULB. ALTERNATE MANUFACTURERS: YORK, DAIKIN, TRANE

PROVIDE 4 SETS OF 16"X16"X2" MERV 8 FILTERS TO THE UNIT. PROVIDE 4 SETS OF 20"X20"X2" MERV 8 FILTERS TO THE UNIT.

PROVIDE DUCT SMOKE DETECTOR AT THE RETURN SIDE OF ROOFTOP UNITS.

PROVIDE FACTORY COATED PHENOLIC SEACOAST PROTECTION FOR UNITS LOCATED WITHIN 20 MILES OF THE COASTLINE.
PROVIDE 14" FACTORY INSULATED ROOF CURB PITCHED 1/4" PER FOCT ACCORDING TO ROOF SLOPE WITH HURRICANE TIE DOWNS AND ENGINEERED WIND LOAD CALCULATIONS.

PROVIDE ALL RTU'S WITH MANUFACTURER'S HAIL GUARDS.

PROVIDE ALL RTU'S WITH CARRIER HUMIDIMIZER SYSTEM FOR HUMIDITY CONTROL

DUCT SIZING GUIDE			НΛ
	RETURN DUCT (0.05SP)	П	

	SUPPLY DU	CT (0.08SP)			RETURN DI	JCT (0.05SP)	
ROUND I	DUCT	SQUARE	DUCT	ROUND I	DUCT	SQUARE	DUCT
CFM RANGE	SIZE (IN)						
1 - 100	6	1 - 125	6 X 6	1 - 75	6	1 - 100	6 X 6
101 - 210	8	126 - 260	8 X 8	76 - 160	8	101 - 200	8 X 8
211 - 395	10	261 - 470	10 X 10	161 - 290	10	201 - 365	10 X 10
396 - 625	12	471 - 760	12 X 12	291 - 470	12	366 - 595	12 X 12
626 - 910	14	761 - 1,145	14 X 14	471 - 710	14	596 - 895	14 X 14
911 - 1,300	16	1,146 - 1,635	16 X 16	711 - 1,010	16	896 - 1,275	16 X 16
1,301 - 1,800	18	1,636 - 2,235	18 X 18	1,011 - 1,375	18	1,276 - 1,745	18 X 18
1,801 - 2,325	20	2,236 - 2,955	20 X 20	1,376 - 1,815	20	1,746 - 2,310	20 X 20

FOR RECOMMENDED SQUARE SIZE DUCT AN APPROXIMATE EQUIVALENT RECTANGULAR CROSS SECTIONAL AREA IS ALSO

CCEPTABLE FOR ALTERNATIVE RECTANGULAR DUCT DIMENSIONS. DO NOT EXCEED A 3:1 DIMENSION RATIO. 2. ROUND AND SQUARE DUCT DIMENSIONS HAVE BEEN SIZED BASED ON 0.08 INCHES OF FRICTION HEAD LOSS FOR SUPPLY DUCT

		MINIMUM VENTI	LATION RATES		
AREAS	OCCUPANCY LOAD	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA (SQFT)	AREA OUTDOOR AIRFLOW RATE (CFM/SQFT)	MINIMUM TOTAL OUTSIDE AIR FLOW (CFM)
SALES	30	7.5	3,150	0.12	603
PREP AREA	4	7.5	380	0.12	76
STORAGE	-	7.5	197	0.12	24
OFFICE	1	7.5	71	0.12	16
TOTAL AIRFLOW					719

#### **GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE**

			,
MARK	NECK	MAX CFM	DESCRIPTION
S-1A	6" Ø	110	
S-1B	8" Ø	210	
S-1C	10" Ø	330	ALUMINUM HIGH PERFORMANCE THREE CONE DIFFUSER, MODULE SIZE 24X24, TITUS TMS-AA.
S-1D	12" Ø	480	
S-1E	14" Ø	650	
S-1F	6" Ø	110	S-1F FACE SIZE SHALL BE 12X12.
R-1A	10" X 10"	800	
R-1B	22" X 22"	2,000	EGGCRATE RETURN AIR GRILLE - CORE OF 1/2"X1/2"X1" ALUMINUM GRID, R-1A-24X12, R-1B-24X24, R-1C-48X24, R-1D-10X10, PANEL SIZE: TITUS 50F, (PROVIDE SQUARE TO ROUND TRANSITION AS
R-1C	22" X 46"	4,000	NEEDED)
R-1D	10" X 10"	400	
E-1	10" X 10"	210	EGGCRATE RETURN AIR GRILLE - CORE OF 1/2"X1/2"X1" ALUMINUM GRID, E-1 10X10 PANEL SIZE; TITUS 50F (PROVIDE SQUARE TO ROUND TRANSITION AS NEEDED)
DG-1	SIZE AS S ON DRAW		ALUMINUM DOOR RETURN GRILLE WITH SIGHT-PROOF BLADES PARALLEL TO LONG DIMENSION; TITUS CT-700 (ALTERNATIVE DIMENSIONS ACCEPTABLE WITH EQUIVALENT CORE AREA)
MOTES			•

I, FURNISH WITH STANDARD WHITE BAKED ENAMEL FINISH (#26 WHITE), UNO.

2. FURNISH "RAPID-MOUNT" FRAMES FOR S-1 & R-1 DEVICES LOCATED IN DRYWALL CEILINGS. COORDINATE MOUNTING GRAME MITH CEILINGWALL TYPE

3. ITEMS GRAYED OUT ARE NOT USED IN THIS PROJECTS'S SCOPE OF WORK (PART OF CLIENT STANDARDS).

SIZE FOR MAXIMUM NOISE CRITERION <30 FOR DIFFUSERS, REGISTERS, AND GRILLES.

5. PROVIDE DIRECTIONAL BLOW CLIPS WHERE REQUIRED OR DIRECTIONAL NECK BAFFLES WHERE INDICATED FOR BLOCKED AIRFLOW.

. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS LOCATED IN INACCESSIBLE CEILING/WALL CONSTRUCTION PROVIDE 120/240 VAC TRANSFORMER POWER MODULE, CONTROLLER/THERMOSTAT AND PRESSURE RELIEF RING FOR ALL VAV

BASIS OF DESIGN PRODUCTS ARE INDICATED FOR REFERENCE ONLY. COMPARABLE PRODUCTS WILL BE ACCEPTED PROVIDED COMPLIANCE WITH TECHNICAL SPECIFICATION REQUIREMENTS.

#### IVAC ABBREVIATIONS

MAXIMUM OVERCURRENT PROTECTION

WATER PRESSURE DROP (FT. H2O)

PRESSURE REDUCING VALVE (PSIG)

FEET PER MINUTE

RELIEF VALVE (PSIG)

SUPPLY AIR

RETURN AIR

OUTSIDE AIR

EXHAUST AIR

HEATING COIL

PREHEAT COIL

RELIEF AIR COOLING COIL

REVOLUTIONS PER MINUTE AIR PRESSURE DROP (IN. W.G.)

POUNDS PER SQUARE INCH

REHEAT COIL DELTA T, TEMP. DIFFERENCE, °F CHILLED WATER SUPPLY

CHILLED WATER RETURN

CONDENSER SUPPLY CONDENSER RETURN

HEATING WATER SUPPLY

HEATING WATER RETURN

LOW PRESSURE STEAM, PSIG

LOW PRESSURE CONDENSATE

HIGH PRESSURE STEAM, PSIG

MEDIUM PRESSURE STEAM, PSIG

GPM MBH

LAT EWT

TSP

MCA

MOP

FPM

RPM

WPD

PSIG

EXH

RFA

CHWR

HWS

LPS

MPS

HPS

C ABBREVIATIONS:	П	INSULATION R-VALUES:		
AIR FLOW RATE (CUBIC FEET PER MINUTE) WATER FLOW RATE (GALLONS PER MIN.)		LOCATION (1)	SUPPLY DUCT	RETUR
1,000 BTU/H	П	EXTERIOR OF BUILDING	R-6	R-4.2
HORSEPOWER	П	VENTILATED ATTIC	R-6	R-4.2
DRY BULB TEMPERATURE (°F) WET BULB TEMPERATURE (°F)	П	UNVENTED ATTIC ABOVE INSULATED CEILING	R-6	R-4.2
RELATIVE HUMIDITY (%) ENTERING AIR TEMPERATURE (°F)	П	UNVENTED ATTIC WITH ROOF INSULATION	R-4.2	NONE
LEAVING AIR TEMPERATURE (°F)	П	UNCONDITIONED SPACES (2)	R-4.2	R-4.2
ENTERING WATER TEMPERATURE (°F)	П	INDIRECTLY CONDITIONED SPACES (3)	NONE	NONE
LEAVING WATER TEMPERATURE (°F) STATIC PRESSURE (IN, W.G.)	П	CONDITIONED SPACES	NONE	NONE
EXTERNAL STATIC PRESSURE (IN. W.G.)	П	BURIED	R-4.2	NONE
TOTAL STATIC PRESSURE (IN. W.G.)	П	NOTES:		
FULL LOAD AMPS LOCKED ROTOR AMPS	П	1. INCLUDES CRAWL SPACES, BOTH VEN' NONVENTILATED.	TILATED A	ND
MINIMUM CIRCUIT AMPS	П	2. INCLUDES RETURN AIR PLENUMS WITH	OR WITH	OUT

SURFACE, OR WHERE ROOFING MATERIALS EXTEND BENEATH THE UNIT. ON RAISED EQUIPMENT SUPPORTS PROVIDING A MINIMUM CLEARANCE

MOUNTE	D MECHANICAL UNITS
WIDTH OF MECHANICAL UNIT (INCHES)	MINIMUM CLEARANCE ABOVE SURFACES (INCHES)
< 24	14
25 < 36	18
37 < 48	24
49 < 60	30
> 60	48

#### RTU WIND MITIGATION INFORMATION:

STRUCTURAL DESIGN:

DESIGN FOR BASIC WIND SPEED = 155 MPH.
EXPOSURE CATEGORIES: C
RISK CLASSIFICATION CATEGORY: II
MEAN ROOF HEIGHT = 15 FT.

REFER TO STRUCTURAL DRAWINGS FOR DETAILED

# MINIMUM DUCT

LOCATION (1)	SUPPLY DUCT	RETURN DUCT
EXTERIOR OF BUILDING	R-6	R-4.2
VENTILATED ATTIC	R-6	R-4.2
UNVENTED ATTIC ABOVE INSULATED CEILING	R-6	R-4.2
UNVENTED ATTIC WITH ROOF INSULATION	R-4.2	NONE
UNCONDITIONED SPACES (2)	R-4.2	R-4.2
INDIRECTLY CONDITIONED SPACES (3)	NONE	NONE
CONDITIONED SPACES	NONE	NONE
BURIED	R-4.2	NONE

EXPOSED ROOFS ABOVE

#### EQUIPMENT ROOF CURB INFORMATION:

MECHANICAL DESIGN:
IBC 1510.10 MECHANICAL UNITS - ROOF MOUNTED
MECHANICAL UNITS SHALL BE MOUNTED ON CURBS
RAISED A MINIMUM OF 8 INCHES ABOVE THE ROOF

INFORMATION.

# DROP IN DIRECTION OF AIRFLOW DUCT TURN WITH RADIUS ELBOW SQUARE TURN WITH VANE ELBOW FLEXIBLE CONNECTION DUCT WITH INTERNAL LINING

(c)

HS

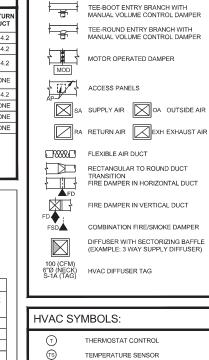
(SD)

(AT)

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~©<del>-</del>



CO2 SENSOR

HUMIDITY SENSOR

SMOKE DETECTOR

EQUIPMENT DESIGNATION

OPEN VAULT DOOR WITH BARS

3/4" DOOR UNDERCUT

**HVAC/PIPING SYMBOLS:** 

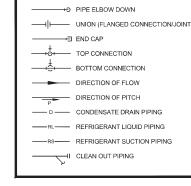
AVERAGING TEMPERATURE SENSOR

HVAC LEGEND DOUBLE LINE:

INTERIOR DUCT DIMENSIONS (WIDTH X DEPTH) DUCT TURNED UP (RETURN)

DUCT TURNED DOWN (SUPPLY)

RISE IN DIRECTION OF AIRFLOW







INFINITY ENGINEERING GROUP, LLC

Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 FL Cert. of Auth. No. 2788

RICHARD KIMBALL, P.E FL REG. NO. 79067

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AND PACE MECHANICAL LEGEND SCHEDULES #426 CEFCO 3

M0.2

#### RTU-3 VENTILATION SCHEDULE:

System name and number	RTU-3
Condition analyzed (impacts Ez, Vdz, Vpz and Vps)	Cooling
All zones are included in the VRP calculation	Yes

Zone Name and Number	Occupancy Category	Zone Floor Area Az (sq ft)	Are you using default value for zone population?	Zone Population Pz (people)	Zone Air Distribution Effectiveness	Zone Outdoor Airflow Voz (cfm)	Zone Discharge Airflow Vdz (cfm)	Zone Primary Airflow Vpz (cfm)	Zone Secondary Recirculation Fraction	Zone Primary Air Fraction Ep
SALES EAST	Sales	1,664	No	16.00	1.00	319.68	3,150	3,150	1.00	1.00
STORAGE - 103	Occupiable storage rooms for dry materials	160	No	1.00	1.00	14.60	250	250	1.00	1.00

System area	As	(sq ft)	
System population	Ps	(people)	
Sum of zone population	sum of Pz	(people)	
Occupant diversity	D		
Uncorrected outdoor air intake	Vou	(cfm)	30
System primary airflow (at condition analyzed)	Vps	(cfm)	3
Average outdoor air fraction	Xs		

Ventilation efficiency	Ev		
Outdoor air intake flow (required by 62.1)	Vot	(cfm)	

#### RTU-1 VENTILATION SCHEDULE:

System name and number	RTU-1
Condition analyzed (impacts Ez, Vdz, Vpz and Vps)	Cooling
All zones are included in the VRP calculation	Yes

Zone Name and Number	Cccupancy Category	Zone Floor Area <i>Az</i> (sq ft)	Are you using default value for zone population?	Zone Population Pz (people)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow Voz (cfm)	Zone Discharge Airflow Vdz (cfm)	Zone Primary Airflow Vpz (cfm)	Zone Secondary Recirculation Fraction Er	Zone Primary Air Fraction Ep
SALES WEST	Sales	1,006	No	12.00	1.00	210.72	1,050	1,050	1.00	1.00
CORRIDOR	Corridors	126	Yes	0.00	1.00	7.56	110	110	0.75	1.00

System area	As	(sq ft)	
System population	Ps	(people)	
Sum of zone population	sum of Pz	(people)	
Occupant diversity	D		
Uncorrected outdoor air intake	Vou	(cfm)	
System primary airflow (at condition analyzed)	Vps	(cfm)	
Average outdoor air fraction	Xs		

Ventilation efficiency	Ev		
Outdoor air intake flow (required by 62.1)	Vot	(cfm)	
Outdoor air intake flow provided (measured or d	lesign)	(cfm)	

# ⊢ No.



#### $\frac{\text{INFINITY ENGINEERING}}{\text{GROUP, LLC}}$

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RICHARD KIMBALL, P.E. FL REG. NO. 79067

Date Date
This item has been electronically signed and sealed by (Richard Kimball, P. on the date and/or time starm shown using a digital signature. Printed copies this document are not considered signe and sealed and the signature must be verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic copy.

ct Name and Address CEFCO #426 - PACE 90 WEST SPENCER FIELD ROAD PACE, FL 32571	MECHANICAL VENTILATION
---	------------------------

Project No. 170-84.00	Sheet
Date AS NOTED	1 MO.3
Scale	1

# RTU-2 VENTILATION SCHEDULE:

System name and number	RTU-2
Condition analyzed (impacts Ez, Vdz, Vpz and Vps)	Cooling
All zones are included in the VRP calculation	Yes

Zone Name and Number	Occupancy Category	Zone Floor Area Az (sq ft)	Are you using default value for zone population?	Zone Population Pz (people)	Zone Air Distribution Effectiveness	Zone Outdoor Airflow Voz (cfm)	Zone Discharge Airflow Vdz (cfm)	Zone Primary Airflow Vpz (cfm)	Zone Secondary Recirculation Fraction	Zone Primary Air Fraction Ep	
HALLWAY - 108	Corridors	60	Yes	0.00	1.00	3,60	200	200	1,00	1.00	
OFFICE - 109	Office space	67	No	1.00	1.00	9.02	70			1.00	
UTILITIES - 111	Telephone closets	165	Yes	0.00	1.00	0.00		600			
CASHIER - 110	Sales	311	No	5.00	1.00	74.82					
DELI - 107	Kitchen (cooking)	274	No	6.00	1.00	77.88	750	750	1.00	1.00	
PREP AREA - 106	Sales	310	No	2.00	1.00	52.20	900	900	1.00	1.00	

System area	As	(sq ft)	1,187
System population	Ps	(people)	14.00
Sum of zone population	sum of Pz	(people)	14.00
Occupant diversity	D		1.00
Uncorrected outdoor air intake	Vou	(cfm)	217.5
System primary airflow (at condition analyzed)	Vps	(cfm)	3,40
Average outdoor air fraction	Xs		0.0
Which method from ASHRAE 62.1 is being used t Ventilation efficiency	o determine syste	m ventilation efficiency (Ev)?	Table 6-3
		m ventilation efficiency (Ev)?	Table 6-3 0.9- 23

Coasta	EXAMINER:	FBC CODE:	DATE: $02/$	

#### WALK-IN EVAPORATOR AND CONDENSING UNIT SCHEDULE COOLING ELECTRICAL PHYSICAL INDOOR UNIT MOUNTING TYPE PAIRED CONDENSING UNIT CONDENSING REFRIGERANT TYPE INDOOR UNIT MODEL SYSTEM TYPE APPLICATION CAPACITY (MBH) OUTDOOR UNIT VOLT / PH / HZ INDOOR UNIT WEIGHT LBS. LOCATION MANUFACTURER MCA INDOOR OUTDOOR UNIT UNIT 208-230 / 1 / 60 BEER CAVE (117) CENTER MOUNT AIR DEFROST 1950 HEATCRAFT SME130BEE M0Z025M63CF R-404A 13.0 1.5 29 141 208 1B FREEZER (112) LOW AIR SILHOUETTE DEFROST 208-230 / 1 , 60 LET160BEK 1F M0Z055L63CF R-404A 21.0 2100 2.25 44 60 66 275 COOLER (113) LOW AIR SILHOUETTE DEFROST 208-230 / 1 / 60 ADT120AEK M0Z060M63CF R-404A 48.0 1300 2.25 44 66 275 COOLER (105) LOW AIR SILHOUETTE DEFROST 208-230 / 1 / 60 2.25 20.6 62 234 72 7.0 1460 BOHN ADT070AEK M0Z005M63CF R-404A 25 FREEZER (104) LOW AIR SILHOUETTE DEFROST 208-230 / 1 / 60

R-404A

9.0

1460

1.5

29

49

216

#### NOTES:

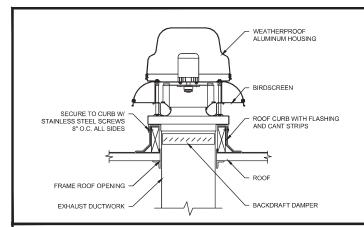
HEATCRAFT

. INDOOR UNIT RECEIVE POWER FROM OUTDOOR UNIT THROUGH FIELD-SUPPLIED INTERCONNECTED WIRING.

LET090BEK

REFFRIGERATION EQUIPMENT SHALL BE SUPPLIED AND INSTALLED PER MANUFACTURER'S GUIDELINES AND INSTALLATION MANUAL. NO SUBSTITUTIONS OR ALTERNATE VENDORS SHALL BE PERMITTED WITHOUT APPROVAL FROM

M0X025L63CF



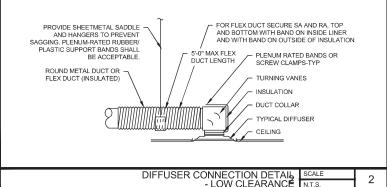
#### **EQUIPMENT ROOF CURB INFORMATION:**

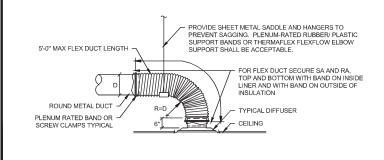
#### MECHANICAL DESIGN:

ROOF MOUNTED MECHANICAL UNITS SHALL BE MOUNTED ON CURBS RAISED A MINIMUM OF 8 INCHES MOUNTED ON COMES RAISED A MINIMINION OF SINCHES ABOVE THE ROOF SURFACE, OR WHERE ROOFING MATERIALS EXTEND BENEATH THE UNIT, ON RAISED EQUIPMENT SUPPORTS PROVIDING A MINIMUM CLEARANCE HEIGHT IN ACCORDANCE WITH TABLE 1510.10.

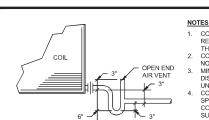
MOUNTED MECHANICAL UNITS								
WIDTH OF MECHANICAL UNIT (INCHES)	MINIMUM CLEARANCE ABOVE SURFACES (INCHES)							
< 24	14							
25 < 36	18							
37 < 48	24							
49 < 60	30							
> 60	48							

ROOF MOUNTED EXHAUST FAN DETAIL



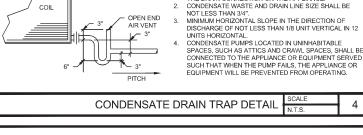


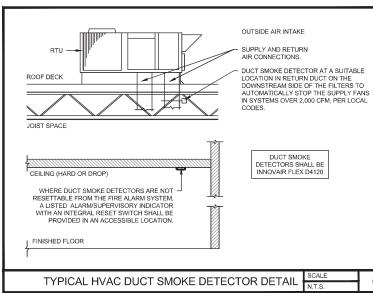
DIFFUSER CONNECTION DETAIL - TYPICAL CLEARANCE 3

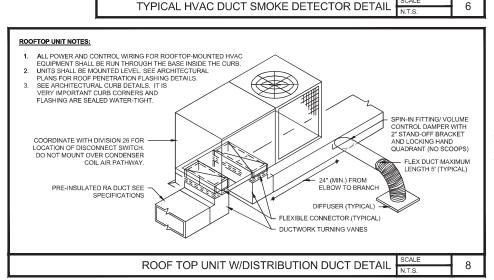


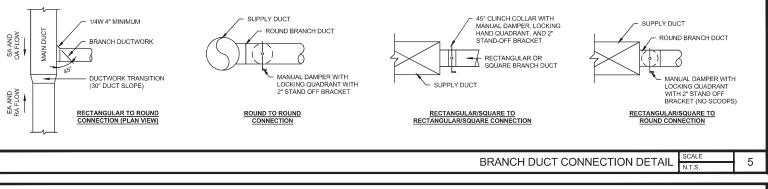
- 1. CONDENSATE PIPING SHALL BE OF CORROSION RESISTANT MATERIAL AND SHALL NOT BE SMALLER THAN THE DRAIN CONNECTION ON THE APPLIANCE
- SPACES, SUCH AS ATTICS AND CRAWL SPACES, SHALL BE CONNECTED TO THE APPLIANCE OR EQUIPMENT SERVED SUCH THAT WHEN THE PUMP FAILS. THE APPLIANCE OR

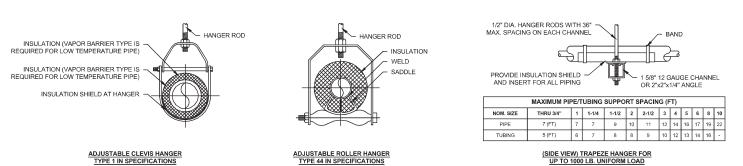




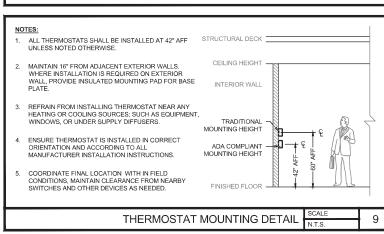


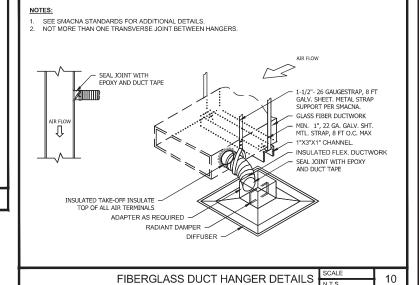




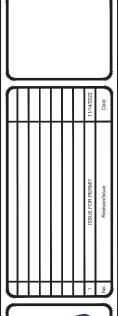








**DETAILS NOTE:** NOT ALL DETAILS ON THIS SHEET MAY APPLY TO THIS PROJECT. REFER TO PROJECT MECHANICAL PLANS FOR DETAILS APPLICABLE TO THIS PROJECT.





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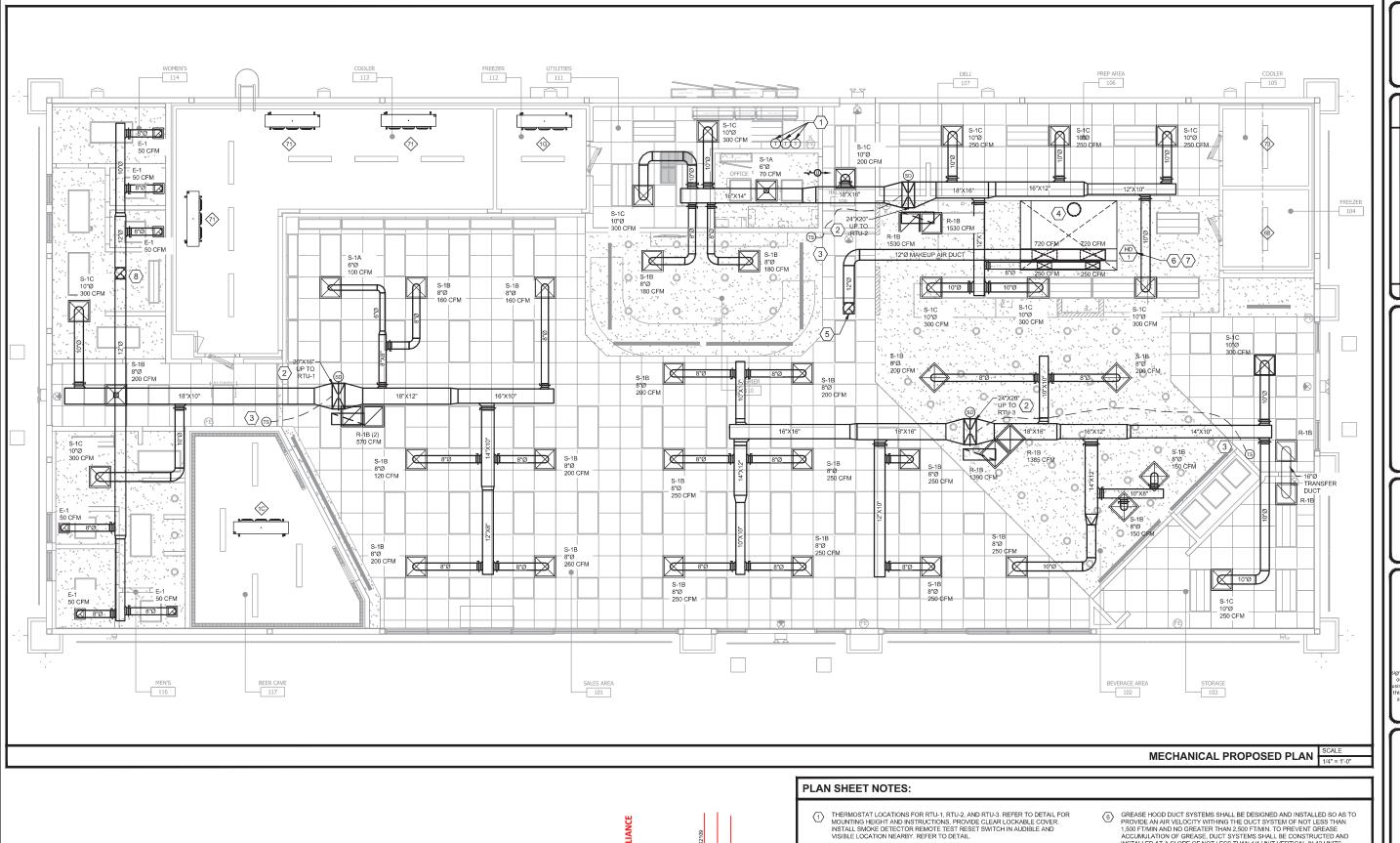
FL REG. NO. 79067

Date

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**DETAILS** PACE #426 CHANICAL CEFCO 3

M1.0



② SUPPLY AND RETURN DUCTWORK UP TO MECHANICAL UNIT LOCATED ON ROOF. REFER TO ROOF PLAN FOR EXACT LOCATION.

3 ROOFTOP UNIT REMOTE TEMPERATURE SENSOR. MOUNT AT 6' A.F.F.

 $\boxed{4} \quad \mbox{14" ROUND DUCT UP TO KEF-1 ON ROOF, REFER TO ROOF PLAN FOR EXACT LOCATION.}$ 

5 12" ROUND DUCT UP TO MAU-1 ON ROOF, PROVIDE NECESSARY TRANSITIONS FOR COMPLETE INSTALLATION, REFER TO ROOF PLAN FOR EXACT LOCATION.

GREASE HOOD DUCT SYSTEMS SHALL BE DESIGNED AND INSTALLED SO AS TO PROVIDE AN AIR VELOCITY WITHING THE DUCT SYSTEM OF NOT LESS THAN 1,500 FT/MIN AND NO GREATER THAN 2,500 FT/MIN. TO PREVENT GREASE ACCUMULATION OF GREASE, DUCT SYSTEMS SHALL BE CONSTRUCTED AND INSTALLED AT A SLOPE OF NOT LESS THAN 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL TOWARD THE HOOD. WHERE HORIZONTAL DUCT EXCEEDS 75 IN LENGTH, SLOPE SHALL NOT BE LESS THAN ONE UNIT VERTICAL IN 12 UNITS HORIZONTAL PER MECHANICAL CODE.

7 TYPE-1 9' KITCHEN HOOD WITH SUPPRESSION SYSTEM. REFER TO CAPTIVEAIRE DETAILS AND SUBMITTAL FOR MORE INFORMATION. PROVIDE MANUAL PULL STATION.

8 12"Ø ROUND EXHAUST DUCT UP TO EF-1. SEE ROOF PLAN FOR LOCATION OF FAN.





INFINITY ENGINEERING GROUP, LLC

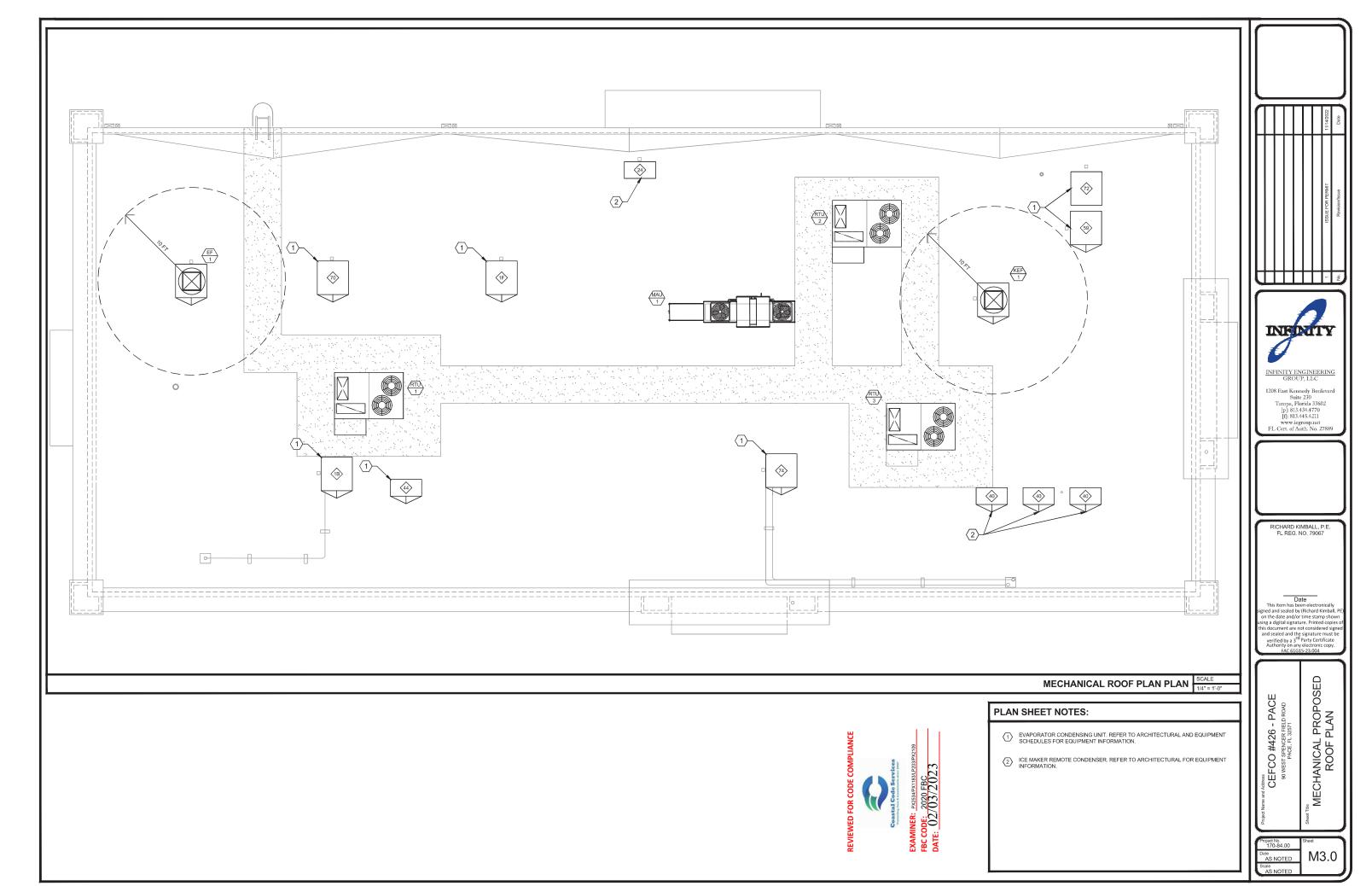
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RICHARD KIMBALL, P.E. FL REG. NO. 79067

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MECHANICAL PROPOSED PLAN CEFCO #426 - PACE

M2.0 AS NOTED



# FOR QUESTIONS, CALL THE

H00.	D INF	ORMATION -	- JOB#5486	241																															
					MAX								UST PL							HOOD (	CONFIG														
HOOD	TAG	MODEL	MANUFACTURER	LENGTH	COOKING	TYPE	APPLIANCE		TOTAL				RISER(S	)			MUA CFM	AC CFM	HOOD	END TO															
NO	NO TAG	MODEL	DDEL WANDFACTORER		TEMP	11112	DUTY	CFM/FT	EXH CFM	WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	WOA CI W	AC OF W	CONSTRUCTION	END	ROW														
_	_																				-														
1	HD-1	5424	CAPTIVEAIRE	8' 0"	600		HEAVY	225	1800			ا بر	14"	1800	1684	-0.930"	1440	500	430 SS	ALONE.	ALONE														
'	HD-1	ND-2-ACPSP-F	CAFTIVEAIRE	8.0.	8.0.	8.0.	8.0.	8.0.	8.0.	8.0.	8.0.	8.0.	0.0.	0.0.	8.0.	8.0.	8.0.	0.0.	DEG		HEAVT	225	1800			-	14	1000	1004	*0.830	1440	300	WHERE EXPOSED	ALONE	ALONE

HC	OD	INFC	ORMATION															
					FILTER(S	5)			LIGHT(S)					UTILITY CABINET(S)			FIRE	HOOD
HC	OD	TAG								WIRE			Ē	RE SYSTEM	ELECTRICAL	SWITCHES		HANGING
N	0	IAG	TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	GUARD	LOCATION	SIZE	TYPE	SIZE	MODEL#			WEIGHT
	,	HD-1	CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0	DCV-1111	1 LIGHT	YES	785
			0/1 HVII 2 0020 HETER	Ľ			00% 022 11212110120	_	THE SESSED THE OTHER		LL!	TE NOT NET	17811110	11.0	557 1111	1 FAN		LBS

HOOL		IONS
HOOD NO	TAG	OPTION
		FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 108.00" LONG 430 SS VERTICAL.
1	HD-1	LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		RISER SENSOR INSTALL 3IN DBL.

PRESSURE DROP VS. FLOW RATE

FLOW RATE (CFM)

HOOD											
NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	WIDTH	LENG	DIA	CFM	SP
						MUA	12"	28"		720	0.168"
4	HD-1	Front	108"	24"	6"	MUA	12"	28"		720	0.168"
1	nu-i	FION	100	24	0	AC	8"	16"		250	0.059"
						AC	8"	16"		250	0.059"

#### SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

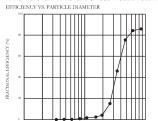
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE BROPN DOT TO EXCEED 1.0 INCHES OF WATER GAUGE. THE CAPITATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.
MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

PERFORATED SUPPLY PLENUM(S)



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH: NFPA #96 NSF STANDARD #2. UL STANDARD #1046, INT. MECH. CODE (IMC). ULC-S649.

#### PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2. AC-PSP WALL (CANADA) - CA PATENT 2820509. AC-PSP ISLAND (CANADA) - CA PATENT 2520330



**GREASE DUCT & CHIMNEY SPECIFICATIONS:** 

PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.

PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12". HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".

DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED. PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND **ENSURE DUCT IS LIQUID TIGHT** 

#### **HVAC DISTRIBUTION NOTE**

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

# **VERIFY CEILING HEIGHT**

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

## CUSTOMER APPROVAL TO MANUFACTURE:

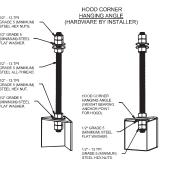
APPROVED AS NOTED	
APPROVED WITH NO EXCEPTION TAKEN	
REVISE AND RESUBMIT	
SIGNATURE	
YOUR TITLEDATE	

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED

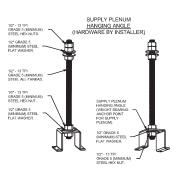
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#### ASSEMBLY INSTRUCTIONS

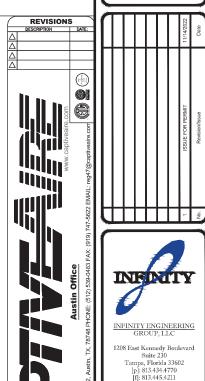
HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 FU GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS, MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57



#### ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 6 (MINIMUM) EXTENTE AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLES ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.





FL Cert. of Auth. No. 2788

FL REG. NO. 79067

Date This item has been electronically ed and sealed by (Richard Kimball,

and sealed and the signature verified by a 3<sup>rd</sup> Party Cert Authority on any electronic

HOOD - PACE KITCHEN EXHAUST, H AND MAKEUP AIR U DETAILS #426

DATE: 5/24/2022 CEFCO 3 5486241

DRAWN BY: JLB-47 3/4" = 1'-0"

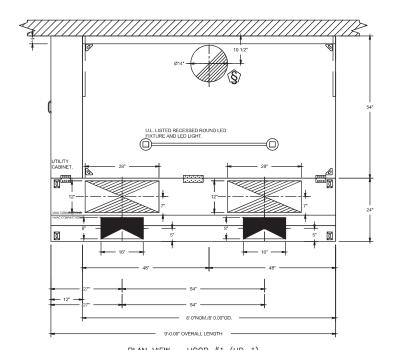
CEFCO #426 Pace,

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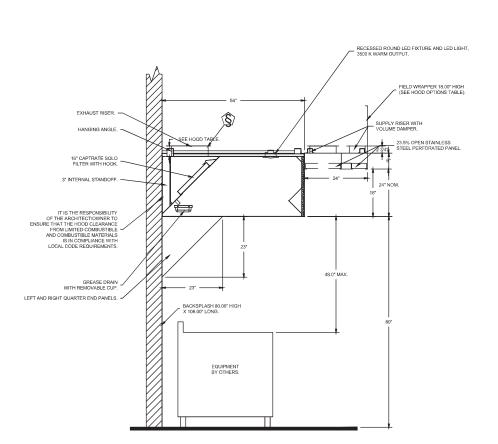
MASTER DRAWING

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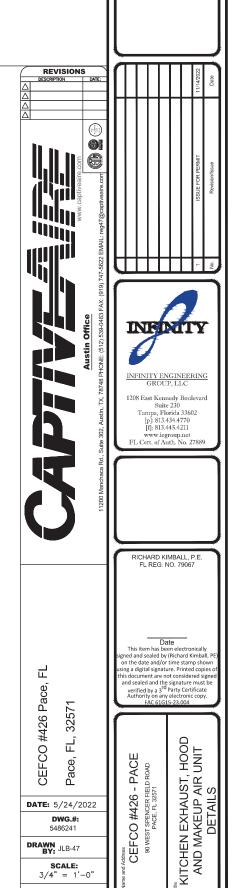
MC0.



ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



SECTION VIEW - MODEL 5424ND-2-ACPSP-F HOOD - #1 (HD-1)



DRAWN BY: JLB-47 **SCALE:** 3/4" = 1'-0" MASTER DRAWING

SHEET NO.

MC0.2

AS NOTED

EXAMINER: PX2540PX1183LP203PX FBC CODE: 2020 FBC DATE: -02/03/2023

#### SECTION 23 38 13 13

#### SPECIFICATIONS

TAG: Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hoods

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. The ND2 series is a Type I, wall canopy hood for use over 600°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.
- B. The hood shall have the size, shape, and performance specified on drawings.

#### 1.2 SUBMITTALS

- A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.
- B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
- C. The manufacturer shall supply complete computer generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

#### 1.3 QUALITY ASSURANCE

- A. This hood is ETL-listed to standard UL710, ULC710, and ULC-S646 when installed in accordance with these installation instructions and National Fire Protection Association Standard "NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations."
- B. Built-in compliance with NSF/ANSI Standard 2.
- C. The hood shall be ETL Listed as:
- 1. "Exhaust Hood Without Exhaust Damper."
- 2. ETL Sanitation Listed and built in accordance with NFPA 96.
- 3. The ETL label shall list temperature rating(s) and minimum CFM/ft rating(s).

#### 1.4 WARRANTY

- A. All units shall be provided with the following standard warranty:
- 1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.
- B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.
- C. Refer to Manufacturer's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty clair

#### PART 2 - PRODUCTS

#### 2.1 GENERAL

A. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost perimeter, which directs and captures grease-laden vapor and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.

B. Duct sizes, CFM, and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

#### 2.2 CONSTRUCTION

- A. Construction shall be type 430 stainless steel.
- B. Double wall insulated front to eliminate condensation and increase rigidity on wide sizes. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.
- C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12' will have added hangers
- D. Exhaust duct collar to be 4" high with flange.
- E. The grease drain system shall be an enclosed integral part of the hood back and have slopes with an exposed, removable 1/2 grease cup to facilitate cleaning.
- F. An integral baffle to direct grease laden vapors toward the exhaust filter bank.
- G. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.
- H. All seams shall be welded and have stainless steel on exposed surfaces.

#### 2.3 LIGHTING

A. Recessed round LED fixture and LED light, 3500K Warm output.

#### 2.4 FILTERS

A. Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 85% efficient at 9 microns, 76% efficient at 5 microns.

#### 2.5 OPTIONS

- A. Fire Suppression System: UL 300 fire suppression system
- B. Optional perforated supply plenum shall provide make-up air discharged below the cooking equipment.
- 1. Perforated diffuser plates shall be included in the design to provide even air distribution.
- 2. Unexposed surfaces shall be constructed of aluminized steel. Plenum shall be insulated to prevent
- 3. Dual Plenum (AC-PSP)
- C. Hood Mounted Utility Cabinet Cabinet can store listed fire suppression system, listed components, pre-wired electrical controls.

- A. End Panel(s) maximize hood performance and eliminate the effects of cross drafts in the kitchen. Units constructed of stainless steel and sized according to hood width and cooking equipment. Exposed edges hemmed for safety and rigidity. Selected panels:
- 1. Quarter End Panel
- B. Splash panel(s) selected:
- 1. Backsplash
- C. Wrapper(s) may be installed from the factory or field installed. Wrapper(s) selected:
- 1. Wrapper
- D. Miscellaneous option(s) selected:
- 1. Riser Sensor Install Sensor set-up for 3" thick double wall duct.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installe

#### 3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes



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CEFCO #426 Pace,

DATE: 5/24/2022 **DWG.#:** 5486241

DRAWN RY: JLB-47

3/4" = 1'-0'MASTER DRAWING

SHEET NO.

REVISIONS

INFINITY ENGINEERING GROUP, LLC Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 FL Cert, of Auth. No. 2788 RICHARD KIMBALL, P.E FL REG. NO. 79067 Date This item has been electronically ed and sealed by (Richard Kimball, and sealed and the signature verified by a 3<sup>rd</sup> Party Certi Authority on any electronic 32571 HOOD UNIT F, PACE Pace, KITCHEN EXHAUST, H AND MAKEUP AIR U DETAILS

#426 -

CEFCO 3

AS NOTED

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INFINITY

REFER TO SEPARATE PERMIT CAPTIVEAIRE (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

FIRE SYSTEM INFORMATION - JOB#5486241

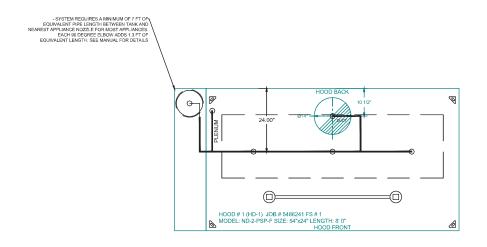
IRE			"	FLOW	INSTALLAT	TION
STEM NO	TAG	TYPE	SIZE	POINTS	SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0	20	FIRE CABINET LEFT	LEFT, HOOD 1

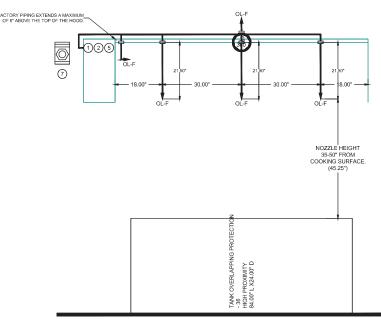
GAS VALVE(S)

SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY	
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS	

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
		0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	4	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	4	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16* ZINC, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
1		0 - 0 - BI145 3/8" BLACK IRON 90 ELL.	2	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	3	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	1	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	5	0
		16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE) - 4 FLOW POINTS.	5	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	5	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0







E: 2020 FBC 02/03/2023

RICHARD KIMBALL, P.E FL REG. NO. 79067

P O

INFINITY

INFINITY ENGINEERING GROUP, LLC

1208 East Kennedy Boulevard Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211

FL Cert. of Auth. No. 27889

Date This item has been electronically signed and sealed by (Richard Kimball, F on the date and/or time stamp showr using a digital signature. Printed copies nis document are not considered signand sealed and the signature must verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic copy.

KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

F,

**DATE:** 5/24/2022

DRAWN BY: JLB-47

MASTER DRAWING

SHEET NO.

#### <u>LEGEND - FIRE CABINET TANK SYSTEM</u>

- 4 GALLON TANK.
- PRIMARY ACTUATOR RELEASE.
- SECONDARY ACTUATOR RELEASE. PRESSURE SUPERVISION SWITCH.
- PRIMARY HOSE ASSEMBLY
- REMOTE MANUAL ACTUATION DEVICE.

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE, TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION A SYSTEM HOOKUP, AND ONE VISIT FOR ONE TEST; ADDITIONAL VISITS WILL SEAULT PER SYSTEM AT A MAXIMUM SIZE OF 2", PERMIT, AND SYSTEM TEST. EXCLUDES: UNION LABOR & PREVALING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CAGINET, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

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REVISIONS

CEFCO #426 Pace, 32571 Pace,

**DWG.#:** 5486241

3/4" = 1'-0"

MC0.4

CEFCO #426 - PACE

- NOTES
   FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
   RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING,
- SALAMANDERS ETC
- SALAWANDERS, E. D..
   OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
   IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
   FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.
- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 5486241.

JOB NAME: CEFCO #426 PACE, FL.

SYSTEM SIZE: TANK-SP-1 TOTAL FP REQUIRED: 20. HOOD # 1 8' 0.00" LONG x 54" WIDE x 24" HIGH. RISER # 1 SIZE: 14" DIA. HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

#### SECTION 21 23 00

WET- CHEMICAL FIRE-EXTINGUISHING SYSTEMS TAG: TANK Fire Suppress

#### PART 1- GENERAL

A. TANK Fire Suppression is a pre-engineered, stored-pressure wet chemical solution extinguishing

- A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the requirements of the project and meet Federal, State,
- and Local codes.

  B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice

- 1.3 QUALITY ASSURANCE
  A. TANK Fire Suppression System shall be UL & ULC listed in accordance with UL300, UL1254,
- ULCORD-C1254.6.
- B. Microprocessor-based control board shall be ETL Listed to UL Standard 864 and CAN/ ULC-S527-11.
   C. TANK Fire Suppression System intended for installation and for use in accordance with the National Fire Protection Association Standards:
- Wet Chemical Extinguishing Systems, NFPA 17A
   National Electrical Code, NFPA 70
   National Fire Alarm & Signaling Code, NFPA 72
   National Fire Alarm & Signaling Code, NFPA 72

- D. New York City and FDNY approved under COA# 5870
- E. California State Fire Marshal (CFSM), Listing No. 7085-2199:0502.

- A. All units shall be provided with the following standard warranties:
- 1. TANK Fire Suppression System is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 60-months from date of shipment.
   B. Warranty does not cover consumable products such as batteries and nitrogen.
- C. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 60-month warranty period, upon examination by the manufacturer such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.
- D. Refer to Manufacturer's Operation. Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims

#### PART 2- PRODUCTS

#### 2.1 GENERAL

A. A pre-engineered, fixed pipe, automatic wet chemical agent fire suppression system for protection of all hazard areas associated with cooking operations, including exhaust hoods, plenums, ductwork, and cooking appliances.

#### 2.2 COMPONENTS

- A. Exhaust hood fire system components to be factory installed.
- B. Cylinder and Valve Assembly
- 1. The cylinders shall have a tin-nickel alloy plated brass valve with pressure gauge.
  2. Wet chemical agent shall be contained in one or more stored pressure DOT/TC rated steel cylinder.
- and valve assemblies.
- 3. Each cylinder is factory-filled with liquid fire suppressant and pressurized to 200 PSIG at 70°F.
- Nozzles shall be located to protect the exhaust ducts, plenums, and all cooking appliances requiring protection.
- All nozzles shall be equipped with a metal blow off cap. The cap prevents contamination from entering the pipe network and is designed to pop-off upon system discharge, allowing agent to flow to the protected hazard area.
- 3. All nozzles shall incorporate a stamped part number to easily identify nozzle type.
- D. Distribution System
- 13. The distribution system shall consist of Copper, Schedule 40 black iron, chrome-plated or stainless-steel pipe and fittings. All exposed piping and fittings must be chrome-plated or stainless

- Fittings shall be minimum class 150. Galvanized fittings shall not be used. E. Suppression System
- 1. The system control equipment shall be capable of all functions associated with automatically and manually discharging the wet chemical agent from all cylinder and valve assemblies, including automatic shutdown of the heat source or fuel and electrical power to all protected areas upon system discharge.
- system utscharige.

  2. Liquid Fire Suppressant shall be Aqueous Potassium Carbonate (APC).

  3. All mechanical components of the actuator kit shall be enclosed.

  4. The actuator kit shall be capable of automatic or manual activation means.
- 5. Supervisory Pressure Switch added to monitor operating system pressure
- 6. For manual activation, an electrically operated manual release shall be used to actuate the system
- For automatic activation, the system will be activated by a Firestat (heat) detector.

- 1. Electrical Division to provide shunt trip breakers at main power panel, or disconnects, as designated by the Electrical Engineer; interconnection provided at hood control panel for the signal to shut down all electricity in and under the exhaust hood. Shunt trips/disconnects to accomplish shut off
- of electricity in the event of fire system activation by others.

  Printed circuit board with microprocessor-based controller that provides all the necessary monitoring, timing, and supervision functions required for the reliable operation of the fire system.

- 3. Independent supervised loops incorporate redundancy and fault detection.
  4. Real-time cloud-based monitoring connection provided with system by ownership.
  5. Primary power supply, with battery backup for power loss.
  6. All wiring must be in accordance to NFPA 70 and the Authority Having Jurisdiction (AHJ).
- 7. Electric gas valve provided for equipment below exhaust hood. Coordinate size and installation with Plumbing Division.

  8. All wiring is to be in accordance with the applicable manufacturer's instructions for the fire alarm
- control panel, gas shut-off valve, manual reset relay, and contractor supplied shut-off devices,

#### PART 3- EXECUTION

#### 3.1 EXAMINATION

A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

#### 3.2 APPLICATION

A. Wet chemical-based fire suppression system for use in commercial kitchens. It can be mounted in the integral cabinet located at the end of the hood or offered as a wall mount package

- A. As part of this item, provide wall mounted type K handheld portable fire extinguisher, placard, and mounting bracket as required in the immediate vicinity of each cooking area, per NFPA-96 and NFPA-10. Additional fire extinguishers as required in the kitchen area are to be specified by the Architect and provided by the General Contractor.
- B. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.

  C. Six-month and twelve-month inspections, servicing, and replacement of components as per NFPA 96
- to be provided by the General Contractor or Owner



REVISIONS

r ģ INFINITY INFINITY ENGINEERING GROUP, LLC Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 FL Cert. of Auth. No. 27889 RICHARD KIMBALL, P.E FL REG. NO. 79067

Date This item has been electronically led and sealed by (Richard Kimball, on the date and/or time stamp shousing a digital signature. Printed cop nis document are not conside, and sealed and the signature verified by a 3<sup>rd</sup> Party Certi. Authority on any electronic

HOOD UNIT

KITCHEN EXHAUST, H AND MAKEUP AIR U DETAILS

#426 - PACE

DATE: 5/24/2022

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Pace,

5486241

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CEFCO #426 Pace,

DRAWN BY: JLB-47 3/4" = 1'-0'

MASTER DRAWING

SHEET NO.

MC0.5 AS NOTED

CEFCO 3

REFER TO SEPARATE PERMIT CAPTIVEAIRE (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

EXHA	UST	FAN	INFORMATION - JOB#54	86241												
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL#	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	DU85HFA	CAPTIVEAIRE	1800	1.200	1454	TEAO-ECM	0.750	0.5440	1	115	8.9	570 FPM	93	14.7

CON	リヒNSヒト	DETAILS										
FAN UNIT NO	TAG	FAN UNIT MODEL#	CONDENSER NO	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX FUSE SIZE	MIN WIRE SIZE	SEER
2	MUA-1	A1-15D-MPU	1	3	208-230	3 PHASE	60 HZ	14.5 AMPS	11.9 AMPS	20 AMPS	14 AWG	14

MUA	FAN	INFO	RMATION - JOB#548624	1															
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL#	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONE
2	MUA-1	1	A1-15D-MPU	15MF-1-MOD	A1	1100	1440	0.500	1529	TEAO-ECM	1.000	0.5500	1	115	11.6	15.6A	25A	930	17.7

COII	,Ş – J0	B#54	86241																				
FAN	TAG	COIL	DESIGN						COOLING										HEATING				
NO	IAG	TYPE	CFM	ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
2	MUA-1	DX	1440	93.0°F	77.0°F	78.7°F	70.6°F					35.9 MBH	21.6 MBH	14.3 MBH									

FAN OPTIONS  FAN UNIT UNIT TAG OTY DESCRIPTION  1 GREASE BOX 1 FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS 1 MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST 1 ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMG3 PREWIRE (TELCO MOTOR), CCW ROTATION 1 2 YEAR PARTS WARRANTY 1 SIZE 1 UNITEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS 3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MUIA (1,100 TO 1,800 CFM), 208V/230V, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY 1 ECM WIRING PACKAGE - DO SUPPLY - PWM SIGNAL FROM ECPMG3 PREWIRE (TELCO MOTOR)	2	MUA-1	DX	1440	93.0°F	77.0°F	78.7°F	70.6°F										
UNIT TAG QTY DESCRIPTION  1 GREASE BOX 1 FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS 1 MIMI DADE CERTIFICATION - NOA-1 ALLUMINUM UPBLAST 1 ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION 1 2 YEAR PARTS WARRANTY 1 SIZE 1 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS 3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MUA (1.100 TO 1.180 OCFM), 280 V/230 V, 3 PHASE. COOLING 1 THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MUA-1 1 MUAD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS 1 MAMI DADE CERTIFICATION - NOA-2 SUPPLY	FAN	OPTIO	VS															
1 FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS 1 FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS 1 MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST 1 ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION 1 2 YEAR PARTS WARRANTY 1 SIZE 1 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS 3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MUA (1,100 TO 1 1,800 CFM), 280V320V3, 3 PHASE COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY	UNIT	TAG	QTY				DESCRIPTION	N										
1 MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST 1 EOM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION 1 2 YEAR PARTS WARRANTY 1 SIZE 1 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS 3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPPTON FOR SIZE 1 MUA (1,100 TO 1 1,800 CFM), 2099/2090, 3 PHASE, COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOATING OPPTON FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	GREASE B	ox													
1 ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION 1 2 YEAR PARTS WARRANTY 1 SIZE I JUNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS 3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MUA (1,100 TO 1,800 CFM), 269V230V, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 MIXING BOX GAPS FOR SINGLE CONDENSER UNITS 1 MIXING BOX CAPS FOR SIZE 1 WORLD FOR SIZE ON SIZE ON SIZE OF SINGLE CONDENSER UNITS 1 MIXING BOX CAPS FOR SIZE ON SIZE OF SINGLE CONDENSER UNITS			1	FAN BASE														
1 2 YEAR PARTS WARRANTY 1 SIZE 1 UNITEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS 3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MUA (1,100 TO 1 1,800 CFM), 208V;30V, 3 PHASE, COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOLING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS 1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY	1	KEF-1	1	MIAMI DAD	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION													
SIZE 1 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS     TON SINGLE CIRCUIT MODDULAR PACKAGED COOLING OPTION FOR SIZE 1 MUA (1.100 TO     1.800 CFM), 2089/2304, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION.      INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL     MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS     MUA-1     MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT     SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS     MIXING BOX DEDICATION - NOA-2 SUPPLY			1	ECM WIRIN														
3 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MUA (1,100 TO 1,800 CFM), 2804/230V, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION 1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL 1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS 1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT 1 SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS 1 CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS 1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	1 2 YEAR PARTS WARRANTY														
1 1,800 CFM), 208V/230V, 3 PHASE, COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION     1 INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL     1 MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS     1 MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT     1 SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS     1 CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS     1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	SIZE 1 UNT														
MUA-1     MOD PACKAGE UNIT AC CONTROLS FOR UNTEMPERED FANS     MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT     SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS     CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS     MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	1,800 CFM)	, 208V/230V, 3 PH													
MIJA-1     MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT     SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS     CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS     MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	INSULATED	BLOWER SECTION	ON SIZE 1-2 COMM	IERCIAL											
MIXING BOX SHELL FOR SIZE 1 MOD PACKAGE UNIT CONDENSER SUPPORT     SIZE 1 COOLING COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS     CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS     MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	MOD PACK	AGE UNIT AC CO	NTROLS FOR UNT	EMPERED FANS											
CONDENSING UNIT LOCKING CAPS FOR SINGLE CONDENSER UNITS     MIAMI DADE CERTIFICATION - NOA-2 SUPPLY	2	MUA-1	1	MIXING BO	X SHELL FOR SIZ	E 1 MOD PACKAG	E UNIT CONDENSE	R SUPPORT										
1 MIAMI DADE CERTIFICATION - NOA-2 SUPPLY			1	SIZE 1 CO	DLING COIL ECOA	IG COIL ECOATING OPTION FOR STANDARD MPU, DX AND CHILLED WATER COILS												
			1	CONDENS	ING UNIT LOCKING	CAPS FOR SING	LE CONDENSER U	NITS										
1 ECM WIRING PACKAGE - DD SUPPLY - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR)			1	MIAMI DAD	E CERTIFICATION	- NOA-2 SUPPLY												
			1	ECM WIRIN	IG PACKAGE - DD	SUPPLY - PWM S	IGNAL FROM ECPN	IO3 PREWIRE (TE	ELCO MOTOR)									
1 2 YEAR PARTS WARRANTY																		

	FAN	ACCES	SORIE.	S								
	FAN UNIT	TAG		EXHAUST		SUPPLY						
	NO		GREASE CUP		WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT			
l	1	KEF-1	YES									
ı	2	MUA-1										

CUI	RB AS	SSEMBLIES			
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	44 LBS	CURB	23.000"W X 23.000"L X 26.000"H ALONG LENGTH, RIGHT VENTED HINGED.
2	#2	MUA-1	69 LBS	CURB	21.000"W X 113.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED MPU CURB CLIPS.

#### MIANI-DADE NOAL ALUMINUM UP-BLAST FANS

ILLY WELDED CURB CORNERS (ABOVE 20" HEIGHT).

1. THIS APPROVAL IS FOR THE STRUCTURAL CAPACITY AND DIPACT PATING OF THE EXTERIOR HOUSING OILY, IT DOES NOT INCLUDE MAY INTERIOR RECHRISS OR ELECTRICAL PART. 2. THESE FANS HAVE NOT BEEN VIND TESTED FOR VIND DRIVEN HAW TEST FOR FLORIDA ROLLING CODE, TASSOD 40–95. INCLINE CORE, TASIN GO-PS.

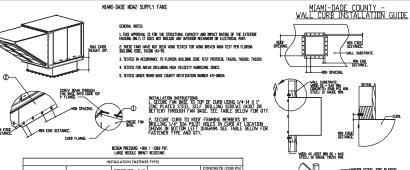
A TESTED IN AGENETIC PLOSEIA RULIUNG CODE TEST PROTOCOL TASEN, TASENZ, TASENZ.

A TESTED FOR AGENG INCLUMING HOR VELICITY MARKENZ ZINES.

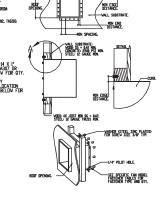
S. TESTED LINER HOWEL-HOR COUNTY HOTFTCATION NUMBER ATT-80833.

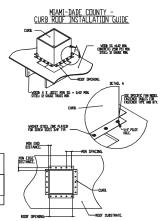


						INSTA	LLATIC	N FASTE	NER T	PES						- 1	1	
	FAN TO CURB					WOOD (SG = 0.42 STEEL (12 GAUGE MIN.)					N.)	CONCR MIN. CO	KED					
FASTENER				5/16"-18 X RILLING SC RIL-FLEX C	REW (	ELCO		DIA. ZIN D LAG E		1/4*-14 DRIL-FLEX SELF DRILLING SCREW				3/8° D KWII EXPANS				
MINIMUM THREAD PENETRATION			Т	N/	a,			2-1/2*			12 GA	UGE			1			
MINIMUM EDGE DISTANCE			Т	N/	a,			1-1/2" 3/8"							$\neg$	1		
	MINIMUM E DISTANCE	ND	Т	N/	۹.			2-5/8*	П	3/8"					1			
	MINIMUM S	PACING	Т	N/	۹.			1-1/2*								i		
	•					- 11	STALLA	ION FASTE	NER QD									
		CURB TO		CURB TO (WALL		W000 (	toor)	DOF) WOOD (WALL)		STEEL (ROOF)		STEEL (A	VALL)	CONCRETE (ROOF)		CONC (WA	CONCRETE (WALL)	
į	N MODEL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	101	
١	DUSS	3	12	3	12	4	16	4	16	5	20	5	20	4	16	4	,	



				LAR	GE MOSSULE	IMPACT	RESISTANT							
				INSTALL	ATION FAS	TENER	TYPES							
		FAN TO CURB			OD (SG = MIN.)	0.42	STEEL	(12 GAU	GE MII		CONCRETE (2500 PSI MIN. GRACKED GONGRETE)			
FASTENER		/4"-14 X 1" LING SCR OR BETT	EW (A)	302	8" DIA. ZIN TED LAG B	1/4"-14 DRIL-FLEX SELF DRILLING SCREW				3/8" DIA. SS HILTI KWIK BOLT TZ EXPANSION ANCHOR				
MINIMUM THREAD PENETRATION		N/A			2"		12 GAUGE				2-5/16"			
MINIMUM EDGE DISTANCE		N/A			1-1/2"		3/8"				3"			
MINIMUM END DISTANCE		N/A			2-5/8"	3/8"				4"				
MINIMUM SPACING		N/A			1-1/2"	$\neg$	3/4"				T			
				INST	ALLATION FAS	TENER C	(TY					$\neg$		
CURS TO FAN					W000	STEER.					CONCRETE			
FAN MODEL	LONG	SHORT	TOTAL	LONG	SHORE	TOTAL	LONG	PER SIDE	TOTAL	LONG	SHORT	TOTAL		
MODULAR 1	2	2	8	4	3	14	4	3	14	3	2	10		







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KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

⊢ Ņ



Pace, **DATE:** 5/24/2022 **DWG.#:** 5486241 DRAWN BY: JLB-47 **SCALE:** 3/4" = 1'-0" MASTER DRAWING

CEFCO #426 Pace, FL

32571

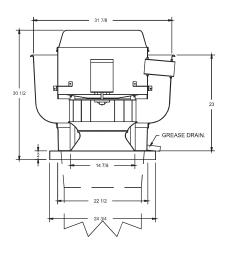
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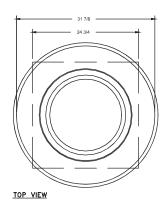
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CEFCO #426 - PACE

REFER TO SEPARATE PERMIT CAPTIVEAIRE (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

#### FAN #1 DU85HFA - EXHAUST FAN (KEF-1)





#### FEATURES:

- PERTURES.

  PIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).

  ROOF MOUNTED FAMS.

  RESTAURANT MODEL.

  ULTOS AND ULCS645

  VARABLE SPEED CONTROL.

  INTERNAL WIRNING.

  THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

  HIGH HEAT OPERATION 307 F (1497).

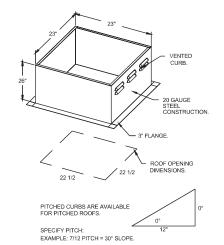
  REASE CLASSIFICATION TESTING.

  NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY
WHILE EXHAUSTING HAT 3 300°F (149°C)
UNTIL ALL FAN PARTS HAVE REACHED
THERMAL EQUILIBRIUM, AND WITHOUT ANY
DETERIORATING FFECTS TO THE FAN WHICH
WOULD CAUSE UNSAFE OPERATION.

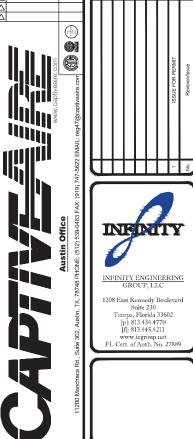
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY
WHILE EXHAUSTING BURNING GREASE VAPORS
AT 600°F (316°C) FOR A PERIOD OF
15 MINUTES WITHOUT THE FAN BECOMING
DANAGGED TO ANY EXTENT THAT COULD CAUSE
AN UNSAFE CONDITION.

OF TORNO
OFFICE OF THE STATE OF





REVISIONS DESCRIPTION DATE:



RICHARD KIMBALL, P.E. FL REG. NO. 79067

KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

MC0.7

Date

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**DATE:** 5/24/2022

**DWG.#:** 5486241 DRAWN BY: JLB-47

CEFCO #426 Pace, FL

**SCALE:** 3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

EXAMINER: PX3534PX11831P2038PX FBC CODE: 2020 FBC DATE: -02/03/2023

AS NOTED

REFER TO SEPARATE PERMIT CAPTIVEAIRE (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

FAN EZ A 1-1 SD.MDU. - SUPPLY FAN (MUA-1)

1. SUPPLY MONT WITH 15" MIXED PLOY OF DIRECT DRIVE FAN IN SIZE #1 HOUSING.

2. NITACK HOUGH WITH LEZ ILLEST

3. DOWN DISCHARGE. ARE FLOW RIGHT > LEFT.

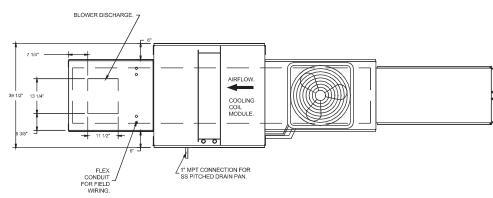
4. DOWN DISCHARGE. CAREFULOW RIGHT > LEFT.

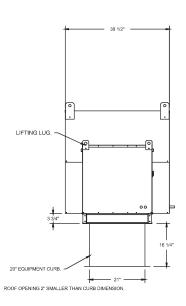
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 UNTEMPERED DIRECT DRIVE AHUS.

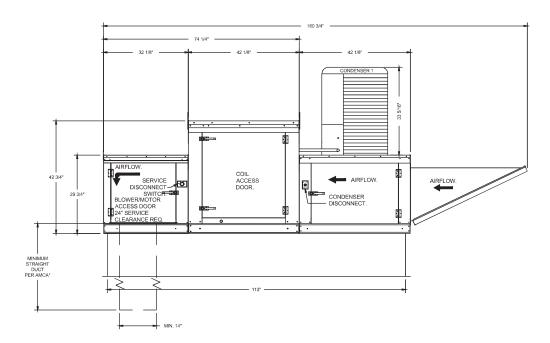
5. 3 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYPER NIT. THERMALE EXPANSION NAUE, FAIR DA REPRIEGEMENT, AND REFERDERSHAPPINNER, (1,00) TO 1,800 CFM) WHEN DRIDERED WITH OPPOSITE AIRFLOW CONDENSERS ACCESS AND COIL PIPINS WILL REMAIN IN STANDARD POSITION, DRAW AND SLEDS WILL MOVE TO THE OPPOSITE SUPPLICATION OF THE CHANGE CONTROL PROCESSOR SIZE AND COIL PIPINS WILL REMAIN IN STANDARD POSITION, DRAW AND SLEDS WILL MOVE TO THE OPPOSITE SUPPLICATION OF THE CHANGE OF THE CHANGE OF THE POSITION OF THE CHANGE OF THE CHANGE OF THE CHANGE OF THE CHANGE OF THE POSITION OF THE CHANGE OF THE CHA

INCTESSIBLY DUCT MAST BE INSTALLED TO MEET SMACAA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF INNT INSIGHERCE AS OUT INFO IN ANCA PUBLICATION 301. WHEN USING RECTANGULAR DUCTWORK, ELEONIS MUST BE RADIUS THROAT, RADIUS BACK WITH URBING VANCES, ELEONIS MUST BE RADIUS THROAT, RADIUS BACK WITH URBING VANCES, ELEONIS MUST BE RADIUS. THROAT, RADIUS BACK WITH DUCTWORK WITH SALES STANDARD ST









TYPICAL DRAIN TRAP INSTALL







r g INFINITY INFINITY ENGINEERING GROUP, LLC 1208 East Kennedy Boulevard Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 www.iegroup.net FL Cert. of Auth. No. 27889

REVISIONS DESCRIPTION DATE:

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"KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

CEFCO #426 - PACE **DATE:** 5/24/2022

**DWG.#:** 5486241 DRAWN BY: JLB-47

**SCALE:** 3/4" = 1'-0"

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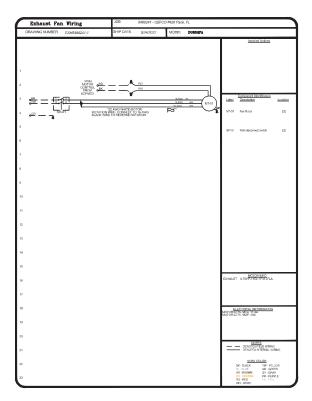
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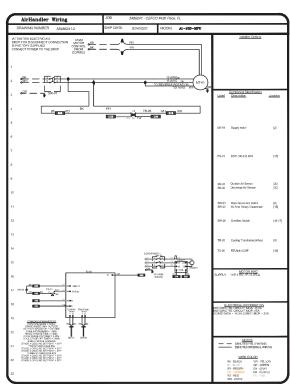
32571

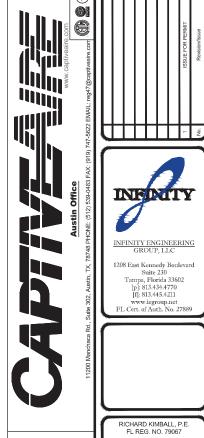
F,

Pace,

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KITCHEN EXHAUST, HOOD
AND MAKEUP AIR UNIT
DETAILS CEFCO #426 - PACE

 $\frac{\text{INFINITY ENGINEERING}}{\text{GROUP, LLC}}$ 

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**DATE:** 5/24/2022 **DWG.#:** 5486241

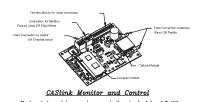
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MC0.9 Date AS NOTED

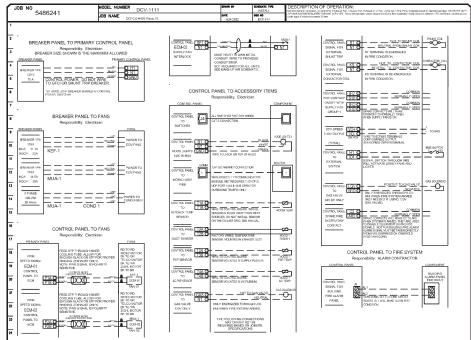




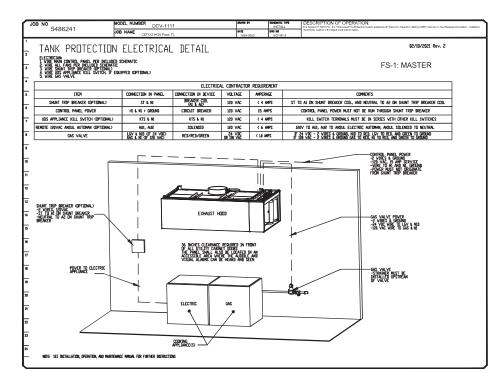
us to allow cloud-based Britishing Management System to remote the sufficient as MOVITOD in the posterior late. The control of the state of the superior state of the set to allow cloud-based Britishing Management System to stifted as CONTROL in the points its. let to allow cloud-based Britishing Management System to SONOMIZER control strategies for fully integrated Britishing

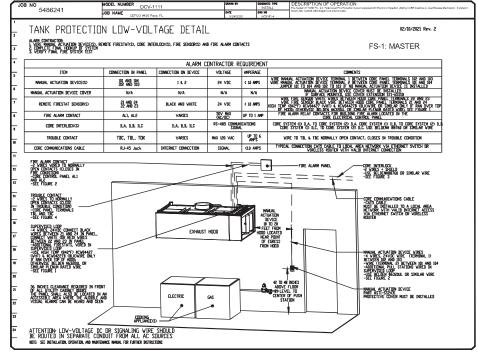
м	NITORING AND	CONTROL POINTS LIST	
DCV Packages	Punction	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Dust Temperature(s)	MONITOR	Dust Temperature(s)	MONITOR
HUA Discharge Temperature	MONITOR	MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Pan Amperage	MONITOR	Fan Paults	MONITOR
Pan Power	MONITOR	Pan Siahu	MONITOR
FFD Faults	MONITOR	PCU Paulte	MONITOR
Controller Faults	MONITOR	PCU Filler Clog Percentages	MONITOR
en Faulte	MONITOR	Pire Condition	MONITOR
Pan Status	MONITOR	CORE Pire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR
PCU Pilter Clag Percentages	MONITOR	Pans Button(s)	MONITOR & CONTR
Pire Condition	MONITOR	Lighte Butten(s)	MONITOR & CONTR
CORE Pire System	MONITOR	Fash Button	MONITOR & CONTR
Building Pressures	MONITOR		
Prop Time Button	MONITOR & CONTROL		
Pens Bulton	MONITOR & CONTROL		
Lights Button	MONITOR & CONTROL		

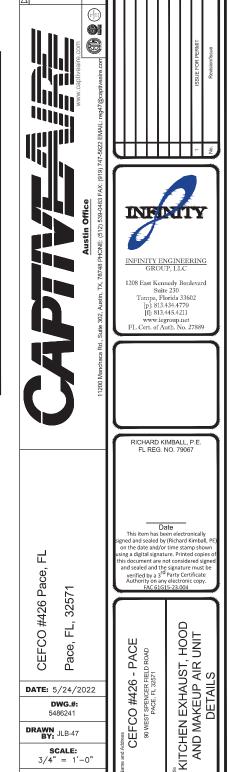
MONITOR & CONTROL



JOB NO	MODEL NUMBER DCV-1111	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
5486241	JOB NAME CEFCO #426 Page, FL	DATE 5/24/2022	DEC NO ECP #1-2	Demand Control Vanishoon, will control for 1 Enhance Fan. 1 Supply Flore. Enhance on in Fine, Lights out in Fine. Fines impossible about on clust temperature. INVER- 3 Problet MCTOR FLORISTS FOR LIGHT WITH VIDE. Scion temperature conscribingued books for fold lacidations Verify distance between VEB and Matery and could popy if citizense exceeds 55 feet.
1	CLF CO MAN PAGE, FE	5/24/2022	ECP-91-2	
2 CONTROL PANEL	BUILDING ALARM PANEL			
SIGNAL FOR				
TROUBLE TR. C TROUBLE OF	COMMON			
ALARM MAKE TRO TO CONDITION.	TEL IN TROUBLE			
5 CONTROL PANE	EL TO FIRE SYSTEM			
	ERTIFIED INSTALLER			
CONTROL PANEL	COMPONENT			
7	FIRE STATS			
2.30 FEET STATES	PERMISED LOOP FS-01			
TO DUCT Installation Sci	Indony and field wiring. See ternalis. Multiple fire sensors Fing Stat			
MOUNTED FIRE HIGH TEMP Y	WRE (\$42 F), PN SLPCON-UFT Supervised Loop wing in contact I other wing shall be FPS \$23200, I other wing shall be FPS \$23200, I			
STAT(8) With is blood 3.0 Belden or simil	So Fire State			
™   <del>                                   </del>	= <i>===</i> # <sup>==</sup> J			
-   — _	PULL STATION			
" "300				
12 IMMANALACTU	ARICH LOOP / FEMORE FIRE EVEREN			
Multiple manual Multiple Holeus A Play Jamper N	including possible.  Assume possible.  The wines been pint to print and from pint to  AUX-01			
13 CONTROL PANEL pin3 is mounted with in the soon Microwards in the soon in th	scholars possible.  Kinders (possible, some of the property of			
manual advisor system dowing	A UNITATE Or absorbed Nation FS permitty in each to place of histories FS permitty in each to pot for distributions or addition. See Fire the course information.			
15	Nonal Attation			
11100	Dela			
16	CORE POB			
17 CONTROL PANEL 12 CAT-S CONN	ECTION FO			
TO ADDITIONAL	DEVICES MAY BE INLINE.			
18 BOARD. IN EMPTY JA UNLESS VE	DK PN: EOL 1284 EOL 120A J6			
OR OTHER	COMPONENT IN SERIES.			
" INTERBOOK NETWORK SHILDED	DISTRICTORE BLACK D.CA			
— I ™ CBOH <del>V</del>	CAU RED TO CB			
PANEL CORE PANEL	E TERMINUS IN AU. 3. THAT MUST ACTIVATE SET MASTER & SLAVE IS PUR HIRE SYSTEM			
21 DESWITCH	IS PUR FIRE SYSTEM			
22				
_				
23				
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24				







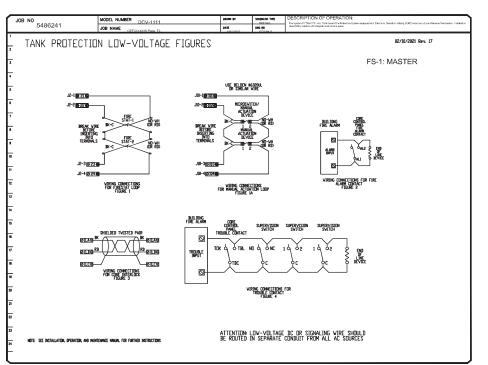
3/4" = 1'-0" MASTER DRAWING

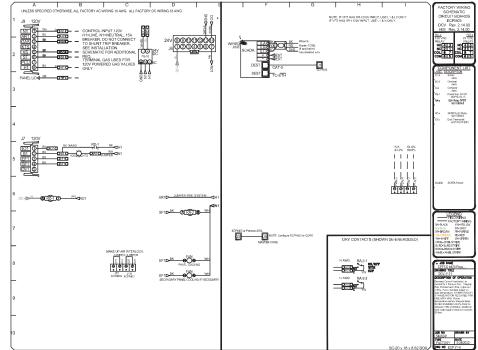
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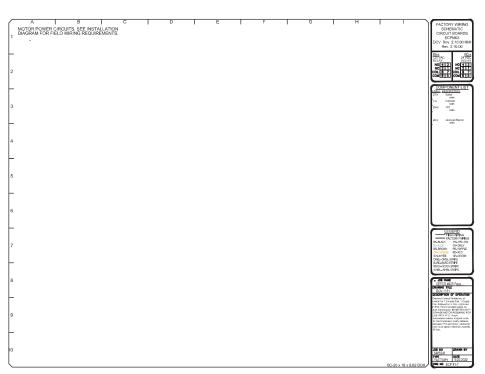
MC1.0

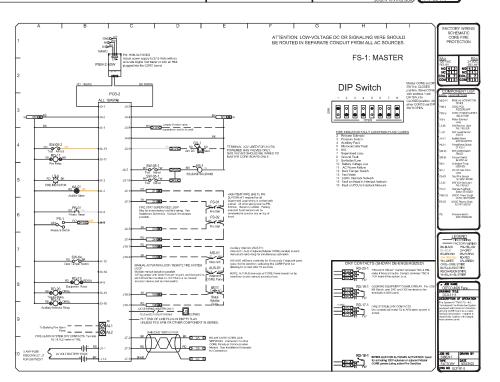
AS NOTED

REVISIONS DESCRIPTION DATE:











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INFINITY

INFINITY ENGINEERING GROUP, LLC

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FL Cert. of Auth. No. 2788

RICHARD KIMBALL, P.E FL REG. NO. 79067

REVISIONS

Date This item has been electronically igned and sealed by (Richard Kimball, on the date and/or time stamp show using a digital signature. Printed copies CEFCO #426 Pace, FL nis document are not conside, and sealed and the signature verified by a 3<sup>rd</sup> Party Certi. Authority on any electronic 32571 "KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS Ŧ,

CEFCO #426 - PACE Pace, **DATE:** 5/24/2022 **DWG.#:** 5486241

DRAWN BY: JLB-47 **SCALE:** 3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

MC1.1 AS NOTED

REFER TO SEPARATE PERMIT CAPTIVEAIRE (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

#### DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS: - CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM

TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.2.8 (2015).

- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HODD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL VANDBET FREUDERS HALL MODULATE THE VPDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DIES TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN THE ST3EM SPALE OPERATE IN PREP MODE DURING LIGHT COOKING DOWN MODE WHEN SUPFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE)

- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:

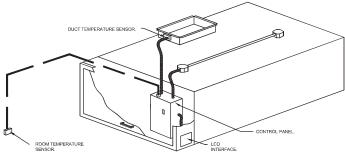
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.

  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).

  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.

  D. DUCT TEMPREPATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.

  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
- F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
- G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.

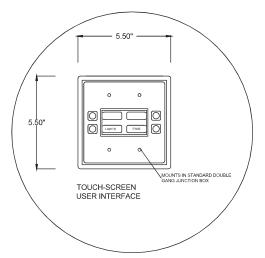


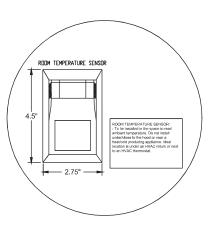
#### TYPICAL HOOD CONTROL PANEL INSTALLATION

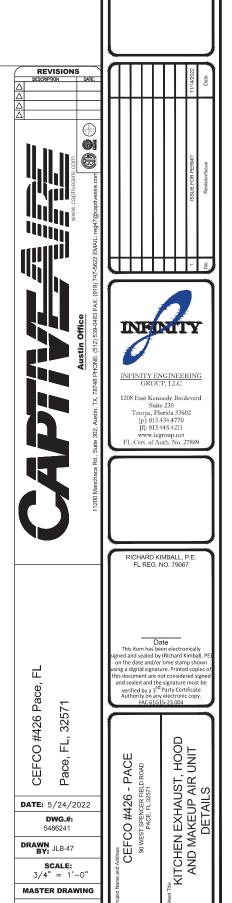
SEQUENCE OF OPERATIONS: THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- I'M TIME:

  AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR YFD DRIVEN MOTORS) MODILATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODILATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.2.8.
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- $\underline{\text{OTHER}}.$  THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT THE PREAKER PROVIDED BY THE ELECTRICAN, FUEL, GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.







MC1.2

SHEET NO. 12

REFER TO SEPARATE PERMIT CAPTIVEAIRE (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

	DUCTWO	RK #1	PARTS	- JOB#5	548	5241 DOUBLE WALL
ON E	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
		-0.0473	19.87	1683.79	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
		-0.007	52.12	1683.79	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 24.5" / ADJUSTMENT = 13.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
			7.25		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 18" OD - INCLUDES UNI-STRUT CUT TO LENGTH,

2 DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.

		1	l	1	1	l	1		
P3	DW1822SADKIT					7.25			DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 18" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW1822SAD, & HARDWARE BAG 4.
P4	DW1445DWASY-2R-S	1800			-0.0675	19.87	1683.79	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P5	DW1447DWAJD-2R-S	1800			-0.014	93.18	1683.79	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P6 ASSEMBLED W/P7	DW1435DWLTTP-2R-S	1800			-0.015	48.06	1683.79		DOUBLE WALL DUCT - 14" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P7 ASSEMBLED W/P6	DW2314TPDBEX	1800				8.00	1683.79		DUCT TO CURB TRANSITION 3/4" DOWN TURN, 23" CURB TO 14" DUCT, 16 GA ALUMINIZED. USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.

	TOTAL WE	IOIII			
DC	UBLE WALL	EACTOR	N DI III	T DUICTINO	DIZ

3M-2000PLUS

P7 ASSEMBLED W/P6 SYSTEM AT P7

W1445DWASY-2R-S

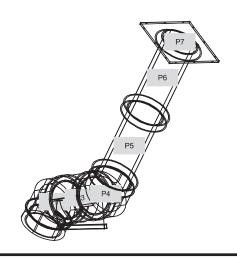
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORI	ZONTAL
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL								
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)					
2R & 2R HT (5"-16")	20'	24'	24'					
2R (18")	18'	24'	24'					
3R & 3Z (5"-24")	10'	24'	24'					
3Z (26" -36")	10'	20'	20'					

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

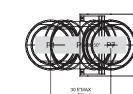
DUCTWORK #1 SE VIEW



#### **DUCTWORK #1 FRONT VIEW**

#### DUCTWORK #1 SIDE VIEW

#### DUCTWORK #1 TOP VIEW





REVISIONS

P O



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RICHARD KIMBALL, P.E FL REG. NO. 79067

KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT

MC1.3

**DATE:** 5/24/2022

DRAWN BY: JLB-47 **SCALE:** 3/4" = 1'-0"

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CEFCO #426 Pace, FL

MASTER DRAWING

SHEET NO.

#### PLUMBING LINE LEGEND:

ALL LINE TYPES SHOWN MAY NOT APPEAR IN ALL DRAWINGS. REFER TO PLANS FOR PLUMBING SCOPE

GREASE WATER PIPING SANITARY VENT PIPING COLD WATER PIPING

HOT WATER PIPING HOT WATER RECIRCULATION

REVERSE OSMOSIS WATER PIPIN REVERSE OSMOSIS WATER PIPIN SCALE CONTROL REVERSE OSMOSIS WATER

PIPING NO SCALE CONTROL STORM DRAIN PIPING OVERFLOW DRAIN PIPING

PLUMBING SYMBOL LEGEND:

ALL SYMBOLS SHOWN MAY NOT APPEAR IN

ALL DRAWINGS SYMBOLS SHOWN ARE

SCHEMATIC AND MAY NOT BE TO SCALE.

PIPE ELBOW DOWN

➤ PIPE ELBOW UP

PIPE BOTTOM

PIPE STRAIGHT T

D≰1 BACK FLOW PREVENTER

(SK-1) FIXTURE DESIGNATION

PIPE BREAK

GLOBE VALVE

CHECK VALVE

GATE VALVE

BALL VALVE

STRAINER

IOINU

 $\bowtie$ 

ιФι

 $\forall$ 

≥ PIPE END CA

→ PIPE RISE

→ PIPE DROF

PIPE TOP T

CONDENSATE DRAIN PIPING

PORT BRASS BALL VALVES WITH BRASS TRII LISTED FOR GAS SERVICE F. FUEL GAS PRESSURE REGULATORS COMMERCIAL STYLE REGULATORS WI INTERNAL PRESSURE RELIEF VALVES.

#### 2.3 HANGERS AND SUPPORTS

A. PROVIDE HANGERS INDICATED ON DRAWINGS. B. WALL SUPPORTS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT

A COMPLY WITH REQUIREMENTS IN "PLUMBING

A. NSF COMPLIANCE: NSF 61 FOR VALVE MATERIALS

B. WATER SHUTOFF SERVICE: TWO-PIECE, FULL

PORT BRASS BALL VALVES WITH BRASS TRIM

C. CHECK VALVES: BRASS SILENT CHECK VALVES

D. FLIEL GAS SHUTGEE SERVICE: TWO-PIECE FULL

WITH NONMETALLIC DISC SUITABLE FOR

HORIZONTAL OR VERTICAL INSTALLATION.

SERVICE LOCATIONS, AND PIPE SIZES.

FOR POTABLE -WATER SERVICE

JOHELT WITH REQUIREMENTS IN PLOMBING INING SCHEDULE" ARTICLE FOR APPLICATIONS PIPE, TUBE, AND FITTING MATERIALS, AND FOR INING METHODS, INSULATION, AND HANGING

1. PIPING 3" AND SMALLER: STEEL RISER CLAMP. C. VERTICAL SUPPORT: STEEL RISER CLAMP.

#### PART 3 - EXECUTION

PART 1 - GENERAL

1.1SUBMITTALS

INDICATED

PART 2 - PRODUCTS

2.2 VALVES

2.1 PIPING MATERIALS

#### 1 PIPING INSTALLATION

- A. INSTALL ESCUTCHEONS AT EACH WALL, FLOOR, AND CEILING PENETRATION IN EXPOSED FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK, USE DEEP PATTERN ESCUTCHEONS WHERE REQUIRED TO CONCEAL PROTRUDING PIPE FITTINGS
- B. INSTALL SLEEVES FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOOR
- C INSTALL SLEEVE SEALS FOR PIPING PENETRATIONS OF CONCRETE WALLS AND
- MAKE SOLDERED JOINTS LISING LEAD FREE . MARE SOLDERED JOIN'S USING LEAD FREE SOLDER AND A NON-CORROSIZE, PASTE-TYPE FLUX. CORE SOLDER IS NOT PERMITTED SOLDER SHALL BE SOLID STRING OR WIRE TYPE, WHERE SOLDERED COPPER PIPING IS CONNECTED TO HREADED BRASS PIPING, USE CAST BRASS ADAPTOR.
- E. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF EACH DAY OR WHEN WORK STOPS
- F. MINIMUM SLOPE OF HORIZONTAL DRAIN PIPING SHALL BE 1/4" PER FOOT FOR PIPING 2-1/2" OR LESS, 1/8" PER FOOT FOR PIPING 3" TO 6", AND 1/16" PER FOOT FOR PIPING 8" OR LARGER
- G MAKE CHANGES IN DIRECTION IN DRAIN PIPING WITH INDIVIDUAL EIGTH BENDS AND WYES
- H QUARTER BENDS SWEEPS TEES AND BINATION WYE & EIGTH BEND FITTINGS ARE
- EXTEND RIGID GAS PIPING TO EXTERIOR GAS APPLIANCES AND INSTALL SHUTOFF VALVE, DIRT LEG, AND UNION AT EACH APPLIANCE.

#### 3.2 JOINT CONSTRUCTION

- A. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS, BEVEL PLAIN ENDS OF STEEL PIPE.
- B. REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPES, TUBES, AND FITTINGS BEFORE ASSEMBLY.
- C. THREADED JOINTS: THREAD PIPE WITH TAPERED PIPE THREADS ACCORDING TO ASME B1.20.1, CUT THREADS FULL AND CLEAN USING SHARP DIES REAM THREADED PIPE ENDS TO REMOVE BURRS
- ΔΡΡΙ Υ ΔΡΡΒΟΡΒΙΔΤΕ ΤΔΡΕ ΟΡ ΤΗΡΕΔΟ COMPOUND TO EXTERNAL PIPE THREADS
- 2. DAMAGED THREADS: DO NOT USE PIPE OR FITTINGS WITH THREADS THAT ARE CORRODED OR DAMAGED.
- D. DISSIMILAR-MATERIAL PIPING JOINTS: MA JOINTS USING ADAPTERS COMPATIBLE WITH MATERIALS OF BOTH PIPING SYSTEMS.
- 3.3 HANGERS AND SUPPORT INSTALLATION
- A SUPPORT PIPES THROUGHOUT BUILDING BOTH DRIZONTALLY AND VERTICAL IN ACCORDANCE WITH REQUIREMENTS HEREIN AND AS SHOWN OF E DRAWINGS. DO NOT USE FASTENERS WHICH PENETRATE THE ROOF DECK.
- B PROVIDE COPPER PLATED HANGERS AND COPPER PIPING PENETRATING METAL STUDS.
- C. IN AREAS WITHOUT CEILINGS, SECURE INSULATION SHIELDS TO INSULATION WITH PRESSURE SENSITIVE TAPE AT EACH END OF SHIFLD. INSTALL HANGERS TO PROVIDE MINIMUM

#### PLUMBING SPECIFICATIONS:

- 1/2" CLEAR SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK
  - E. PLACE A HANGER WITHIN ONE FOOT OF EACH HORIZONTAL FLBOW

PLUMBING SPECIFICATIONS:

- F. SUPPORT VERTICAL PIPE RUNS AT ROOF, AT FLOOR, AND AT MAXIMUM 15-FOOT INTERVALS.
- G. SPACE SUPPORTS NOT MORE THAN FIVE FEET APART AT VALVES. STRAINERS OR PIPING ACCESSORIES LARGER THAN 2"
- H. INSTALL LATERAL BRACING WITH PIPE HANGERS
- INSTALL HANGERS AND SUPPORTS TO ALLOW INSTALL HANGERS AND SUPPORTS TO ALLOW
  CONTROLLED THERMAL, AND SEISMIC MOVEMENT
  OF PIPING SYSTEMS, TO PERMIT FREEDOM OF
  MOVEMENT BETWEEN PIPE ANCHORS, AND TO EXPANSION LOOPS, EXPANSION BENDS, AND SIMILAR UNITS.
- J. ADJUSTING
- 1. HANGER ADJUSTMENTS: ADJUST HANGERS TO DISTRIBUTE LOADS EQUALLY ON ATTACHMENTS AND TO ACHIEVE INDICATED SLOPE OF PIPE.
- 2. LOAD DISTRIBUTION: ADJUST HANGERS AND SUPPORTS SO THAT PIPING LIVE AND DEAD LOADS AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT
- 3 PIPE SLOPES: ADJUST HANGERS AND RTS TO PROVIDE INDICATED PIPE SUPPORTS TO PROVIDE INDICATED PIPE SLOPES AND TO NOT EXCEED MAXIMUM PIPE DEFLECTIONS ALLOWED BY ASME B31.9 FOR BUILDING SERVICES PIPING.
- TRIM EXCESS LENGTH OF CONTINUOUS THREAD HANGER AND SUPPORT RODS TO 1-1/2"

#### 3.4 PIPE INSULATION INSTALLATION

A.INSULATE FITTINGS AND VALVES WITH PREFORMED INSULATION FITTINGS WITH PVC JACKET

#### 3.5 VALVE AND SPECIALTIES INSTALLATION

- A.PROVIDE DEEP SEAL P-TRAPS FOR FLOOR DRAINS
- B. FOR CLEANOUTS LOCATED IN CONCEALED 6. FOR CLEANOUTS LOCALED IN CONCEALED PIPING, INSTALL CLEANOUT WALL ACCESS COVERS OF TYPES INDICATED, WITH FRAME AND COVER FLUSH WITH FINISHED WALL.
- C. PROTECT DRAINS DURING CONSTRUCTION PERIOD TO AVOID CLOGGING WITH DIRT OF DEBRIS AND TO PREVENT DAMAGE FROM TRAFFIC OR CONSTRUCTION WORK.

#### GENERAL NOTES:

- PROVIDE ALL MATERIALS AND FOLIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL
  COMPLETE AND OPERABLE PLUMBING SYSTEMS
  AS INDICATED ON THE DRAWINGS, AS SPECIFIED
- CONTRACT DOCUMENT DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ANGEMENT ONLY
- INSTALL ALL PLUMBING FOLIPMENT AND NSTALL ALL PLOMBING EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
- PROVIDE VIBRATION ISOLATION FOR ALL PLUMBING EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE
- PROVIDE VIRRATION ISOLATORS FOR ALL PIPING THROUGHOUT MECHANICAL EQUIPMENT ROOMS DO THE SAME FOR SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILER OR PRESSURE REDUCING VALVES
- PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILERS AND PRESSURE REDUCING VALVES.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND RESERVE ANY AND ALL UNDERGROUND TILITIES UNLESS OTHERWISE INDICATED
- VORK WITH ARCHITECTURAL, STRUCTURAL CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS
- ALL TESTS SHALL BE COMPLETED BEFORE ANY LUMBING EQUIPMENT OR PIPING INSULATION IS
- LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY

#### GENERAL NOTES (CONT.):

- WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED. THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
- REINFORCEMENT DETAILING AND PLACEMENT OF CONCRETE SHALL CONFORM TO ASTM 315 AND ACI 318. CONCRETE SHALL CONFORM TO ASTM C94. CONCRETE WORK SHALL CONFORM TO ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS." COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 3,000 PSI, TOTAL AIR CONTENT OF EXTERIOR CONCRETE SHALL BE BETWEEN 5 AND 7 PERCENT BY VOLUME, SLUMP SHALL BE SETWEEN 3 AND 4 INCHES CONCRETE SHALL BE
- COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS COORDINATE AND PROVIDE ALL PIPING RANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION
- ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 16 OF THE SPECIFICATION.
- WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH PIPING, COORDINATE PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS, COORDINATION SHALL BE DONE PRIOR TO CUTTING OF PIPING, OR FABRICATION
- THE LOCATIONS OF ALL ITEMS SHOWN ON THE FIXED BY DIMENSIONS ARE APPROXIMATE ONLY THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT
- PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE CONCEALED PLUMBING EQUIPMENT ACCESS PANELS SHALL BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION
- ALL FOLIPMENT PIPING FTC. SHALL BE SUPPORTED AS DETAILED, SPECIFIED, AND
- PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM OF AMPS MEETING MSS STANDARDS WELDING TO STRUCTURAL OF C-CLAMPS SHALL NOT BE PERMITTED
- PLUMBING EQUIPMENT AND PIPING SHALL NOT BE SUPPORTED FROM METAL DECK.
- U. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED
- ALL OPENINGS IN FIRE WALLS DUE TO PIPING CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL
- EQUIPMENT INSTALLATION.

#### PIPING NOTES:

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED
- TO THE CENTERLINE OF ALL PRESSURE PIPING AND TO THE INVERT OF ALL GRAVITY PIPING.
- MAINTAIN A MINIMUM OF 3'6" OF GROUND COVER OVER ALL UNDERGROUND HVAC PIPING
- D. LINESS OTHERWISE NOTED ALL CHILLED WATER HEATING WATER PIPING SHALL BE 3./4 INCH
- PROVIDE AN AIR VENT AT THE HIGH POINT OF EACH DROP IN THE HEATING WATER, CHILLED WATER, AND OTHER CLOSED WATER PIPING SYSTEMS, ALL PIPING SHALL GRADE TO LOW POINTS, PROVIDE HOSE END DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND LOW POINTS.
- LINI ESS OTHERWISE NOTED. ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB, WITH SPACE FOR INSULATION IF REQUIRED.
- INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE
- ALL VALVES SHALL BE INSTALLED SO THAT VALVE REMAINS IN SERVICE WHEN EQUIPMENT OF PIPING ON EQUIPMENT SIDE OF VALVE IS

#### PIPING NOTES (CONT.):

- ALL BALANCING VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY
- PROVIDE CHAINWHEEL OPERATORS FOR ALL VALVES IN EQUIPMENT ROOMS MOUNTED GREATER THAN 7'-0" ABOVE FLOOR LEVEL; CHAIN SHALL EXTEND TO 7'-0" ABOVE FLOOR LEVEL
- ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPÉ BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS
- UNIONS AND/OR FLANGES SHALL BE INSTALLED TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS
- PITCH STEAM PIPING DOWNWARD IN THE DIRECTION OF FLOW 1./4 INCH IN 10 FEET (1 INCH IN 40 FEET) MINIMUM, PITCH ALL STEAM RETURN IN 40 FEET) MINIMUM. PITCH ALL STEAM RETURN
  LINES DOWNWARD IN THE DIRECTION OF
  CONDENSATE FLOW 1/2 INCH PER 10 FEET (1 INCH
  IN 20 FEET) MINIMUM. WHERE LENGTH OF BRANCH
  LINES ARE LESS THAN 8 FEET, PITCH BRANCH
  LINES TOWARD MAINS 1/2 INCH PER FOOT MINIMUM.
- PITCH UP ALL STEAM AND CONDENSATE RUNOUTS TO RISERS AND EQUIPMENT 1/2 INCH PER FOOT. WHERE THIS PITCH CANNOT BE ORTAINED RUNOUTS OVER 8 FEET IN LENGTH SHALL BE ONE SIZE LARGER THAN NOTED
- MAINS (45 DEGREES PREFERRED, 90 DEGREES ACCEPTABLE).
- PROVIDE AN END OF MAIN DRIP AT EACH RISE IN THE STEAM MAIN. PROVIDE CONDENSATE DRIPS AT THE BOTTOM OF ALL STEAM RISERS. DOWNFED RUNOUTS TO EQUIPMENT, RADIATORS. DOWNFED ROHOUTS TO EQUIPMENT, RADIATOR ETC., AT END OF MAINS AND LOW POINTS, AND AHEAD OF ALL PRESSURE REGULATORS, CONTROL VALVES, ISOLATION VALVES, AND EXPANSION JOINTS.
- ON STRAIGHT STEAM PIPING RUNS WITH NO NATURAL DRAINAGE POINTS INSTALL DRIPLEGS AT INTERVALS NOT EXCEEDING 200 FEET WHERE PIPE IS PITCHED DOWNWARD IN THE DIRECT OF STEAM FLOW AND A MAXIMUM OF 100 FEET CONDENSATE FLOW IS OPPOSITE OF STEAM
- R. STEAM TRAPS SHALL BE MINIMUM 3/4" SIZE. INSTALL ALL PIPING WITHOUT FORCING OR
- ALL PIPING SHALL CLEAR DOORS AND WINDOWS.
- ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION. ALL PIPING WORK SHALL BE COORDINATED WITH
- ALL TRADES INVOLVED, OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER PROVIDE ELEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS, CHILLER COOLING TOWERS. AND OTHER EQUIPMEN
- PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE OR AS INDICATED ON THE DRAWINGS. SLOPE REFRIGERANT PIPING ONE PERCENT IN HE DIRECTION OF OIL RETURN, LIQUID LINES

WHICH REQUIRE VIBRATION ISOLATION EXCEPT WATER COILS. FLEXIBLE CONNECTIONS SHALL BE

- MAY BE INSTALLED LEVE INSTALL HORIZONTAL REFRIGERANT HOT GAS DISCHARGE PIPING WITH 1/2" PER 10 FEET DOWNWARD SLOPE AWAY FROM THE
- INSTALL HORIZONTAL REFRIGERANT SUCTION LINES WITH 1/2" PER 10 FEET DOWNWARD SLOPE TO THE COMPRESSOR WITH NO LONG TRAPS OF DEAD ENDS WHICH MAY CAUSE OIL TO SEPARATI

FROM THE SUCTION GAS AND RETURN TO THE

- VIDE LINE SIZE LIQUID INDICATORS IN MAIN LIQUID LINE LEAVING CONDENSER OR RECEIVER INSTALL MOISTURE-LIQUID INDICATORS IN LIQUID LINES BETWEEN FILTER DRYERS AND THERMOSTATIC EXPANSION VALVES AND IN LIQUID LINE TO RECEIVER
- AR PROVIDE LINE SIZE STRAINER LIPSTREAM OF EACH AUTOMATIC VALVE. PROVIDE SHUTOFF VALVE ON EACH SIDE OF STRAINER.
- AC. PROVIDE PERMANENT FILTER DRYERS IN LOW TEMPERATURE SYSTEMS AND SYSTEMS USING HERMETIC COMPRESSORS.
- AD. PROVIDE REPLACEABLE CARTRIDGE FILTER DRYERS WITH THREE VALVE BYPASS ASSEMBLY FOR SOLENOID VALVES, ADJACENT TO
- PROVIDE REFRIGERANT CHARGING VALVE CONNECTIONS IN LIQUID LINE BETWEEN RECEIVER SHUTOFF VALVE AND EXPANSION

#### PLUMBING NOTES:

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- RUN ALL SOIL WASTE AND VENT PIPING WITH 2% MINIMUM GRADE UNLESS OTHERWISE NOTED. HORIZONTAL VENT PIPING SHALL BE GRADED TO DRIP BACK TO THE SOIL OR WASTE PIPE BY
- ELEVATIONS AS SHOWN ON THE DRAWINGS ARE TO THE CENTERLINE OF ALL PRESSURE PIPING AND TO THE INVERT OF ALL GRAVITY PIPING.
- ADJUST SEWER INVERTS TO KEEP TOPS OF PIPE
- OVER ALL UNDERGROUND WATER MAINS AND A MINIMUM OF 3'0" OF GROUND COVER OVER ALL UNDERGROUND SEWERS AND DRAINS.
- PROVIDE SHUTGEF VALVES IN ALL DOMESTIC RANCH PIPING SERVES TWO OR MORE
- UNLESS OTHERWISE NOTED, ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE 1/2 INCH SIZE.
- UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF SLAB, WITH SPACE FOR INSULATION IF REQUIRED
- INSTALL PIPING SO THAT ALL VALVES, STRAINERS UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- WHERE DOMESTIC COLD AND HOT WATER PIPING DROPS INTO A PIPE CHASE, THE SIZE SHOWN FOR THE PIPE DROPS SHALL BE USED TO THE LAST
- INSTALL ALL PIPING WITHOUT FORCING OR
- ALL PIPING SHALL CLEAR DOORS AND WINDOWS.
- ALL PIPING SHALL GRADE TO LOW POINTS. PROVIDE HOSE END DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND LOW POINTS UNIONS AND/OR FLANGES SHALL BE INSTALLED.
- ONIONS MIDJOK FLANGES STALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG PIPING RUNS (100 FEET OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATION AND
- ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.
- ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO MENT AND CONTROLS
- PROVIDE CHAINWHEEL OPERATORS FOR ALL VALVES IN EQUIPMENT ROOMS MOUNTED GREATER THAN 7'-0" ABOVE FLOOR LEVEL: CHAIN SHALL EXTEND TO 7'-0" ABOVE FLOOR LEVEL
- PROVIDE ALL PLUMBING FIXTURES AND FOLIPMENT WITH ACCESSIBLE STOPS
- LINEESS OTHERWISE NOTED, DRAINS SHALL BE
- PROVIDE CLEANOUTS IN SANITARY AND STORM DRAINAGE SYSTEMS AT ENDS OF RUNS, AT CHANGES IN DIRECTION, NEAR THE BASE OF STACKS EVERY 50 FEET IN HORIZONTAL RUNS AND ELSEWHERE AS INDICATED
- ALL CLEANOUTS SHALL BE FULL SIZE OF PIPE FOR PIPE SIZES 6 INCHES AND SMALLER AND SHALL BE 6 INCHES FOR PIPE SIZES LARGER THAN 6
- ALL BALANCING VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY ALL VALVES SHALL BE INSTALLED SO THAT VALVE
- REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED, OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT

NO ADDITIONAL COST TO THE OWNER

PROVIDE ELEXIBLE CONNECTIONS IN ALL PIPING PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE REQUIRED AS CLOSE TO THE FOLIRMENT AS POSSIBLE OR AS INDICATED ON THE DRAWINGS.

#### PLUMBING ABBREVIATIONS:

INVERT

MECH

PLBG

PSI RPBP

SHWR

SA

WS

SHEET

MSE

INDIRECT WASTE

MOP SERVICE BASIN

NORMALLY CLOSED

OUTSIDE DIAMETER

OPEN END DRAIN POST INDICATOR VALVE

PLUMBING POUNDS PER SQUARE INCH

REDUCED PRESSURE BACKFLOW

SOIL STACK / STAINLESS STEEL

VARIABLE FREQUENCY DRIVE

TITLE

LUMBING SPECIFICATIONS, LEGENDS AND NOTES

P0.3 PLUMBING ISOMETRIC DIAGRAMS - SANITARY&VENT

P0.4 PLUMBING ISOMETRIC DIAGRAMS - DOMESTIC WATER

P1.0 PLUMBING PROPOSED PLAN - SANITARY & VENT

P2.0 PLUMBING PROPOSED PLAN - DOMESTIC WATER

NORMALLY OPEN

MECHANICAL

PREVENTER

SHOWER

TYPICAL

URINAL

VENT

SHOCK ABSORBER

SANITARY DRAIN

FAMPER SWITCH

TEMPERED WATER

VACUUM BREAKER

WASTE STACK

PLUMBING DRAWING LIST:

P0.2 PLUMBING DETAILS AND SCHEDULES

P3.0 PLUMBING PROPOSED ROOF PLAN

P4.0 PLUMBING PROPOSED - NATURAL

VENT STACK VENT THROUGH ROOF

WASTE WATER CLOSET (TOILET)

ACCESS PANEL BATH TUB BWV BACK WATER VALVE CUBIC FEET PER HOUR CUBIC FEET PER HOUR
CUBIC FEET PER MINUTE
CAST IRON
CEMENT LINED DUCTILE IRON CFM CLEANOU CONC CONCRETE CHROME PLATED CTE CONNECT TO EXISTING COLD WATER CWR CWS DF DIA ELEV EWC COLD WATER RETURN COLD WATER SUPPLY KING FOUNTAIN FLOOR CLÉANOU FEC FHV FIRE EXTINGUISHER CABINET FIRE HOSE VALVE FLR FP FIRE PROTECTION FPWH FREEZE PROOF WALL HYDRANT FLOW SWITCH FOOT OR FEE GALV GALVANIZED GCO GROUND CLEAN OUT GREASE INTERCEPTOR GALLONS PER FLUSH GPM GALLONS PER MINUTE INSIDE DIAMETER



RICHARD KIMBALL, P.I

FL REG. NO. 79067

Date

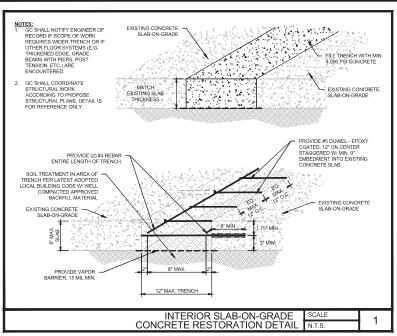
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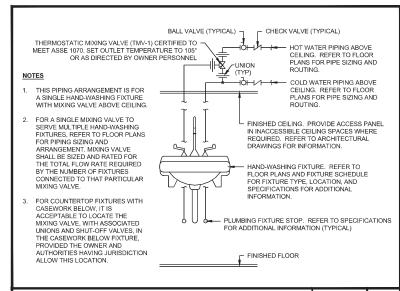
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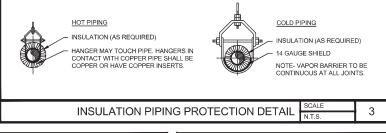
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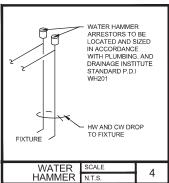


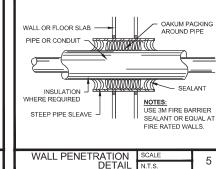




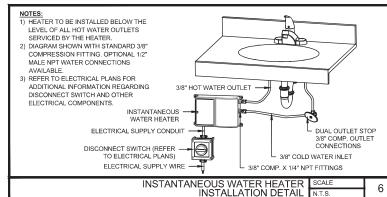


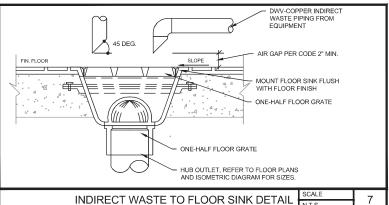
THERMOSTATIC MIXING VALVE PIPING DETAIL

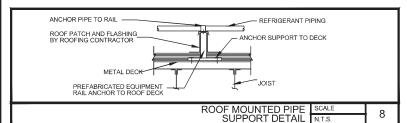


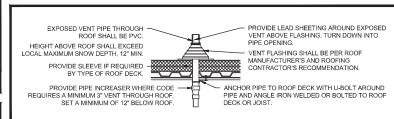


2









NOTES:  1. CONDENSATE DRAIN PIPING FROM ABOVE CEILING AND EXPOSED IN JANITOR'S CLOSET.	CONDENSATE DRAIN ————————————————————————————————————
CONDENSATE DRAIN PIPING. SIZE AS NOTED ON FLOOR PLAN. SECURE PIPE TO WALL AS REQUIRED TO SUPPORT PIPING.	WALL
TERMINATE CONDENSATE DRAIN PIPING ABOVE MOP BASIN WITH CODE REQUIRED AIR GAP	
FINISHED FLOOR	4, 4

VENT THROUGH ROOF DETAIL

FINISHED FLOOR -			
	CONDENCALETIMO	SCALE	10
	TERMINATION AT MOP SINK	N.T.S.	- 10

WATER HEATER SCHEDULE:								
MARK	DESCRIPTION	BASIS OF DESIGN	GALLONS / GPM	MAXIMUM BTU/H	VOLT / PH / HZ	GAS CONNECT ION	HOT/ COLD CONNECTI ONS	NOTES
GWH	GAS TANKLESS WATER HEATER	RHEEM	7.5 GPM	199,000	120/1/60	3/4"	3/4"	1-3
NOTES:								

. PROVIDE AUTOMATIC LEAK DETECTOR SHUTOFF VALVE WITH SENSOR LOCATED IN DRAIN PAN.

MOUNT WATER HEATER ABOVE MOP SINK

SET OUTLIET HOT WATER TEMPERATURE TO 145°F

					200	NECTION S	1750		
MARK	DESCRIPTION	DESCRIPTION BASIS OF DESIGN TRIM/ACCESSORIES				NOTES			
			cw	HW	WASTE	TRAP	VENT		
WC-1	WATER CLOSET	ZURN Z5665-BWL1	1.28GPF FLUSH VALVE TYPE ZEMS6000AV-HET HARDWIRED AUTOMATIC SENSOR VALVE. MAILINE ML 105SSSC000 WHITE ELONGATED PLASTIC OPEN FRONT TOILET SEAT.	1"	-	4"	4"	2"	1-4
LAV-1	LAVATORY	SLOAN ELS-72000	2 STATION WALL MOUNTED SINK, 301PC P-TRAP, PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE, SET OUTLET TEMP TO 100° F	1/2"	1/2"	2"	2"	1-1/2"	1-4
LAV-2	LAVATORY	KOHLER K-2084	VITREOUS CHINA WALL MOUNT LAVATORY, SINGLE HOLE, POP UP DRAIN, OVERFLOW AND CHROME PLATED SUPPLY STOPS. SINGLE LEVER FAUCET KOHLER K-16027-4-CP, 1.5 GPM.	1/2"	1/2"	2"	2"	1-1/2"	1-4
UR-1	URINAL	AMERICAN STANDARD 6590001.020 WWC	TOPSPUD URINAL WITH SLOAN ECOS 186 HARDWIRED-1.0-OR-HW 1.0 GPF FLUSHOMETER. PROVIDE EL-451 TRANSFORMER SERVING (4) URINALS, AND PROVIDE (4) 18 GAUGE WIRE FROM TRANSFORMER TO FLUSHOMETER.	3/4"	-	2"	2"	1-1/2"	1-4
HS-1	HAND SINK	ADVANCE TABCO 7-PS-EC-SP-1X	WALL MOUNTED BASE TYPE	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"	1-4
HS-2	HAND SINK	EAGLE GROUP SR19-16-13.5-1	DROP IN SINK, 1-COMPARTMENT, 20"X16"X13-1/2", 18 GAUGE STAINLESS STEEL, WITH DECK MOUNTED FAUCET, SWING NOZZLE, BASKET DRAIN, PROVIDE THERMOSTATIC MIXING VALVE, SET OUTLET TEMP TO 105" F	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"	1-4
FS-1	FLOOR SINK	OATEY MANUFACTURING 42721 WWC	12"X12"X8" PORCELAIN COATED CAST IRON FLOOR SINK, NO-HUB BOTTOM OUTLET, ALUMINUM DOME STRAINER, AND 3" WASTE CONNECTION	-	-	3"	3"	1-1/2"	1-4
MS-1	MOP SINK	ADVANCE TABCO 9-OP-24FM-SSR	FLOOR MOUNTED MOP SINK. FAUCET: ADVANCE TABCO, K-240, SERVICE SINK FAUCET.	1/2"	1/2"	3"	3"	1-1/2"	1-4
3CS-1	THREE COMP SINK	POWERSOAK CUSTOM	POT AND PAN WASHER	1/2"	1/2"	3"	3"	1-1/2"	1-4
FD-2	FLOOR DRAIN	SIOUX CHIEF 832-36PF WWC	FLOOR DRAIN WITH HUB ADAPTOR	-	-	3"	3"	1-1/2"	Ţ.
RH-1	ROOF HYDRANT	WATTS HY900	NON-FREEZE ROOF HYDRANT WITH 3/4" INLET FEMALE THREADED INLET CONNECTION. ROUTE 1/8" DRAIN LINE TO NEAREST FLOOR SINK	3/4"	-	1/8"	-	-	-
FCO	FLOOR CLEAN OUT	834-4HNR WWC	SIOUX CHEIF 834 SERIES, ON-GRADE ADJUSTABLE CLEANOUT. SIZE CONNECTION TO PIPE. RING & COVER; ROUND NICKEL-BRONZE	-	-	-	-	-	-
	1					_			

#### NOTES:

TD-1

1. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT AND ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING POSITION OF FIXTURES.

STAINLESS STEEL FLOOR RECEPTOR WITH BAR

GRATE, 36"X36"

ANTI-SIPHON WALL FAUCETS. MODEL 24/B24:P-3/4 INLET, 3/4:" FPT. MAX PRESSURE: 125 PSI. MAX TEMP: 120° F

2. FAUCET HOLES TO MATCH FAUCET SPECIFIED.

TRENCH DRAIN

HOSE BIBB

3. FIXTURE ASSEMBLY MUST BE APPROVED BY AND INSTALLED PER ADA REQUIREMENTS.

ZURN Z893

WOODFORD 24P3/4

- . PROVIDE INSULATION KIT ON ALL ADA FIXTURES EXPOSED SUPPLIES AND DRAIN TRAP WITH TRUBRO LAV-GUARD IN WHITE.
- BASIS OF DESIGN PRODUCTS ARE INDICATED FOR REFERENCE ONLY. COMPARABLE PRODUCTS WILL BE ACCEPTED PROVIDED COMPLIANCE WITH TECHNICAL SPECIFICATION

FIXTURE U	INIT LOAD	VALUES

				FIXTURE	UNITS		
FIXTURE TYPE	OCCUPANCY CONTROL TYPE QTY.		DRAINAGE	WATER SUPPLY			
				DRAINAGE	COLD	нот	TOTAL
FLOOR DRAIN	PRIVATE / PUBLIC	TRAP PRIMER	2	2.0	0.0	0.0	0.0
KITCHEN SINK	PRIVATE	FAUCET	4	2.0	1.0	1.0	1.4
LAVATORY	PUBLIC	FAUCET	4	1.0	1.5	1.5	2.0
SERVICE SINK	OFFICES	FAUCET	1	2.0	2.25	2.25	3.0
URINAL (GPF>1.0)	PUBLIC	1" FLUSH VALVE	3	4.0	5.0	0.0	5.0
WATER CLOSET (1.6GPF)	PUBLIC	FLUSH VALVE	6	4.0	10.0	0.0	10.0
HOSE BIB	PRIVATE	3/4" VALVE	1	0.0	0.75	0.0	0.75
ROOF HYDRANT	PRIVATE	3/4" VALVE	1	0.0	0.75	0.0	0.75
THREE COMP SINK	PRIVATE	FAUCET	1	6	2.25	2.25	3
ТОТА	L FIXTURE UNIT	LOAD VALUES	60	106	14.5	111.1	
CORRESP	ONDING INTERM	ITTENT USE (GPM)	-	61.2	17	64.3	
MINIMUM COR	RESPONDING MA	AIN PIPE SIZE (INCH	ES)	4"	2"	1"	2"

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- DRAINAGE FIXTURE UNITS BASED ON FLORIDA PLUMBING CODE TABLE 709.1. WATER SUPPLY FIXTURE UNITS ASED ON UNIFORM PLUMBING CODE TABLE E103.3(2).
- TITEMS IN GRAY ARE EXISTING TO REMAIN OR OUT OF SCOPE OF WORK.
- . CORRESPONDING DOMESTIC WATER PIPE SIZES ARE BASED OFF OF ASSUMED AVERAGE PRESSURE OF ABOUT

#### INSTANTANEOUS WATER HEATER SCHEDULE:

TION	t.	MODEL					
		MODEL	USAGE	KW	VOLT / PH / HZ	SIZE	TEMP.
	١X	ACCUMIX AM010240T	0.5 GPM	7.5	208/1/60	3/8"	105°F
	××	ACCUMIX AM0005240T	0.5 GPM	3.6	208/1/60	3/8"	105°F
	١X	PROSERIES PR008240	4.8 GPM	5.8	208/1/60	1/2"	105°F
	US POINT R HEATER EEMA US POINT R HEATER EEMA	R HEATER EEMAX US POINT R HEATER US POINT R HEATER EEMAX	R   HEATER   EEMAX   AM010240T	R HEATER	RHEATER   EEMAX   AM010240T   0.5 GPM   7.5	R HEATER EEMAX AM010240T 0.5 GPM 7.5 208/1/60 US POINT EEMAX AM0005240T 0.5 GPM 3.6 208/1/60 US POINT R HEATER EEMAX PROSERIES PRO08240 4.8 GPM 5.8 208/1/60	RHEATER EEMAX AM010240T 0.5 GPM 7.5 208/1/60 3/8" US POINT RHEATER EEMAX AM0005240T 0.5 GPM 3.6 208/1/60 3/8" US POINT R HEATER EEMAX PROSERIES PRO08240 4.8 GPM 5.8 208/1/60 1/2"

- . DYNAMIC OPERATING PRESSURE; MINIMUM 30 PSI AND MAXIMUM 150 PSI. 2. UNIT SHALL HAVE ABS-UL 94 5VA RATED COVER AND ALLOW MOUNTING IN ANY DIRECTION.
- ELEMENT SHALL BE REPLACEABLE CARTRIDGE INSERT AND SHALL HAVE REPLACEABLE FILTER IN THE

#### GREASE INTERCEPTOR SIZING:

(1) 3 COMPARTMENT SINK EA. BASIN IS 16"X20"X12" (2) HAND SINK-1 (X3) BASIN IS 14"X10"X5" (3) HAND SINK-2 (X1) BASIN IS 20"X16"X13-1/2" (4) MOP SINK BASIN IS 24"X21"X10"

[1,575] / [231] = 6.82 GAL/MIN.

(1) GAL./MIN. CALCULATIONS FOR 3 COMP. SINK [16x20x12] [3] = 11,520 C.I. [11,520 C.I.] [.75] = 8,640 C.I. [8,640] / [231] = 37.4 GAL/MIN.

(2) GAL./MIN. CALCULATIONS FOR HAND SINK-1 [14X10X5] [3] = 2,100 C.I. [2,100 C.I.] [.75] = 1,575 C.I.

(3) GAL./MIN. CALCULATIONS FOR HAND SINK-2 [20X16X13.5] = 4,320 C.I. [4,320 C.I.] [.75] = 3,240 C.I. [3,240] / [231] = 14.1 GAL/MIN.

(4) GAL./MIN. CALCULATIONS FOR MOP SINK [24X21X10] = 5,040 C.I. [5,040 C.I.] [.75] = 3,780 C.I. [2,520] / [231] = 16.4 GAL/MIN.

TOTAL FLOW = 74.7 GAL./MIN. FLOW RATE TOTAL CAPACITY = 74.7GPMX10(RETENTION TIME) PROVIDE 1000 GAL GREASE TRAP.

\*CALCULATED WITH RETENTION TIME OF 10 MINS.







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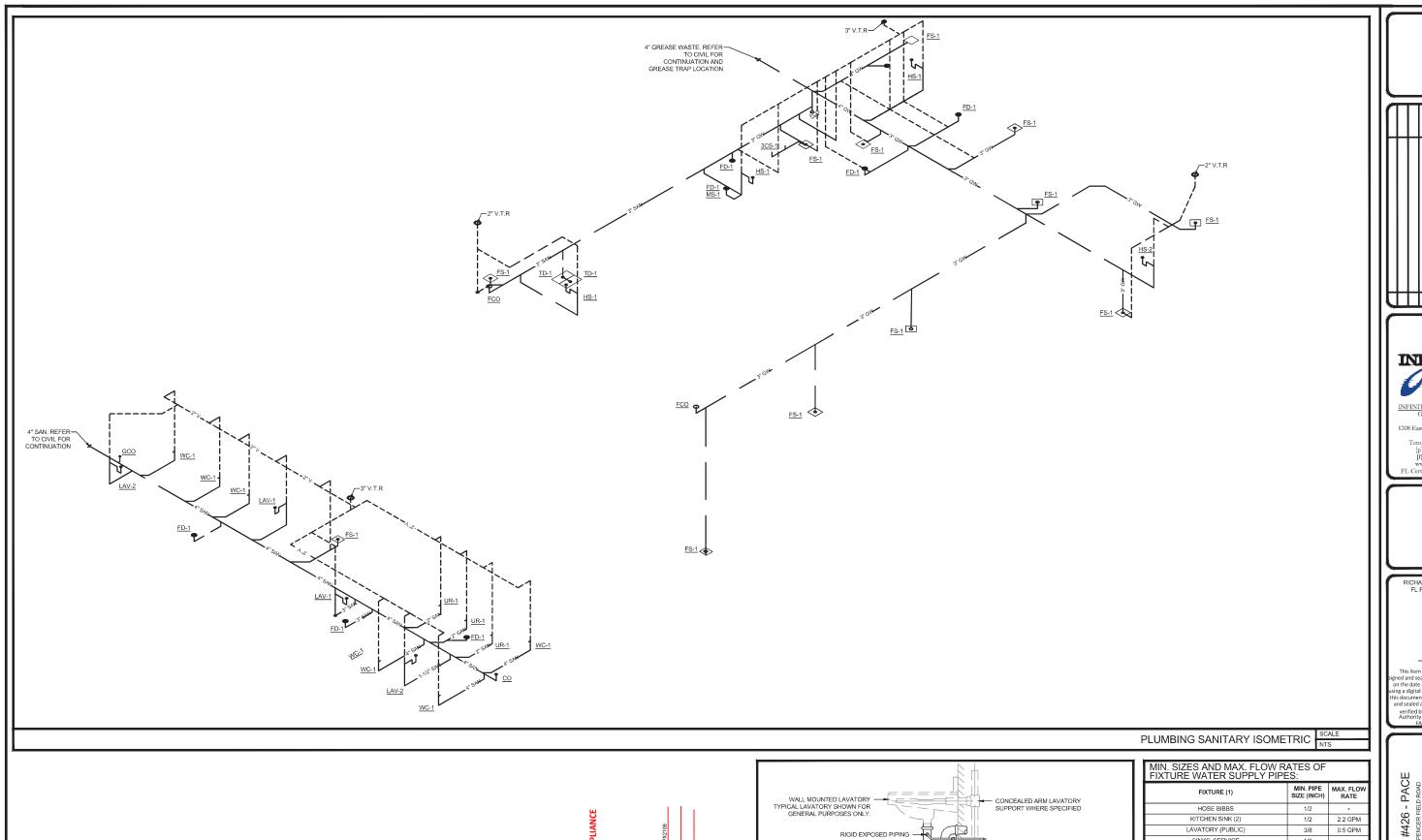
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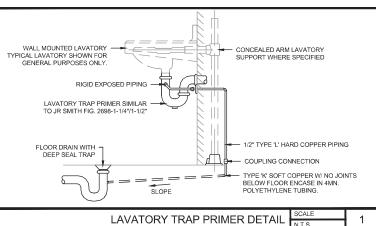
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AND PACE PLUMBING DETAILS SCHEDULES #426 CEFCO 3

P0.2 AS NOTED





FIXTURE (1)	MIN. PIPE SIZE (INCH)	MAX. FLOW RATE
HOSE BIBBS	1/2	-
KITCHEN SINK (2)	1/2	2.2 GPM
LAVATORY (PUBLIC)	3/8	0.5 GPM
SINKS, SERVICE	1/2	-
URINAL, FLUSHOMETER VALVE	3/4	1.0 GPM
WATER CLOSET, FLUSHOMETER VALVE	1	1.6 GPF
NOTES.	•	

NOTES:

1. TABLE INFORMATION GATHERED FROM 2018 INTERNATIONAL PLUMBING CODE TABLE 604.5

CODE I ABLE 604.3

2. WHERE THE DEVELOPED LENGTH OF THE DISTRIBUTION LINE IS 50 FEET OR LESS, AND THE AVAILABLE PRESSURE AT THE METER IS 36 PSI OR GREATER, THE MINIMUM SIZE OF AN INDIVIDUAL DISTRIBUTION LINE SUPPLIED FROM A MANIFOLD AND INSTALLED AS PART OF A PARALLEL WATER DISTRIBUTION SYSTEM SHALL BE ONE NOMINAL TUBE SIZE SMALLER THAN THE SIZES INDICATED.

	1						
						11/14/2022	Date
						ISSUE FOR PERMIT	Revision/Issue
1	H	U	Ш			-	No



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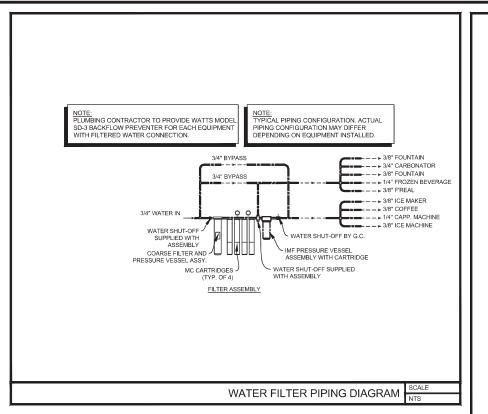
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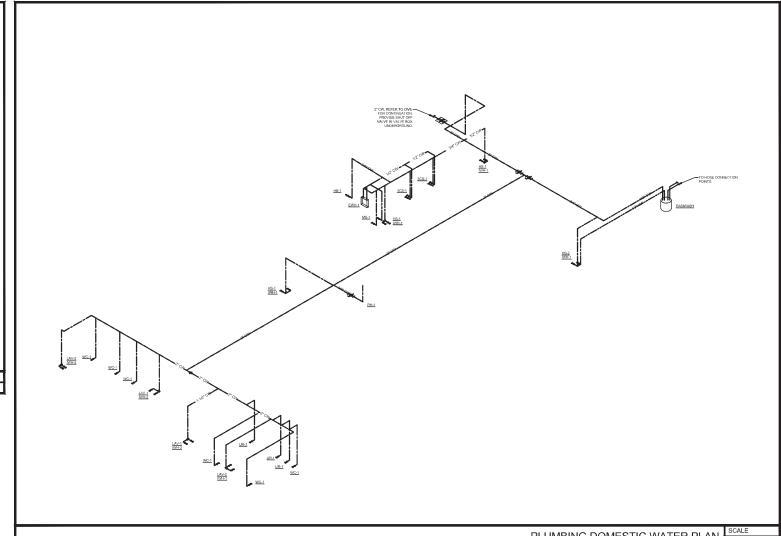
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and sealed and the signature must be
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Authority on any electronic copy.
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Authority on any electronic copy.

Project Name and Address CEFCO #426 - PACE
90 WEST SPENCER FIELD ROAD PACE, FL 32571
Shoot Tile PLUMBING ISOMETRIC
DIAGRAMS - SANITARY &
VENIT

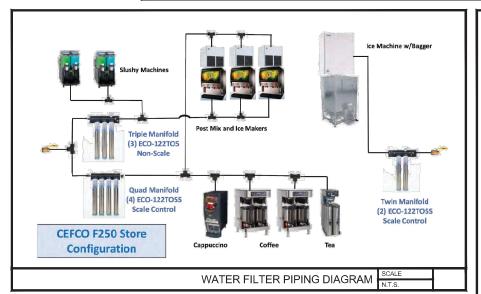
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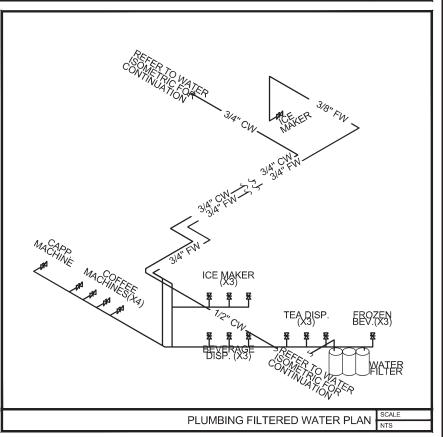


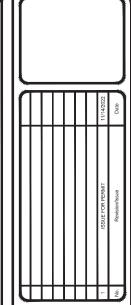














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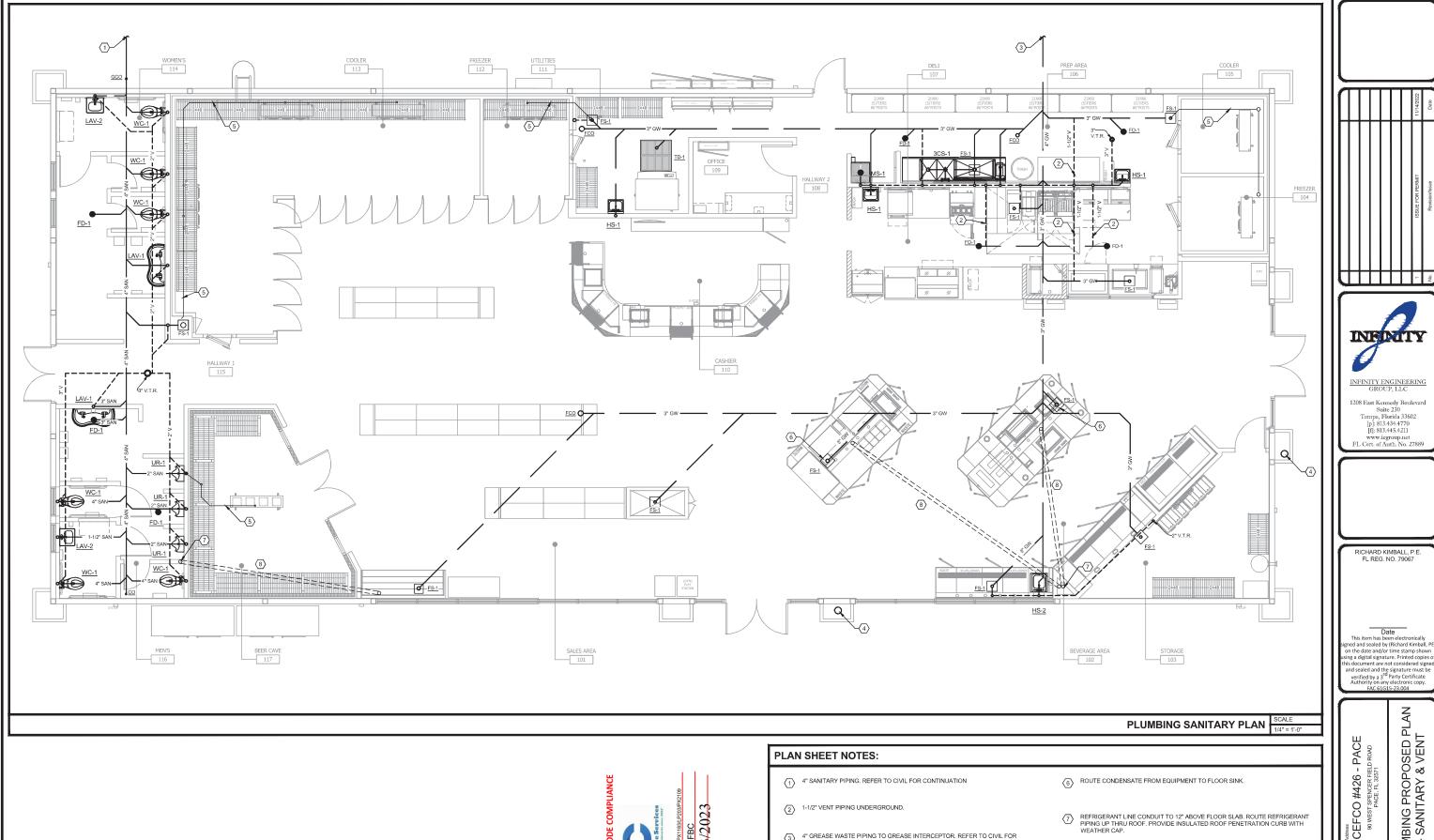
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Date
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\*\* PLUMBING ISOMETRIC DIAGRAMS - DOMESTIC WATER CEFCO #426 - PACE

P0.4 Date AS NOTED



2 1-1/2" VENT PIPING UNDERGROUND.

5) 3/4" CONDENSATE FROM FREEZER EVAPORATOR. DRAIN TO NEAREST FLOOR SINK OR AS SHOWN ON PLAN WITH AIR GAP FITTING.

(3) 4" GREASE WASTE PIPING TO GREASE INTERCEPTOR. REFER TO CIVIL FOR GREASE INTERCEPTOR LOCATION.

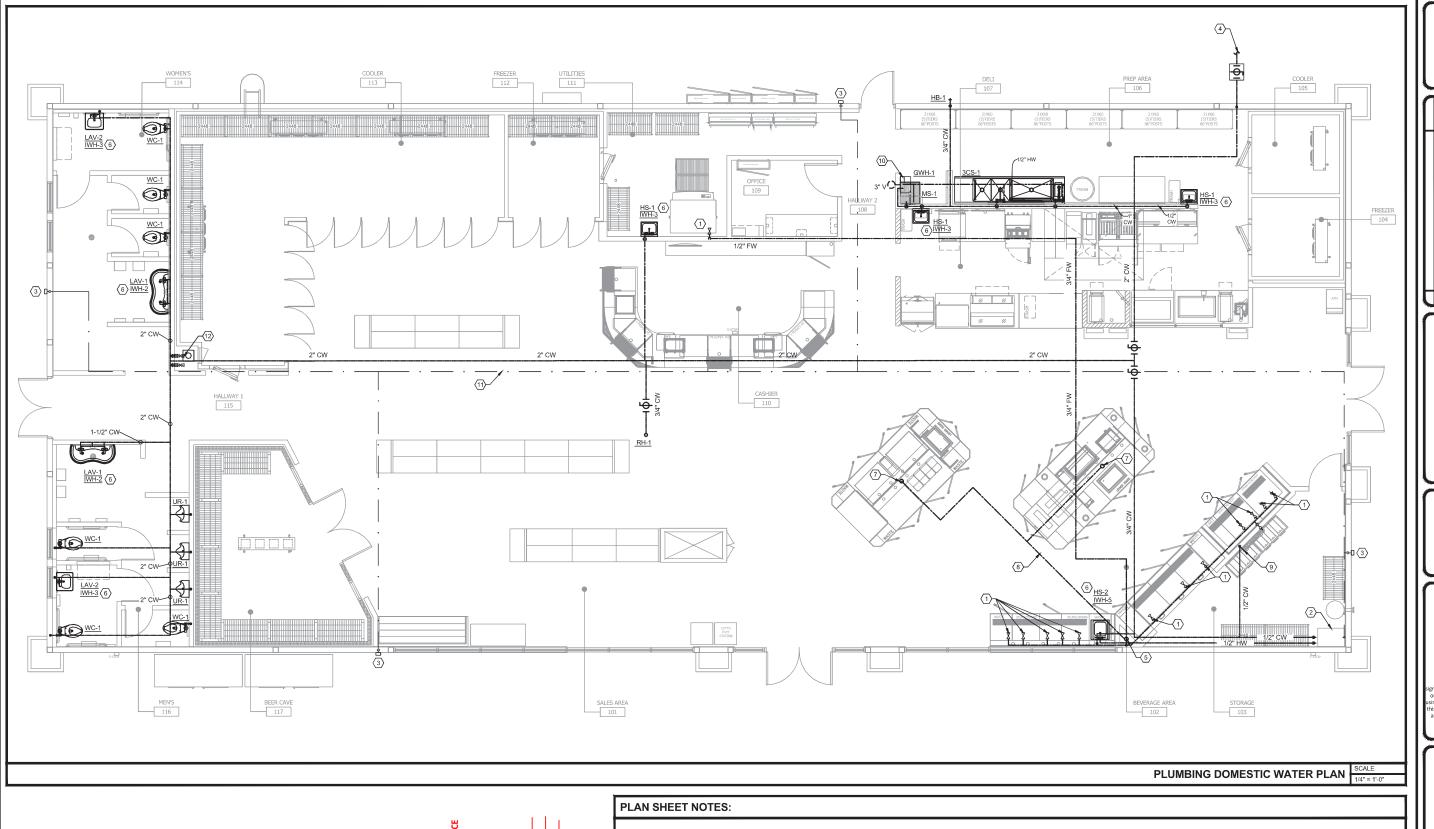
(4) CONTRACTOR TO CONNECT 4" PVC DRAINAGE PIPE FOR AWNING WHICH WILL CONNECT TO THE STORM DRAINAGE THROUGH THE TOWER. PROTECT DRAIN PIPE ENTRY WITH AN APPROVED MESH. VERIFY WITH OWNER. SEE CIVIL AND ARCHITECTURAL FOR ADDITIONAL INFORMATION.

(8) UNDER FLOOR REFRIGERANT LINE CHASE. 4" PVC INSTALLED WITH LONG RADIUS SWEEPS (MINIMIM 24" R.). BED PIPE IN 4" GRAVEL. INSTALL WITH MINIMUM NUMBER OF JOINTS POSSIBLE.

7 REFRIGERANT LINE CONDUIT TO 12" ABOVE FLOOR SLAB. ROUTE REFRIGERANT PIPING UP THRU ROOF, PROVIDE INSULATED ROOF PENETRATION CURB WITH WEATHER CAP.

PLUMBING PROPOSED PLAN
- SANITARY & VENT P1.0 Date AS NOTED

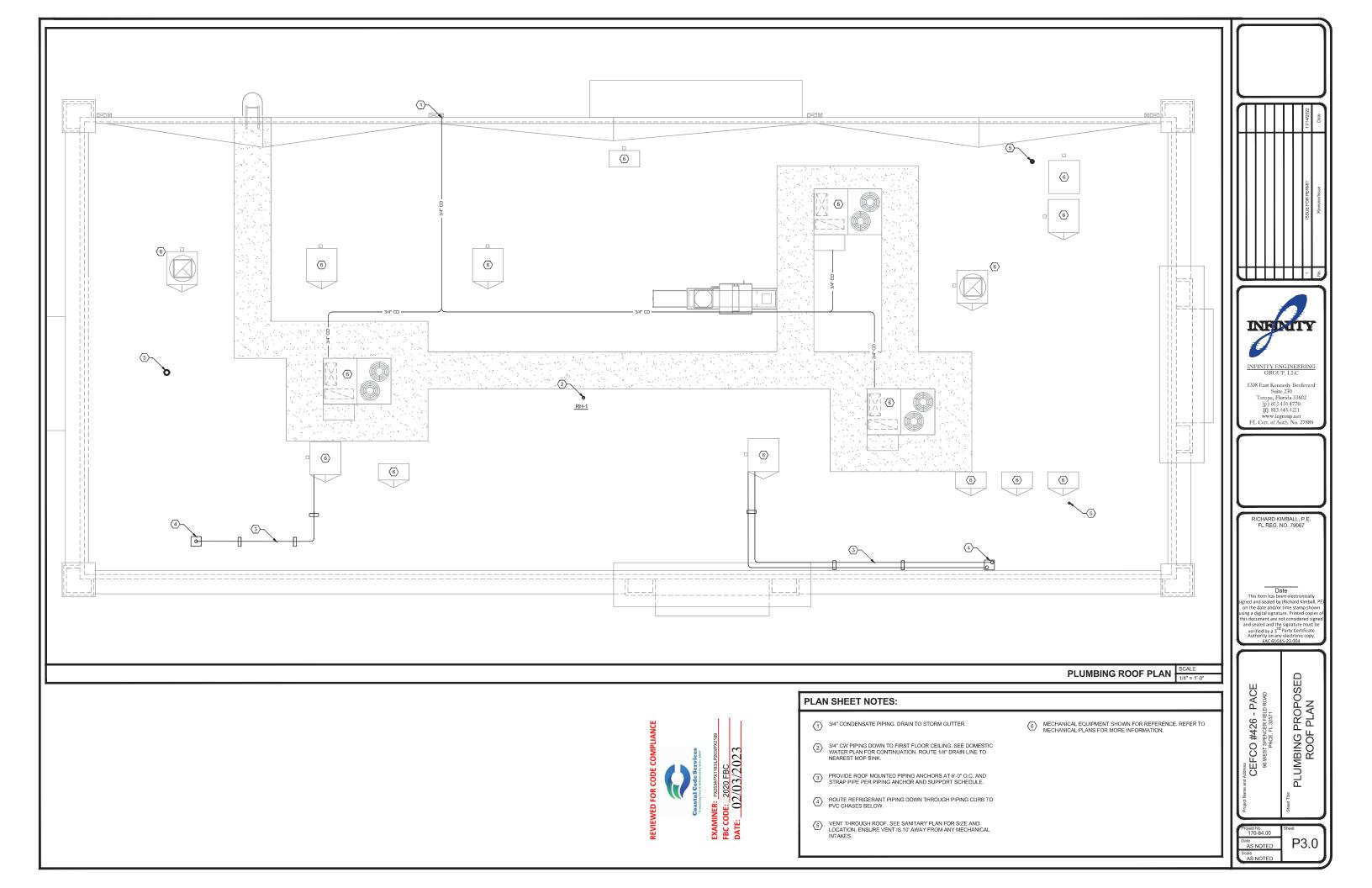
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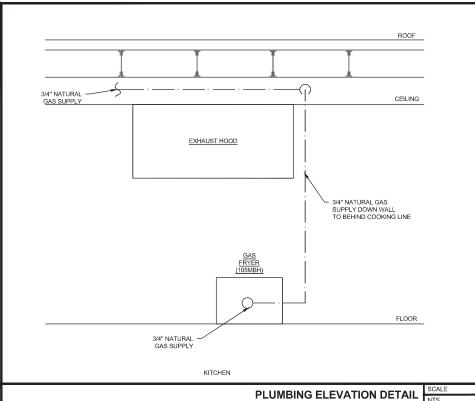


- PLUMBING CONTRACTOR TO PROVIDE RPZ BACKFLOW PREVENTER OUTSIDE MAIN SERVICE LINE, FOR EACH ICE MACHINE AND WATER FILTER INDIVIDUALLY. PROVIDE WATTS MODEL SD-3 BACKFLOW PREVENTER FOR BEVERAGE AND TEA/COFFEE DISPENSERS INDIVIDUALLY. CONTRACTOR TO ENSURE DOUBLE CHECK VALVES (SD-3S) AT EACH BEVERAGE EQUIPMENT LOCATION.
- (2) INSTALL EASIWASH SYSTEM PER MANUFACTURER'S INSTRUCTIONS. ROUTE HIGH PRESSURE LINES THRU 2\* SCHEDULE 40 PVC WITH LONG RADIUS SWEEP ABOVE CEILING TO HOSE CONNECTION POINTS ON EXTERIOR WALL. REFER TO ARCHITECTURAL EQUIPMENT PLAN FOR ADDITIONAL INFORMATION.
- (3) CONNECT INCOMING HIGH PRESSURE WATER LINE WITH HIGH PRESSURE HOSE AND FREEZE RESISTANT BALL VALVE.
- 4 2" CW PIPING. REFER TO CIVIL FOR CONTINUATION AND WATER METER LOCATION. PROVIDE LOCKABLE VALVE BOX UNDERGROUND.
- (5) 4° PVC REFRIGERANT LINE CHASES AT FLOOR. ROUTE REFRIGERANT LINES UP TO CONDENSING UNIT LOCATED ON ROOF, RUN REFRIGERANT PIPING SUCH THAT MANUFACTURERS MAXIMUM REFRIGERANT PIPE LENGTHS ARE MAINTAINED.
- (6) INSTANTANEOUS WATER HEATER INSTALLED UNDERNEATH SINK. REFER TO DETAIL FOR MORE INFORMATION.
- PROVIDE 3/4" CW STUB-UP FOR FUTURE USE.
- 8 3/4" FILTERED CW PIPING UNDER SLAB.

- (9) 1/2" CW PIPING ROUTED TO WATER FILTER. REFER TO ARCHITECTURAL FOR EXACT LOCATION AND SPECIFICATIONS.
- TANKLESS GAS WATER HEATER INSTALLED ABOVE MOP SINK. INSTALL PER MANUFACTURERS RECOMMENDATIONS. CONNECT 34' CW, 344' HW, AND 344' NATURAL GAS. PROVIDE 3" PVC DIRECT VENT AS PER MANUFACTURERS RECOMMENDATIONS..
- 2" SCHEDULE 40 PVC CONDUIT FOR HIGH PRESSURE SERVICE LINE WITH LONG RADIUS SWEEP.
- WATER SHUT-OFF FOR BOTH RESTROOMS TO BE ACCESSED FROM ACCESS PANEL IN WALK-IN-COOLER. CONTRACTOR TO DETERMINE BEST LOCATION.

⊢ No. INFINITY INFINITY ENGINEERING GROUP, LLC Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 FL Cert. of Auth. No. 2788 RICHARD KIMBALL, P.E. FL REG. NO. 79067 Date This item has been electronically ed and sealed by (Richard Kimball, I nis document are not consider and sealed and the signature verified by a 3<sup>rd</sup> Party Certii Authority on any electronic PLUMBING PROPOSED PLAN
- DOMESTIC WATER CEFCO #426 - PACE P2.0 AS NOTED



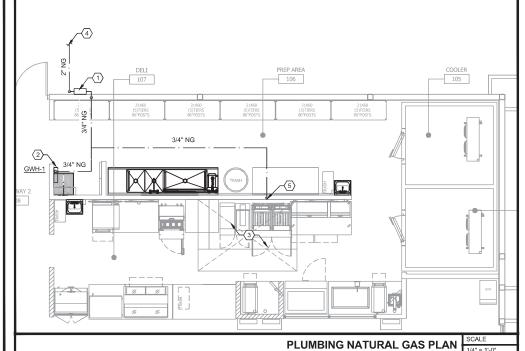


NATURAL GAS CALCULATION:

EQUIPMENT REQUIRING NAT. GAS
APPLIANCE INLET SIZE
GAS FRYER 3/4"
GWH-1 3/4" **BTU** 105,000 199,000

TOTAL BTU = 304,000 BTU
PIPE LENGTH TO MOST REMOTE FIXTURE =30FT
REQUIRED PIPE SIZE = 2"

NOTE: ALL COOKING EQUIPMENT UNDER HOOD MUST BE SHUT-OFF AUTOMATICALLY UPON ACTIVATION OF HOOD SUPPRESSION SYSTEM, PER NFPA CODES, UTILIZING SHUNT-TRIP BREAKERS BY CONTRACTOR, AS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, OR GAS SUPPLY SHUT-OFF VALVES, AS FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR. GAS VALVE SERVING HOOD GAS EQUIPMENT SHALL BE A 120V SOLENOID TYPE THAT FAILS IN THE CLOSED POSITION.



# **PLAN SHEET NOTES:**

- INSTALL NEW GAS METER. PROVIDE GAS PRESSURE REGULATOR, AND MAIN BUILDING SHUTOFF VALVE. COORDINATE EXACT LOCATION WITH UTILITY COMPANY AND CIVIL.
- INSTALL GAS INSTANTANEOUS WATER HEATER PER MANUFACTURERS INSTRUCTIONS. CONNECT 3/4" NATURAL GAS LINE TO NEAREST MAIN. PROVIDE SHUT OFF VALVE. CONNECT 3" PVC DIRECT VENT AND ROUTE THRU ROOF. TERMINATE MINIMUM 12" ABOVE ROOF.
- 3) ALL COOKING EQUIPMENT UNDER HOOD MUST BE SHUT-OFF AUTOMATICALLY UPON ACTIVICATION OF HOOD SUPPRESSION SYSTEM, PER NFPA CODES, UTILIZING SHUNT-TRIP BREAKERS BY CONTRACTOR, AS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, OR GAS SUPPLY SHUTTOFF VALVES, AS FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR, GAS VALVE SERVING HOOD GAS EQUIPMENT SHALL BE A 120V SOLENOID TYPE THAT FAILS IN THE CLOSED POSITION.
- 4 2" NATURAL GAS PIPING, REFER TO CIVIL FOR CONTINUATION.
- (5) 3/4" GAS TO DUAL FRYER, INSTALL REGULATOR SUPPLIED WITH UNIT AND FLEX LINE TO EQUIPMENT WHERE ALLOWED BY LOCAL CODES.

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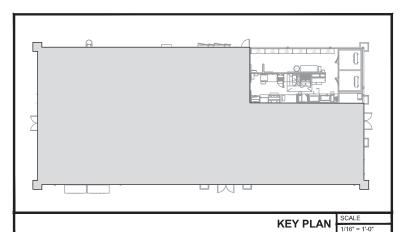
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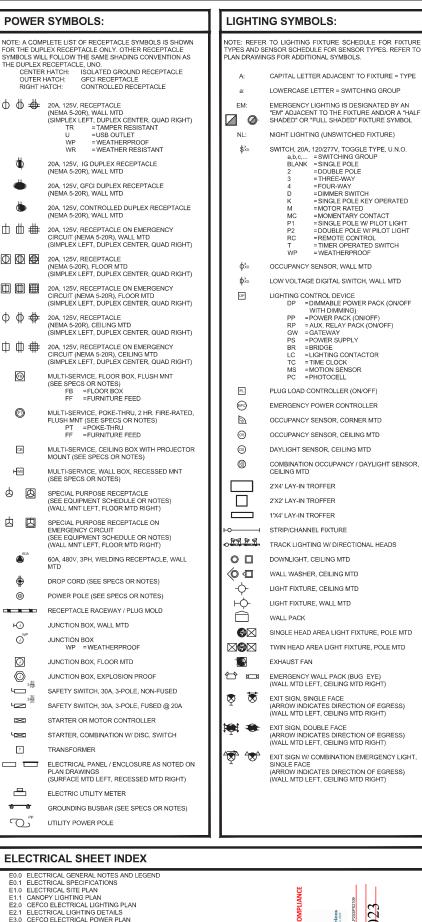
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Date Date
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PLAN CEFCO #426 - PACE PLUMBING PROPOSED - NATURAL GAS

P4.0 AS NOTED





E3.1 CEFCO UNDERSLAB ELECTRICAL PLAN
E3.2 CEFCO ELECTRICAL EQUIPMENT PLAN
E4.0 CEFCO ELECTRICAL ROOF PLAN

E6.0 CEFCO ELECTRICAL RISER DIAGRAM

E7.0 CEFCO ELECTRICAL PANEL SCHEDULES

E7.1 CEFCO ELECTRICAL PANEL SCHEDULES

E5.0 ELECTRICAL DETAILS

E5.1 ELECTRICAL DETAILS

E5.2 ELECTRICAL DETAILS

### X = NUMBER OF TELEPHONE PORTS DATA OUTLET, WALL MTD =NUMBER OF DATA PORTS COMBINATION TELE/DATA OUTLIET WALL MTD TELEPHONE OUTLET (FLOOR MTD LEFT, CEILING MTD RIGHT) $\nabla$ (FLOOR MTD LEFT, CEILING MTD RIGHT) COMBINATION TELE/DATA OUTLET (FLOOR MTD LEFT, CEILING MTD RIGHT) WAP WAP WIRELESS ACCESS POINT (CEILING MTD LEFT, WALL MTD RIGHT) TELEPHONE BACKBOARD (TBB) INTERCOM OUTLET INTERCOM STATION BLANK = REMOTE =MASTER HAV AV AUDIO / VIDEO DEVICE AMP SOUND SYSTEM AMPLIFIER HS S (WALL MTD LEFT, CEILING MTD RIGHT) AUDIBLE NOTIFICATION DEVICE В BUZZER оВ/ BELL & BUZZER COMBINATION ΠN AUDIBLE NOTIFICATION DEVICE H =HORN S =SIREN ВТ AUXILIARY SYSTEM DEVICE = BELL RINGING TRANSFORMER = RELAY = ELECTRIC DOOR OPENER =LOW VOLTAGE TRANSFORMER $\Leftrightarrow$ E DH INDICATOR LIGHT (WALL MTD LEFT, CEILING MTD RIGHT) BL = BURGLAR ALARM LIGHT Ю. CLOCK =MASTER = DOUBLE FACE = COMBINATION SPEAKER =DOOR CONTACT =GLASS BREAK DETECTOR =HEAT DETECTOR =HOLD-UP BUTTON =KEY PAD =MOTION DETECTOR = PANIC BUTTON = PUBLIC VIEW MONITOR = SOUND DETECTOR = SECURITY CONTROL PANEL = VIBRATION SENSOR WC = WINDOW CONTACT ©R ACP ACCESS CONTROL DEVICE ACP = ACCESS CONTROL PANEL CR = CARD READER =ELECTRIC STRIKE =MAGNETIC LOCK = PROXIMITY SENSOR =REQUEST EXIT PUSH BUTTON SECURITY CAMERA (WALL MTD LEFT, CEILING MTD RIGHT) PTZ = PAN/TILT/ZOOM =MINI DOME =BULLET WP = WEATHERPROOF PUSHBUTTON STATION (BUTTONS REPRESENTED BY SOLID DOTS) NORMAL / EMERGENCY CALL BUTTON ПН PUSH BUTTON THERMOSTAT (WALL MTD LEFT, CEILING MTD RIGHT) HT (T) (02/03/2023 (02/03/2023 CODES IN EFFECT:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH

FLORIDA BUILDING CODE - 2020 (7TH EDITION

NATIONAL ELECTRICAL CODE - 2017

ASHRAF 90 1 - 2016

SPECIAL SYSTEMS SYMBOLS:

UNLESS NOTED OTHERWISE, PROVIDE OVERSIZE

CEILING SPACE. COORDINATE WITH L R FOR FINAL REQUIREMENTS.

JUNCTION BOX AND 1" EMPTY CONDUIT WITH PLASTI NSULATING BUSHINGS AND PULL STRING STUBBED MIN. 6" INTO

	RACEV	VAY SYMBOLS:
D IC		HOMERUN CIRCUIT TO PANELBOARD
O.V	— LV —	LOW VOLTAGE CABLE
	l I—-—	CONDUIT BURIED
		CONDUIT CONCEALED
		CONDUIT EXPOSED
	$\sim$	FLEXIBLE CONDUIT
	-	CONDUIT UP
	←	CONDUIT DOWN
	r	CONDUIT SEAL-OFF
	T	CONDUIT TEE BODY
	L,	CONDUIT EL BODY
	ī	CONDUIT CAP
	$ \hspace{.05cm} \hspace{.05cm} \hspace{.05cm} $	CONDUIT SLEEVE WITH BUSHINGS
	PB	PULL BOX
	НН	HAND HOLE
	ABBRE	EVIATIONS:
	A AFC AFCI AFF AFG AHJ AIC ATS BLOG	AMPERE AVAILABLE FAULT CURRENT ARC FAULT CIRCUIT INTERRUPTER ABOVE FINISHED FLOOR AUTHORITY HAVING JURISDICTION AMPERE INTERRUPTING CAPACITY AUTOMATIC TRANSFER SWITCH

# CONDUIT CEILING CONTROL POWER TRANSFORMER CURRENT TRANSFORMER EQUIPMENT GROUND EQUIPMENT GROUNDING CONDUCTOR **EMERGENCY** ELECTRONIC OVERLOAD FEEDER FULL LOAD AMPS GROUNDING ELECTRODE CONDUCTOR GROUNDING ELECTRODE CONDUCTOR GROUND FAULT INTERRUPTER GROUND FAULT CIRCUIT INTERRUPTER GROUND GALVANIZED RIGID STEEL HAND-OFF-AUTO ISOLATED GROUND JUNCTION BOX KILOVOLT-AMPERE KILOWATT ONG, SHORT, INSTANTANEOUS, GROUND AUI T TRIP HAULT TRIP LIGHTING MINIMUM CIRCUIT AMPS MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MOLDED CASE CIRCUIT BREAKER MCCB MOTOR CIRCUIT PROTECTOR MAIN DISTRIBUTION PANEL MAXIMUM FUSE SIZE MAIN GROUNDING BUSBAR MAIN LUG ONLY MAXIMUM OVERCURRENT PROTECTION MOUNTED MANUAL TRANSFER SWITCH NORMALLY CLOSED NORMALLY OPEN NIGHT LIGHT NOT TO SCALE OVERCURRENT PROTECTION DEVICE OVERHEAD RECEPTACLE RECEP ROOM SHORT CIRCUIT CURRENT RATING SCCR SWITCH SWITCHBOARD SWRE TELEPHONE BACKBOARD TELEPHONE COMPANY TELECOMMUNICATIONS GROUNDING BUSBAR TELECOMMUNICATIONS MAIN GROUNDING TMGB TYPICAL UNDERGROUND UNI ESS NOTED OTHERWISE UNINTERRUPTIBLE POWER SUPPLY VOLT VERIFY IN FIELD WITH WEATHER RESISTANT WR XFMR TRANSFORMER

WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRECT COMPLIANCE WITH THE CODES, STANDARDS, AND PRACTICES LISTED HEREIN. THEIR RESPECTIVE DATES ARE FURNISHED AS THE MINIMOM REQUIREMENTS (UNLESS OTHERWISE DETERMINED BY THE LOCAL AUTHORITIES HAVING JURISDICTION).

# **GENERAL NOTES:**

- PRE-BID SITE VISIT: CONTRACTOR PROPOSING TO UNDERTAKE WORK UNDER THIS DIVISION SHALL VISIT THE SITE OF THE WORK AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT EFFECT THE WORK AND COST THEREOF AND EXAMINE THE DRAWINGS AS RELATED TO THE SITE CONDITIONS, BIDDERS WHO DO NOT VISIT THE SITE MAY BE UNILATERALLY NOT FERMITTED TO SUBMIT ABID IN THE OWNER OF DESIGNATES.

  BID TERMS AND CONDITIONS: THE ELECTRICAL CONTRACTOR SHALL OBTAIN A FULL SET OF PLANS AND SPECIFICATIONS FROM THE GENERAL CONTRACTOR PRIOR TO BID. CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUDERSTANDINGS OF THE AMOUNT OF WORK TO BE PERFORMED. TENDED OF PROPOSAL SHALL CONVEY FULL AGREEMENT TO THE ITEMS AND CONDITIONS INDICATED IN THE PLANS AND SPECIFICATIONS. ANY DISCREPANCES OR OMISSIONS FOUND IN THE CONTRACT DOCUMENTS OR DOUBT AS TO THE INTENT THEREOF. SHALL BE INMEDIATELY BROWNING THE THE INTENT THEREOF. SHALL BE INMEDIATELY BROWNING THE THE INTENT THEREOF. SHALL BE INMEDIATELY BROWNING THE THE PROPERTY OF THE SIZE OF THE AMOUNT OF THE SIZE OF THE BID WITHOUT FORMAL A SUTHER ARCHITECT HAND OWNER SERVEY THE RIGHT TO REQUIRE THE MORE RESTRICTIVE MORE EXPENSIVE THE RIGHT TO REQUIRE THE MORE RESTRICTIVE MORE EXPENSIVE THE RIGHT TO REQUIRE THE MORE RESTRICTIVE HE MORE RESTRICTIVE HE MORE RESTRICTIVE.
- SPECIFICATION.

  SPECIFICATION.

  EXCLUSIONS; MATERIAL AND LABOR EXCLUDED BY THE ELECTRICAL CONTRACTOR SHALL NOT RELIEVE THE GENERAL CONTRACTOR FROM PROVIDING SAME.

  COMPLETE SYSTEM. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, SUPERINTENDENTS AND SERVICES REQUIRED TO CONSTRUCT, INSTALL, AND

  MODIFY THE ELECTRICAL SYSTEMS AS HEREIN SPECIFIED AND SHOWN ON THESE DRAWINGS FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM. COORDINATE WORK TO BE

  PERFORMED OR INSTALLED BY OTHERS AFFECTING THE ELECTRICAL WORK AND FURNISH AND INSTALL ALL NECESSARY STEEL SHAPES, BLOCKING, ANOHORS, SLEVAN
  HANGERS, ETC. FOR ATTACHING ELECTRICAL WORK TO RELIEVE WORK OF OTHER TRADES, ALL LALL MENDISORALLY MENTIONED HEREN OR NOT INDICATED

  IN THE DRAWINGS, WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER TO RHANDERS.

  BY OR ALBOR THE SYSTEM OF THE OWNER OF THE WORKING INSTALLATION, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER TO RHANDERS.

  BY OR ALBOR THE OWNER OF THE OWNER OF THE WORKING INSTALLATION, SHALL BE PROVIDED WITHOUT ADDITIONAL EVER TO THE OWNER TO RHANDER OF THE OWNER TO THE OWNER
- PERMITS; OBTAIN ALL NECESSARY PERMITS, LICENSES, AND INSPECTIONS AS REQUIRED BY ANY OF THE FOREGOING AUTHORITIES AND PAY FOR ALL OTHER COSTS IN

- PERMITS: OBTAIN ALL NECESSARY PERMITS, LICENSES, AND INSPECTIONS AS REQUIRED BY ANY OF THE FOREGOING AUTHORITIES AND PAY FOR ALL OTHER COSTS. IN CONNECTION WITH THE WORK.
  INSPECTIONS; CONTRACTOR SHALL NOT CONCEAL ANY WORK UNTIL INSPECTED AND APPROVED BY ELECTRICAL INSPECTOR ANDIOR ARCHITECTIENGINEER.
  REQUILATIONS, ALL ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST ADDITED NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE REPORT AND ADDITED NATIONAL ELECTRICAL. CODE (NEC) AND ALL OTHER APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE WORKMANNIKE MANNER IN ACCORDANCE WITH APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE WORKMANNIKE MANNER IN ACCORDANCE WITH APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE WORKMANNIKE MANNER IN ACCORDANCE WITH APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE CONTINUE OF THE APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE CONTINUE OF THE APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE CONTINUE OF THE APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE CONTINUE OF THE APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE APPROVAL OF THE CONTINUE OF THE APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE CONTINUE OF THE APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE APPROVAL

- AND ELECTRICAL DEVICES FIELD VERTIY EXACT MANIFEATE DATA ON ALL EQUIPMENT FOUNDED OTHER DIVISIONS AND/OR BY THE OWNER PRIOR TO THE INSTALLATION OF ELECTRICAL WORK AND MAKE ANY ADJUSTMENTS TO OUTLETS, CONDUITS, WHICH, AND DEVICE TO RECRUIT DEMANGER FATINGS AS REQUIRED TO MATCH EQUIPMENT ACTUALLY OF THE PROPERTY OF THE

- SUBMITTAL IS DONE AT THE CONTRACTOR'S OWN RISK.

  "ALUE ENGINEERING SUBMITTALS, VALUE ENGINEERING SUBMITTALS SHALL BE LABELED AS SUCH AND INDICATE A 'DEDUCT' OR CREDIT BACK TO THE OWNER, VE SUBMITTALS NOT
  CLEARLY LABELED OR NOT INCLUDING A DEDUCT SHALL BE REJECTED.
  SUBSTITUTION AND ALTERATIONS. THERE SHALL BE NO DEVIATION FROM THE REQUIREMENTS HEREIN WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER, CONTRACTOR SHALL
  ASSUME RESPONSIBILITY FOR ALL COSTS INCURRED RESULTING FROM SUBSTITUTION OF EQUIPMENT AS WELL AS THE PERFORMANCE AND SPACE REQUIREMENTS OF SUCH
- EQUIPMENT.

  SUBSTITUTIONS AND ALTERATIONS OF OTHER DISCIPLINES EQUIPMENT. SUBSTITUTE AND ALTERED EQUIPMENT BY OTHER DISCIPLINES SHALL INCLUDE ALL MATERIAL AND LABOR COSTS FOR ELECTRICAL CONTRACTOR TO PROVIDE COMPLETE AND PULLY FUNCTIONAL SYSTEMS TO ACCOMMODATE THESE SUBSTITUTED AND ALTERED EQUIPMENT. THESE ADDITIONAL ELECTRICAL COSTS MUST BE ABSORBED BY THE OTHER DISCIPLINES CONTRACTOR IN ROBER OF THE SUBSTITUTED OR ALTERED EQUIPMENT. THESE ADDITIONAL ELECTRICAL COSTS MUST BE ABSORBED BY THE OTHER DISCIPLINES CONTRACTOR IN ROBER OF THE SUBSTITUTED OR ALTERED EQUIPMENT SHORT CIRCUIT CURRENT RATINGS (SCCR) AND OVERCURRENT PROTECTIVE DEVICE AMPERE INTERRUPTING CAPACITY (AIC). PAUL SUBSTITUTED AND ALTER SUBSTITUTED OR ALTERED EXPONENT SCCR AND OVERCURRENT PROTECTIVE DEVICE AND REPORT SCCR AND OVERCURRENT PROTECTIVE DEVICE AIC RATINGS WITH POWER COMPANY. OBTAIN THE AVAILABLE FAULT CURRENT AT TRANSFORMER SECONDARY FROM THE POWER COMPANY AND PROVIDE PROPOSED COUPMENT SCCR AND OVERCURRENT PROTECTIVE DEVICE AIC RATINGS HOLD SECONDARY FROM THE POWER COMPANY AND PROVIDE PROPOSED WITH A MINIMUM 10% MARGIN BETWEEN THE CALCULATED FAULT LEVEL AND THE SPECIFIED SHORT CIRCUIT RATING OF THE EQUIPMENT UND ON PLANS.

  VOLTAGE DROP WIRE SUSS SPECIFIED IN THESE PLANS ARE MINIMUM WHIS SUSS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INCREASING WIRE SUZES BASED ON ACTUAL CIRCUIT LEVEL THE OWNER AND ACTUAL CIRCUIT LEVEL THE OWNER AND ACTUAL CIRCUIT LEVEL AND THE SOURCE.

  WIRELS ALL CONDITIONS OF A PROPERTY OF A MAXIMUM OF SIX FOR BRANCH CIRCUITS AND 2% FOR FEEDERS. THE CUMULATIVE VOLTAGE DROP FROM THE SOURCE.

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  WIRELS ALL CONDITIONS OF A PROPERTY OF A MAXIMUM OF SIX FOR BRANCH CIRCUITS AND 2% FOR FEEDERS. THE CUMULATIVE VOLTAGE DROP FROM THE SOURCE.
- ACTION CRICKING THE COMMINATIVE LINES DROP AT A MAXIMUM OF 5% FOR BRANCH CRICKINS AND 2% FOR FEEDERS. THE COMMINATIVE VOLTAGE DROP FROM THE SOURCE
  TO THE RND DEVICE SHALL NOT EXCEED 5% OF ROMINAL SYSTEM VOLTAGE.

  WIRING, ALL CONDUCTORS CARTING 50 VOLTS OR MORE SHALL BE MINIMUM #12 AWG, CU, UNO, PROVIDE DUAL, RATED TYPE THIN-THIN-FOR ABOVE ROUND AND TYPE THINOR XHHIP OF BELDW GROUND, COORDINATE IN ISOLUTION TYPE WITH ENVIRONMENTAL CONDITIONS, NEC REQUIREMENTS, AND CONDUCT HIL REQUIREMENTS. CONDUCTORS #12
  AND #10 SHALL BE SOULD, CONDUCTORS #1 AND LARGER SHALL BE STRANDED, ALL CONDUCTORS SEE AS REASED ON COPPER WITH 90°C INJURIATION FOR CIRCUITS RATED 100A
  OR LESS AND 75°C POR CIRCUITS RATED MORE FIRM 100A.

  ON OUT TACE WIRING, LOW VOLTAGE WIRING FOR SYSTEMS, EPERMITED TO BE FREE-WIRED ONLY ADOVE ACCESSIBLE CHINGS, AND BELD ON PRISED FLOOR SYSTEMS,
  INDO FREE-WIRED CARLES SHALL BE ULLISTED. PLENDING RATED 100A OF SYSTEMS,
  INDO FREE-WIRED CARLES SHALL BE ULLISTED. PLENDING RATED 100A OF SYSTEMS,
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  ONLY THE STRAND SHALL BE STRAND SH

PHASE A:	BROWN	BLACK	BLACK	BLACK	
PHASE B:	ORANGE	RED	ORANGE	RED	
PHASE C:	YELLOW	BLUE	BLUE		
NEUTRAL:	GRAY	WHITE	WHITE	WHITE	
EQUIPMENT GROUND:	GREEN	GREEN	GREEN	GREEN	
ISOLATED GROUND:		GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	

- 24. SIGLATED GROUND:

  GREENYELLOW GREENYELLOW GREENYELLOW GREENYELLOW

  A SIGLATED GROUND:

  SHARED GIRCUIT NEUTRALS: SHARED GIRCUIT NEUTRALS SHALE OF BE USED NILESS MIDICATED OTHERWISE ON PANEL SCHEDULE. WHERE USED, CIRCUIT BREAKER HANDLE

  TES SHALL BE PROVIDED TO DISCONNECT POWER TO EACH PHASE CONDUCTOR OF THE SHARED NEUTRAL GIRCUIT.

  GROUNDING ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED GREEN COPPER EQUIPMENT GROUND CONDUCTOR SIZED PER NEC. THE EQUIPMENT GROUND CONDUCTOR SHALD BE ROUNDED WITH AN INSULATED GREEN COPPER EQUIPMENT GROUND CONDUCTOR HAVE BEEN UPSIZED TO MAINTAIN ACCEPTAGE

  VOLTAGE DROVE LEVELS EQUIPMENT GROUNDED SHALL BE DROVEDED TO ALL GUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EQUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EQUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EQUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EQUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EQUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EXPENSE OF THE PLACE OF THE PL
- GROUND CONDUCTOR.

  CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT, MINIMUM 1/2" FOR INDOOR AND 3/4" FOR OUTDOOR AND UNDER SLAB. EMT IS ACCEPTABLE WITH COMPRESSION FITTINGS
- OMERUNS SHALL BE HARD PIPED. MC IS ÁCCEPTABLE FOR FIXTURE WHIPS ONLY. ALL CONDUIT AND WIRING SHALL BE CONCEALED IN FLOORS, WALLS, ANDIOR LESS SPECIFICALLY NOTED OTHERWISE. CHANNEL EXISTING WALLS WHERE REQUIRED. WHERE CONDUITS ARE UNABLE TO BE CONCEALED, HARD PIPED CONDUI

- 22. CONDUIT ALL WIRING SHALL BE INSTALLED IN CONDUIT, MINIMUM 12" FOR INDOOR AND 34" FOR OUTDOOR AND INDER SLAB BATT IS ACCEPTABLE WITH COMPRESSION FITTINGS ONLY ALL HOMERIUM SHALL BE CONCEALED IN CID SCHOOL SHALL SHALL BE HARD PIPED M. CI SACCEPTABLE FOR RIVING WHILE WHIPS ONLY, ALL CONDUIT AND WIRING SHALL BE CONCEALED IN FOR INDOORS, WALK, ANDOR SHALL BE CONCEALED IN THE FOREIGN SHALL BE ROUTED TIGHT TO THE CONCEALED IN THE FOREIGN SHALL BE ROUTED TIGHT TO THE CONTROL OF THE FOREIGN SHALL BE HARD PIPED IN CONDUIT ON THE FOREIGN SHALL BE ROUTED TIGHT TO EXCE SHIFT SHALL BE HARD PIPED IN CONDUIT ON THE FOREIGN SHALL BE ROUTED TIGHT TO EXCE SHIFT SHALL BE ROUTED TO SHALL BE ROUTED TIGHT TO EXCE SHIFT SHALL BE ROUTED TO SHALL BE ROUTED TIGHT TO EXCE SHIFT SHALL BE ROUTED TO SHALL BE SHALL BY SHALL BE SHALL BE ROUTED TO SHALL BE SHALL BY STEMS SHALL BE SHALL BY SHALL BE

- DEVICES AND COVER PLATES, UND.

  CLEANING, UPON COMPLETION OF WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE CONTRACT AREA AND ALL OTHER AREAS USED FOR STORAGE, STAGING, ETC. ALL EQUIPMENT AND DEVICES SHALL BE CLEANED AND POLISHED IN ACCORDANCE WITH MANUFACTURERS'S RECOMMENDATIONS. SOAP AND WATER CLEANING OR OTHER METHODS HAT LEAVE A FILM SHALL BE CORRECTED UPON REQUEST BY THE ENGINEER OR ARCHITECT.

  TESTING: THE CONTRACTOR SHALL TEST ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATION. AT THE TIME OF FINAL INSPECTION AND TESTS, ALL CONNECTIONS AT PASHELBOARDS, CONTROL PANELS, DEVICES, AND EQUIPMENT AND ALL SPLICES MUST BE COMPLETED. EACH BRANCH CIRCUIT AND INSPECTION AND CONNECTIONS AT PASHELBOARDS, CONTROL PANELS, DEVICES, AND EQUIPMENT AND ALL SPLICES MUST BE COMPLETED. EACH BRANCH CIRCUIT AND THE ARCHITECTURE AND THE CONTROL PASHELBOARDS, CONTROL PANELS, DEVICES, AND EQUIPMENT AND ALL SPLICES MUST BE COMPLETED. EACH BRANCH CIRCUIT AND THE ARCHITECTURE AND THE CONTROL PASHED AND THE CONTROL PASHED
- AUCEPTANCE.
  42. FINAL ACCEPTANCE: AT THE END OF CONSTRUCTION, A FINAL WALK-THROUGH SHALL BE PERFORMED. ALL DEFICIENCIES IDENTIFIED DURING FINAL INSPECTION SHALL BE
- 42 FILM. ACCEPTANCE. AT THE END OF CONSTRUCTION, A FINAL WALK-THROUGH SHALL BE PERFORMED, ALL DEFICIENCIES IDENTIFIED DURING FINAL INSPECTION SHALL BE CORRECTED. TO PERFORMED, ALL DEFICIENCIES IDENTIFIED DURING FINAL INSPECTION SHALL BE CORRECTED. TO PERFORMED, ALL DEFICIENCIES DENTIFIED DURING FINAL INSPECTION SHALL BE CONTRACTOR SHALL BE COUNTRACTOR SHALL BE COUNTRACTOR SHALL BE COUNTRACTOR SHALL BE COUNTRACTOR SHALL DENDES AND SHALL BE COLUMNED. ADDITION SHALL BE DELIVERED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE AND ONE COPY GIVEN TO THE ENGINEER UPON COMPLETION OF WORK. DRAWINGS SHALL INCLUDE AT AMINIMUM.

  A. A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM AND
  B. FLOOR PLANS RIDICIATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.

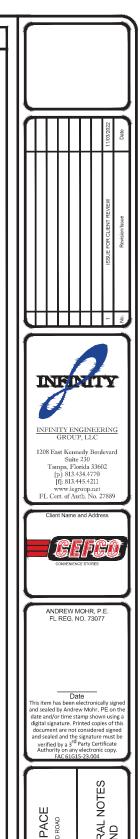
  45. OPERATIONS AND MAINTENANCE (OWN MANUALS; PROVIDE TWO COPIES OF OPERATIONS AND MAINTENANCE (OWN MANUTENANCE) COMM MANUALS; PROVIDE TWO COPIES OF OPERATIONS AND MAINTENANCE (OWN MANUTENANCE) CONTRACTOR OF THE SHALL BE COMPLED AND ORGANIZED THE OWN OF THE SHALL INCLUDE AT A MINIMUM, THE FOLLOWING.

  A SUBMITTAL DATA STATING SCOUNTED AND ORGANIZED THESE OF EQUIPMENT REQUIRED MAINTENANCE ACTIONS SHALL BE CLEARLY OFFICE OF EQUIPMENT REQUIRED MAINTENANCE ACTIONS SHALL BE CLEARLY OFFICE OF EQUIPMENT REQUIRED MAINTENANCE ACTIONS SHALL BE CLEARLY OFFICE.

  C. NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE ASENCY.

  D. WARRSAND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE ASENCY.

- D. WARRANTY INFORMATION.
  WARRANTY THE ENTIRE ELECTRICAL SYSTEM INSTALLED UNDER THIS CONTRACT SHALL BE HANDED OVER IN PROPER WORKING ORDER. ANY WORK OR MATERIALS WHICH DEVELOP DEFECTS, EXCEPT FROM ORDINARY WEAR AND TEAR, WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE SHALL BE REPLACED WITHOUT CHARGE. IF MATERIALS HAVE A STANDARD WARRANTY SHALL BE REPLACED WITHOUT CHARGE. IF MATERIALS HAVE A STANDARD WARRANTY SHALL DESTRUCT SHALL NOT BE CONSTRUED AS FINAL ACCEPTANCE. THE ELECTRICAL SYSTEMS AND EQUIPMENT, APPRAGRATIOR, DEVELOP THIS WARRANTY SHALL WORN RECESSARY TO ENSURE EFFICIENT AND FORCE THE PUNCTIONING.



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#### 1.01 RELATED DOCUMENTS

The general provisions of the contract including General and Special Conditions and General Requirements shall apply to all work under this Section.

- 1.02 REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS

  A. Equipment, fixtures, material and installation shall conform to the requirements of the local Building Department, the serving utility companies, the National Electrical Code, National Electrical Safety Code, Life Safety Code, Occupational Safety and

  - utility companies, the National Electrical Code, National Electrical Safety Code, Life Safety Code, Occupational Safety and Health Act, and applicable national, state and local codes, ordinances and regulations.

    All equipment shall be equal to or exceed the minimum requirements of NEMA, IEEE, and UL. Should any change in Drawings or Specifications be required to comply with governmental regulations, the Contractor shall notify Architect/Engineer prior to execution of the Work. The work shall be carried out according to the requirements of such code in accordance with the instruction of the Architect/Engineer and at no additional cost to the Owner. The provisions of Standards, Codes, Laws, Ordinances, etc., shall be considered minimum requirements. In case of conflict between their published requirements, the Owner's Representative shall determine which is to be followed and his decision shall be binding. Specific requirements of this specification or the drawings, which exceed the published requirements, shall take precedence over them.

A. All local fees, permits, and services of inspection authorities shall be obtained and paid for by the Contractor. The Contractor shall cooperate fully with local companies with respect to their services. Contractor shall include in his bid any costs to be incurred relative to power service (primary and/or secondary) and telephone service.

- This division of the specifications covers the electrical systems of the project. It includes work performed by the electrical trades as well as trades not normally considered as electrical trades.

  Provide all incidentals, equipment, appliances, services, hoisting, scaffolding, supports, tools, supervision, labor consumable items, fees, licenses, etc., necessary to provide complete systems. Perform start-up and checkout on each item and system to provide fully operable systems
- C. Examine and compare the Electrical Drawings with these specifications, and report any discrepancies between them to the Architect/Engineer and obtain from him written instructions for changes necessary in the work. At time of bid the most stringer requirements must be included in the bid.

  D. Examine and compare the Electrical Drawings and Specifications with the Drawings and Specifications of other trades, and
- D. Examine and compare the Electrical Drawings and Specifications with the Drawings and Specifications of other trades, and report any discrepancies between them to the Architect/Engineer and obtain from him write instructions for changes necessary in the work. At time of bid, the most stringent requirements must be included in said bid.
  Install and coordinate the electrical work in cooperation with other trades installing interrelated work. Before installation, make proper provisions to avoid interferences in a manner approved by the Architect/Engineer. All changes required in the work of the Contractor, caused by his neglect to do so, shall be made by him at his own expense.
  It is the intent of the Drawings and Specifications to provide a complete workable system ready for the Owner's operation. Any item not specifically shown on the Drawings or called for in the Specifications, but normally required to conform with the intent, to the provided acomplete workable or provided acomplete workable or provided acomplete workable system ready for the Owner's operation.
- are to be considered a part of the Contract.
- G. All materials furnished by the Contract shall be new and unused (temporary lighting and power products are excluded) and Am indicated uninsing by the Contractor stain be new and unused (temporary injuring an power products as a textuction) and free from defects. All materials used shall bear the Underwriter's Laboratory, Inc. label provided a standard has been established for the material in question.

  H. Except for conduit, conduit fittings, outlet boxes, wire and cable, all items of equipment or material shall be the product of one manufacturer throughout the entire project. Multiple manufacturers will not be permitted.

DE: 2020 FBC 02/03/2023

- A. Utilize the following abbreviations and definitions for discernment within the Drawings and Specifications.
  - a) NEC National Electrical Code.
  - b) OSHA Occupational Safety and Health Act

    - ) ANSI American National Standards Institute ) NFPA National Fire Protection Association.

    - NFPA National Fire Protection Association.
       ASA American Standards Association.
       IEEE Institute of Electrical and Electronics Engineer
       NEMA National Electrical Manufacturers Association
       UL Underwriters' Laboratories, Inc.

    - IES Illuminating Engineering Society.
       ICEA Insulated Cable Engineers Association.
       ASTM American Society of Testing Materials
    - ETL Electrical Testing Laboratories, Inc CBM Certified Ballast Manufacturers.

- "PROVIDE" means to supply, purchase, transport, place, erect, connect, test, and turn over to Owner, complete and ready for regular operation, the particular Work referred to.
  "INSTALL" means to join, unite, fasten, link, attach, set up, or otherwise connect together before testing and turning over to

- "INSTALL" means to join, unite, fasten, link, attach, set up, or otherwise connect together before testing and turning over to Owner, complete and ready for regular operation, the particular Work referred to.

  "FURNISH" means to supply all materials, labor, equipment, testing apparatus, controls, tests, accessories, and all other items customarily required for the proper and complete application for the particular Work referred to.

  "VIRTING" means the inclusion of all raceways, filtings, conductors, connectors, tape, junction and outlet boxes, connections, splices, and all other items necessary and/or required in connection with such Work.

  "CONDUIT" means the inclusion of all fittings, hangers, supports, sleeves, etc.

  "AS DIRECTED" means as directed by the Architecl/Englineer, or his representative.

  "CONCEALED" means as directed by the Architecl/Englineer, or his representative.

  "CONCEALED" means embedded in masonry or other construction, installed behind wall furring or within double partitions, or installed above turn calling.

## 1.07 COORDINATION OF THE WORK

- COORDINATION OF THE WORK

  A. Certain materials will be provided by other trades. Examine the Contract Documents to ascertain these requirements.

  B. Carefully check space requirements with other trades and the physical confines of the area to insure that all material can be installed in the spaces allotted thereto including finished suspended ceilings and the spaces within the existing building. Make modifications thereto as required and approved.

  C. Transmit to other trades all information required for work to be provided under their respective Sections in ample time for installed.
- Wherever work interconnects with work of other trades, coordinate with other trades to insure that all trades have the
- information necessary so that they may properly install all the necessary connections and equipment. Identify all items of work that require access so that the ceiling trade will know where to install access doors and panels.
- that require access so that the ceiling trade will know where to install access doors and panels.

  Coordinate, project and schedule work with other trades in accordance with the construction sequence.

  The Drawings show only the general run of raceways and approximate location of outlets. Any significant changes in location of outlets, cabinets, etc., necessary in order to meet field conditions shall be brought to the immediate attention of the Architect/Engineer and receive his approval before such alterations are made. All such modifications shall be made without additional cost to the Owner.

  Obtain from the Architect/Engineer in the field the location of such outlets or equipment not definitely located on the Drawings.

  Circuit "lags" in the form of arrows are used where shown to indicate the home runs of raceways to electrical distribution points. These tags show the circuits in each home run and the panel designation. Show the actual circuits numbers on the finished record drawings and on panel directory card. Where circuiting is not indicated, Electrical Subcontractor must provide required circuiting in accordance with the locating indicated on the drawings and/or as directed.

  Adjust location of conduits, panels, equipment, pull boxes, fixtures, etc. to accommodate the work to prevent interferences, both anticipated and encountered. Determine the exact route and location of each raceway prior to fabrication.

- 1. Right-of-Way:
  a) Lines that pitch have the right-of-way over those that do not pitch. For example: steam, condensate, and plumbing drains normally have right-of-way. Lines whose elevations cannot be changed to have right-of-way over lines whose elevations can be changed.
  b) Make offsets, transitions and changes in direction in raceways as required to maintain proper headroom in pitch of sloping lines whether or not indicated on the Drawings.

  J. Wherever the work is of sufficient complexity, prepare additional Detail Drawings to scale similar to that of the bidding Drawings, prepared on tracing medium of the same size as Contract Drawings. With these layouts, coordinate the work with the work of other trades. Such detailed work to be clearly identified on the Drawings as to the area to which it applies. Submit for review Drawings clearly showing the work and its relation to the work of other trades before commencing shop fabrication or erection in
- Coordinate with the local Electric Utility Company and the local Telephone Company as to their requirements for service connections and provide all necessary materials, labor and testing.
   Coordinate with contractors for work under other Divisions of this specification for all work necessary to accomplish this

### 1.08 EXAMINATION OF SITE

Prior to the submitting of bids, the Contractor shall visit the site of the job and shall familiarize himself with all conditions affecting the proposed installation and shall make provisions as to the cost thereof. Failure to comply with the intent of this paragraph will in no way relieve the contractor of performing all necessary work shown on the Drawings.

#### 1.09 PROGRESS OF WORK

The Contractor shall order the progress of his work to conform to the progress of the work of other trades and shall complete the entire installation as soon as the conditions of the building will permit. Any cost resulting from the defective or ill-timed work performed under this section shall be borne by the Contractor.

#### DELIVERY, STORAGE, AND HANDLING

- Ship and store all products and materials in a manner that will protect them from damage, weather and entry of debris. If items are damaged, do not install, but take immediate steps to obtain replacement or repair. Any such repairs shall be subject to review and acceptance of the Architect/Engineer.

  Deliver materials in manufacturer's unopened container fully identified with manufacturer's name, trade name, type, class,
- grade, size and color.

  Store materials suitably sheltered from the elements, but readily accessibly for inspection by the Architect/Engineer until
- installed. Store all items subject to moisture damage in dry, heated spaces

#### EQUIPMENT ACCESSORIES

- IUIPMENT ACCESSORIES

  Provide supports, hangers and auxiliary structural members required for support of the work.

  Furnish and set all sleeves for passage of raceways through structural, masonry and concrete walls of floors and elsewhere as will be required for the proper protection of each raceway passing through building surfaces.

  Wall mounted equipment may be directly secured to wall by means of steel boils. Maintain at least 1" air space between equipment and supporting wall. Groups or arrays of equipment may be mounted on adequately sized steel angles, channels, or bars. Prefabricated steel channels providing a high degree of mounting flexibility, such as those manufactured by Kindorf, Glob-Strutt and Unistrut, may be used for mounting arrays of equipment.

#### 1.12 OPERATIONS AND MAINTENANCE MANUALS

- CRATIONS AND MAINT IEMANCE ANALOUS.

  General: Provide operations & maintenance (O&M) manuals in accordance with the Contract Documents.

  1. Provide two (2) copies of each manual.

  2. Manuals shall be 6-1/2 inches X 11 inches in hard cover 3-ring loose-leaf binders.

  3. Manuals shall be complete and in Owner's hands prior to turning building over to Owner and at least 10 days prior to
- instruction to operating personnel.

  B. Provide manufacturer's literature as regularly published by the respective manufacturers for proper preventative and
- C. Provide O&M manuals including but not limited to the following.
- Alphabetical list of all system components, with the name, address, and 24-hour phone number of the company responsible for servicing each item during the first year of operation.
- ervicing each item during the first year of operation.

  rating instructions for complete system including:

  a) Normal starting, operating, and shut-down.
  b) Emergency procedures for fire or failure of major equipment.
  c) Summer and winter special procedures, if any.
  d) Day and night special procedures, if any.

- Maintenance instruction including:
   a) Proper lubricants and lubricating instructions for each piece of equipment, and date when lubricated.
- b) Necessary cleaning, replacement and/or adjustment schedule
   4. Manufacturer's data for each piece of equipment including:
- a) Installation instructions.
   b) Drawings and specifications.
   c) Parts list, including recommended items to be stocked.
   d) Complete wiring diagrams.
   e) Marked or changed prints locating all concealed parts and all variations from the original system design.
   D. Refer to individual specification sections for additional O&M requirements.

### 1.13 RECORD DOCUMENTS

- During construction, keep an accurate record of all deviations between the work as shown on Drawings and that which is actually installed. Keep this record set of prints at the job site for review by the Architect/Enginee
- actually installed. Keep this record set of prints at the job site for review by the Architect/Engineer.

  B. Upon completion of the installation and acceptance by the owner, transfer all record drawing information to one neat and legible set of prints. Then deliver them to the Architect/Engineer for transmittal to the Owner.

  C. Provide in each main electrical switchboard room a framed copy under glass of the appropriate Single Line Riser Diagram as reviewed by the electrical engineer. Media shall be a high quality presentation type paper. Blueprints or other media which fade shall not be used.

# 1.14 GUARANTEE

Guarantee all material and workmanship for a period of one (1) year from date of final acceptance by the Owner, except that Colarantee air macrain and workindarsing for a period of left (1) year mind used to mind acceptance by the Owine, (except via where guarantees or warranties for longer terms are specified herein, such longer term to apply. Within 24 hours after notification, correct any deficiencies that occur during the guarantee period at no additional cost to the Owner, all to the satisfaction of the Owner and Architect/Engineer. Obtain similar guarantees from subcontractors, manufacturers, suppliers and

### PART 2 - PRODUCTS

- - Applicable equipment and materials shall be listed by UnderWriter's Laboratones and Manufactured in accordance with ASME, NEMA, ANSI or IEEE standards, and as approved by local authorities having jurisdiction as mentioned in Division 1.
    If products and materials are specified or indicated on the Drawings for a specific item or system, use those products or materials. If products and materials are not listed in either of the above, use first class products and materials, subject to approval of Shop Drawings where Shop Drawings are required or as approved in writing where Shop Drawings are not required.
    All equipment capacities, etc. are listed for job site operating conditions. All equipment sensitive to altitudes or ambient temperatures to be derated and method of derating shown on Shop Drawings. Where operating conditions, the equipment to be derated and the method of derating shown on Shop Drawings.

# SUBSTITUTION OF MATERIALS OR EQUIPMENT

- JBSTITUTION OF MATERIALS OR EQUIPMENT

  All requests for substitution of materials or equipment shall be made in writing by the Contractor. The request must be in the Engineers office not less than 10 days prior to the bid date. Samples of proposed substitute materials or equipment shall be submitted to the Engineer for review whenever they are requested. Bids shall be based only upon the specified materials and equipment, or substitutes that have received written acceptance from the Engineer prior to the bid.

  Wherever the words "for approval" or "approved" are used in regard to manufactured specialties, or wherever it is desired to substitute a different make or type of apparatus for that specified, submit all information pertinent to the adequacy and adaptability of the proposed apparatus, and secure Architect/Engineer's acceptance before apparatus is ordered.

  Wherever quantities or a definite make and size of apparatus is specified, the make and size of apparatus which is proposed must conform substantially (in regard to the operating results) to that specified or implied. Same shalppy to important dimensions relating to operation of apparatus in coordination with the rest of the system, or to properly fitting it into available space conditions. Any substitution of equipment or apparatus shall include all necessary revisions, as required to complete the space conditions. Any substitution of equipment or apparatus shall include all necessary revisions, as required to complete th
- D. Acceptance of substitutions, for equipment specified herein, will not be given merely upon submission of manufacturer's names Acceptance of substitutions, for equipment specified herein, will not be given merely upon submission of manufacturer's names and will be given only after receipt of complete and satisfactory performance data ocvering the complete range of operating conditions in tabular and graphical form. Furnish complete and satisfactory information relative to equipment dimensions, weight, etc. Acceptance of all equipment specified or shown on the Drawings, or substitutions submitted for that specified or shown on the Drawings, will be granted if such equipment, in the opinion of the Architect/Engineer, conforms to the performance requirements, space conditions, weight requirements and quality requirements. Any additional construction and design costs incurred as a result of any accepted substitution shall be borne by the Contractor. The opinion and judgement of the Architect/Engineer shall be final, conclusive, and binding.

### SHOP DRAWINGS

- Prepare and submit detailed Shop Drawings for materials, systems, and equipment as listed herein, including locations and
- respect and south ordered who permiss of the meetings, systems, and equipment as itseed never indicating the street in the stree
- tre job. Each submitted snop Drawing shall include a certification that all related job conditions have been cnecked and that no conflict exists.

  2. All drawings shall be submitted sufficiently in advance of field requirements to allow ample time for checking and resubmittal as may be required. All submittals shall be complete and contain all required and detailed information.

  2. Acceptance of any submitted data or Shop Drawings for material, equipment apparatus, devices, arrangements, and layout shall not relieve Contractor from responsibility of furnishing same of proper dimensions and weight, capacities, sizes, quantity, quality and installation details, to efficiently perform the requirements and intent of the Contract. Such acceptance shall not relieve Contractor from responsibility of errors, omissions, or inadequacies of any sort on submitted data or Shop Drawings.

  E. Each Shop Drawing shall contain the following information.

  1. Provide general information on each copy of the submittal.

  2. Project title.

  3. Project title.

  4. Contractor and supplier identification, addresses and telephone numbers.

  4. Certification that the contractor has reviewed the submittal.
- Certification that the contractor has reviewed the submittal.
- 3. Refer to individual specification sections for additional information requirements Shop Drawing submittals shall be provided for each specific material, system, or equipment as identified herein.
   As a minimum, make submittals on the following items:
  - a) Raceways, conduit & wire

- Switchboard ) Transformers

- e) Panelboards f) Fuses g) Disconnect switches h) Motor control centers

b) Wiring devices and plates

- Motor controllers, starters, and contactor
- Lighting fixtures, lamps
- Instrumentation, metering equipment
- Special systems fire alarm, security, CCTV, intercom, etc.
- 2 Refer to individual specification sections for additional submittal requirements

#### PART 3 - EXECUTION

### 3.01 INSTALLATION

ISTALLATION Follow manufacturer's instructions for installing, connecting, and adjusting all equipment. Provide one copy of such instructions to the Architect/Engineer before installing any equipment. Provide a copy of such instructions at the equipment during any work on the equipment. Provide all special supports, connections, wiring, accessories, etc.
Use mechanics skilled in their trade for all work.
Keep all items protected before and after installation. Clean up all debris.

- Refer an item's protected older and safet installation. Used in op an etem's.

  Before commencing Work, examine all adjoining, underlying, etc., Work on which this Work is in any way dependent for perfect workmanship and report any condition which prevents performance of first class work. Become thoroughly familiar with actual existing conditions to which connections must be made or which must be changed or altered.

# 3.02 PREMIUM TIME WORK

- The following Work shall be performed at night or weekend other than holiday weekends as directed and coordinated with the
- Owner.

  1. All tie-in, cut-over and modifications to the existing electrical system and other existing system requiring tie-ins or modifications shall be arranged and scheduled with the Owner to be done at a time as to maintain continuity of the service and not interfere with normal building operations.

## 3.03 EXCAVATION TRENCHING AND BACKELL

- EXCAVATION, TRENCHING AND BACKFILL

  A. Provide excavation for the Work. Excavate all material encountered, to the depths indicated on the drawings or required. Remove from the site, excavate materials not required or suitable for backfill. Provide grading, as may be necessary, to prevent surface water from flowing into trenches or other excavations. Remove any water accumulating therein. Provide sheeting and shoring a may be necessary for the protection of the Work and for the safety of personal.

  B. Provide trenches of widths necessary for the proper execution of the Work. Grade bottom of the trenches accurately to provide uniform bearing and support the Work on undisturbed soil at every point along its entire length. Except where rock is encountered, do not excavate below the depths indicated. Where rock excavations are required, excavate rock to a minimum overdepth of four (4") inches below the trench depths indicated on the Drawings or required. Backgill overdepths in the rock excavation and unauthorized overdepths with loose granular, moist earth, thoroughly machine tamped, to a compaction level of at least 95 percent to standard protector density or 75 percent relative density or as specified by the Architect. Whenever unstable soil that is incapable of properly supporting the Work, as determined by Architect/Engineer, is encountered in the bottom of the trench, remove soil to a depth required and backfill the trench to the proper grade with coarse sand, fine gravel, or other suitable material.

  C. Excavate trenches for utilities to a depth that will provide the following minimum depths of cover from existing grade or from indicated finished grade, whichever is lower, unless otherwise specifically shown.

  1. Primary electric service: four (4) feet (minimum)

  2. Secondary electric service: four (2) feet (minimum)
- Secondary electric service: two (2) feet (minimum) Telephone service: two (2) feet (minimum)
- Trenches shall not be placed within ten (10) feet of foundation or soil surfaces which must resist horizontal forces
- D. Trenches shall not be placed within ten (10) feet of foundation or soil surfaces which must resist horizontal forces.
  E. Do not backfill trenches until all required tests have been preformed and the installation observed by the Engineer. Comply with the requirements of other sections of these specifications. Backfill shall consist of non-expansive soil with limited porosity. Deposit in six (6") inch layers and thoroughly and carefully tamp until the Work has a cover of not less than one (1) foot. Backfill and tamp remainder of trench at twelve (12") inch intervals until complete. Uniformly grade the finished surface. Backfill and tamp with compaction at least equal to the surrounding area.

## 3.04 CUTTING, PATCHING AND REPAIRING

- The work shall be carefully laid out in advance. Where cutting, channeling, chasing or drilling of floors, walls, partitions, ceilings or other surfaces is necessary for the proper installation, support or anchorage of raceway, outlets or other equipment, the work shall be carefully done. Any damage to the building, piping, equipment or defact finish plaster, woodwork, metalwork, etc. shall be repaired by skilled mechanics of the trades involved at no additional cost to the Owner.
- Where conduits, mounting channels, outlet, junction, or pull boxes are mounted on a painted surface, or a surface to be painted, they shall be painted to match the surface. Whenever support channels are cut, the bare metal shall be cold galvanized.

# 3.05 DEMOLITION AND CONTINUANCE OF EXISTING SERVICES

- All existing electrical services not specifically indicated to be removed or altered shall remain as they presently exist.

  Should any existing services interfere with new construction, the Contractor shall (after obtaining written approval from the Architect/Engineer) after or reroute such existing equipment to facilitate new construction. C. Under no circumstances shall existing services be terminated or altered unless deemed necessary by the Architect/Engineer or specified herein; also, prior to altering any existing situation, the Contractor shall notify the Owner in writing giving two (2) weeks
- D. It shall be solely the Contractor's responsibility to guarantee continuity of present facilities (with respect to damage or alteration due to new construction) and any unauthorized alteration to existing equipment shall be corrected by the Contractor to the Architect/Engineer's satisfaction at the Contractor's expense.

- Contractor shall take care to avoid accumulation of debris, boxes, crates, etc., resulting from the installation of his work.
- Contractor shall remove from the premises each day all debris, boxes, etc., and keep the premises clean.
  Contractor shall clean up all futures and equipment at the completion of the project.
  All switchboards, panelboards, wireways, trench ducts, cabinets and enclosures shall be thoroughly vacuumed clean prior to .... onnounces, parietizearus, wireways, trench ducts, cabinets and enclosures shall be thoroughly vacuumed clean penergizing equipment and at the completion of the project. Equipment shall be opened for observation by the Architect/Enas required.

- ATEMPROOFING
  Avoid, if possible, the penetration of any waterproof membranes such as roofs, machine room floors, basement walls, and the like. If such penetration is necessary, perform it prior to the waterproofing and furnish all sleeves or pitch-pockets required. Advise the Architect/Engineer and obtain written permission before penetrating any waterproof membrane, even where such penetration is shown on the Drawings.

  If Contractor penetrates any walls or surfaces after they have been waterproofed, he shall restore the waterproof integrity of that surface as directed by the Architect/Engineer at his own expense.

- A. Support work in accordance with the best industry practice and the following.

  B. Include supporting frames or racks extending from building structure for work indicated as being supported from walls where the walls are incapable of supporting the weight. In particular, provide such frames or racks in electric closets.

  C. Include supporting frames or racks for equipment, intended for vertical surface mounting, which is required in a free standing
- position.

  D. Supporting frames or racks shall be of standard angle, standard channel or specialty support system steel members. They shall be rigidly botted or welded together and adequately braced to form a substantial structure. Racks shall be of ample size to assure a workmanlike arrangement of all equipment mounted on them.

  E. Nothing, (including outlet, pull and junction boxes and fittings) shall depend on electric conduits, raceways, or cables for support, except that threaded hub type fittings having a gross volume not in excess of 100 cubic inches may be supported from heavy wall conduit, where the conduit is securely supported from the structure within five inches of the fitting on two opposite
- F. Nothing shall rest on, or depend for support on, suspended ceilings media (tiles, lath, plaster, as well as splines, runners, bars and the like in the plane of the ceiling).

  G. Provide required supports and hangers for conduit, equipment, etc., so that loading will not exceed allowable loadings of

# Floor or pad mounted equipment shall not be held in place solely by its own dead weight. Include anchor fastening in all cases. For itsms which are shown as being ceiling mounted at locations, where fastening to the building construction element above is not possible provide suitable auxiliary channel or and icrothorising, tying to the building structural elements.

3.10 TESTING EQUIPMENT AND MATERIALS e Contractor shall provide all testing instruments, equipment and all materials, connections, labor, etc., required to perform

Fasten electric work to building structure in accordance with the best industry practice and the following

- B. Test all circuits, fixtures, equipment, and systems for proper operation and freedom from grounds, shorts and open circuits before acceptance is requested. C. Measure voltage at panelboards and outlets after the building is fully occupied. Make final transformer tap adjustments based
- Perform all tests required by local authorities, such as tests of life safety systems, in addition to tests specified herein
- Perform tests required by other specification sections





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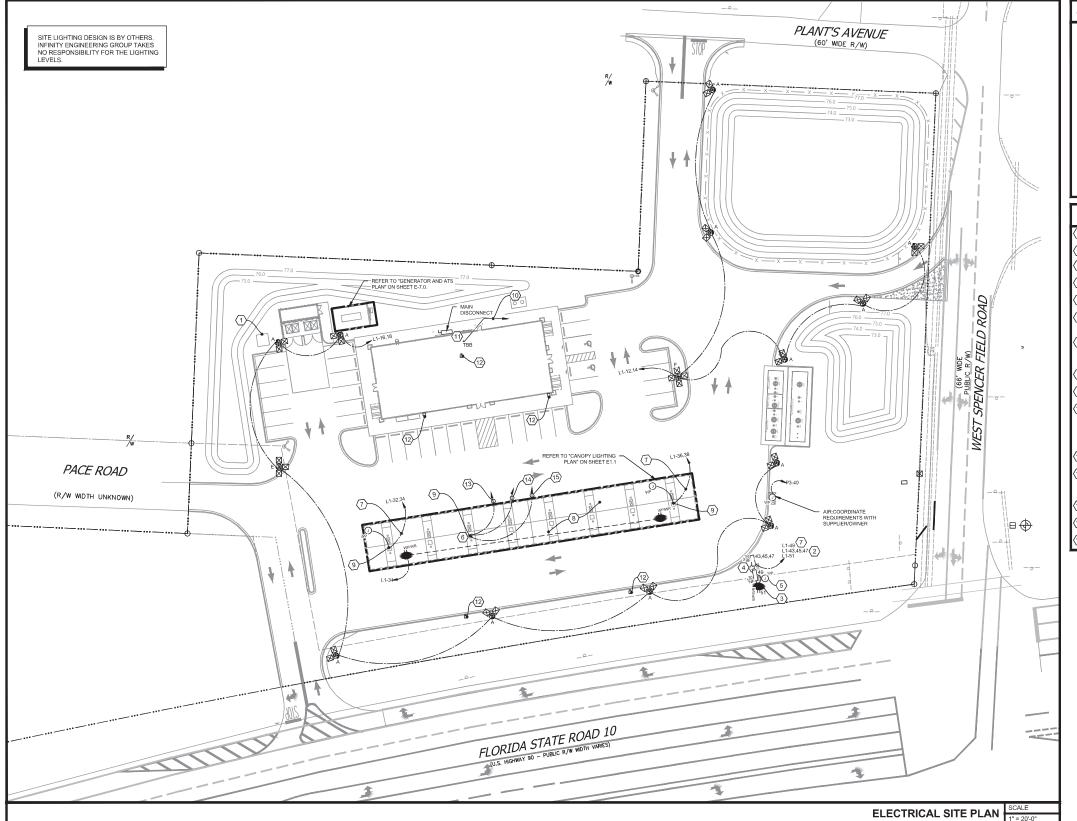
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> PACE ELECTRICAL PECIFICATIONS #426 CEFCO 3

E0.1



# SITE LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING HEIGHT	ARRANGEMENT	LAMP	VOLTAGE	TOTAL WATTAGE
Α	COMMERCIAL MEDIUM TWO HEAD @90 DEGREE AREA LIGHT, 28L, TYPE FT, 5K CCT	LSI INDUSTRIES	SMA-LED-28L-ACR-FT-50	22'POLE + 3' BASE	2 @ 90 DEGREES	LED	208V	458W
Е	COMMERCIAL MEDIUM THREE HEAD @ 90 AREA LIGHT, 28L, TYPE FT, 5K CCT	LSI INDUSTRIES	SMA-LED-28L-ACR-FT-50	22'POLE + 3' BASE	3 @ 90 DEGREES	LED	208V	458W
F	COMMERCIAL MEDIUM FOUR HEAD @ 90 AREA LIGHT, 28L, TYPE FT, 5K CCT	LSI INDUSTRIES	SMA-LED-28L-ACR-FT-50	22'POLE + 3' BASE	4 @ 90 DEGREES	LED	208V	458W
NOTE: AL	I AREA LICHTS DEGLIDANG DOLES CHALL BE DROWNED WITH DOLES AND DOLE BASES TO MATCH OTHER CES	O CITEC IN THE CTATE	OF ELODIDA, DOLE AND BACEC CHALL BE DROVIDED TO	MEET THE MINIMUM	WIND LOADING BEOL	ITDEMENTO	COD TUTE CE	ECTETC

NOTE: ALL AREA LIGHTS REQUIRING POLES SHALL BE PROVIDED WITH POLES AND POLE BASES TO MATCH OTHER CEFCO SITES IN THE STATE OF FLORIDA. POLE AND BASES SHALL BE PROVIDED TO MEET THE MINIMUM WIND LOADING REQUIREMENTS FOR THIS SITE PER ASCE-7. INCLUDE ALL ACCESSORIES FOR COMPLETE AND FULLY FUNCTIONING AREA LIGHT ASSEMBLIES.
ALL AREA POLE LIGHTS SHALL BE AIMED IN PRESENCE OF LUMINIAIRE PROVIDED EXACT LAYOUT REQUIRED TO ACHIEVE PHOTOMETRIC CALCULATION VALUES INDICATED IN THE LIGHTING MANUFACTURER'S SITE LIGHTING PHOTOMETRIC STUDY. THE MANUFACTURER'S PHOTOMETRIC STUDY SHALL GOVERN THIS SITE LIGHTING LAYOUT.

ELECTRICAL SITE WORK PHASING: ELECTRICAL SITE WORK SHALL BE PHASED PER GC DIRECTIONS IN FIELD.

CCTV GENERAL NOTE:
EC SHALL PROVIDE 1" CONDUIT SYSTEMS FROM LIGHTING POLES THAT WILL EC SHALL PROVIDE T CONDUIT SYSTEMS FROM LIGHTING POLES THAT WILL HAVE CAMERAS MOUNTED ON THEM TO THE C-STORE IT RACK. EXACT QUANTITIES AND LOCATIONS OF LIGHT POLES WITH CCTV CAMERAS SHALL BE DETERMINED IN FIELD WITH OWNER REPRESENTATIVE AND CCTV PROVIDER.

## SHEET NOTES:

- VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO CONNECTION
- 2. COORDINATE ALL INSTALLATIONS W/ OTHER TRADES.
- CANOPY LIGHTING FIXTURES TO BE OF LED TYPE. FIXTURES ARE PROVIDED AND INSTALLED BY CANOPY SUPPLIER AND CIRCUITED BY ELECTRICAL CONTRACTOR.
- ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE GASOLINE DISPENSER, GASOLINE TANK VENTS, AND UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA-30A.
- ALL INTRINSICALLY SAFE (IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSI/ISA RP 12.6 IN ADDITION, SPECIAL IS WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS) WHERE PRACTICAL, OR PERMANENTLY ATTACHED,
- UNDERGROUND STORAGE FUEL TANK LEAK MONITOR PANEL REQUIRES AN EQUIPMENT GROUND WIRE AND A BARRIER GROUND WIRE.

### **KEYED NOTES:**

- POWER COMPANY TRANSFORMER: INCLUDE ALL REQUIRED MATERIAL AND LABOR FOR COMPLETE AND FULLY FUNCTIONAL POWER COMPANY PAD MOUNTED TRANSFORMER.
- (2) ID/PRICER PORTION OF SIGN: ID/PRICER SHALL ILLUMINATE CONTINUOUSLY.
- 3 SIGN MAINTENANCE RECEPTACLE: PROVIDE NEW WEATHER RESISTANT GFI, 20A, DUPLEX RECEPTACLE: PROVIDE METAL WHILE-IN-USE TYPE WEATHERPROOF COVER.
- 4 MONUMENT SIGN: PROVIDE A WEATHERPROOF LOCAL DISCONNECTING MEANS IF ONE IS NOT INCLUDED WITH SIGN PACKAGE DELIVERED TO SITE. (5) SIGN DATA CABLE: PROVIDE 1" CONDUIT W/ ID SIGN DATA CABLE. ROUTE TO POS EQUIPMENT IN C-STORE. COORDINATE W/ SIGN MANUFACTURER FOR REQUIREMENTS AND EXACT LOCATION.
- (6) TOP OF CANOPY LOW VOLTAGE WIRING: ALL TOP OF CANOPY LOW VOLTAGE CONDUCTORS SHALL BE IN CONDUIT. PROVIDE COMPLETE CONDUIT SYSTEMS TO SUPPORT LOW VOLTAGE SYSTEM REQUIREMENTS ON ARCHITECTURAL PLANS.
- (7) CONTROL CIRCUIT FOR NIGHT OPERATION: RUN THIS CIRCUIT VIA LIGHTING CONTACTOR IN UNITIZED GEAR REFER TO OUTDOOR LIGHTING SCHEMATIC DETAIL #3 ON SHEET E5.0 FOR ADDITIONAL INFORMATION. FLORIDA ENERGY CODE LIGHTING SETBACK REQUIREMENTS PER C405.2.6.3. EXCLUDED TO COMPLY WITH FLORIDA STATUTE 812.173
- (8) TOP OF CANOPY EQUIPMENT AND DEVICES: COORDINATE EXACT LOCATION WITH CANOPY MANUFACTURER PRIOR TO START OF WORK.
- SEAL-OFF FITTING: PROVIDE SEAL OFF FITTING FOR EACH CONDUIT WITHIN STEEL COLUMN AT HANDHOLE. REFER TO DETAIL 2 ON SHEET E5.0.
- (1) TELEPHONE UTILITY SERVICE CONDUITS: PROVIDE (2) 4°C W NYLON PULL STRING FOR TELEPHONE SERVICE. ROUTE MINIMUM 30° BELOW GRADE FROM TELEPHONE SERVICE POINT AT EDGE OF PROPERTY LINE TO TELEPHONE BACKBOARD (TBB), STUB UP 6° ON EACH END AND PROVIDE TEMPORARY CAP. ROUTE CONDUIT BENDS IN LONG SWEEPS, DO NOT USE 90° ELBOWS. COORDINATE WITH TELEPHONE COMPANY FIELD REPRESENTATIVE FOR SERVICE REQUIREMENTS, EXACT ROUTING, AND LOCATION OF SERVICE POINT.
- TELEPHONE BACKBOARD: REFER TO POWER PLAN FOR EXACT LOCATION. REFER TO DETAIL # ON SHEET ES 2.
- FUEL SYSTEM EMERGENCY FUEL SHUT OFF PUSHBUTTON STATION(EFSO): REFER TO EFSO SCHEMATIC DETAIL 4 ON SHEET E5.0 FOR CONNECTIONS. REFER TO DETAIL 6 ON SHEET E5.0 FOR ADDITIONAL DETAILS. REFER TO TANK ELECTRICAL PLANS FOR EFSO PUSHBUTTON LOCATIONS
- (3) SPARE CANOPY CONDUITS: PROVIDE (2) 1" CONDUITS FROM TOP OF CANOPY TO IT RACK LOCATION IN C-STORE.
- 44 FUEL CANOPY CCTV CONDUIT: PROVIDE A 1" CONDUIT FROM FUEL CANOPY TO VICINITY OF IT RACK AT C-STORE.
- (15) FUEL CANOPY SOUND SYSTEM CONDUIT: PROVIDE A 1" CONDUIT FROM FUEL CANOPY TO VICINITY OF IT RACK AT C-STORE.







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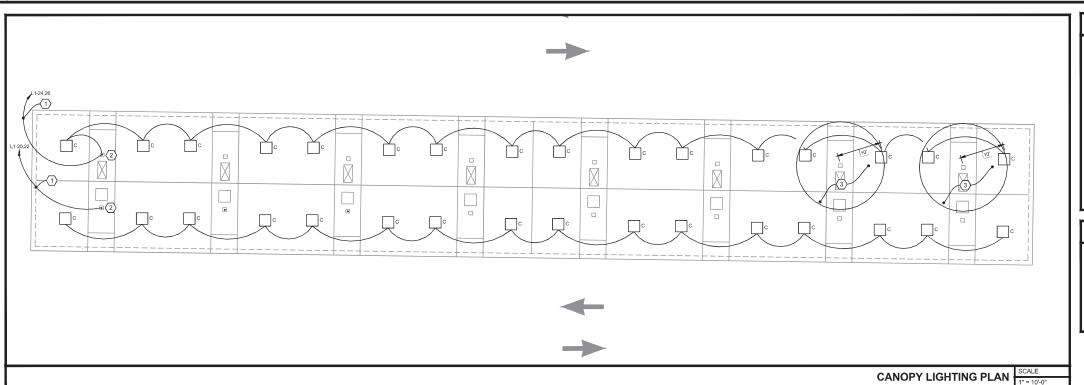
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PACE SITE #426 -ECTRICAL CEFCO 3

> E1.0 AS NOTED



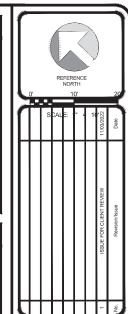


# SHEET NOTES:

- 1. VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO CONNECTION.
- 2. COORDINATE ALL INSTALLATIONS W/ OTHER TRADES.
- 3. CANOPY LIGHTING FIXTURES TO BE OF LED TYPE. FIXTURES ARE PROVIDED AND INSTALLED BY CANOPY SUPPLIER AND CIRCUITED BY ELECTRICAL CONTRACTOR.
- 4. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE GASOLINE DISPENSER, GASOLINE TANK VENTS, AND UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA-30A.
- 5. ALL INTRINSICALLY SAFE (IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSI/ISA RP 12.6. IN ADDITION, SPECIAL IS WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS) WHERE PRACTICAL, OR PERMANENTLY ATTACHED, GROUNDED DIVIDER.
- UNDERGROUND STORAGE FUEL TANK LEAK MONITOR PANEL REQUIRES AN EQUIPMENT GROUND WIRE AND A BARRIER GROUND WIRE.

# **KEYED NOTES:**

- CONTROL CIRCUIT FOR NIGHT OPERATION; RUN THIS CIRCUIT VIA LIGHTING CONTACTOR IN UNITIZED GEAR REFERT TO OUTDOOR LIGHTING SCHEMATIC DETAIL #3 ON SHEET E5.0 FOR ADDITIONAL INFORMATION.
- (2) SEAL-OFF FITTING: PROVIDE SEAL OFF FITTING FOR EACH CONDUIT WITHIN STEEL COLUMN A HANDHOLE. REFER TO DETAIL 2 ON SHEET E5.0.
- HAZARDOUS CLASSIFIED AREA: VENTS FOR REGULAR, PREMIUM UNLEADED AND DIESEL ARE IN A HAZARDOUS CLASSIFIED AREA. AVOID ANY CONDUIT RUNS THROUGH CANOPY HAZARDOUS CLASSIFIED AREAS. IF UNAVOIDABLE, THE CONDUIT SYSTEM WILL REQUIRE A SEAL-OFF FITTING BEFORE ENTERING THE HAZARDOUS CLASSIFIED AREA AND UPON LEAVING THE HAZARDOUS CLASSIFIED AREA. CANOPY LIGHTS SHALL NOT BE LOCATED IN HAZARDOUS CLASSIFIED AREA. CANOPY LIGHTS SHALL NOT BE LOCATED IN HAZARDOUS.





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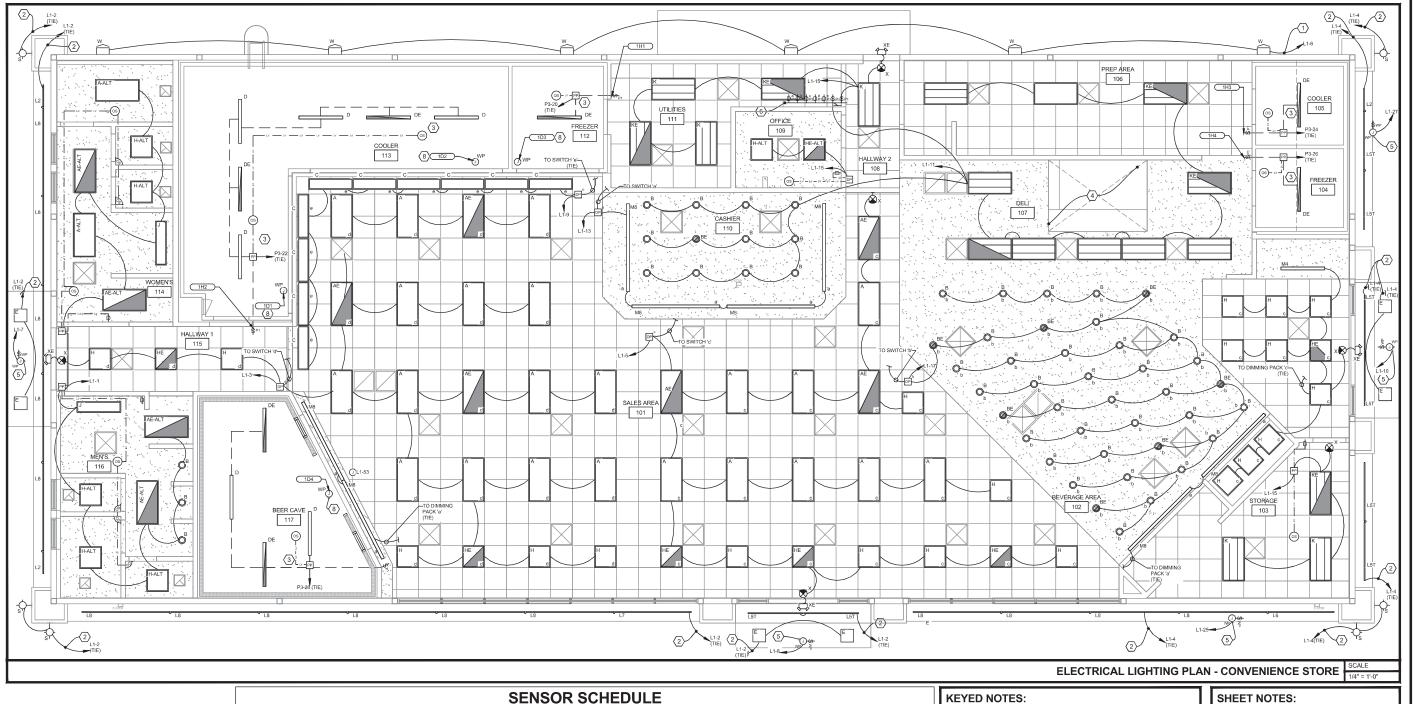
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CEFCO #426 - PACE

E1.1 AS NOTED

CANOPY LIGHTING PLAN

SITE CANOPY LIGHTING FIXTURE SCHEDULE TAG DESCRIPTION MANUFACTURER MOUNTING HEIGHT LAMP VOLTAGE TOTAL WATTAGE MODEL NUMBER ARRANGEMENT C LEGACY LED CANOPY LIGHT, STANDARD SYMMETRIC, VERY HIGH OUTPUT 5000K COOL WHITE LSI INDUSTRIES CRUS-SC-LED-VHO-50-UE SINGLE LED 208V



TYPE DESCRIPTION MANUFACTURER CATALOG NUMBER MOUNTING RATINGS NOTES OCCUPANCY SENSOR - CORNER MOUNT, PASSIVE INFRARED, DLM **⋑** WATTSTOPPER I MPX-100 CORNER CEILING UP TO 45' @ 10' MNT HGT OCCUPANCY SENSOR - 360 DEGREE PASSIVE INFRARED, DLM WATTSTOPPER LMPC-100 CEILING 15' RADIAL @ 10' MNT HGT ₱₂ DIGITAL WALL SWITCH, ONE-BUTTON, ON/OFF, DLM WATTSTOPPER LMSW-101 WALL DIGITAL WALL SWITCH, ONE-BUTTON, 2HR OVERRIDE, DLM ORDER CUSTOM ENGRAVED BUTTON: "2HR OVERRIDE" PROGRAM BUTTON: "PROGRAM BUTTON: WATTSTOPPER WALL 2HR OVERRIDE ON FOR TIME-OF-DAY CONTROLLED LIGHTS ↓
↓
DIGITAL WALL SWITCH, ON/OFF/RAISE/LOWER, DLM WATTSTOPPER LMDM-101 WALL MMING PACK: DIGITAL ON/OFF/RAISE/LOWER @120V, 20A\*\*, 1HP | @277V, 20A\*\*, 1HP \*\*16A FOR E-BALLAST, ONE RELAY: LMRC-211 WATTSTOPPER ABOVE CEILING NOTE 1 0-10V DIMMING ROOM CONTROLLER, ONE, TWO, OR THREE RELAY, DLM TWO RELAY: LMRC-212 TOTAL LOAD PER ROOM CONTROLLER THREE RELAY: LMRC-213 POWER PACK: DIGITAL ON/OFF @120V, 20A\*\*, 1HP | @277V, 20A\*\*, 1HP ONE RELAY: LMRC-101 TWO RELAY: LMRC-102 NON-DIMMING ROOM CONTROLLER. NOTE 1 WATTSTOPPER ABOVE CEILING TOTAL LOAD PER ROOM CONTROLLER ONE OR TWO RELAY, DLM

GENERAL NOTES:

A. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT NECESSARILY BE REFLECTED IN CATALOG NUMBER AND/OR DESCRIPTION IN THE SCHEDULE. A REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT NECESSARILY BE REFLECTED IN CATALOG NUMBER ANDION DESCRIPTION IN THE SCHEDULE.

B. PROVIDE ALL LIGHTING CONTROL COMPONENTS TO PERFORM FUNCTION AS DESCRIBED ON THESE PLANS, PROVIDE ALL BRIDGES, GATEWAYS, POWER SUPPLIES, POWER PACKS (ROOM CONTROLLERS, ACCESSORIES, AND PROGRAMMING FOR A COMPLETE AND FULLY FUNCTIONAL LIGHTING CONTROL SYSTEM, LIGHTING CONTROLS ARE INDICATED FOR DESIGN INTENT ONLY. EC SHALL PROVIDE SHOP DRAWINGS AND PRODUCT CUTSHEETS FOR REVIEW BY THE ENGINEER. PROVIDE DETAILED DESCRIPTIONS OF LIGHTING FUNCTIONS FOR EACH ROOM.

C. PROVIDE ALL PROGRAMMING, COMMISSIONING, AND TRAINING OF LIGHTING CONTROLS AS REQUIRED BY THESE PLANS, OWNER AND LANDLORD REQUIREMENTS, AND ENERGY CODE.

D. LIGHTING CONTROL SYSTEM FUNCTIONAL TESTING SHALL BE PROVIDED AND DOCUMENTS CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET THE PERFORMANCE CRITERIA OF THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED TO THE OWNER AND ENGINEER WITHIN 90 DAYS FROM THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

E. POWER PACKS / ROOM CONTROLLERS ARE INDICATED ON PLANS AS SINGLE RELAY UNITS FOR CLARITY ONLY. MULTI-RELAY POWER PACKS / ROOM CONTROLLERS MAY BE USED IN LIEU OF SINGLE PLANS AND STRUCK AND PROTECTIONS.

SINGLE RELAY UNITS. COORDINATE WITH MANUFACTURER FOR SELECTIONS.

<u>IOTES:</u> 1. SELECT APPROPRIATE NUMBER OF CO<u>NTACTS BASED ON APPLICATION.</u>

# **KEYED NOTES:**

DETAIL 1 ON SHEET E5.1.

- BUILDING LIGHTING CIRCUIT: ROUTE CIRCUIT VIA "1/2 SITE LIGHTING ZONE"

  AND "2/2 SITE LIGHTING ZONE" LIGHTING CONTACTORS IN CPI SWITCHGEAR
- 2) BUILDING LIGHTING CIRCUIT: ROUTE CIRCUIT VIA "BUILDING EXTERIOR LIGHTING ZONE" LIGHTING CONTACTORS IN CPI SWITCHGEAR.
- WALK-IN COOLERS/FREEZERS: PROVIDE RACEWAYS, WIRING, AND ALL LIGHTING FIXTURES IN COOLERS/FREEZERS: PROVIDE RACEWAYS, WIRING, AND ALL LIGHTING FIXTURES IN COOLER / FREEZER. COORDINATE THE INSTALLATION OF SWITCHES AND PLATES WITH THE CUIPMENT SUPPLIER. REFER TO DETAIL #4 ON SHEET E2.1 FOR LOW TEMPERATURE OCCUPANCY SENSOR AND POWER PACK FOR AUTOMATED CONTROL OF LIGHTS, ALL PENETRATIONS IN WALK-IN/STEP-IN COOLERS/FREEZERS/BEER CAVE SHALL BE MADE THROUGH THE TOP OF THE BOX. MAKE ALL PENETRATIONS PER
- $\overline{\langle 4 \rangle}$  HOOD LIGHTS: REFER TO SHEET MC0.2 FOR HOOD LIGHTING.
- SIGN: PROVIDE A WEATHER PROOF JUNCTION BOX FOR EXTERIOR SIGN.
  ROUTE CIRCUIT VIA "SIGNAGE LIGHTING ZONE" LIGHTING RELAY PANEL IN CP
  SWITCHGEAR. REFER TO "OUTDOOR LIGHTING CONTROL SCHEMATIC",
  DETAIL #3 ON SHEET E5.0. PROVIDE WEATHERPROOF SWITCH FOR LOCAL
  DISCONNECTING MEANS IF ONE IS NOT INCLUDED INTEGRAL TO SIGN.
- 6) SWITCHBANK: PROVIDE PERMANENT ENGRAVED COVERPLATE INDICATING CONTROLLED AREA BELOW EACH LIGHT SWITCH.
- ZEXTERIOR EMERGENCY EGRESS LIGHTING: CONNECT FIXTURES ABOVE ENTRANCE TO 100W EXTERNAL 90-MIN BATTERY BACKED EMERGENCY LIGHTING INVERTER, PHILIPS BODINE ELI-S-100 OR EQUAL. INSTALL ABOVE CPI SWITCHGEAR.
- 8 WALK-IN COOLER / FREEZER ANTHONY DOOR LIGHTING: COORDINATE WITH FOUIPMENT SUPPLIER FOR FINAL CONNECTION.

- EMERGENCY LIGHTING FIXTURES SHALL SWITCH WITH
- EMERGENCY FIXTURES WITH INTEGRAL 90-MINUTE BATTERY PACKS SHALL BE PROVIDED WITH AN UN-SWITCHED HOT CONDUCTOR SO THAT EMERGENCY BATTERY PACK CAN CHARGE WHEN POWER TO THE
- EXIT AND NIGHT LIGHT FIXTURES SHALL BE
- LIGHT FIXTURES IN THE SAME ROOM SHALL HAVE THE
- TO EACH LINE VOLTAGE WALL SWITCH, WHERE THE WIRING DEVICE DOES NOT REQUIRE THE USE OF A NEUTRAL CONDUCTOR, CAP FOR FUTURE USE.
- REFER TO DETAIL #3 ON SHEET E5.0 FOR OUTDOOR LIGHTING CONTROL SCHEMATIC.
- LOCATION AS WELL AS CONDUIT AND WIRING REQUIREMENTS.

HALF SHADED OR FULLY SHADED LUMINAIRES SHALL BE PROVIDED WITH SELF-CONTAINED 90-MINUTE BACK-UP BATTERY PACKS.

LOCAL NORMAL LIGHTING UNLESS INDICATED AS "EM/NL" OR "NL" (NIGHT LIGHT).

- LIGHT FIXTURES IS SWITCHED OFF.
- CONNECTED TO UN-SWITCHED CIRCUIT AHEAD OF LIGHTING CONTROLLER.
- SAME ORIENTATION.

  THE CIRCUIT NEUTRAL CONDUCTOR SHALL BE ROUTED
- REFER TO ROOF PLAN FOR PHOTOCELL PROPOSED.



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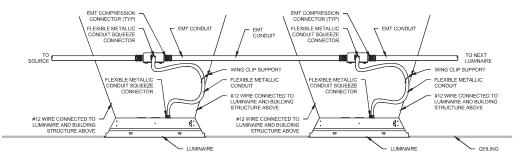
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ELECTRICAL LIGHTING PLAN PACE #426 CEFCO 3 CEFCO E

E2.0

LIG	HTING FIXTURE SCHEDULE						
	DECORPTION.		LIGHT FIXTURE	MOUNTAIN	QTY, OF	1401.70	
LABEL	DESCRIPTION	MFG.	MODEL#	MOUNTING	LAMPS	VOLTS	WATTS
Α	2'x4' EDGE-LIT LED PANEL, 4000 LUMEN, 40K, DIMS TO 10%	LSI	SFP24 LED 50 UE DIM 40	LAY-IN	LED	120	50
AE	2'x4' EDGE-LIT EMERGENCY BACKUP LED PANEL, 4000 LUMEN, 40K, DIMS TO 10%	LSI	SFP24 LED 50 UE DIM 40 EM	LAY-IN	LED	120	50
A-ALT	2'x4' EDGE-LIT LED PANEL, 4000 LUMEN, 40K, DIMS TO 10%	LSI	SFP24 LED 50 UE DIM 40; FK24	LAY-IN	LED	120	50
AE-ALT	2'x4' EDGE-LIT EMERGENCY BACKUP LED PANEL, 4000 LUMEN, 40K, DIMS TO 10%	LSI	SFP24 LED 50 UE DIM 40 EM; FK24	LAY-IN	LED	120	50
В	6" LED DOWNLIGHT, 2500LUMEN.	LSI	LCD6 LED 25L UNV DIM1 40	RECESSED	LED	120	22
BE	6" LED EMERGENCY BACKUP DOWNLIGHT, 2500LUMEN.	LSI	LCD6 LED 25L UNV DIM1 40 EM	RECESSED	LED	120	22
С	1'x4' EDGE-LIT LED PANEL, 4000 LUMEN, 40K, DIMS TO 10%	LSI	SFP14 LED 40 UE DIM 40	LAY-IN	LED	120	40
C2	1'x2' EDGE-LIT LED PANEL, 2000 LUMEN, 40K, DIMS TO 10%	LSI	CONSULT WITH LSI REP FOR 1'X2' FLAT PANEL LUMINAIRE	LAY-IN	LED	121	20
D	4' LED WET LOCATION LINEAR LUMINAIRE CONSTRUCTED OF FIBERGLASS-REINFORCED FIBERGLASS HOUSING, 6695 LUMENS, 4000K COLOR TEMP, 0-10V DIMMING.	LSI	EG3 4 LED 6L DA S UNV DIM 40 80	SURFACE	LED	120	50
DE	4' LED WET LOCATION EMERGENCY BACKUP LINEAR LUMINAIRE CONSTRUCTED OF FIBERGLASS-REINFORCED FIBERGLASS HOUSING, 6695 LUMENS, 4000K COLOR TEMP, 0-10V DIMMING.	LSI	EG3 4 LED 6L DA S UNV DIM 40 80 EM	SURFACE	LED	120	50
Е	LEGACY LED CANOPY LUMINAIRE, 10525 LUMEN, 50K.	LSI	CRUS LW LED SS 50 UE WHT	CANOPY	LED	120	74
Н	2'x2' EDGE-LIT LED PANEL, 3000 LUMEN, 40K, DIMS TO 10%	LSI	SFP22 LED 30 UE DIM 40	LAY-IN	LED	120	30
HE	2'x2' EDGE-LIT EMERGENCY BACKUP LED PANEL, 3000 LUMEN, 40K, DIMS TO 10%	LSI	SFP22 LED 30 UE DIM 40 EM	LAY-IN	LED	120	30
H-ALT	2'x2' EDGE-LIT LED PANEL, 3000 LUMEN, 40K, DIMS TO 10%	LSI	SFP22 LED 30 UE DIM 40; FK22	LAY-IN	LED	120	30
HE-ALT	2'x2' EDGE-LIT EMERGENCY BACKUP LED PANEL, 3000 LUMEN, 40K, DIMS TO 10%	LSI	SFP22 LED 30 UE DIM 40 EM; FK22	LAY-IN	LED	120	30
J	1'x4' EDGE-LIT LED PANEL, 4000 LUMEN, 40K, DIMS TO 10%	LSI	SFP14 LED 40 UE DIM 40 U; FK14	LAY-IN	LED	120	40
К	2'x4' LED TROFFER, 4800 LUMENS, 4000K, 0-10V DIMMING TO 10%.	LSI	OPT24 LED 48L W UNV DIM 40	LAY-IN	LED	120	39
KE	2'x4' EMERGENCY BACKUP LED TROFFER, 4800 LUMENS, 4000K, 0-10V DIMMING TO 10%.	LSI	OPT24 LED 48L W UNV DIM 40 EM	LAY-IN	LED	120	39
L2	QWIK STIK FLAT SERIES 2' LED FIXTURE WITH 12VDC POWER SUPPLY. SUPPLIED BY FASCIA SUPPLIER, ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR.	PRINCIPAL LED	PL-QS24-XX-FL	SURFACE	LED	120	4.7
L5T	QWIK STIK FLAT SERIES 5'-4" LED FIXTURE WITH 12VDC POWER SUPPLY. SUPPLIED BY FASCIA SUPPLIER, ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR.	PRINCIPAL LED	PL-QS64-XX-FL	SURFACE	LED	120	14.2
L6	QWIK STIK FLAT SERIES 6' LED FIXTURE WITH 12VDC POWER SUPPLY. SUPPLIED BY FASCIA SUPPLIER, ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR.	PRINCIPAL LED	PL-QS72-XX-FL	SURFACE	LED	120	15.6
L7	QWIK STIK FLAT SERIES 7' LED FIXTURE WITH 12VDC POWER SUPPLY, SUPPLIED BY FASCIA SUPPLIER, ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR.	PRINCIPAL LED	PL-QS84-XX-FL	SURFACE	LED	120	18.0
L8	QWIK STIK FLAT SERIES 8' LED FIXTURE WITH 12VDC POWER SUPPLY, SUPPLIED BY FASCIA SUPPLIER, ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR.	PRINCIPAL LED	PL-QS96-XX-FL	SURFACE	LED	120	21.2
M4	4FT LED STRIP DIFFUSED LUMINAIRE, 4000 LUMENS, 4000K.	LSI	SDL4 LED 40L FL UNV DIM1 40 90CRI	SURFACE	LED	120	31
M8	8FT LED STRIP DIFFUSED LUMINAIRE, 8000 LUMENS, 4000K.	LSI	SDL8 LED 80L FL UNV DIM1 40 90CRI	SURFACE	LED	120	61
S	DORADO ROUND 4" ROUND LED WALL MOUNT CYLINDER, UP/DOWN, 50K	E-CONOLIGHT	OWCQ4-U-10-33-MV-50-BZ	WALL	LED	120	33
w	MIRADA OUTDOOR LED WALL SCONCE, TYPE 4, 8000 LUMEN, 50K	LSI INDUSTRIES	XWM-FT-LED-08-50-UE	WALL @ 12 FT	LED	120	62
PE	WALL SCONCE, WET-LISTED EMERGENCY LIGHT WITH BATTERY BACKUP, BRONZE DIE-CAST HOUSING WITH POLYCARBONATE LENS AND MIRROR REFLECTOR.	E-CONOLIGHT	E-XMTDCZ	WALL	XENON	120	4
Х	EXIT SIGN LIGHT WITH BATTERY BACKUP, WHITE POLYCARBONATE HOUSING, RED EXIT LETTERS.	SURE-LITES	APX7R	SURFACE	LED	120	7
1. ALL L	IGHT FIXTURE SUBSTITUTION SHALL BE APPROVED BY OWNER AND MUST BE EQUAL TO OR	OF BETTER QUAL	ITY THAN FIXTURES SPECIFIED BY ARC	HITECT.			•
2. PENE	ANT LUMINAIRES: ORIENTATION OF PENDANT LUMINAIRES SHALL BE THE SAME.						
3. FASC	IA LIGHT FIXTURES: BOLT ALL FASCIA LIGHT FIXTURES TOGETHER PER MANUFACTURER RE	COMMENDATIONS	b				
_							_



- NOTES:

  1. REFER TO ARCHITECTURAL PLANS FOR CEILING GRID SUPPORT REQUIREMENTS. THIS DETAIL SHOWS FIXTURE SUPPORT REQUIREMENTS ONLY.

  2. RACEWAY SHALL BE SUPPORTED IN ACCORDANCE WITH NEC 300.11.

  3. LUMINAIRES MAY NOT BE USED AS A RACEWAY IN ACCORDANCE WITH NEC 410. 21 AND 410.64.

  4. ALL JUNCTION BOXES SHALL BE SUPPORTED BY BUILDING STRUCTURE.

  5. LUMINAIRES SHALL BE SUPPORTED INDEPENDENT OF THE CEILING GRID TO BUILDING STRUCTURE. DO NOT SUPPORT FROM DUCTWORK OR PIPING.

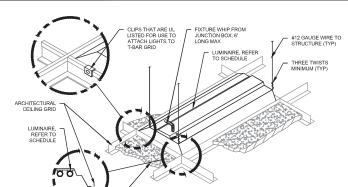
  6. FLEXIBLE METALLIC CONDUIT WHIPS FOR LUMINAIRES SHALL NOT EXCEED 6 FEET IN LENGTH.

  7. FLEXIBLE METALLIC CONDUIT WHIPS SHALL BE SUPPORTED BY LUMINAIRES SUPPORT WIRE USING A CONDUIT WING CLIP THAT IS UL LISTED FOR THIS PURPOSE.

  8. SECURELY FASTEN FIXTURE TO CEILING FRAMING MEMBERS. ATTACH TO SUSPENDED CEILING GRID ONLY AS APPROVED BY AUTHORITY HAVING JURISDICTION.

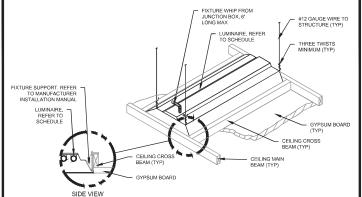
SIDE VIEW

# LIGHTING FIXTURE AND RACEWAY SUPPORT DETAIL



NOTES:
1. REFER TO ARCHITECTURAL PLANS FOR CEILING GRID SUPPORT REQUIREMENTS. THIS DETAIL SHOWS FIXTURE SUPPORT
REQUIREMENTS ONLY.
2. INSTALL IN ACCORDANCE WITH MANUFACTURER'S MOUNTING INSTRUCTIONS AND USING RECOMMENDED MOUNTING HARDWARE.
3. THERMAL INSULATION SHALL NOT BE INSTALLED ABOVE A RECESSED LUMINAIRE OR WITHIN 3' OF OF THE RECESSED LUMINAIRE'S ENCLOSURES, WIRING OMPARTMENT, BALLEST, TRANSFORMER, LED DRIVER, OR POWER SUPPLY UNLESS THE LUMINAIRE IS IDENTIFIED AS TYPE IC FOR INSULATION CONTACT.

# TROFFER MOUNTING - LAY-IN CEILING

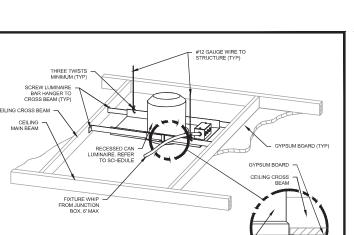


NOTES:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S MOUNTING INSTRUCTIONS AND USING RECOMMENDED MOUNTING HARDWARE
2. THERMAL INSULATION SHALL NOT BE INSTALLED ABOVE A RECESSED LUMINAIRE OR WITHIN 9" OF OF THE RECESSED LUMINAIRE IS ENCLOSURES. WIRING COMPARTMENT, BALLAST, TRANSFORMER, LED DRIVER, OR POWER SUPPLY UNLESS THE LUMINAIRE IS IDENTIFIED AS 17PE IC FOR INSULATION CONTACT.

3. ALL JUNCTION BOXES SHALL BE ACCESSIBLE.

TROFFER MOUNTING - GYPBOARD CEILING N.T.S.



THERMAL INSULATION SHALL NOT BE INSTALLED ABOVE A RECESSED LUMINAIRE OR WITHIN 3'OF OF THE RECESSED LUMINAIRES ENCLOSURES, WIRING COMPARTMENT BALLAST, TRANSFORMER, LED DRIVER, OR POWER SUPPLY UNLESS THE LUMINAIRE IS IDENTIFIED AS TYPE IF OF OR INSULATION CONTACT.

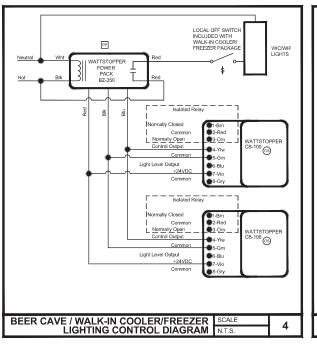
ALL JUNCTION BOXES SHALL BE ACCESSIBLE.

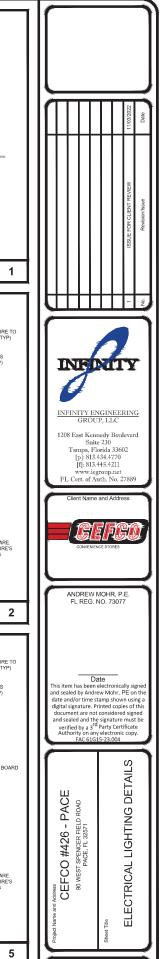
DOWNLIGHT MOUNTING - GYPBOARD CEILING N.T.S.

3

SIDE VIEW

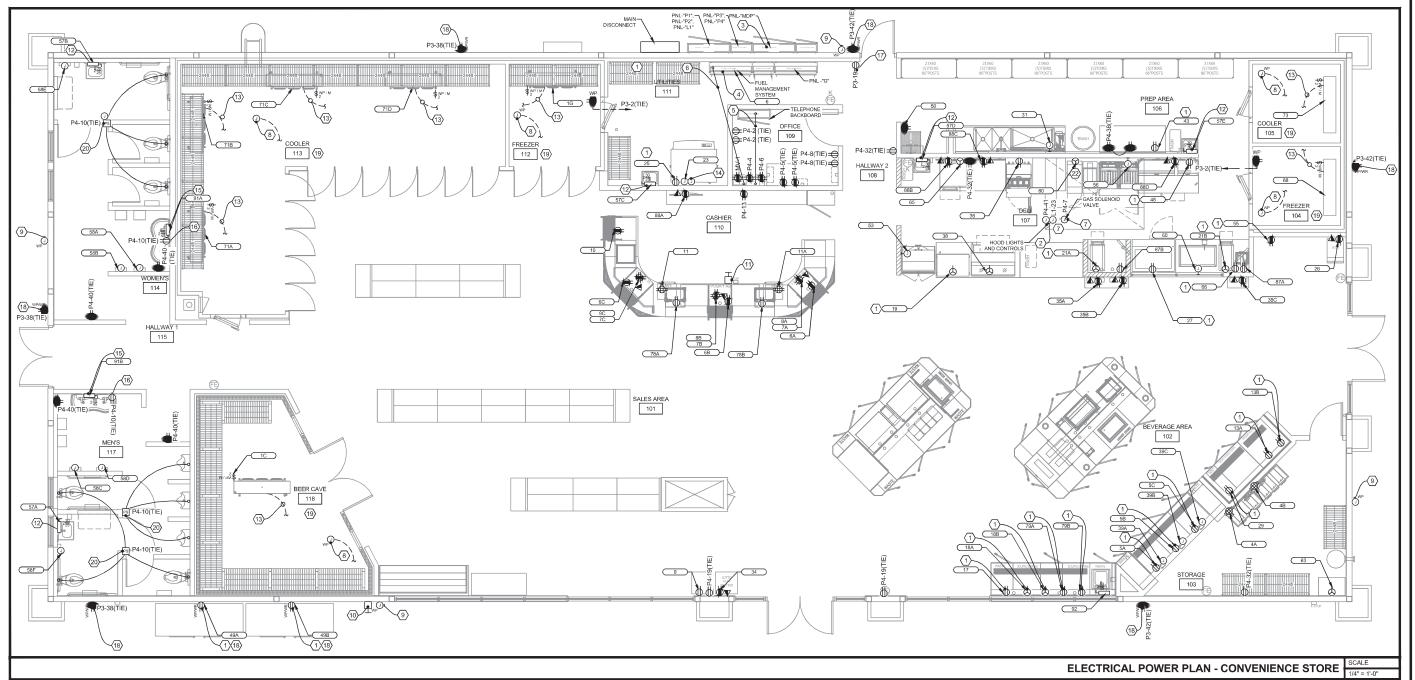






E2.1

AS NOTED



# **KEYED NOTES:**

- EQUIPMENT GFCI PROTECTION: REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER.
- (2) GREASE HOOD WITH FIRE SUPPRESSION: PROVIDE SEPERATE 120V CIRCUITS TO LIGHTS (L1-23) AND CONTROLS (P4-41) FOR HOODS. WIRE SUPPLY AIR FAN AND EXHAUST AIR FAN THROUGH HOOD CONTROLLER. REFER TO LIGHTING PLAN FOR LIGHT FIXTURE DETAILS.
- (3) CPI UNITIZED SWITCHGEAR: COORDINATE EXACT LOCATION WITH OTHER TRADES. REFER TO ELECTRICAL RISER DIAGRAM.
- MAC VICTOR UPS: OWNER SUPPLIED 2KVA MAC VICTOR UPS WITH FOUR (4) 120V, 20A OUTPUT CIRCUITS. UPS TO BE MOUNTED ABOVE CPI PANEL. COORDINATE FINAL LOCATION WITH OWNER. PROVIDE 2.#12, #12 GND & #12 IG, 34°C FOR EACH OUTPUT BRANCH CIRCUIT.

  1. MV #1: BACK OFFICE POS HARDWARE (500VA).

  2. MV #2: TWO POS UNITS AT FROM SALES COUNTER (THE TWO CLOSEST TO FRONT/MAIN ACCESS) (400VA).

  3. MV #3: ONE POS UNIT (CLOSEST TO SIDE/END ACCESS) AND TELECOMMUNICATIONS CABINET (400VA).

  4. MV #4: CPI FUELING CABINET FOR POWERING VEEDER ROOT TLS 450 PLUS ATG, VERIFONE FCI FUEL CONTROLLER AND WAYNE FUSION IX GATEWAY (500VA).
- CONTROLLER, AND WAYNE FUSION IX GATEWAY, (500VA)
- TBB TO OFFICE CONDUIT: 2" CONDUIT WITH PULLWIRE ROUTED ABOVE CEILING FROM TBB IN UNITIZED SWITCHGEAR IT RACK IN OFFICE.
- (7) HEAT PRODUCING EQUIPMENT UNDER HOOD: UPON ACTIVATION OF HOOD, THE SOLENOID OPERATED GAS SHUT OFF VALVE SHALL CLOSE AND ALL ELECTRICALLY POWERED ITEMS UNDER HOOD SHALL BE ELECTRICALLY DISCONNECTED VIA A RESETTABLE CONTACTOR.
- COOLER/FREEZER THERMOSTAT: PROVIDE WP JUNCTION BOX FOR COOLER / FREEZER THERMOSTAT. ROUTE 3/4" CONDUIT WITH CONTROL WIRING FROM REMOTE CONDENSERS TO EVAPORATOR(S) VIA THERMOSTAT. COORDINATE WITH COOLER / FREEZER SUPPLIER PRIOR TO ROUGH IN.
- (9) EASIWASH SYSTEM CONTROLS: PROVIDE 3/4°C WITH (1) 20/6 CONTROL CABLE PER MANUFACTURER'S INSTALLATION RECOMMENDATIONS. ROUTE FROM REMOTE CONTROL POINT TO MAIN UNIT(63).

- (10) EMERGENCY FUEL SHUT-OFF (EFSO) PUSHBUTTON: REFER TO TANK PLANS FOR EXACT LOCATION. PROVIDE J-BOX IN WALL WITH 1/2" CONDUIT STUBBED THROUGH WALL AND ROUTED TO DISPENSER DISCONNECT IN CUNITIZED SWITCHGEAR ENCLOSURE.
- (1) EMERGENCY FUEL SHUT-OFF (EFSO) PUSHBUTTON: LOCATE PUSHBUTTON UNDER CASHIER COUNTER. ROUTE WIRING IN UNDER SLAB CONDUIT BACK TO DISPENSER DISCONNECT IN CPI UNITIZED SWITCHGEAR ENCLOSURE. REFER TO UNDERSLAB ELECTRICAL PLAN.
- (12) WATER HEATER: PROVIDE 2P-25A DISCONNECTING MEANS, MOUNT ON WALL ADJACENT TO WATER HEATER AND CONNECT TO WATER HEATER WITH FLEXIBLE CONDUIT.
- (13) COOLER EVAPORATORS: PROVIDE 2P-20A WEATHERPROOF MOTOR RATED SWITCH, PROVIDE 3/4" CONDUIT WITH CONTROL WIRING FROM REMOTE CONDENSER TO EVAPORATOR(S) FOR CONTROLS. COORDINATE WIT COOLER / FREEZER SUPPLIER PRIOR TO ROUGH-IN.
- (4) ICE MAKER: ROUTE 3/4" CONDUIT WITH CONTROL WIRING FROM ICE MAKER TO REMOTE CONDENSER ON ROOF.
- (15) WATER HEATER: PROVIDE 2P-45A, DISCONNECTING MEANS. MOUNT ON WALL ADJACENT TO WATER HEATER AND CONNECT TO WATER HEATER WITH FLEXIBLE CONDUIT.

  (16) FAUCET SENSOR: RECEPTACLE FOR POWER SUPPLY FOR TOUCHLESS OPERATION FAUCETS. ACCESS PANEL IS REQUIRED. GFCI PROTECTION PROVIDED BY BREAKER.
- (17) INSECT LIGHT: PROPOSED LOCATION OF INSECT LIGHT. FIELD VERIFY EXACT LOCATION WITH CEFCO FIELD REPRESENTATIVE PRIOR TO ROUGH-IN.
- (18) METAL WHILE-IN-USE WEATHERPROOF COVER: PROVIDE INTERMATIC WP1010MXD.
- (19) PENETRATIONS IN WALK-IN AND STEP-IN COOLER/FREEZER/BEER CAVE: ALL PENETRATIONS SHALL BE MADE THROUGH THE TOP OF THE COOLER/FREEZER BOX. REFER TO SEALING PENETRATION DETAILS ON SHEET E5.1.
- WATER CLOSET / URINAL FLUSHVALVE SENSOR: POWER SUPPLY FOR TOUCHLESS OPERATION FLUSHVAVE. REFER TO DETAIL #3 ON SHEET E5.2. ACCESS PANEL IS REQUIRED.

# **GENERAL NOTES:**

CONTRACTOR SHALL REPERTO EQUIPMENT VENDOR, AND ARCHITECTURAL DEVICES, DEVICE LOCATIONS, AND DEVICE DEVICE TO BE STALL REPERTOR TO BID / INSTALLATION. DRAWINGS ARE NOT TO BE SCALED.

COORDINATE ELECTRICAL REQUIREMENTS, MOUNTING AND CONNECTIONS WITH ALL EQUIPMENT VENDORS PRIOR TO PURCHASING ELECTRICAL DEVICES.

## **COOLER SUPPLIER**

STORE SOURCE INC. GREGORY LAKIN (830) 743 - 3088 GREGL@STORESOURCEINC.COM





Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 FL Cert. of Auth. No. 278



ANDREW MOHR, P.E FL REG. NO. 73077

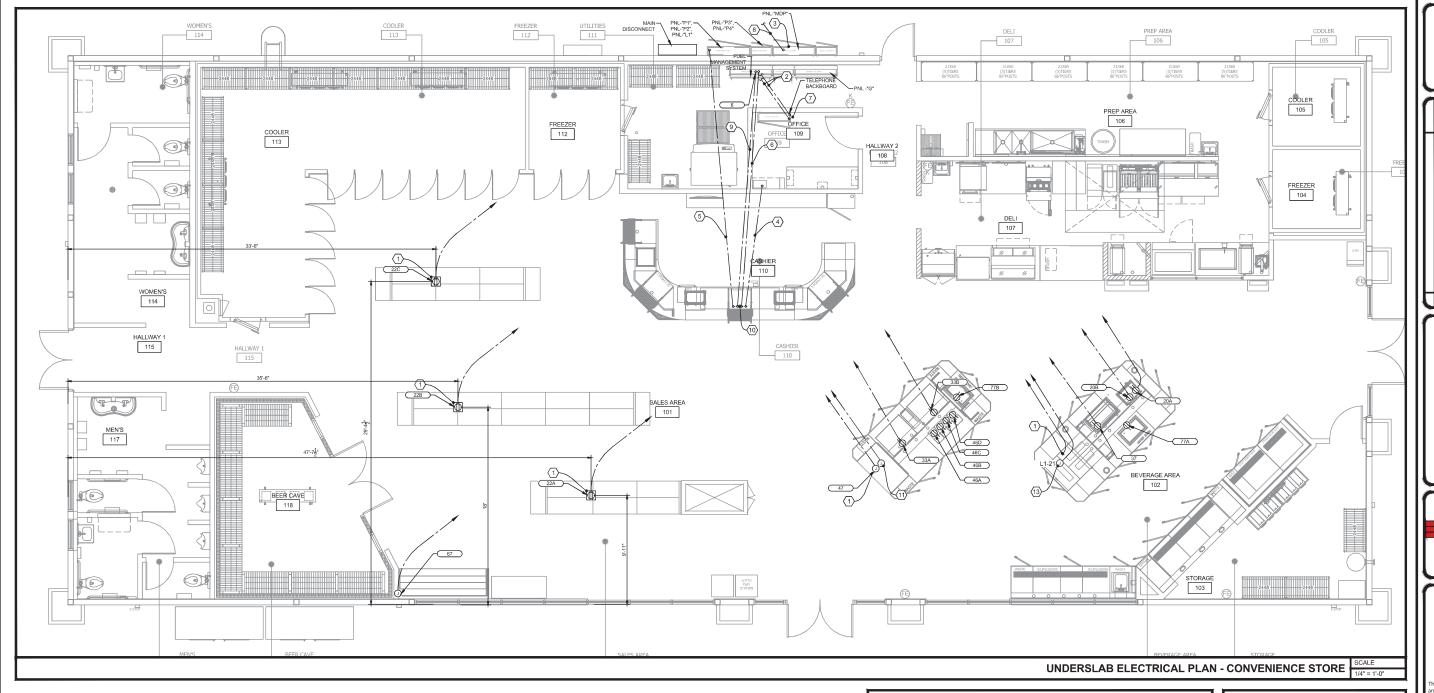
Date

is item has been electronically sign d sealed by Andrew Mohr, PE on t te and/or time stamp shown using and sealed and the signature must be verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic conv

- PACE CEFCO ELECTRICAL POWER PLAN CEFCO #426

E3.0







THERE ARE ADDITIONAL UNDERGROUND CONDUITS THAT WILL BE REQUIRED FOR SITE, FUEL SYSTEMS AND OTHER MISCELLANEOUS ITEMS. IT IS THE RESPONSIBILITY OF THE GC TO PROVIDE THE EC WITH A COMPLETE SET OF PLANS. THE EC SHALL PROVIDE ALL UNDERGROUND CONDUIT SYSTEMS NEEDED FOR A COMPLETE AND FULLY FUNCTION BUILDING INCLUDING UNDERGROUND CONDUIT SYSTEMS

# **KEYED NOTES:**

- (2) TELEPHONE SERVICE CONDUITS: REFER TO SITE ELECTRICAL PLAN FOR REQUIREMENTS AND ROUTING
- ③ CPI UNITIZED SWITCHGEAR: COORDINATE EXACT LOCATION WITH OTHER TRADES. REFER TO ELECTRICAL RISER DIAGRAM.

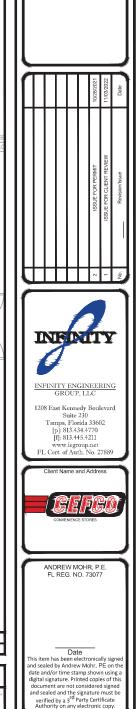
- Cashier Counter to Office Conduit: 2°C W Pull String Routed Below Slab from Cashier Counter to Office Conduit: 2°C W Pull String Routed Below Slab from Cashier Counter to Office Refer to Low Voltage Plan.

   Cashier Counter to Fuel Equipment Conduit: 2°C W Pull String Routed Below Slab from Cashier Counter to Fuel Equipment in Unitized Switchigear.

   Telecommunications Cabinet: CPI Telecom Cabinet with Fire-Rated Plywood Backboard and Intersystem With (1) #30 Ground Conductor Conduitate With Telephone Company For Requirements. Coordinate With Owner For Final Location.
- (8) C-STORE INCOMING FEEDERS: REFER TO SITE PLAN AND RISER DIAGRAM.
- (9) EMERGENCY FUEL SHUT-OFF (EFSO) PUSHBUTTON; 3/4" CONDUIT FOR EFSO WIRING FROM CASHIER COUNTER TO DISPENSER DISCONNECT IN CPI SWITCHGEAR.
- (10) CASHIER COUNTER CONDUITS: STUB CASHIER COUNTER UNDERGROUND LY CONDUITS INTO FLUSH MOUNT 12"X12" ENCLOSURE. INSTALL ENCLOSURE BELOW COUNTER. COORDINATE WITH MILLWORK PRIOR TO ROUGH-IN.
- (1) MERCHANDISER EQUIPMENT: ROUTE 3/4\* CONDUIT WITH CONTROL WIRING FROM MERCHANDISER TO REMOTE CONDENSER ON ROOF.
- 12 NOT USED:
- (13) CABINET LED: PROVIDE JUNCTION BOX FOR CABINET LED.

# **GENERAL NOTES:**

COORDINATE ELECTRICAL REQUIREMENTS, MOUNTING AND CONNECTIONS WITH ALL EQUIPMENT VENDORS PRIOR TO PURCHASING ELECTRICAL



CON IRAC TOR SHALL REPERT TO EQUIPMENT YENDOW AND ARCHITECTURAL DRAWINGS FOR ALL REQUIRED ELECTRICAL DEVICES, DEVICE LOCATIONS, AND DEVICE MOUNTING HEIGHTS PRIOR TO BID / INSTALLATION, DRAWINGS ARE NOT TO BE SCALED.

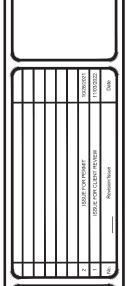
Procincia Marcon and Additions	CEFCO #426 - PACE	90 WEST SPENCER FIELD ROAD PACE, FL 32571	Sheet Title	CEFCO UNDERSLAB ELECTRICAL PLAN	
L	roject No 170-t	34.00	Shee		•

EL	ECTRCAL EQUIPMEN	T SCHEDUL	E (CONTINUE	D):						
ITEM #	DESCRIPTION	MANUFACTURER	MODEL NUMBER	PHASE	VOLTAGE	AMPS	LOAD/W	CONNECTION TYPE	CIRCUIT#	MOUNTING HEIGHT (AFF)
88A	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)	
88B	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)	
88C	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)	
88D	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)	
35A	CUSTOMER KIOSK	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-11(TIE)	
35B	CUSTOMER KIOSK	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-11(TIE)	
35C	CUSTOMER KIOSK	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-11(TIE)	
58A	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-23	
58B	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-25	
58C	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-27	
58D	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-29	
71A	L-SHAPED COOLER - EVAPORATOR	BOHN	ADT120AEK	1	120	1.8	216	HARDWIRED	P1-2(TIE)	
71B	L-SHAPED COOLER - EVAPORATOR	BOHN	ADT120AEK	1	120	1.8	216	HARDWIRED	P1-2(TIE)	
71B	L-SHAPED COOLER - EVAPORATOR	BOHN	ADT120AEK	1	120	1.8	216	HARDWIRED	P1-2(TIE)	
71D	L-SHAPED COOLER - EVAPORATOR	BOHN	ADT120AEK	1	120	1.8	216	HARDWIRED	P1-2(TIE)	
78A	HEATED DISPLAY MERCHANDISER	WASSERSTROM	6655	1	120	2.9	348	PLUG-IN	P2-6	
78B	HEATED DISPLAY MERCHANDISER	WASSERSTROM	6655	1	120	2.9	348	PLUG-IN	P2-8	
79A	2 SH STAND	BUNN	27875.0200	1	120	1.8	216	PLUG-IN	P2-10	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
79B	2 SH STAND	BUNN	27875.0200	1	120	1.8	216	PLUG-IN	P2-12	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
80	RETHERMALIZING UNIT	PITCO	SRTE14-GM	3	208	22	7926	PLUG-IN	P3-9,11,13	NEMA 15-50
87A	DELL MONITOR	22" KDS	E2216HV	1	120	0.6	72	PLUG-IN	P4-39(TIE)	
87B	DELL MONITOR	22" KDS	E2216HV	1	120	0.6	72	PLUG-IN	P4-39(TIE)	
91A	INSTANTANEOUS WATER HEATER [IWH-2]	EEMAX	AM010240T	1	208	36	7488	HARDWIRE	P3-32,34	
91B	INSTANTANEOUS WATER HEATER [IWH-2]	EEMAX	AM007240T	1	208	36	7488	HARDWIRE	P3-1,3	
92	INSTANTANEOUS WATER HEATER [IWH-5]	EEMAX	AM007240T	1	208	27.5	5720	HARDWIRE	P2-40,42	

Coas	Coastal Code Services
<b>EXAMINER:</b>	EXAMINER: PX2534/PX1183/LP203/PX2109
FBC CODE:	2020 FBC
DATE: 02	02/03/2023

REVIEWED FOR CODE COMPLIANCE

	ECTRCAL EQUIPMEN	T SCHEDUL	.E:									
EM #	DESCRIPTION	MANUFACTURER	MODEL NUMBER	PHASE	VOLTAGE	AMPS	LOAD/W	NEMA CONFIGURATION	CONNECTION TYPE	CIRCUIT#	MOUNTING HEIGHT (AFF)	REMARKS
1B	BEER CAVE REMOTE CONDENSING UNIT	HEATCRAFT	MOZ025M63CF	3	208	16.00	5764	-	HARDWIRED	P1-7,9,11	ROOF	AIR DEFROST
1C	BEER CAVE EVAPORATORS	BOHN	SME130BEE	- 1	208	15.7	3266	-	HARDWIRED	P1-8,10	DOWN FROM ABOVE	EC MOTOR, AIR DEFROST (USING HEATERS)
D1 D2	COOLER DOOR HEATERS/LTS - RM 113  COOLER DOOR HEATERS/LTS - RM 113	ANTHONY ANTHONY	101B NT 30X75 5DOOR 101B NT 30X75 7DOOR	1	120	4.80 6.72	576 806	-	HARDWIRED HARDWIRED	P3-8 P3-10	DOWN FROM ABOVE DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS  COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
D3	FREEZER DOOR HEATERS/LTS - RM 112	ANTHONY	101B NT 30X75 7DOOR 101B LT 30X75 3DOOR	1	120	2.88	346	-	HARDWIRED	P3-10 P3-12	DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS  COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
D4	BEER CAVE DOOR HEATERS/LTS - RM 118	741110111	1010 21 00/10 000011	1	120	2.88	346	-	HARDWIRED	P3-14	DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
1F	3 DOOR FREEZER - REMOTE COND. UNIT	HEATCRAFT	MOZ055L63CF	3	208	30.00	10808	-	HARDWIRED	P1-13,15,17	ROOF	ELECTRIC DEFROST
1G	3 DOOR FREEZER - EVAPORATOR	HEATCRAFT	LET160BEK	1	208	15.7	3266	-	HARDWIRED	P1-14,16	DOWN FROM ABOVE	EC MOTOR, ELECTRIC DEFROST
IH1	WIF DOOR HEATER AND LIGHTS - RM 112			1	120	12.5	1500	-	HARDWIRED	P3-20		
H2 H3	WIC DOOR HEATER AND LIGHTS - RM 113 STEP-IN COOLER DOOR HTR & LTS RM 105			1	120	12.5	1500	-	HARDWIRED HARDWIRED	P3-22 P3-24		
H4	STEP-IN COOLER DOOR HTR & LTS RM 105			1	120	12.5	1500	-	HARDWIRED	P3-24 P3-26		
4A	BAG-N-BOX		AS PER OWNER	1	120	3	360	5-20	PLUG-IN	P4-34	+80*	
4B	BAG-N-BOX		AS PER OWNER	1	120	3	360	5-20	PLUG-IN	P4-36	+80"	
5A	FOUNTAIN DISPENSER	CORNELIUS	FLAVOR FUSION	1	120	9.3	1116	5-20	PLUG-IN	P2-14		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
5B 5C	FOUNTAIN DISPENSER FOUNTAIN DISPENSER	CORNELIUS CORNELIUS	FLAVOR FUSION FLAVOR FUSION	1	120	9.3	1116	5-20 5-20	PLUG-IN PLUG-IN	P2-16 P2-18		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
SA SA	FUEL MANAGEMENT SYSTEM	CORNELIUS	AS PER OWNER	1	120	3	360	5-20	PLUG-IN PLUG-IN	P4-42 (TIE)		REQUIRED GFGI PROTECTION PROVIDED BY GFGI BREAKER
iB	FUEL MANAGEMENT SYSTEM		AS PER OWNER	1	120	3	360	5-20	PLUG-IN	P4-42 (TIE)		
С	FUEL MANAGEMENT SYSTEM		AS PER OWNER	1	120	3	360	5-20	PLUG-IN	P4-42 (TIE)		
Ā	CASH REGISTER		AS PER OWNER	1	120	1,67	200	5-20	PLUG-IN	MV-2 (TIE)	UNDER COUNTER	CONNECTED TO MAC VICTOR UPS
В	CASH REGISTER		AS PER OWNER	1	120	1.67	200	5-20	PLUG-IN	MV-2 (TIE)	UNDER COUNTER	CONNECTED TO MAC VICTOR UPS
С	CASH REGISTER		AS PER OWNER	1	120	1.67	200	5-20	PLUG-IN	MV-3	UNDER COUNTER	CONNECTED TO MAC VICTOR UPS
A	CREDIT CARD		AS PER OWNER	1	120	1.67	200	5-20	PLUG-IN	-	UNDER COUNTER	PLUG INTO CASH REGISTER 7A RECEPTACLE
В	CREDIT CARD		AS PER OWNER	1	120	1.67	200	5-20	PLUG-IN	-	UNDER COUNTER	PLUG INTO CASH REGISTER 7B RECEPTACLE
0	CREDIT CARD		AS PER OWNER	1	120	1.67	200	5-20	PLUG-IN		UNDER COUNTER	PLUG INTO CASH REGISTER 7B RECEPTACLE
1	LOTTO MACHINE UNDER COUNTER SAFE	ARMOR	AS PER OWNER CS 7100	1	120 120	1.67	200 400	5-20 5-20	PLUG-IN PLUG-IN	P4-20 P4-16	UNDER COUNTER	
٨	UNDER COUNTER SAFE	ARMOR	CS 7100	1	120	3.33	400	5-20	PLUG-IN PLUG-IN	P4-16 P4-24	UNDER COUNTER  UNDER COUNTER	
ì	TEA BREWER	BUNN	ITB-DBC DUAL	1	120	14	1680	5-20	PLUG-IN	P2-20	1	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. 2WIRES PLUS GND
3	TEA BREWER	BUNN	ITB-DBC DUAL	1	120	14	1680	5-20	PLUG-IN	P2-22		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. 2WIRES PLUS GND
	CAPPUCCINO MACHINE	BUNN	iMIX-5	1	120	15	1800	5-20	PLUG-IN	P2-23		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. 2WIRES PLUS GND
·	COFFEE BREWER	-	OWNER PROVIDED	1	208	20	4160	-	PLUG-IN	P2-28,30		EC TO COORDINATE WITH MANUFACTURER FOR CIRCUIT BREAKER SIZE PRIOR INSTALLATION. REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3	COFFEE BREWER		OWNER PROVIDED	1	208	20	4160		PLUG-IN	P2-32,34		EC TO COORDINATE WITH MANUFACTURER FOR CIRCUIT BREAKER SIZE PRIOR 1
						-						INSTALLATION. REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
1	HEATED DISPLAY CASE MICROWAVE	HATCO VOLLRATH	GRSDS-36T MWA7025	1	120 120	15	1752 1452	L14-20 5-20	PLUG-IN PLUG-IN	P1-1 P2-37	1	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
,	MICROWAVE	VOLLRATH	MWA7025	1	120	12.1	1452	5-20	PLUG-IN	P2-39		
	RAPID-COOK OVEN	OVENTION	MISA-A12	1	208	30	5200	6-30	PLUG-IN	P2-7,9		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3	RAPID-COOK OVEN	OVENTION	MISA-A12	1	208	30	5200	6-30	PLUG-IN	P2-11,13		
	GONDOLA RECEPTACLE			1	120	3	360	5-20	PLUG-IN	P4-26	FLOOR	
4	GONDOLA RECEPTACLE			1	120	3	360	5-20	PLUG-IN	P4-28	FLOOR	
-	GONDOLA RECEPTACLE  ICE MAKER	HOSHIZAKI	KM-1601SRH	1	120	12.8	360 2662	5-20	PLUG-IN HARDWIRED	P4-30 P1-31,33	FLOOR	3 WIRE WITH NEUTRAL
+	ICE MAKER CONDENSER	HOSHIZAKI	URC-22F	1	120	12.8	2002	-	HARDWIRED	P1-31,33	ROOF	POWER PROVIDED FROM ICE MAKER [23]
$\dashv$	ICE BAGGER	KLOPPENBERG	DISP-1000	1	120	8.8	1056	5-20	PLUG-IN	P3-21	ROOF	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3	ATM - ANY CARD	AS PER OWNER		1	120	11.5	1380	5-20	PLUG-IN	P4-1		COORDINATE WITH EQUIP. MANUF, FOR RECEPTACLE REQUIREMENTS
1	PIZZA PREPARATION REFRIGERATOR	TRAUSLEN	TB046SL3S	1	115	10	1200	5-15	PLUG-IN	P4-21		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
П	FROZEN CARBONATED BEV M/C	BUNN	34000.0520	1	120	12	1440	5-20	PLUG-IN	P4-23		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
1	POT AND PAN WASHER	POWER SOAK		- 1	208	8.8	1830	-		P4-25,27		COORDINATE WITH EQUIP, MANUF, FOR RECEPTACLE REQUIREMENTS
Α	HOT DOG GRILL	STAR	75SCBDE	1	120	14.4	1728	5-20	PLUG-IN	P2-36		
3B	HOT DOG GRILL	STAR	75SCBDE	1	120	14.4	1728	5-20	PLUG-IN	P2-38		DECUMPED OF CURPOSE OF
7	SANDWICH PREP REFRIGERATED COUNTER DISPLAY	BEVERAGE-AIR VOLLRATH	SPE27HC-12M-B 40862	1	120 120	3.9	240 468	5-20 5-20	PLUG-IN PLUG-IN	P2-19 P4-29		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3	HEATED DISPLAY CASE	ALTO SHAM	ED2 -48-SS	1	208	13.3	3300	L14-20	PLUG-IN	P4-31,33		
A	ICE MAKER	HOSHIZAKI	FD-1002MAJ-C	1	120	13.7	1644	-	HARDWIRED	P1-35 (TIE)		
В	ICE MAKER	HOSHIZAKI	FD-1002MAJ-C	1	120	13.7	1644	-	HARDWIRED	P1-37 (TIE)		
0	ICE MAKER	HOSHIZAKI	FD-1002MAJ-C	1	120	13.7	1644	-	HARDWIRED	P1-39 (TIE)		
A	ICE MAKER CONDENSER	HOSHIZAKI	URC-5F	- 1	120			-	HARDWIRED	P1-35 (TIE)		POWER SUPPLIED FROM ICE MAKER[39A]
В	ICE MAKER CONDENSER	HOSHIZAKI	URC-5F	1	120	-		-	HARDWIRED	P1-37 (TIE)		POWER SUPPLIED FROM ICE MAKER[39B]
7	ICE MAKER CONDENSER	HOSHIZAKI	URC-5F	1	120				HARDWIRED	P1-39 (TIE)		POWER SUPPLIED FROM ICE MAKER[39C]
_[	BOHA FOOD LABEL MAKER	TRANSACT	ACCUDATE 9700	1	120	10	1200	5-20	PLUG-IN	P4-35		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
4	HUSSMAN REMOTE CONDENSING UNIT	KRACK	HTST-020PMSDT	1	208	16.03	3335	-	HARDWIRED	P2-27,29		ROOF
4	CHILI / CHEESE DISPENSER	GEHL'S		1	120	1.7	204	-	PLUG-IN	P4-37 (TIE)		
4	CHILL/ CHEESE DISPENSER	GEHL'S		1	120	1.7	204	-	PLUG-IN	P4-37 (TIE) P4-37 (TIE)		
+	CHILI / CHEESE DISPENSER CHILI / CHEESE DISPENSER	GEHL'S GEHL'S		1	120	1.7	204	+	PLUG-IN PLUG-IN	P4-37 (TIE)		
+	MULTI-DECK MERCHANDISER (MEDIUM TEMP)	HUSSMAN	IM-05-EN4-R	1	120	1.7	144	-	HARDWIRED	P1-38		END PIECE
+	REF. PIZZA PREP TABLE	BEVERAGE -AIR	DPD67HC-4	1	120	1	1	5-20	PLUG-IN	P1-6		100 FO F 100 FO
	ICE MECHANDISER	POLAR TEMP	600AD	1	120	7.2	864	5-20	PLUG-IN	P1-24	<u></u>	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
	ICE MECHANDISER	POLAR TEMP	600AD	1	120	7.2	864	5-20	PLUG-IN	P1-26		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
	GAS TANKLESS WATER HEATER - [GWH-1]	RHEEM	RTGH-CM95DVL	1	120	4	480	-	HARDWIRED	P4-21	ADJACENT TO UNIT	
_	HEATED DISPLAY CASE	ALTO SHAM	HSM-36/5S/T	1	208	16.7	3474	-	HARDWIRED	P2-15,17		
-	DRINKING WATER FOUNTAIN	ELKAY	EZSTL8C	1	120	3	360	5-20	PLUG-IN	P4-12		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
	CAR BUAL EDVED	PITCO	SSH75-2FD	1	120	4	831	-	HARDWIRE	P2-4		
	GAS DUAL FRYER		AM0005240T	1	208	17	3536	-	HARDWIRED	MDP-40,42	ADJACENT TO UNIT	
-	WATER HEATER - [IWH-3]	EEMAX ACCUMIX				17	3536	-	HARDWIRED HARDWIRED	MDP-37,39 P3-5,7	ADJACENT TO UNIT	
	WATER HEATER - [IWH-3] WATER HEATER - [IWH-3]	EEMAX ACCUMIX	AM0005240T	1	208	47	3500		HARDWIKED	r u-0,/		
-	WATER HEATER - [IWH-3] WATER HEATER - [IWH-3] WATER HEATER - [IWH-3]	EEMAX ACCUMIX EEMAX ACCUMIX		1 1	208	17	3536 3536	-		P3-15.17	ADJACENT TO UNIT	
	WATER HEATER - [IWH-3] WATER HEATER - [IWH-3]	EEMAX ACCUMIX	AM0005240T AM0005240T	- 1		_			HARDWIRED HARDWIRED	P3-15,17 P2-24,26	ADJACENT TO UNIT  ADJACENT TO UNIT	
	WATER HEATER - [IWH-3] WATER HEATER - [IWH-3] WATER HEATER - [IWH-3] WATER HEATER - [IWH-3]	EEMAX ACCUMIX EEMAX ACCUMIX	AM0005240T AM0005240T AM0005240T	1	208 208	17	3536	-	HARDWIRED		ADJACENT TO UNIT	END PIECE
	WATER HEATER - [WH-3]	EEMAX ACCUMIX  EEMAX ACCUMIX  EEMAX ACCUMIX	AM0005240T AM0005240T AM0005240T AM0005240T	1 1 1	208 208 208	17 17	3536 3536	-	HARDWIRED HARDWIRED	P2-24,26	ADJACENT TO UNIT	END PIECE
:	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT	AM0005240T AM0005240T AM0005240T AM0005240T MOH025L63CF	1 1 1 3	208 208 208 208 208	17 17 16.8	3536 3536 6052	-	HARDWIRED HARDWIRED HARDWIRED	P2-24,26 P1-25,27,29	ADJACENT TO UNIT	END PIECE REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
:	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT	AM0005240T AM0005240T AM0005240T AM0005240T MOH025L63CF	1 1 1 3 1	208 208 208 208 208 208	17 17 16.8 6.5	3536 3536 6052 1352		HARDWIRED HARDWIRED HARDWIRED HARDWIRE	P2-24,26 P1-25,27,29 P1-3,5	ADJACENT TO UNIT	
:	WATER HEATER - [WH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLLRATH	AM0005240T	1 1 3 1 1 1 3 3 1 1	208 208 208 208 208 208 208	17 17 16.8 6.5 19.2 38 7	3536 3536 6052 1352 3994	- - - - 6-30	HARDWIRED HARDWIRED HARDWIRED HARDWIRE PLUG-IN PLUG-IN	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3 5 0	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SAUDWICH PRESS REMOTE COOLED CASE	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLLRATH HUSSMAN	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH025L63CF 300HW D6  DOUBLE MILO-16 40972 RGD30 96 R	1 1 3 1 1 3 1 1 1 1	208 208 208 208 208 208 208 208 208 120	17 17 16.8 6.5 19.2 38 7 2.7	3536 3536 6052 1352 3994 7904 840 318	6-30 15-50 5-20	HARDWIRED HARDWIRED HARDWIRE HARDWIRE PLUG-IN PLUG-IN HARDWIRED	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLIRATH HUSSMAN BOHN	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH02543CF 3000HW D6  DOUBLE MILO-16 40972 RDD30 96 R LT090BEK	1 1 1 3 1 1 1 3 1 1 1	208 208 208 208 208 208 208 208 208 120 120	17 17 16.8 6.5 19.2 38 7 2.7 7.8	3536 3536 6052 1352 3994 7904 840 318	- - - - - - - 5-20 - 5-20	HARDWIRED HARDWIRED HARDWIRE PLUG-IN PLUG-IN HARDWIRED HARDWIRED PLUG-IN	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
:	WATER HEATER - [WH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER EVAPORATOR L-SHAPED COOLER - CONDENSING UNIT	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLLRATH HUSSMAN BOHN HEATCRAFT	AM0005240T	1 1 1 3 1 1 1 3 1 1 1 1 1 3	208 208 208 208 208 208 208 208 208 120 120 208 208	17 17 16.8 6.5 19.2 38 7 2.7 7.8	3536 3536 6052 1352 3994 7904 840 318 1622 8646	6-30 15-50 5-20	HARDWIRED HARDWIRED HARDWIRE HARDWIRE PLUG-IN PLUG-IN HARDWIRED PLUG-IN HARDWIRED PLUG-IN HARDWIRED	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22 MDP-26,28,30	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  AIR DEFROST
	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR L SHAPED COOLER - CONDENSING UNIT	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM  OVENTION VOLLRATH HUSSMAN BOHN HEATCRAFT HEATCRAFT	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH025L63CF 300HW D6  DOUBLE MILO-16 40972 RGD30 96 R LT090BEK M0Z066M83CFC M0Z005M63CF	1 1 1 3 1 1 1 3 1 1 1 1 1 3 3 3 3 1 1 1 1 1 3	208 208 208 208 208 208 208 208 208 208	17 17 16.8 6.5 19.2 38 7 2.7 7.8 24 23.8	3536 3536 6052 1352 3994 7904 840 318 1622 8646 8574	- - - - - - - 5-20 - 5-20	HARDWIRED HARDWIRED HARDWIRED HARDWIRE PLUG-IN PLUG-IN HARDWIRED PLUG-IN HARDWIRED HARDWIRED HARDWIRED	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22 MDP-26,28,30 P1-19,21,23	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR L-SHAPED COOLER - CONDENSING UNIT STEP-IN COOLER - CONDENSING UNIT	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLLEATH HUSSMAN BOHN HEATCRAFT HEATCRAFT BOHN	AM0005240T	1 1 1 3 1 1 3 1 1 1 1 3 3 1 1 1 1 3 3 1 1	208 208 208 208 208 208 208 208 208 120 120 208 208 208 120	17 17 16.8 6.5 19.2 38 7 2.7 7.8 24 23.8	3536 3536 6052 1352 3994 7904 840 318 1622 8646 8574 216	6-30 15-50 5-20	HARDWIRED HARDWIRED HARDWIRED HARDWIRE PLUG-IN PLUG-IN HARDWIRED PLUG-IN HARDWIRED HARDWIRED HARDWIRED	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22 MDP-26,28,30 P1-19,21,23 P1-4	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  AIR DEFROST  AIR DEFROST
	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR L SHAPED COOLER - CONDENSING UNIT	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM  OVENTION VOLLRATH HUSSMAN BOHN HEATCRAFT HEATCRAFT	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH025L63CF 300HW D6  DOUBLE MILO-16 40972 RGD30 96 R LT090BEK M0Z066M83CFC M0Z005M63CF	1 1 1 3 1 1 1 3 1 1 1 1 1 3 3 3 3 1 1 1 1 1 3	208 208 208 208 208 208 208 208 208 208	17 17 16.8 6.5 19.2 38 7 2.7 7.8 24 23.8	3536 3536 6052 1352 3994 7904 840 318 1622 8646 8574	6-30 15-50 5-20	HARDWIRED HARDWIRED HARDWIRED HARDWIRE PLUG-IN PLUG-IN HARDWIRED PLUG-IN HARDWIRED HARDWIRED HARDWIRED	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22 MDP-26,28,30 P1-19,21,23	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  AIR DEFROST
33 30 00 00 00 00 00 00 00 00 00 00 00 0	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR L-SHAPED COOLER - CONDENSING UNIT STEP-IN COOLER - CONDENSING UNIT STEP-IN COOLER - EVAPORATOR HUSSMAN REMOTE CONDENSING UNIT	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLLRATH HUSSMAN BOHN HEATCRAFT HEATCRAFT BOHN KRACK	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH025L83CF 300HW D6  DOUBLE MILO-16 40972 RGD30 96 R LT050BEK MOZ060M3CFC MOZ065M3CF ADT070AEK HTSS-0201MSK-AB-A	1 1 1 3 1 1 1 1 3 3 3 1 1 3 3 1 3 3 1 1 3 3 1 1 3 3 1 1 3 3 1 1 3 3 1 1 3 3 1 1 3 1 1 3 1	208 208 208 208 208 208 208 208 120 120 208 208 208 208 208 208	17 17 16.8 6.5 19.2 38 7 2.7 7.8 24 23.8 1.8 6.8	3536 3536 6052 1352 3994 7904 840 318 1622 8646 8574 216 2450	6-30 15-50 5-20 5-20	HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRE PLUG-IN HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22 MDP-26,28,30 P1-19,21,23 P1-4 P2-31,33,35	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  AIR DEFROST  AIR DEFROST  ELECTRIC DEFROST
3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR L-SHAPED COOLER - CONDENSING UNIT STEP-IN COOLER - CONDENSING UNIT DROP-IN REFRIGERATOR	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM  OVENTION VOLLRATH HUSSMAN BOHN HEATCRAFT HEATCRAFT BOHN KRACK APW WYOTT	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH025L63CF 300HW D6  DOUBLE MILO-16 40972 RGD30 96 R LT090BEK M0Z060M3CFC M0Z005M83CFC ADT070AEK HTSS-0201MSK-AB-A CW-1	1 1 1 3 3 1 1 3 3 1 1 3 1 1	208 208 208 208 208 208 208 208 208 208	17 17 16.8 6.5 19.2 38 7 2.7 7.8 24 23.8 1.8 6.8 5.8	3536 3536 8052 1352 3994 7904 840 318 1622 8646 8574 216 2450 696	6-30 15-50 5-20 - - - - - 5-20	HARDWIRED HARDWIRED HARDWIRED HARDWIRE PLUG-IN PLUG-IN HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED PLUG-IN	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-1,3,5 P2-21 P3-16 P1-20,22 MDP-26,28,30 P1-19,21,23 P1-4 P2-31,33,35 P1-18	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  AIR DEFROST  AIR DEFROST  ELECTRIC DEFROST  REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
	WATER HEATER - [IWH-3] STEP-IN FREEZER - CONDENSING UNIT DROP-IN HOT WALL EASIWASH WASH SYSTEM CONVECTION OVEN SANDWICH PRESS REMOTE COOLED CASE STEP-IN FREEZER - EVAPORATOR L-SHAPED COOLER - CONDENSING UNIT STEP-IN COOLER - CONDENSING UNIT DROP-IN REFRIGERATIOR DROP-IN REFRIGERATIOR	EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX EEMAX ACCUMIX HEATCRAFT ALTO-SHAM OVENTION VOLLRATH HUSSMAN BOHN HEATCRAFT HEATCRAFT BOHN KRACK APW WYOTT APW WYOTT	AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T AM0005240T MOH025L93CF 3000HW D6  DOUBLE MILO-16 40972 R0D30 96 R LT090BEK M02060M63CFC M02005M63CFC ADT070AEK HTSS-0201MSK-AB-A CW-1 CW-1	1 1 1 3 1 1 3 1 1 1 1 3 3 1 1 1 3 3 1 1 1 1 3 3 1 1 1 1 1 1 1 3 1	208 208 208 208 208 208 208 208 208 120 120 208 208 208 120 208 120 120 120 120 120 120 120 120	17 17 16.8 6.5 19.2 38 7 2.7 7.8 24 23.8 1.8 6.8 5.8	3536 3536 6052 1352 3994 7904 840 318 1622 8646 8574 216 2450 696		HARDWIRED HARDWIRED HARDWIRED HARDWIRED PLUG-IN PLUG-IN HARDWIRED PLUG-IN HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED HARDWIRED PLUG-IN PLUG-IN	P2-24,26 P1-25,27,29 P1-3,5 P3-28,30 P2-13,5 P2-21 P3-16 P1-20,22 MDP-26,28,30 P1-19,21,23 P1-4 P2-31,33,35 P1-18 P1-36	ADJACENT TO UNIT	REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  AIR DEFROST  ELECTRIC DEFROST  REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER  REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER





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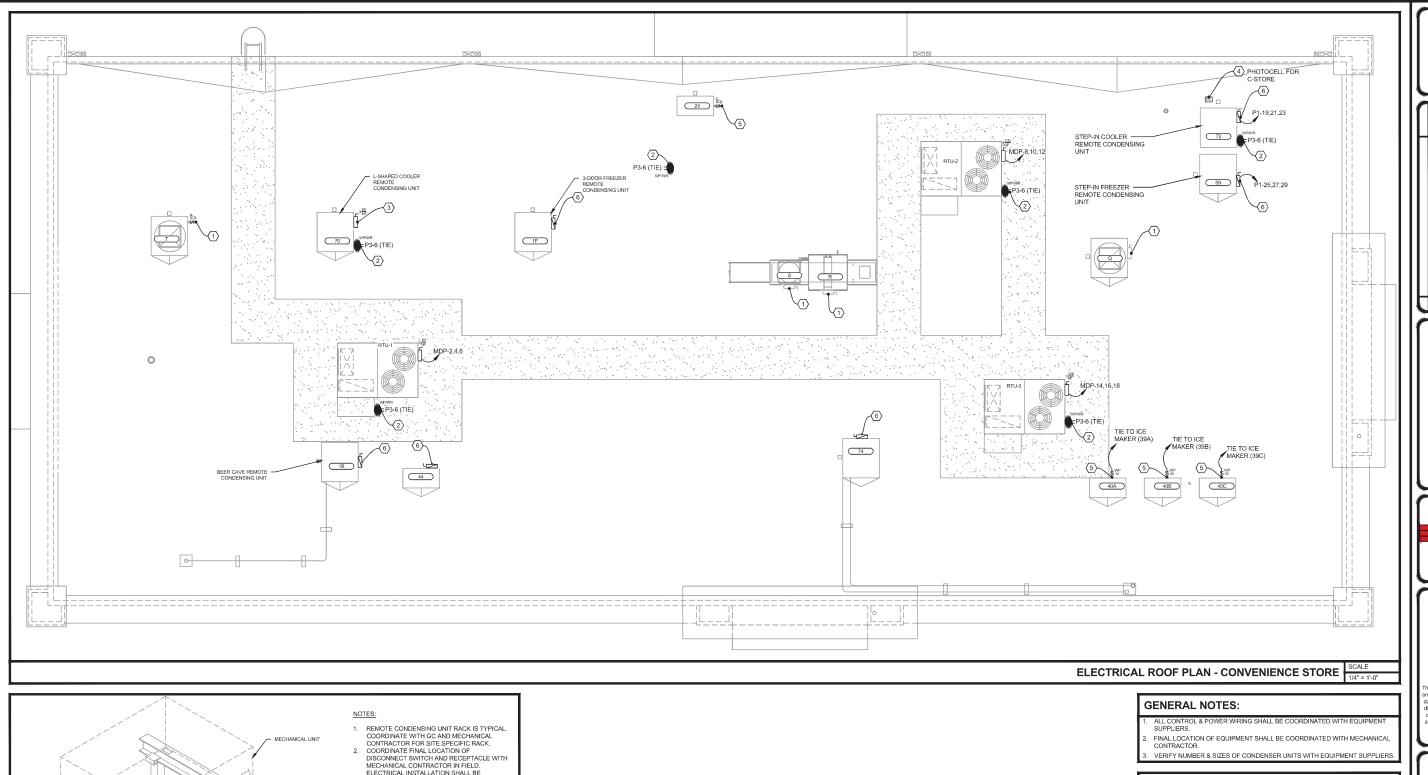


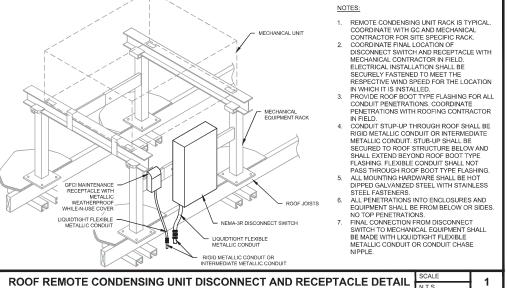
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CEFCO #426 - PACE
90 WEST SPENCER FIELD ROAD
PACE, FL 22571 CEFCO ELECTRICAL EQUIPMENT PLAN

Project No.
170-84.00
Date
AS NOTED
Scale
AS NOTED E3.2







## **KEYED NOTES:**

- 1) <u>DISCONNECT</u>: DISCONNECT FURNISHED WITH UNIT.
- ROOF MAINTENANCE RECEPTACLE: WEATHER RESISTANT GFCI DUPLEX RECEPTACLE IN WEATHERPROOF SURFACE MOUNTED METAL BELL BOX WIT
- RECEPTACLE IN WEATHERPROOF SUPERACE MOUNT IED METAL BELL BOX WITH
  METALLIC TINJUSE" COVER MOUNT ADJACENT TO DISCONNECT.

   REMOTE CONDENSER DISCONNECT: MOUNT 240V, NEMA-3R, HEAVY DUTY,
  NON-FUSIBLE DISCONNECT SWITCH ON RACK AT LOCATION DETERMINED BY
  EQUIPMENT INSTALLER. ROUTE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT
- TO UNIT AS REQUIRED.

  4 PHOTOCELL FOR CEFCO: PROVIDE 1/2" CONDUIT FROM PROPOSED PHOTOCELL LOCATION TO CPI UNITIZED GEAR FOR SITE LIGHTING CONTROLS. INSTALL A 2 WIRE SHIELDED CABLE. REFER TO CPI UNITIZED GEAR SUBMITTALS.
- GEM SUBMITIALS.

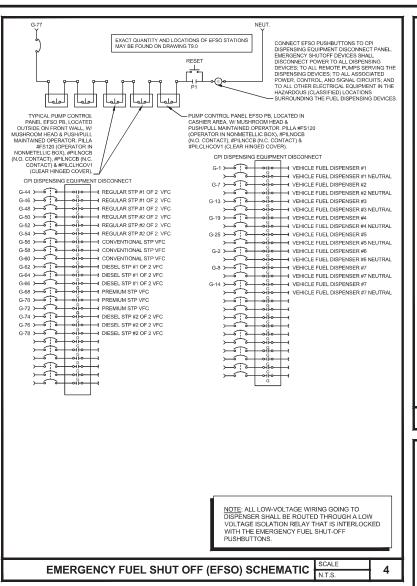
  S REMOTE ICE MAKER CONDENSER: PROVIDE WEATHERPROOF 1P-20A MOTOR RATED SWITCH MOUNTED ON CONDENSER.

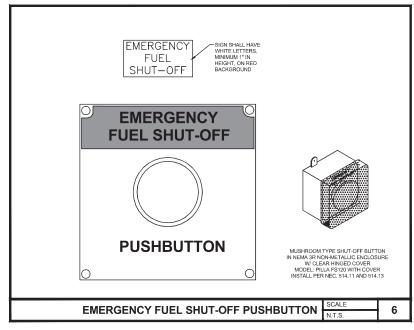
  REMOTE CONDENSER FUSIBLE DISCONNECT: MOUNT 240V, NEMA-3R, HEAVY DUTY, FUSIBLE DISCONNECT SWITCH ON RACK AT LOCATION DETERMINED BY EQUIPMENT INSTALLER. ROUTE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT TO UNIT AS REQUIRED. PROVIDE FUSES FOR DISCONNECT PER UNIT NAMEPLATE MAXIMUM OVERCURRENT PROTECTION (MOCP).

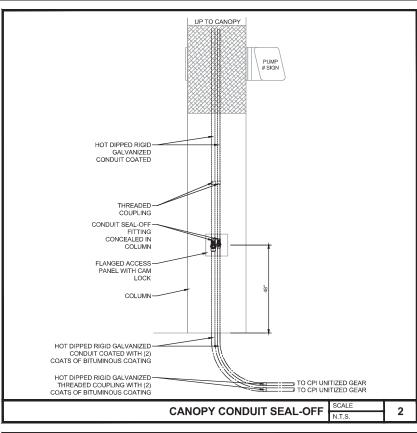


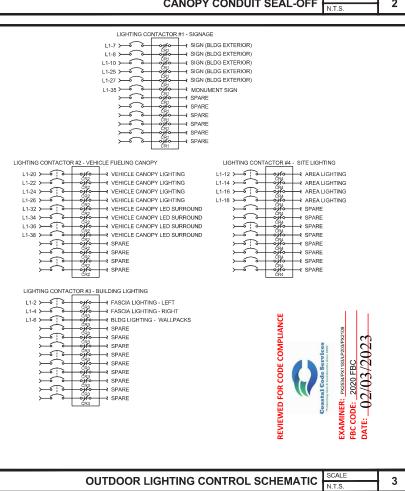
CEFCO ELECTRICAL ROOF PLAN CEFCO #

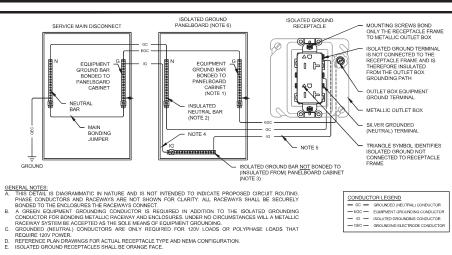
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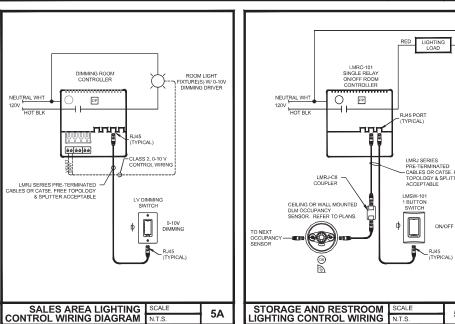


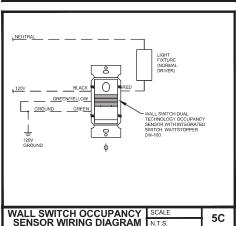


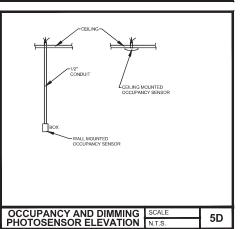


NOTES:
1. EGG BUS BAR: ONLY EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE ON THIS EQUIPMENT GROUND BAR.
2. NEUTRAL BUS BAR: ONLY GROUNDED (NEUTRAL) CONDUCTORS SHALL TERMINATE ON THIS NEUTRAL BAR.
3. IG BUS BAR: ONLY ISOLATED GROUNDING CONDUCTORS SHALL TERMINATE ON THIS ISOLATED GROUND BAR.
4. SIZED PER NEC TABLE 260.122 BASED ON CONTINUOUS CURRENT RATING OF JUSTICEMON OPPO (BREAKERPUSE) PROTECTING ISOLATED GROUND PANELBOARD ISOLATED GROUNDING CONDUCTORS ARE PERMITTED TO PASS THROUGH ONE OR MORE PANELBOARDS WITHOUT A CONNECTION TO THE INTERMEDIATE PANELBOARD GROUNDING TERMINALS. ISOLATED GROUNDING CONDUCTORS SHALL BE ROUTED BACK TO THE SERVICE EQUIPMENT FOR CONNECTION TO THE SERVICE EQUIPMENT FOR CONNECTION TO THE SERVICE EQUIPMENT GROUNDING CONNECTION TO THE SERVICE EQUIPMENT FOR CONNECTION TO













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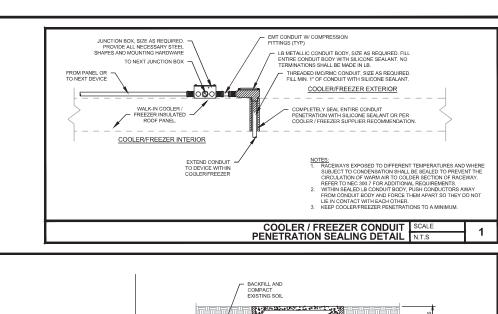
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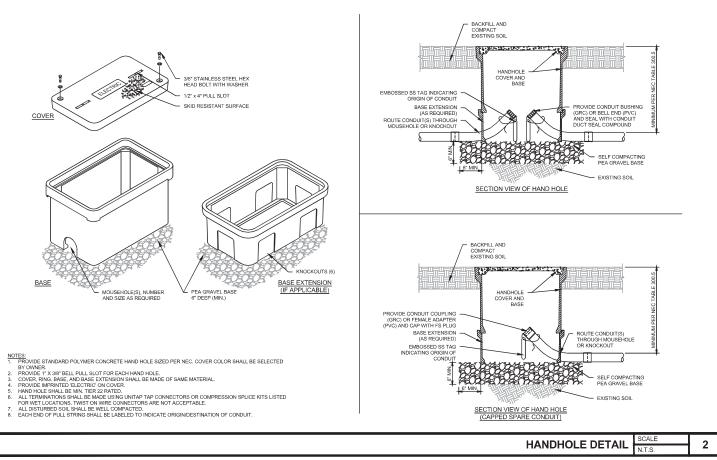
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DETAILS PACE #426 ELECTRICAL CEFCO 3

E5.0 AS NOTED











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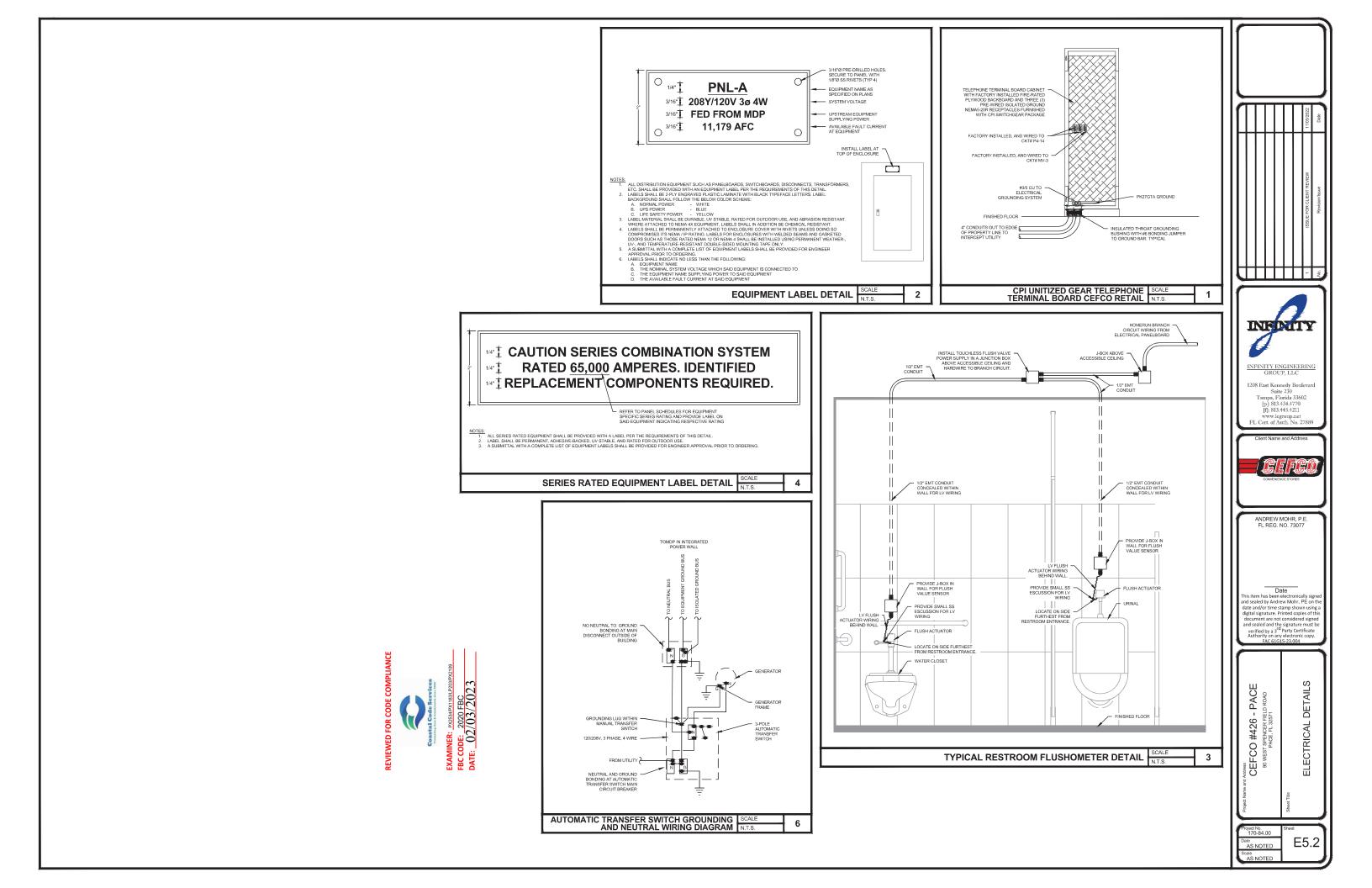
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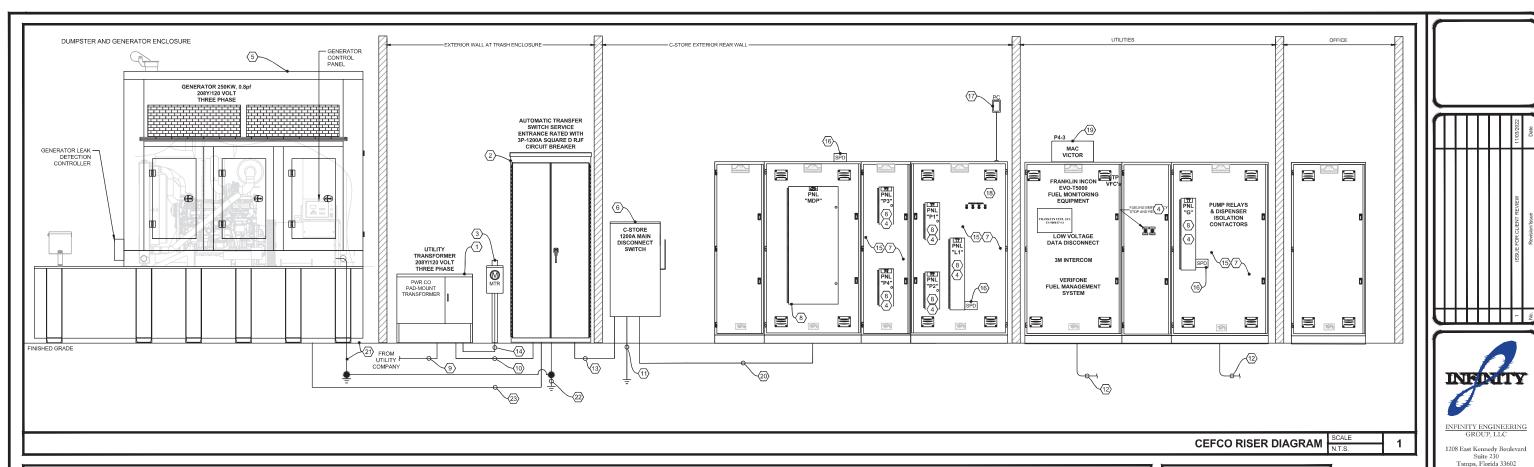
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DETAILS CEFCO #426 - PACE 90 WEST SPENCER FIELD ROAD ELECTRICAL

E5.1 Date AS NOTED





## **CEFCO RISER DIAGRAM KEYED NOTES**

- POWER COMPANY PAD MOUNTED TRANSFORMER: SERVICE SHALL BE 208Y/120V, 3Ø, 4-WIRE TYPE. COORDINATE EXACT LOCATION WITH POWER COMPANY, MOUNT TRANSFORMER ON CONCRETE PAD, FURNISHED BY ELECTRICAL CONTRACTOR.
- SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH(ATS): 1200A, 600V. 3-POLE. NEMA-3R. SERVICE ENTRANCE RATED AUTOMATIC TRANSFER 6000, 3-POLE, NEMA-3R, SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH (ATS), ASCO 3005E TYPE HAUS 1200. CIRCUIT BREAKERS AND ATS SHALL BE HAVE 100,000 AIC RATING. REFER TO MANUFACTURER INSTALLATION MANUAL FOR AUXILIARY WIRING REQUIREMENTS PRIOR TO INSTALLATIONE. REFER TO AUTOMATIC TRANSFER SWITCH GROUNDING AND NEUTRAL WIRING DIAGRAM DETAIL-6 ON SHEET E5.2.
- METER SOCKET: PROVIDE APPROVED MODEL METER SOCKET PER POWER COMPANY REQUIREMENTS.
- 4 PANEL SERIES RATING LABEL: PROVIDE A SERIES RATING LABEL PER DETAIL 4 ON SHEET E5.2.
- 4 ON SHEET 62.

  OPTIONAL STANDBY DIESEL GENERATOR: 250 KW, 0.8PF, 208Y/120V, 3Ø, 4-WIRE, JOHN DEERE STANDBY GENERATOR, BLUE STAR POWER SYSTEMS MODEL #432CSL6210. PROVIDE WITH LEVEL 2 ENCLOSURE (WPF) AND 750 GAL DIESEL TANK TO OPERATE 48HR CONTINUOUS. REFER TO MANUFACTURER INSTALLATION MANUAL FOR AUXILIARY WIRING REQUIREMENTS PRIOR TO INSTALLATION. GENERATOR INSTALLER SHALL ANCHOR IT TO THE DUMPSTER PAD. INCLUDE VIBRATION ISOLATION MOUNTS. FUEL TANK SHALL BE FULL WHEN BUILDING IS TURNED OVER TO OWNER. INCLUDE 3P-1000A CIRCUIT BREAKER AT GENERATOR.
- FUSIBLE DISCONNECT SWITCH: 1200A, 600V, 3-POLE, NEMA-3R FUSIBLE DISCONNECT W/ (3) 1200A FUSES AND THREE (3) SPARE 1200A FUSES 6 FURNISHED BY OWNER AS PART OF CPI PACKAGE.

- 7) CPI UNITIZED SWITCHBOARD: SWITCHBOARD SHALL BE FACTORY WI ASSEMBLED WITH ELECTRICAL PANELS, LIGHTING CONTROLS, FUEL EQUIPMENT, INTERCOM, AND POS, PROVIDE WITH 4" GALVANIZED BASE AND DOCUMENT HOLDER. UNITIZED SWITCHBOARD SHALL BE FURNISHED BY OWNER AND INSTALLED BY EC
- 8 C-STORE ELECTRICAL PANELS: THESE PANELS ARE FULLY EQUIPPED WITH BOLT-ON TYPE CIRCUIT BREAKERS AND FACTORY WIRED AND INSTALLED IN CPI UNITIZED SWITCHBOARD. REFER TO PANEL SCHEDULES FOR RATINGS. PROVIDE LABEL PER EQUIPMENT LABEL DETAIL 2 ON SHEET E5.2.
- POWER COMPANY PRIMARY CONDUIT SYSTEM: PROVIDE CONDUIT SYSTEMS, IF REQUIRED, FOR POWER COMPANY PRIMARY SERVICE CONDUCTORS. POINT OF INTERCEPTION WITH POWER COMPANY SHALL BE PER POWER COMPANY FIELD REPRESENTATIVE DIRECTION.
- SERVICE ENTRANCE: (4) SETS OF 4#600 KCMIL COMPACT AL XHHW EACH IN 4" CONDUIT. OWNER WILL PROVIDE THE CONDUCTORS FOR THE EC TO INSTALL. COMPACT ALUMINIUM CONDUCTORS SHALL HAVE OWNER PROVIDED HI PRESS LUGS FOR INSTALLATION BY EC ON COMPACT ALUMINIUM CONDUCTORS.
- (11) GROUNDING ELECTRODE CONDUCTOR: PROVIDE 1-#4/0 CU PVC INSULATED CONDUCTOR ROUTED FROM MAIN DISCONNECT SWITCH IN 3/4" PVC CONDUIT. BOND GROUNDING ELECTRODE CONDUCTOR TO 2-3/4" X 10" CU CLAD GROUND RODS, CONCRETE ENCASED ELECTRODE, BUILDING STEEL, AND METAL COLD WATER PIPE TO OBTAIN A RESISTANCE OF 10 OHMS OR LESS.
- CONDUIT FOR FUEL EQUIPMENT: ROUTE CONDUIT AND WIRING TO FUEL EQUIPMENT. PROVIDE EXPLOSION-PROOF SEAL-OFFS AS REQUIRED BY NEC. REFER TO ELECTRICAL PLAN DRAWINGS, TANK ELECTRICAL DRAWINGS, AND PANEL SCHEDULES FOR EQUIPMENT/CONSUMER LOCATIONS AND BRANCH CIRCUIT REQUIREMENTS, REFER TO EQUIPMENT INSTALLATION MANUALS PRIOR TO INSTALLATION.
- . C-STORE SERVICE FEEDER: (4) SETS OF 4-#600 KCMIL COMPACT AL AND 1-#4/0 CU EG EACH IN 4" CONDUIT. OWNER WILL PROVIDE THE CONDUCTORS FOR THE ECT OI INSTALL. COMPACT ALUMINUM CONDUCTORS SHALL HAVE OWNER PROVIDED HI PRESS LUGS FOR INSTALLATION BY EC ON COMPACT ALUMINUM CONDUCTORS.
- $\begin{tabular}{ll} \hline $\langle 14 \rangle$ & $\frac{CT\ WIRING\ CONDUIT;}{FOR\ UTILITY\ PROVIDED\ CT\ METER\ WIRING.} \\ \hline \end{tabular}$
- (15) C-STORE ELECTRICAL SUB-PANEL FEEDERS: THESE FEEDERS ARE FACTORY WIRED BY CPI. REFER TO PANEL SCHEDULE FOR NUMBER AND SIZE.
- (16) SURGE PROTECTIVE DEVICE: FURNISHED AND INSTALLED IN CPI UNITIZED GEAR.
- PHOTOCELL: INSTALL CPI FURNISHED PHOTOCELL ON NORTH SIDE OF BUILDING TO CONTROL ON/OFF CIRCUIT TO LIGHTING CONTACTOR. EXACT LOCATION OF PHOTOCELL DEVICE TO BE AS DIRECTED BY GENERAL CONTRACTOR.
- (18) RESETTABLE CONTACTOR: FACTORY WIRED AND INSTALLED RESETTABLE CONTACTORS WITH THE BELOW CIRCUITS ROUTED THROUGH IT. WHEN THE HOOD FIRE SUPPRESSION SYSTEM IS ACTIVATED, THE CONTACTOR SHALL OPEN THE CIRCUITS. CIRCUITS: MDP -20,22,24 [56A], P1-1[55], P3-13,15,17[54], P3-33,35,37[R], P3-39[S], L1-23.

- MACVICTOR UPS: MACVICTOR BATTERY BACKUP AND POWER CONDITIONE FURNISHED BY OWNER AS PART OF CPI PACKAGE. COORDINATE WITH OWNER FOR FINAL LOCATION. MAKE ALL CONNECTIONS.
- (20) C-STORE SERVICE FEEDER WITH ISOLATED GROUND: (4) SETS OF 4-#600 KCMIL COMPACT AL XHHW, 1-#4/0 CU IG AND 1-#4/0 CU EG EACH IN 4" CONDUIT. OWNER WILL PROVIDE THE CONDUCTORS FOR THE EC TO INSTAL COMPACT ALUMINIUM CONDUCTORS SHALL HAVE OWNER PROVIDED HI PRESS LUGS FOR INSTALLATION BY EC ON COMPACT ALUMINIUM
- (21) SENERATOR EQUIPOTENTIAL GROUND: GROUND ENCLOSURE/FRAME AT TWO PLACES ON OPPOSITE CORNERS AS WELL AS TANK WITH 1.44/10 PVC INSULATED CONDUCTOR TO 3/4" X 10" CU CLAD GROUND ROD. ROUTE GROUND CONDUCTORS IN 3/4" PVC CONDUIT.
- GROUNDING ELECTRODE CONDUCTOR(GEC): INSTALL MAIN BONDING JUMPER TO ESTABLISH NEUTRAL-GROUND BOND. INSTALL 1-#3/0 PVC CONDUCTOR GEC) ROUNDING GELECTRODE CONDUCTOR (GEC) ROUTED IN 3/4" PVC CONDUIT TO GROUNDING ELECTRODE SYSTEM, GROUNDING ELECTRODE SYSTEM, GROUNDING ELECTRODE SYSTEM CONDISISTING OF 2-3/4" X 10" CU CALD GROUND RODS, CONCRETE ENCASED ELECTRODE BUILDING STEEL, AND METAL COLD WATER PIPE, ADD ROUSE COLDING BONDS, CONCRETE DRIVEN GROUND RODS IN PARALLEL UNTIL A RESISTANCE OF 10 OHMS IS ACHIEVED.
- (23) GENERATOR FEEDER: (4) SETS OF 4-#500 KCMIL COMPACT AL AND 1-2/0 CU EACH IN 4" CONDUIT. OWNER WILL PROVIDE THE CONDUCTORS FOR THE EC TO INSTALL. COMPACT ALUMINIUM CONDUCTORS SHALL HAVE OWNER PROVIDED HI PRESS LUGS FOR INSTALLATION BY EC ON COMPACT ALUMINIUM CONDUCTORS.

# UNITIZED SWITCHBOARD SUPPLIER

CAROLINA PRODUCTS, INC. eric Line (800) 736-4455 ERICL@CPIPANELS.COM

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ANDREW MOHR, P.E

FL REG. NO. 73077

PACE CEFCO ELECTRICAL RISER DIAGRAM #426 CEFCO #

E6.0

Load Resistance Reactance Impedence, V.D. Busway Volts Length Power DROP CURRENT %VD MAIN DISCONNECT 2 CEFCO SHORT CIRCUIT AND VOLTAGE DROP CALCULATION ALUMINIUM



BUS MAIN	NELBOARD: P4 (N AMPS: 150A SIZETTYPE: MLO SIPHASE: 208Y/120V, 3PH, 4W	,						AC RA	ES:	ENT:		65000 SI	O ONE-LIN	ΞD	AM							F		DE EQUIPMENT GROUND MDE ISOLATED GROUND	
	10N: 1							LOCAT		UKFACE		ENCLOS	OKE. NEW	1											
CKT	DESCRIPTION	C	ONDUC	TOR &	COND	ÚÍT	В	REAKE	R	VOL	TAMPS/P	HASE	VOL.	AMPS/PE	HASE	В	REAKE	R	CC	ONDUC	TOR &	CONDU	JIT	DESCRIPTION	CK
NO.	10 000 00000000000000000000000000000000	PH	NEUT	GND	IG	COND	TYP	AMP	POLE	Α	В	С	Α	В	С	POLE	AVP	TYP	COND	IG	GND	NEUT	PH	Sample Control of the	NO
1	REC - ATM - ANY CARD [26]	12	12	12	12	3/4"		20	1	1,380	d diame		360		11-28/11	1	20		3/4"		12	12	12	REC - OFFICE QUAD	2
3	MISC - MAC VICTOR	10	10	10	10	3/4"		25	1	The Trail	2,000		1	360		- 1	20		3/4"	12	12	12	12	REC - CASHIER EQ QUA	D 4
5	REC - OFFICE CPU	12	12	12	12	3/4"		20	1		1 2	750	3	2. 1	360	1	20		3/4"	12	12	12	12	REC - TBB EQ QUAD	6
7	MISC- GAS SOLONOID VALVE	12	12	12		3/4"		20	1	200			360		- Mil.	1	20		3/4"		12	12	12	REC - OFFICE QUAD	8
9	SPARE							20	1					144		1	20		3/4"		12	12	12	REC - RESTROOM SENS	ORS 10
11	REC- CUSTOMER KIOSK	12	12	12	12	3/4"		20	1			504		-	360	1	20	GFCI	3/4"		12	12	12	REC - DRINK FOUNTAIN	12
13	REC-BEHIND CASHIER	12	12	12	12	3/4"		20	1	180			540		(6)	1	20		3/4"	12	12	12	12	REC - TBB RECEPTALCE	S 14
15	EWH- INSTANTANEOUS	10		10		3/4"		25	2	111111	1,768			400		1	20		3/4"		12	12	12	REC - UC SAFE[11]	16
17	WATER HEATER [V3]	10		10		3/4		25	2		CONTACT OF	1,768		200	200	1	20		3/4"		12	12	12	REC - GEMINI LOTTO T/9	18
19	REC- FRONT ENTRANCE	12	12	12		3/4"		20	1	360						1	20							SPARE	20
21	REF-PIZZA PREP REF[27]	12	12	12	**	3/4"	GFCI	20	1		1,200			1,440		1	20	GFCI	3/4"	12	12	12	12	REC - TVS[88AB,C,D]	22
23	REF-FZN BEV M/C (29)	12	12	12		3/4"	GFCI	20	1			1,440		-		1	20		3/4"		12	12	12	REC- UC SAFE[11A]	24
25	ME DOWED HAD LONGER	10		40		3/4"		20	-	915		11/15	360		- 1	1	20		1"		10	10	10	REC-GONDOLAREC[22A	4] 26
27	KIT-POWER WASH SINK[[31]	10		10	***	3/4		30	2	11110	915			360		1	20		1"		10	10		REC-GONDOLA REC[228	
29	REF-REFRIG DISPLAY [37]	12	12	12		3/4"		20	1		1 1 2	696		0	360	1	20		1"		10	10	10	REC-GONDOLA RECI220	C1 30
31	WE LED DIODI AV CASE (OC)	12		40		0.44	LIOFE	20	0	1,373		The state of	540		19)	1	20		3/4"		12	12	12	REC - GEN BOH	32
33	KIT-HTD DISPLAY CASE [38]	12		12		3/4"	LOFF	20	2		1,373	a vicini		360		1	20		3/4"		12	12	12	REC-BAG-N-BOX [4A]	34
35	REC -FOOD LABEL MKR[43]	12	12	12		3/4"	GFCI	20	1		2.0	1,200		8-1	360	1	20		3/4*		12	12	12	REC-BAG-N-BOX [4B]	36
37	REC- CHILLIES[46ABCD]	10	10	10		1"		20	1	720		COLUMN TO SERVICE	800		12.1	1	20		3/4"		12	12	12	REC- GEN BOH	38
39	REC- DELL MONITOR	12	12	12		3/4"	GFCI	20	1		360	OTTO THE	25	720		1	20		3/4"		12	12	12	REC - RESTROOM	40
41	MISC-HOOD CONTROL SYS	12	12	12		3/4"		20	1			600	2		600	1	20		3/4"		12	12	12	REC - MISC[6]	42
								SUE	STOTAL	5,128	7,616	6,958	2,960	3,784	2,240	SUBTO	OTAL							,	
LOAD	)	CON	IN. VA	DF		LOAD				CON	N. VA	DF				•			TOTAL	PHASE	A-VA	8.0	88		
	LING			1.00		REFR	GERAT	ION		3,336		1.00									AMPS	6	7	1	
HEAT	ING			0		SIGN/E	DISPLA	Y				1.25							TOTAL I	PHASE	B-VA	11,	400	1	
LIGH	TING			1.25		KITCH	EN			4,576		1.00									AWPS	9	15	f	
REC	EPTACLES	11,618	3	1.0/.5		EXIST	NG					1.00							TOTAL F	PHASE	C - VA	9,1	98	i i	
MOTO				1.00			ST MO	TOR				1.25								CONN		7		TOTAL DEMAND	D
	R HEATER	3,536		1.00		SHOW						1.25							TOTA	L PNLE	BD - VA	28,	686		27,877 V
		5,620		1.00		LTG TF						1.00									AMPS	8			77 /
																		ı	NEV	V P	ANE	L "I	P4"	SCALE N.T.S.	5

① ② ③ ④ ⑤ ⑥ ⑦ ⑥ ⑩ ⑪ ⑫	REMOTE START GENERATOR WIRING: PROVIDE 3/4" CONDUIT W/ (3) #12 DC CONTROL WIRING FOR REMOTE START FROM STANDBY GENERATOR TO ATS. COORDINATE REQUIREMENTS W/ GENERATOR AND ATS SUPPLIER.  \$PARE GENERATOR POWER CONDUIT. PROVIDE (1) SPARE 1" CONDUIT FROM PANEL 10" TO GENERATOR CONTROL PANEL VIA ATS.  GENERATOR LEAK DETECTION CONTROL PANEL VIA ATS.  GENERATOR BATTERY CHARGER: REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT WIRING.  GENERATOR BATTERY CHARGER: REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT WIRING. GOORDINATE W/ GENERATOR SUPPLIER.  GENERATOR BLOCK HEATER: REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT WIRING. GOORDINATE W/ GENERATOR SUPPLIER.  GENERATOR REMOTE ANNUNCIATOR: PROVIDE 3/4" CONDUIT FROM GENERATOR REMOTE ANNUNCIATOR PANEL TO GENERATOR CONTROL PANEL PROVIDE 4/C + G SHIELDED TWISTED PAIN PER MANUFACTURER REQUIREMENTS. COORDINATE W/ GENERATOR SUPPLIER.  PROVIDE (1) SPARE 1" CONDUIT FROM PANEL "G" TO GENERATOR CONTROL PANEL. PROVIDE (1) SPARE 1" CONDUIT FROM PANEL "G" TO GENERATOR CONTROL PANEL.  GENERATOR EPO (INTERNAL): GENERATOR FACTORY FURNISHED WITH EMERGENCY POWER OFF PUSH BUTTON.  GENERATOR EPO (INTERNAL): SENERATOR SHOW METTALIC ENCLOSURE W/ CLEAR HINGED COVER, BY PILLA OR EQUAL. PROVIDE (2) #12 & (1) 12 E & (1)	GENERATOR EPO  OPTIONAL STANDBY DIESEL GENERATOR  GENERATOR  GENERATOR  GENERATOR  GENERATOR  GENERATOR  BUILDING  TO PANEL G'  TO MIDP  OPTIONAL STANDBY DIESEL GENERATOR  GENERATOR  GENERATOR  BUILDING  7  TO MIDP
		G-73,75 TO PANEL 'G'
		TO GENERATOR REMOTE

GENERATOR & ATS PLAN SCALE N.T.S. 3 ELECTRICAL CONTRACTOR TO PROVIDE GFCI CIRCUIT BREAKERS AS REQUIRED. REFER TO PANEL SCHEDULE FOR MORE INFORMATION.

PANELBOARD: MDP 8US AMPS: 1200A MAN SIZE/TYPE: MLO YOLTS/PHASE: 208Y/120V, 3PH, 4V	•	W)				Ale SE	C RATIN	JRRENT: IG: G: SURFA	ne ne	65000 F	TO ONE-LIN ULLY RATE SURE: NEM	D	AM									DE EQUIPMENT GROUND B MDE ISOLATED GROUND B	
ECTION: 1	•						CATION		0_	Litolo	JOINE MEN												
KT DESCRIPTION		ONDUC					AKER		OLTAMPS/			TAMPS/P			REAKE				CTOR &			DESCRIPTION	_
0.		NEUT	GND	IG	COND	TYP A	MP PC		В	С	A	В	С	POLE	AMP	TYP	COND	IG	GND	NEUT	_		_
PANEL P1	4/0 4/0 4/0	4/0	4	-	2-1/2*	2	25A	3 20,96	18,29	14,888	5,088	5,088	5,088	3	60		1-1/4"	-	10		4 4	CLG - RTU-1 [ELEC]	
PANEL P2	4/0	4/0	4	_	2-1/2*	2.	25A	3 20,9	23,984		7,104	7,104	3,000	3	80		1-1/4"		8		3	CLG - RTU-2 [ELEC]	_
3	4/0							20,63		23,049	7,104		7,104								3		_
PANEL P3	4/0	4/0	4		2-1/2*	2:	25A	3	24,673	17,160		7,104	7,104	3	80		1-1/4"	-	8		3	CLG - RTU-3 [ELEC]	
9 1 1 3	1/0 1/0 1/0	1/0	6	6	2"	1	50A	3 8,08	11,400	9,198	2		9	3								SPACE	
PANEL L1	4/0 4/0 4/0	4/0	4	-	2-1/2*	2	25A	14,80	11,172	12,353	2,880	2,880	2,880	3	50		1-1/4"		10		6 6	REF-L-SHAPED COOLER 1 REMOTE CONDENSING UI	
PANEL G	4/0 4/0 4/0	4/0	4	-	2-1/2*	2.	25A	3 10,26	17,060					2								SPACE	
7 EWH - TANKLESS WTR HTR 9 [578] [IWH-1]	10		10	-	3/4"		25 :	2 1,80	1,800			1,800		2							10	SPACE EWH-TANKLESS WTR HTF	R
SPARE		П				- 3	20	2			1.0		1,800	2	25		3/4"		10			[57A] [IWH-1]	_
5 SPACE		Н						2		rpis I			- 1	3								SPACE	
9 SURGE PROTECTIVE DEVICE 3	10 10	10	10	-	3/4"	3	30	3			*			3								SPACE	
							SUBTO	TAL 97,45	6 108,38	1 87,007	22,176	23,976	23,976	SUBTO	JATC								
)AD		IN. VA	DF		LOAD				ONN. VA	DF							TOTAL				,632		_
COLING	63,108	3	1.00			GERATION	V .	68,60	7	1.00									AMPS	_	97		
EATING SHTING	28.827	7	1.25	-	SIGN/C	ISPLAY		8,400 63.75	1	1.25 0.65	-					_	TOTAL	CONN.			,357		
ECEPTACLES	20.596		1.0/.5		EXISTI			33,75	*	1.00						-	TOTAL I				,983		
OTORS	34,891		1.00			ST MOTO	R			1.25								CONN			25	TOTAL DEMAND	-
ATER HEATER	42,336		1.00	1	SHOW	WNDOW				1.25	1						TOTA	L PNLE			,971	34	44
SC EQUIP	32,453	3	1.00		LTGTF	RACK				1.00									AMPS	10	800		_
_																NE	W F	PAN	IEL	"МІ	DP"	SCALE N.T.S.	

BUS MAIN VOLT	NELBOARD: P1 (N AMPS: 225A SIZE/TYPE: MLO SI/PHASE: 208Y/120V, 3PH, 4W NON: 1		)					AIC RA	S: TING: S	ENT: SURFACE		65000 SE	OONE-LIN RIES RATI URE: NEM	ED	AM							F	PROVIE	E EQUIPMENT GROUND BUS	S
CKT	DESCRIPTION	C	ONDUC	TOR &	COND	UIT	В	REAKE	R	VOLT	AMPS/P	HASE	VOL*	TAMPS/PI	HASE	E	REAKE	R	CC	NDUC	TOR &	CONDL	JIT	DESCRIPTION	Т
NO.	CHANGE CONT.	PH	NEUT	GND	IG	COND	TYP	AMP	POLE	Α	В	C	A	В	С	POLE	AMP	TYP	COND	IG	GND	NEUT	PH	54.05.00.00000.1000000	
1	KIT-HEATED DISPLAY CASE[1	12	12	12		3/4"	GFCI	20	1	1,752	- 1	2.0	864	The State of		1	20		3/4"		10	10	10	REF-L-SHAPE 113 EVAP [71]	jΤ
3	KIT-DROP IN HOT WALL [60]	12		12		3/4"		20	2		700	1		216	1000	. 1	20		3/4"		10	10	10	REF-STEPN COOLR EVAP[73	3]
5		12	1	12		3/4		20	-			700				1	20	GFCI	3/4"		12	12		REF - PIZZA PREP TABLE [48]	8]
7	REF-BEER CAVE	10								1,920			1,633			2	20		3/4"		10	_	10	REF-BEER CAVE 118	Т
	REMOTE CONDENSING UNIT	10		10		3/4"		25	3		1,920			1,633	10.08	-	20		0,4		10		10	EVAPORATORS [1C]	
	[1B]	10	1									1,920	THE REAL PROPERTY.			- 1	20							SPARE	Т
13	REF-3 DOOR FREEZER	6								3,600			1,633			2	20		3/4"		10		10	REF-3DOOR FREEZER 112	П
	REMOTE CONDENSING UNIT	6		10		1"		50	3		3,600		100	1,633		-	100.00							EVAPORATORS [1G]	
	[1F]	6										3,600			696	1	20	GFCI	3/4"		12	12	12	REF- DROP-IN REFRIGERATO	rc
	REF-STEP-IN COOLER	10		70000					700	2,856		- 1	811			2	15		3/4"		10		10	REF-STEPN FREEZER	
	REMOTE CONDENSING UNIT	10		10		3/4"		25	3	1 1	2,856		1 1	811										EVAP[68]	
	[72]	10										2,856	in line		828	1	20	GFCI	3/4"		12	12		REF-ICE MERCH[49A]	
	REF-STEP-IN FREEZER	10								2,016			828			1	20	GFCI	3/4"	***	12	12	12	REF-ICE MERCH[49B]	
	REMOTE CONDENSING UNIT	10	0.770	10	1000	3/4"		25	3		2,016	V	in the		The same of	1	20							SPARE	
	[59]	10										2,016	Bart III			1	20							SPARE	
	REF-ICE MAKER[23] &	10	10	10		3/4"	L/OFF	20	2	1,331		100				1								SPARE	
	REMOTE CONDENSER[24]	10		10,000	10000	1000			~		1,331				THE ST	1	20							SPARE	
	REF-ICE MAKER[39A]	10	10	10		3/4"	L/OFF	20	1			1,576			696	1	20	GFCI	3/4"		12	12	12	REF- DROP-IN REFRIGERATO	
	REF-ICE MAKER[39B]	10	10	10		3/4"	L/OFF	20	1	1,576			144			1	15		1"		12	12	12	REC - MULTI MERCHAND[47]	4]
	REF-ICE MAKER[39C]	10	10	10		3/4"	L/OFF	20	1		1,576	- 2	1 - 1			1	20							SPARE	
41	SPARE							20	1							1	20							SPARE	
								SUB	TOTAL	15,051	13,999	12,668	5,913	4,293	2,220	SUBT	OTAL								
OAE	)	CON	IN. VA	DF		LOAD				CON	N. VA	DF							TOTAL	PHASE	A - VA	20,	963		_
000	LING			1.00	1	REFRI	GERAT	ION		50,846		1.00								CONN.	AMPS	17	5		
HEAT	ING			0		SIGN/E	ISPLA'	/				1.25							TOTAL	PHASE	B-VA	18,	291		
	TING			1.25		KITCH				1,400		1.00								CONN.	AMPS	15	52		
RECI	EPTACLES	144		1.0/.5		EXISTI	NG					1.00							TOTAL F	PHASE	C - VA	14,	888		
иот	DRS			1.00		LARGE	ST MO	TOR				1.25								CONN.	AMPS	12	24	TOTAL DEMAND	_
NATE	R HEATER			1.00		SHOW	WINDO	w				1.25							TOTAL	PNLB	D - VA	54.	142	54,1	.1
AISC	EQUIP	1.752		1.00	1	LTGT	RACK					1.00									AMPS	15	in.		

PANELBOARD: P2 (N US AMPS: 225A IAIN SIZE/TYPE: NLO OLTS/PHASE: 203Y/120V, 3PH, 4W ECTION: 1	,						AIC RA SERVE MOUN' LOCAT	S: TING: S TON:	ENT: SURFACE		65000 SE	O ONE-LIN RIES RATE URE: NEM	ED	ΜМ							**		E EQUIPMENT GROUND BUS	
KT DESCRIPTION			TOR & C			_	REAKE			TAMPS/PE		VOL	TAMPS/P			REAKE					CONDU		DESCRIPTION	CKT
10.	PH	NEUT	GND	IG	COND	TYP	AMP	POLE	Α	В	С	Α	В	С	POLE	AMP	TYP	COND	IG	GND	NEUT	PH		NO.
1	6								4,550						1	20							SPARE	2
3 KIT-CONVECTION OVEN [65]	6	**	10		1-1/4"	GFCI	50	3		4,560			480		1		HOOD	3/4"	-	12	12		KIT - GAS FRYER [56]	4
5	6										4,560			348	1	20		3/4"		12	12		KIT-HTD MERCH [78A]	6
KIT RAPID COOK OVEN[21A]	10	10	10	-	3/4"		30	2	2,496			348			1	20		3/4"		12	12		KIT - HTD MERCH [78B]	8
9	10							-		2,496		1 1			1	20	GFCI	3/4"		12	12		KIT - 2 SH STAND [79A]	10
KIT-RAPID COOK OVEN[21B]	10	10	10		3/4"		30	2			2,496				1	20		3/4"		12	12		KIT - 2 SH STAND [79B]	12
3	10	10	10	27.55	0/4		00	-	2,496			1,116			1	20	GFCI	3/4"	-	12	12		KIT-FOUNT. DISPENSER[5A]	14
KIT- HTD DISPLAY CASE[53]	10		10		3/4"	GFCI	25	2		1,737			1,116		1	20	GFCI	3/4"	-	12	12	12	KIT-FOUNT. DISPENSER[5B]	16
7	10		, 0		0.1	0, 0,		~			1,737			1,116	1	20	GFCI	3/4"		12	12	12	KIT-FOUNT. DISPENSER[5C]	18
9 KIT-SANDWCH PREP[36]	12	12	12		3/4"		20	1	240		-81	1,728			1	20	GFCI	3/4"	-	12	12		KIT-TEABREWER[13A]	20
KIT - SANDWICH PREP [66]	12	12	12		3/4"	G-CI	20	1		821		A STATE OF	1,728		1	20	GFCI	3/4"		12	12	12	KIT-TEABREWER[138]	22
3 KIT-CAPPUCCINO MACH. [17]	12	12	12		3/4"	G=CI	20	1			1,800			1,800	2	25		3/4"		10	1220	10	EWH - INSTANTANEOUS	24
5 SPARE							20	1			-	1,800			~	2.0		51.4		,,,		10	WATER HEATER [IWH-3] 57E	26
7 REF-HUSSMAN 9 CONDENSER[44]	8		10		1"		35	2		1,667	1,667		2,080	2,080	2	20	GFCI	3/4"		10	10	10	KIT-COFFEE BREWER[18A]	30
REF-HUSSMAN	10	_	10		3/4"		20	3	817	817		2,130	2,130		2	20	GFCI	3/4"		10	10	10	KIT-COFFEE BREWER[18A]	32
CONDENSER[74]	10		, ,							011	817		2,100	1,728	1	20		3/4"		12	12	12	KIT-HOT DOG GRILLISSAT	36
7 REC - MICROWAVE [20A]	12	12	12		-4.0		20	1	1,452		011	1,728		1,120	1	20	_	3/4"		12	12	12		38
9 REC - MICROWAVE [208]	12	12	12	_	4.5		20	1	1,102	1,452	-	1,120	2.900	-			-				16	6	EWH - INSTANTANEOUS	40
1 SPARE	12	12	12	_	-	_	20	1		1,402			2,000	2,900	2	35		3/4"	-	10		6	WATER HEATER (WH-2)[92]	42
1 Of Aire		_	-	_	_				12,061	10.550	10.077	8.850	10.101	9,972	011070		-	$\rightarrow$		_			WHICH TENED TENED TENEDED	42
							306	TOTAL		_		8,850	10,434	9,972	SUBIC	JIAL								
)AD	CON	N. VA	DF		LOAD				CON	N. VA	DF							FOTAL F			20,			
COLING			1.00			GERATI			5,785		1.00					l			CONN.		17			- 1
ATING			0			DISPLAY	(				1.25					L		FOTAL F			23,			- 1
SHTING			1.25		KITCH				49,855		0.65					- [			CONN.		20			- 1
CEPTACLES	2,904		1.0/.5		EXISTI						1.00						1	TOTAL P			23,			
TORS			1.00			EST MO					1.25					l			CONN.		19		TOTAL DEMAND	
ATER HEATER	9,400		1.00			WINDO	W				1.25					[		TOTAL	. PNLB		67,			194 VA
SC EQUIP			1.00		LTGT	RACK					1.00					- 1				AMPS	18	39		140 A





 $\frac{\text{INFINITY ENGINEERING}}{\text{GROUP, LLC}}$ 

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GEFGO

ANDREW MOHR, P.E. FL REG. NO. 73077

Date
This item has been electronically signed and sealed by Andrew Mohr, PE on the date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3<sup>cd</sup> Party Certificate Authority on any electronic copy. FG. GG1G1-5.3.00 PG.

PANEL CEFCO #426 - PACE CEFCO ELECTRICAL SCHEDULES

E7.0 AS NOTED

PANELBOARD NOTES: 1. ALL BUSING SHALL BE COPPER.
2. BOLT-ON BREAKERS ONLY.
3. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORY CARD.
4. ALL PANELBOARDS SHALL BE SUPPLIED FROM THE SAME MANUFACTURER.
5. IN EXISTING INSTALLATIONS, NEW CIRCUIT BREAKERS SHALL MATCH EXISTING IN TYPE AND AIC RATING, UNO.
6. CIRCUIT BREAKER TYPE ABBREVIATIONS ARE AS FOLLOWS:
AFCI ARCF-AULT CIRCUIT INTERRUPTER
F RED MARKING & "FIRE ALARM CIRCUIT"
GFCI GROUND-FAULT CIRCUIT INTERRUPTER
GFPE 30 mA EQUIPMENT GROUND FAULT PROTECTION
HT2 HANDLE TIE FOR SHARED NEUTRAL CIRCUIT (3 POLE)
LON LOCKABLE "LOCK ON" HANDLE HARDWARE
LOFT LOCKABLE "LOCK OF" HANDLE HARDWARE
TAN TANDEM
SHNT SHUNT TIPP
SWD SWITCHED NEUTRAL

ETTE STATEMENT OF TANDEM
SWITCHED NEUTRAL

SWITCHED NEUTRAL

STEEL STATEMENT
SWITCHED NEUTRAL

ETTE STATEMENT
SWITCHED NEUTRAL

STEEL STATEMENT
STATEMENT
SWITCHED NEUTRAL

STEEL SWITCHER

SWITCHED NEUTRAL

SWITCHED NEUTRAL

STEEL SWITCHER

S ETR FW HOOD EXISTING TO REMAIN EXISTING TO REMAIN FACTORY WIRED CIRCUIT CONTROLLED BY HOOD FIRE SUPPRESSION SYSTEM NEW TO MATCH EXISTING REMOVE EXISTING AND PROVIDE NEW CIRCUIT THRU TIME CLOCK CIRCUIT THRU PHOTOCELL CIRCUIT THRU LIGHTING CONTROL PANEL CIRCUIT THRU LIGHTING CONTACTOR

ELECTRICAL CONTRACTOR TO PROVIDE GFCI CIRCUIT BREAKERS AS REQUIRED. REFER TO PANEL SCHEDULE FOR MORE INFORMATION.

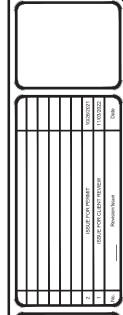


PANELBOARD: L1 (NEW) PROVIDE EQUIPMENT GROUND BUS FAULT CURRENT: REFER TO ONE-LINE DIAGRAM BUS AWPS: 225A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 208Y/120V, 3PH, 4W SECTION: 1 AIC RATING: 65000 SERIES RATED SERVES: MOUNTING: SURFACE ENCLOSURE: NEMA 1 LTG-SITE LIGHTING LTG-VEHICLE FUELING CANOPY LTG-VEHICLE FUELING 23 LIGHROU LIND LIND
22 SIGN-RRONT RIGHT SIGN
27 SIGN-RIGHT SIGN
28 SPARE
31 REC - CANOPY MATENANCE
33 REC - SIGN A MAINTENANCE
35 LITG - SIGN A MAINTENANCE
35 LITG - SIGN A MAINTENANCE
36 LITG - SIGN A MAINTENANCE
37 LITG - SIGN A MAINTENANCE
48 SPARE
41 LITG-SIGN A WOLLEADED
43 SPARE
47 SPARE
47 SPARE
48 SPARE
51 SPARE
61 SPACE
61 SPACE
63 SPACE CANOPY LTG-VEHICLE FUELING 8 CANOPY LTG-VEHICLE FUELING CANOPY (SURROUND LED)
LTG-VEHICLE FUELING 12 MSC-LTG CONTACTORS

8 LTG-TRUCK FUELING

8 CANOPY (SURROUND LED) 63 SPACE 65 SPACE 67 69 RSE-1 8.400 CONN. AMPS 93
TOTAL PHASE C - VA 12,953
CONN. AMPS 103
TOTAL PNLBD - VA 38,327
AMPS 106 28,827 600 TOTAL DEMAND
47.633 **NEW PANEL "L1"** 1

PANELBOARD: G (I BUS AMPS: 225A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 208Y/129V, 3PH, 4 SECTION: 1							AIC RA SERVE MOUN' LOCAT	s. Ting si Ton:	ENT: URFACE		65000 SI	O ONE-LIN ERIES RATI BURE: NEM	ED	AM									E EQUIPMENT GROUND BUS	3
CKT DESCRIPTION NO.		NEUT			UIT		REAKE AMP	R POLE	VOL1	FAMPS/PI B	HASE C	VOL:	TAMPS/PI B	IASE C	POLE	REAKE AMP		COND	IG IG		CONDU		DESCRIPTION	CKT NO.
1 MISC-VEHICLE FUEL	$\sim$	10	10		1"	SWN	20	2		THE STREET					2	20	SWN	1"	_	10	$\sim$	10	MISC-VEHICLE FUEL	2
3 DISPENSER#1	10	$\sim$	10	0.55	1.	SVIIN	20	2		800			800		- 2	23	SVVIA	1	11(53)	10	10	><	DISPENSER #6	4
5 SPACE								1							1								SPACE	6
7 MISC-VEHICLE FUEL	$\geq \leq$	10	10		1"	SWN	20	2		000					2	20	SWN	1"	1-0	10	$\geq \leq$		MISC-VEHICLE FUEL	8
9 DISPENSER#2	10	$\sim$		_	-		-	1		800			800		1					_	10		DISPENSER #7	10
11 SPACE 13 MISC-VEHICLEFUEL	-	10	70.70		200										-	1000					$\overline{}$		SPACE MISC-VEHICLE FUEL	12
15 DISPENSER#3	10	10	10		1"	SWN	20	2		800		-	800		2	20	SWN	1"	-	10	10		DISPENSER #8	16
17 SPACE	10							1				1	000		1						10		SPACE	18
19 MISC-VEHICLEFUEL	$\sim$	10	10		1"	SWN	20	2						- 1	2	20					$\sim$		SPARE	20
21 DISPENSER#4	10	$\sim$	10		1	SVIIV	20			800		2				23						$\times$		22
23 SPACE								1	i nanis						1								SPACE	24
25 MISC-VEHICLEFUEL	10	10	10	-	1"	SWN	20	2		800					2	20					$\sim$		SPARE	26
27 DISPENSER#5 29 SPACE	10	$\sim$						1		800	- Constitution		-		1			_		_		$\simeq$	SPACE	28 30
04		+	$\vdash$								H-17-10									_	$\overline{}$			32
31 SPARE		1					20	2	in demi						2	20						><	SPARE	34
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37 SPARE	$\sim$						20	2							2	20					$\sim$		SPARE	38
39		$\geq$					20	700							200	20						X	PARTIE CARROLL	40
41 SPACE								1		10.71			- 4		1								SPACE	42
SECTION: 2 43 SPACE	_	_						1		Late Steel	1 1 2 1 1 1	1,710	-				_			_		10		44
45 SPACE	_	_	-				-	1	100	ULL PURE		1,710	1,710		3	30		1"	-	10		10	MTR-REGULAR STP #1 of 2	46
47 SPACE	-	1						1					1,710	1,710	0.	- 00			11,565	10		10	VFC(4HP)	48
49 SPACE								1			III.X	1,710	-	1								10	MED DECLU AD SED #0 -40	50
51 SPACE								1			THE PARTY		1,710		3	30		1"	10-0	10		10	MTR-REGULAR STP #2 of 2 VFC(4HP)	52
53 SPACE								. 1						1,710								10	VFO(4HF)	54
55 SPACE					_			. 1				1,710										10	MTR-CONVENTIONAL STP	56
57 SPACE		1			-			1					1,710	4.740	3	30		1"	-	10		10	VFC(4HP)	58
59 SPACE 61 SPACE		+	$\vdash$	-	-	-	_	1				1,710	-	1,710						-		10		60
63 FUEL CONTROL POWER	12	12	12		3/4"		15	1	100	400		1,710	1,710		3	30		1"	-	10		10	MTR-DIESEL STP#1	64
65 SPACE		1	1.4					1					.,,	1,710	-					0.00		10	VFC(4HP)	66
67 SPARE							20	1			TO THE IN	1,710						ev.				10	MTR-PREMIUM STP	68
69 SPARE							20	1					1,710		3	30		1"		10	=	10	VFC(4HP)	70
71 SPARE							20	1						1,710								10	()	72
73 SPARE		-					20	2				1,710	4.740		3	30		1"		10		10	MTR-DIESEL STP #2	74
75 MISC-EVERG, FUEL SHUT-OFF	10	10	10		1"	L/OFF	20	1		District Co.	100	-	1,710	1,710	3	30		1.0	1000	10	100	10	VFC(4HP)	76 78
70	10	10	10		-	50.7	20	-			100		- 21	1,710								10		80
SURGE PROTECTIVE DEVIC	10	10	10		3/4"		30	3			100	2			3	20						$\vdash$	SPARE	82
83 RSE-1	10		1000				***************************************					2	- 2		500									84
*		•			ÌТ		SUB	TOTAL		4,400	100	10,260	12,660	10,260	SUBTO	DTAL								
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						CW TS:																	TOTAL DEMAND	





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ANDREW MOHR, P.E. FL REG. NO. 73077

Date This item has been electronically sign and sealed by Andrew Mohr, PE on t date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic copy.

2

**NEW PANEL "G"** 

E7.1 AS NOTED

## 1 GENERAL CONDITIONS

#### PART 1 - GENERAL

SCOPE OF WORK: THE WORK INCLUDED IN THE CONTRACT FOR THIS PROJECT CONSISTS OF THE FURNISHING OF ALL LABOR MATERIALS, SERVICES, EQUIPMENT AND APPLIANCES REQUIRED IN CONJUNCTION WITH OR PROPERLY INCIDENTAL TO THE COMPLETE CONSTRUCTION OF AN UNDECRSCOUND FUEL INSTALLATION FOR THE PROJECT HEREBY REPRESENTED.

#### PART 2 - AGREEMENT

- 2.1 CONTRACTOR FORM SHALL BE THE OWNERS "CONSTRUCTION AGREEMENT" DATED, AND RELATED INSURANCE SPECIFICATIONS. A COPY OF THIS CONTRACT IS AVAILABLE THROUGH THE OWNER'S OFFICE OR SITE MANAGER FOR
- 2.2 OWNER: WHENEVER THE WORD "OWNER" APPEARS IN THE CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS, IT SHALL BE DEEMED TO READ: CEFCO
- 2.3 CONTRACTOR: WHENEVER THE WORD "CONTRACTOR" APPEARS IN THE CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS, IT SHALL BE DEEMED TO READ "GENERAL UNDERGROUND FUEL/DEF INSTALLATION CONTRACTOR."

#### PART 3 - INTENT OF DRAWINGS AND SPECIFICATIONS

- 3.1 THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO PRESCRIBE A COMPLETE. WORK OR IMPROVEMENT WHI CONTRACTOR UNDESTRAKES TO DO IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTORS ALL WORK AS MAY BE RECESSARY TO COMPLETE THE WORK IN A SATISFACTORY AND ACCEPTABLE MANNER.
- 3.2 THE CONTRACTOR SHALL, UPON DISCOVERY, REPORT ANY DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS TO THE OWNER'S CONSTRUCTION MANAGER.
- 3.3 THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLIMENTARY. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS. SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH, GENERALLY, THE SPECIFICATIONS DESCRIBE WORK WHICH CANNOT BE READILY DENTIFIED ON THE DRAWINGS AND INDICATE TYPES, QUALITIES, AND METHODS OF INSTALLATION OF THE VARIOUS MATERIALS AND EQUIPMENT REQUIRED FOR THE WORK, IT IS NOT INTENDED TO NEVERTION EVERY TIFE MOY WORK IN THE SPECIFICATIONS WHICH CAN BE ADEQUATELY SHOWN ON THE DRAWINGS NOR TO SHOW ON THE DRAWINGS ALL TEMS OF WORK OF SECRIED OF THE REQUIRED BY THE SPECIFICATIONS EVEN IF THEY ARE OF SUCH NATURE THAT THEY DESCRIBED OR REQUIRED BY THE SPECIFICATIONS EVEN IF THEY ARE OF SUCH NATURE THAT THEY DESCRIBED OR THE SPECIFICATIONS EVEN IF THEY ARE OF SUCH NATURE THAT THEY DESCRIBED OR THE SPECIFICATION EVEN IF THEY SHOWN ON THE DRAWINGS OR IS RESISCONABLY MORE THAN THE WORK IS EXPRESSIVE OF DROWN ON THE DRAWINGS OR IS RESISCONABLY NOT THE WORK IS EXPRESSIVE OXYGENED IN THE SPECIFICATIONS.
- 34 THE CONTRACTOR, SUBCONTRACTORS AND ALL TRADES SHALL EXAMINE THE SITE AND ASCERTAIN EXISTING CONDITIONS PRIOR TO THE START OF THEIR PORTIONS OF THE WORK BEFORE ORDERING MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR THE CORRECTIVES OF ALL MEASUREMENTS AT THE SITE ANY DIFFERENCES WHICH MAY BE FOUND BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE DRAWNINGS OR SHOP DRAWNINGS SHALL BE SUBMITTED TO THE OWNERS ATTENTION FOR CONSIDERATION BEFORE PROCEEDING WITH THE ACTUAL DIMENSIONS AND MEASUREMENTS INDICATED ON DRAWNINGS UNLESS A SUBSTANTIAL ERROR HAS BEEN MADE. IF SUCH AN ERROR SHOULD COCUR! IT SHALL BE BROUGHT TO THE ATTENTION OF THE OF THE OWNER AND OWNERS AGENT AND RESOLVED BEFORE PROCEEDING W/WORK.
- 3.5 THE ORGANIZATION OF SPECIFICATIONS INTO DIVISIONS, SECTIONS AND PARAGRAPHS, AND THE ARRANGEMENT OF THE DRAWINGS ARE NOT INTENDED TO CONTROL THE CONTRACTOR IN DIVIDING THE WORK AMONG SUBCONTRACTORS OR IN ESTABLISHING THE EXTENT OF WORK TO BE PERFORMED BY ANY TRADE.
- DRAWINGS AND SPECIFICATIONS: DRAWINGS INDICATE GENERAL DESIGN AND ARRANGEMENTS. DRAWINGS ARE DIAGRAMATIC AND ARE NOT SCALED FOR DIMENSIONS, TAKE ALL DIMENSIONS FROM ARCHITECTURAL PLANS AND EQUIPMENT TO BE FUNDINSHED. VERIFY DIMENSIONS IN THE FIELD.

#### PART 4 - RESPONSIBILITY OF THE CONTRACTOR

- 4.1 CONTRACTOR HEREBY DECLARES HE HAS READ ALL SPECIFICATIONS AND EXAMINED THE DRAWINGS AND THAT HE
- 4.2 CONTRACTOR HEREBY DECLARES HE HAS VISITED THE SITE AND IS FAMILIAR WITH THE CONDITIONS AFFECTING THE WORK NO ALLOWANCES SHALL BE MADE SUBSECUENTLY ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR REGUIGENCE ON HIS PART, IF, IN THE PERFORMANCE OF THE CONTRACT. LATENT CONDITIONS AT THE SITE ARE FOUND TO BE MATERIALLY DIFFERENT FROM THOSE INDICATED BY THE DRAWINGS AND SPECIFICATIONS, OR LUNKNOWN CONDITIONS UNUSUALLY INHERENT IN WORK OF THIS CHARACTER SHOWN AND SPECIFIED. THE ATTENTION OF THE OWNER AND THE OWNER AND THE OWNERS AGENT SHALL BE CALLED IMMEDIATELY TO SUCH CONDITIONS DEFORE THEY ARE DISTURBED.
- 4.3 CONTRACTOR HEREBY DECLARES THAT HE HAS READ AND IS FAMILIAR WITH THE APPLICABLE SOILS REPORT, CONTRACTOR CONTRACTOR HEREBY DECLARES THAT HE HAS READ AND IS HAMILLAR WITH THE APPLICABLE SOILS REPORT, CONTRACT, SHALL BE RESPONSIBLE FOR STRICTLY ADHERING TO THE RECOMMENDATIONS OF SAID SOILS REPORT FOLLOWING ALL APPLICABLE PROCEDURES NOTED THEREIN, EXISTING WATER TABLE SHALL DETERMINE THE UTILIZATION OF TANK STRAP AND TYPE OF BACKFILL MATERIAL, SHOULD GROUND WATER OR CONTAMINATION BE DISCOVERED DURING TANK EXCAVAT WORK SHALL BE SUSPENDED PENDING REVIEW BY OWNER/OWNER'S AGENT OR REPRESENTATIVE.
- 4.4 CONTRACTOR SHALL REPORT ANY OBJECTION TO MATERIALS, APPLIANCES, OR METHODS OF CONSTRUCTION SHOWN OR SPECIFIED TO THE OWNER/OWNER'S AGENT AND OBTAIN A DECISION BEFORE PROCEEDING.
- 4.5 PROPOSALS: CONTRACTOR SHALL SUBMIT BID ON OWNER'S FORM "UNDERGROUND FUEL INSTALLATION BID AND EST FORM. PROPOSALS SUBMITTED ON ANY OTHER FORM SHALL BE REJECTED AND RETURNED. PROPOSALS NOT COMPLETELY AND PROPERLY FILLED OUT SHALL BE REJECTED. PROPOSALS SHALL INCLUDE MONIES FOR REMOVAL OF ALL EXISTING MIPROVEMENTS AS REQUIRED FOR UNDERGROUND FUEL INSTALLATION.
- 4.6 PERMITS: CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING AND PAYING FOR ALL APPLICABLE STATE AND LOCAL PERMITS AND APPLICATIONS AS RELATED TO THIS WORK. COPIES OF PERMITS AND CERTIFICATES SHALL BE FORWAY THE OWNER/OWNER'S AGENT OR SITE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK FINAL CERTIFICATION OF ACCEPTANCE BY GOVERNING AUTHORITIES SHALL ALSO BE ON FILE WITH THE OWNER OR SITE CONTRACTOR PRIOR PROCESSING OF FINAL PAY REQUEST.
- 4.7 INSPECTIONS: CONTRACTOR SHALL BE REQUIRED TO ADHERE TO ALL REQUIREMENTS OF OWNER'S INSPECTION PROC CONTRACTOR SHALL COMPLY WITH REQUIREMENTS FOR NOTIFICATION, SITE PREPARATION REQUIREMENTS, COMPLIA ON-SITE PRESENCE DURING INSPECTION AND CORRECTION OF ANY DEFECTS OR RELATED PROBLEMS AS DIRECTED LOCAL GOVERNMENTAL INSPECTION.
- 4.8 COORDINATION: UNDERGROUND FUEL CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING ALL PHASES OF THE FUEL INSTALLATION WITH THE GENERAL CONTRACTOR IN CHARGE OF THE BUILDING GOR MAJOR PORTION OF THE PROJECT. THE BUILDING GENERAL CONTRACTOR AND THE UNDERGROUND FUEL CONTRACTOR SHALL JOINT, VIDEVELOP AND THAT ALL STANDAY AGREEABLE SCHEDULE AND TIMETABLE FOR COMPLETION OF THE UNDERGROUND FUEL INSTALLATION. TIMETABLE FOR BUILDING AND UNDERGROUND FUEL STANDAY FUEL OF THE SOME SHALL AND THE SOME DEALY THE OTHER SHOULD UNDERGROUND FUEL CONTRACTOR FAIL TO MEET DEADLINES AS ESTABLISHED BY THE SCHEDULE ANDIOR HOLD UP THE COMPLETION OF THE OVERALL BUILDING PROJECT. THE OWNER/OWNER'S AGENT RESERVES THE RIGHT TO RECTIFY THE SITUATION ACCORDINGLY.
- 4.9 CONTRACTOR SHALL PROVIDE OWNER WRITTEN CERTIFICATION AS TO THE FOLLOWING:
  4.9.1 CERTIFICATION FROM LOCALISTATE GOVERNING AUTHORITIES AS APPLICABLE FOR CONTRACTOR
  CERTIFICATION LICENSING FOR INSTALLATION OF UNDERGROUND PUEL STORAGE TANK SYSTEM.
  4.9.2 CERTIFICATION FROM PEULIPMENT MANUFACTURERS AND SUPPLIERS (TANKS, PRODUCT LINES, GTMS, ETC.) AS TO
  ATTENDING AND ACHIEVING CERTIFICATION FROM APPORPRIATE COMPANY FOR INSTALLATION OF EQUIPMENT.
  4.9.3 CERTIFICATION ON APPROPRIATE FORMAT AS TO INSTALLATION OF COMPILETE SYSTEM BEING PERFORMED IN
  CONTRACTION OF A CONTRACT OF THE STATE OF

### 4.10 PAYMENTS SHALL BE MADE AS PER THE CONTRACT.

- 4.11 LIENS: CONTRACTOR SHALL PERMIT NO LIENS OF ANY KIND TO BE FIXED UPON OR AGAINST THE PROPERTY BY ITS LABORERS, MECHANICS OR MATERIAMEN, AND SHALL INDEMNIFY, PROTECT AND SAVE OWNER HARMLESS FROM AND AGAINST ALL SUCH CLAIMS, AND LIENS.
- 4.12 EQUIPMENT RESPONSIBILITY: CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING, RECEIVING, UNLOADING, HANDLING AND PROVIDING PROTECTED INSIDE STORAGE FOR ALL OWNER SUPPLIED EQUIPMENT AND MATERIAL. CONTRACTOR SHALL INSPECT EQUIPMENT UPON RECEIPT AND INMEDIATELY REPORT ANY DAMAGE DUE TO SHIPPINGT OF THE OWNERS AGENT. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DUE TO FAILURE TO COMPLY WITH THESE REQUIREMENTS DISPENSES SHALL BE PROTECTED WITH SHIPPING BOXES UNTIL STORE IS TUNNED OVER FOR OPENING. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ADEQUATE AND LOCKED STORAGE OF OWNERS MISCELLANEOUS EQUIPMENT, TO INCLUDE FUEL CONSOLE, PROR TO OPENING. CONTRACTOR
- 4.13 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FILING OF RECEIVING FORMS AND MISCELLANEOUS CONFIRMATION OF EQUIPMENT RECEIVING INFORMATION AS REQUIRED BY THE OWNER.
- 4.14 GENERAL CONTRACTOR SHALL PROVIDE ALL PLUMBING, WIRING, MATERIALS, AND LABOR AS REQUIRED TO INSTALL OWNER SUPPLIED EQUIPMENT. INCLUDE MONIES IN BID PROPOSAL FOR INSTALLATION OF OWNER'S SUPPLIED EQUIPMENT UNLESS

### 1 GENERAL CONDITIONS - continued

#### PART 5 - PROTECTION

- 5.1 CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY LOSS OR DAMAGE CAUSED BY HIM OR HIS WORKMEN TO THE PROPERTY OR EQUIPMENT OF THE OWNER, OR TO THE WORK DAMAGE OR INJURY WITHOUT COST TO OWNER FOR SUCH LOSS OR DAMAGE
- 52 CONTRACTOR SHALL PROVIDE AND MAINTAIN SUITABLE TEMPORARY SIDEWALKS, FENCES, LIGHTS, SIGNS OR OTHER STRUCTURES AND DEVICES AS REQUIRED BY LAW, DO NOT OBSTRUCT OR INTERFERE WITH TRAFFIC IN PUBLIC STREETS, ALLEYWAYS OR PRIVATE RIGHT-OF-MAYS, IF WORK IS SUSPENDED, KEEP ALL ROADWAYS AD SIDEWALKS IN PROPER CONDITION AND UT AND LEAVE THEM IN PROPER CONDITION AT TERMINATION OF WORK.
- 6.3 CONTRACTOR SHALL SEND PROPER NOTICES, MAKE NECESSARY ARRANGEMENTS AND PERFORM ALL WORK REQUIRED FOR THE CARE, PROTECTION, AND MAINTENANCE OF PUBLIC UTILITIES ON AND AROUND THE BUILDING SITE. ASSUMING ALL RESPONSIBILITY AND PAYING ALL COST FOR WHICH THE CONTRACTOR I HEREBY DECLARES HE HAS VERIFIED HE LOCATIONS OF EXISTING UTILITIES ON SITE PRIOR TO THE START OF THE WORK. CONTRACTOR HEREBY AGREES TO MAKE ARRANGEMENTS FOR AND TO PAY ALL CHARGES IN CONJUNCTION WITH THE RELOCATIONS OF EXISTING REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL UTILITY EASEMENTS, HOOK-UP CHARGES, TAP FEES, SYSTEM DEVELOPMENT FEES AS NECESSARY FOR COMPLETION OF THIS PROJECT.
- 5.4 IF ALL OR PART OF THE WORK IS SUSPENDED FOR ANY REASON, CONTRACTOR SHALL PROPERLY COVER OVER, SECURE AND PROTECT ANY PORTION LIABLE TO SUSTAIN INJURY FROM ANY CAUSE.
- 5.5 PRODUCT PROTECTION: CONTRACTOR SHALL PROVIDE ADEQUATE AND SECURE PROTECTION OF PRODUCT IN TANKS UPON DELIVERY UNTIL TURNED OVER FOR OPERATION. ALL FILL, VENT, AND GAUGING CAPS AND/OR OPENINGS SHALL BE SECURED AND PA

6.1 MATERIALS AS SPECIFIED REPRESENT REQUIRED STANDARDS. SUBSTITUTIONS MAY BE PROPOSED IN WRITING WITH ADEQUATE SUPPORTING DATE FURNISHED. USE OF SUBSTITUTE MATERIALS IS DEPENDENT ON RECEIPT OF WRITTEN APPROVAL FROM OWNER/OWNERS AGENT.

- 7.1 THE CONTRACT SHALL BE CONSIDERED FULFILLED, SAVE AS PROVIDED IN ANY MAINTENANCE STIPULATIONS, BOND OR BY LAW, WHEN ALL THE WORK HAS BEEN COMPLETED WITH FINAL INSPECTION AND ACCEPTANCE MADE BY ALL APPLICABLE GOVERNING BUILDINGS DEPARTMENTS, FIRE MARSHALLS OR OTHER JURISDICTIONS.

- WORKMANSHIP:
   PRAME CONSIES AND JOINTS IN RUNINNO MATERIALS OF THE SAME CROSS SECTIONS PROFILE SHALL BE ACCURATELY
   PRAME CONSIES AND JOINTS, FREE FROM OFFSETS ACROSS THE FINSH SURFACES AT THE JOINT
   PROFIDE PARTS OR MEMBERS SHALL BE SEQUIATED TIGHT IN PLACE FIREF FROM DISTORTIONS
   FINISHES SHALL BE FREE FROM BUBBLES, STREAKS, PELLING, PITS OR OTHER INREGULARITIES, EXCEPT WHERE ROUGH MATERIALS MAY BE REQUIRED, FINISH SURFACES SHALL BE FREE FROM DIST, GREASE, MASTICS, FINGERPRINTS, SCRATCHES, DENTS, CRACKS, STAINS, CHIPS OR OTHER DAMAGING EFFECTS.

- 7.3 CLEANING:
  7.3.1 ALL WORK SHALL BE CLEAN AND READY FOR SE UPON COMPLETION. REMOVE TEMPORARY TAPES, WRAPPING, COATING, PAPER LABELS, AND OTHER ITEMS.
  7.3.2 CLEANING METHODS FOR PROPRIETARY MATERIALS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CLEANING SOLUTIONS, AGENTS, SOLVENTS, WAXES OR OTHER MATERIALS SHALL BE ONLY AS APPROVED BY THE MANUFACTURER OF THE MATERIAL INSTALLED IN THE WORK.
  7.3.3 CLEAN UP: CONTRACTOR SHALL CLEAN UP ALL DEBRIS CAUSE BY THE WORK OF THIS SECTION, KEEPING THE PREMISES NEAT AT ALL TIMES.

#### PART 8 - CODE

- 8.1 THE FOLLOWING CODES ARE MADE A PART OF THIS SPECIFICATION. SAID CODES SHALL DICTATE MINIMAL ACCEPTABLE STANDARDS. CODE SHALL BE ADHERED TO UNLESS LOCAL GOVERNING DICTATE HIGHER OR MORE STRINGENT REQUIREMENTS
- WHICH SHALL TAKE PRECEDENCE:
  8.1.1 MFPA 30.4 FAMMABLE AND COMBUSTIBLE LIQUIDS CODE
  8.1.2 PER JANUAL "RECOMMENDED PRACTICES FOR INSTALLATION OF UNDERGROUND LIQUID STORAGE SYSTEMS." #RP-109-90
  (OR LATEST EDITION).

9.1 EXCEPT WHERE SPECIAL GUARANTEES ARE REQUIRED IN EXCESS OF ONE (1) YEAR, THE CONTRACTOR AGREES TO REPAIR OR REPLACE ANY DEFECT IN MATERIAL OR WORKMANSHIP (BEYOND ORDINARY WEAR AND TEAR) TO THE SATISFACTION OF THO WINERFOWNER'S AGENT FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE, WHETHER IN HIS WORK OR IN THAT SUBCONTRACTORS, WITHOUT COST TO THE OWNER.

### PART 10 - AS BUILT PLAN AND DOCUMENTATION

- 10.1 UPON COMPLETION OF PROJECT, CONTRACTOR SHALL PROVIDE "AS BUILT SITE PLAN" VERIFYING FINAL LOCATION OF IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, PLUMBING AND ELECTRICAL.
- 10.2 CONTRACTOR SHALL KEEP PHOTOGRAPHIC JOURNAL OF ALL PHASES OF THE COMPLETE INSTALLATION. PHOTOGRAPHS ARE TO BE PROPERLY DATED. IDENTIFIED. AND FORWARDED TO THE OWNER.

## 2 INSPECTIONS/TESTING

### PART 1 - GENERAL

1.1 SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR, SERVICES AND EQUIPMENT AS REQUIRED TO PROVIDE INSPECTION SERVICES OF THE UNDERGROUND FUEL/DEF INSTALLATION.

- 2.1 INSPECTOR: INSPECTIONS / TESTS SHALL BE PERFORMED BY THE OWNER AND/OR APPOINTED REPRESENTATIVE
- 2.2 NOTIFICATION: CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING OWNER/OWNER'S AGENT 48 HOURS PRIOR TO REQUESTED INSPECTION.
- 2.3 SPILLAGE: SHOULD SPILLAGE OF PRODUCT OCCUR AT ANY PHASE OF INSTALLATION OR TESTING, THE OWNER/OWNERS AGENT IS TO BE NOTIFIED IMMEDIATELY. ESTIMATED LOSS OF PRODUCT AS WELL AS ACTION TAKEN IS TO BE NOTED AND RECORDED.
- 2.4 REPRESENTATIVE: CONTRACTOR AND PLUMBING SUBCONTRACTOR SHALL BE AVAILABLE ON SITE DURING TESTING PROGRAMS. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL RESULT IN ANY CONNECTIONS AND/OR REPAIRS AS REQUIRED, DOEING PERFORMED BY OWNERS AS REQUIRED, DOES FOR SAID REPAIRS AND/OR CONNECTIONS SHALL BE DEDUCTED FROM CONTRACT AMOUNT AS REQUIRED TO SATISFY THE SITUATION.
- 2.5 PROHIBITED WORK. CONTRACTOR SHALL SCHEDULE WORK SUCH THAT NO HEAVY EQUIPMENT IS OPERATING ON SITE DURING INSPECTION PROGRAMS. NO WELDING OR OPEN FLAME SHALL BE ALLOWED ON SITE AT ANY TIME DURING TEST
- 26 INSTALLATION REPORTS: SHOULD OWNER OR APPOINTED REPRESENTATIVE BE UNABLE TO BE PRESENT AT SITE FO PURPOSES OF FILING ANY INSPECTION REPORTS. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSPECTIO FILING OF REPORT WITH THE OWNER'S OFFICE. WRITTEN REPORT SHALL INCLUDE PHOTOGRAPHIC DOCUMENTATION OF ALL PROCEDURES.
- 2.7 TEST FAILURE: SHOULD SYSTEM FAIL ANY PORTION OF TEST PROGRAM, CONTRACTOR SHALL IMMEDIATELY INSTIGATE PROCEDURES AS REQUIRED TO BRING SYSTEM INTO COMPLIANCE. SHOULD FAILURE OF TEST DUE TO FACULTY WORK REQUIRE EXPENDITURE OF ADDITIONAL MONIES FOR RESCHEDULING ANDIDR RETESTING OF SYSTEM, CONTRACTOR SHEE HELD RESPONSIBLE FOR COMPENSATION ACCORDINGLY.
- 2.8 CLEAN-UP: IN THE EVENT PRODUCT SPILLAGE SHOULD OCCUR DURING CONSTRUCTION OR DURING WARRANTY PERIOD DUE TO WORK PERFORMED BY CONTRACTOR, CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP AS MAY BE REQUIRED.
- 2.9 TEST REPORT: UPON COMPLETION OF TESTING PROGRAMS, REPRESENTATIVE OF TESTING INSPECTION COMPANY SHALL BE RESPONSIBLE FOR FILING COPIES OF TANK AND PIPING TESTINSPECTION REPORTS WITH OWNER OR OWNERS AGENT WITH COPY TO JOB SITE.

### 2 INSPECTIONS/TESTING continued

#### PART 3 - TANK INSTALLATION INSPECTION

- 3.1 SCHEDULE: CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING SCHEDULE SO THAT TANKS ARE TESTED AND SET IN TANK HOLE SAME DAY OF DELIVERY.
- 3.2 EXCAVATION: ALL EXCAVATIONS SHALL BE COMPLETED WITH BEDDING MATERIAL IN PLACE AND READY FOR INSTALLATION PRIOR TO TANK DELIVERY.
- 3.4 STRAPS: SHOULD ON-SITE CONDITIONS REVEAL THE NEED FOR WET HOLE TYPE INSTALLATION, CONTRACTOR SHALL IMMEDIATELY NOTIFY TANK MANUFACTURER AND OWNER/OWNER'S AGENT OF SITUATION. SAID NOTIFICATION WILL BE REQUIRED SO AS TO INCLUDE ANCHOR STRAPS WITH DELIVERY OF TANK PACK
- 3.5 AIR TEST: TANKS SHALL BE AIR TESTED AS PER MANUFACTURER'S SPECIFICATIONS PRIOR TO PLACEMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS TO PROVIDE COMPLETE AIR TEST INCLUDING, BUT NOT LIMITED TO, AIR COMPRESSOR OF SUFFICIENT SIZE AND CAPACITY, SPECIFIED SOAP MATERIAL AND ACCEPTABLE SOAP APPLICATION EQUIPMENT.
- 3.6 MINIMUM TESTING: FIBERGLASS DOUBLE WALL TANKS AS MANUFACTURED BY HALL TANK COMPANY SHOULD ARRIVE AT THE JOB SITE WITH A MINIMUM OF 4 "HG ON THE INTERSTICE. OBSERVE THE VACUUM HOLD TEST FOR AT LEAST ONE (1) HOUR PRIOR TO SETTING THE TANKS, SHOULD THE INTERSTICE NOT HOLD A MINIMUM 4" HG VACUUM, THEN CONTACT THE TANK MANUFACTURER IMMEDIATELY.
- 3.7 OBSERVATION: OWNER AND/DR OWNER'S SUBCONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION OF AIR OR VACUUM TEST, OBSERVATION OF LIFTING, SETTING AND BURIAL OF TANKS.
- 3.8 TANK INSPECTION REPORT: WRITTEN REPORT SHALL INCLUDE PHOTOGRAPHIC DOCUMENTATION OF ALL PROCEDURES.

#### PART 4 - TANK AND LINE TESTING

- 4.1 TEST: PRIOR TO PLACEMENT OF CONCRETE OVER TANKS, A COMPLETE SYSTEM TIGHTNESS TEST INCLUDING TANKS, PRODUCT LINES, STAGE IN VAPOR RECOVERY LINES, SECONDARY CONTAINMENT PIPING AND VENT LINES SHALL BE EPERFORMED. TESTING SYSTEM SHALL BE AS APPROVED BY THE OWNER'S ENVIRONMENTAL DEPARTMENT AN DIOR OWNER'S AGENT.
- 4.2 PRODUCT DELIVERY: CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION TO OWNER/OWNER'S AGENT OF TEST DATE AND VERIFICATION OF NEED FOR TANKS TO BE FILLED WITH PRODUCT FOR TESTING PROCEDURES. A MINIMUM OF 72 HOURS ADVANCE NOTIFICATION WILL BE REQUIRED FOR PRODUCT DELIVERY.
- 4.3 CONTRACTOR SHALL HAVE REPRESENTATIVES ON SITE TO ACCEPT AND RECORD ALL PRODUCT DELIVERIE CONTRACTOR'S REPRESENTATIVE SHALL REMIND DELIVERY COMPANY THAT NO OVERFILL PROTECTION IS INSTALLED AND TO FOLLOW PROCEDURES FOR DELIVERY AS SITUATION DISTATES.
- 4.4 CONTRACTOR SHALL COMPLETE AND BE RESPONSIBLE FOR THE FOLLOWING PRIOR TO SYSTEM TEST:
  4.4 FIPPING: ALL PIPPING SHALL BE COMPLETED EXCEPT INSTALLATION OF OVERFILL PROTECTION. OVERFILP
  PROTECTION SHALL BE INSTALLED HOW COMPLETED ON FEBT. 4.4.2 VERNITS. VENT LINES SHALL BE
  COMPLETED UNDERGROUND AND STUBBED UP MINIMUM OF 5' ABOVE FINISHED GRADE.
  4.4 SPROUDET LINES: ALL PRODUCT LINES SHALL BE COMPLETE WITH FIRE VLYES INSTALLED AT ISLAND.
  4.4 PUMPS: SUBMERSIBLE PUMPS AND LINES SHALL BE COMPLETE! VINSTALLED.
  4.4 SPAMP RECOVERY: LAT HARSE INAPOR RECOVERY: LOSS SHALL BE COMPLETE AND CONNECTED AT
- ISLANDS.

  18 ISLANDS.
  4.4.6 FILL PIPES: ALL FILL, PHASE I VAPOR RECOVERY AND GAUGING RISERS SHALL BE INSTALLED.
  4.4.7 SITE PREPARATION: CONTRACTOR SHALL PREPARE TANK AREA FOR PRODUCT DELIVERY AND TANK TESTING PROCEDURES.
  4.4.8 FILL: CONTRACTOR SHALL PROVIDE TWO FEET BACKFILL OVER TANKS OR PROVIDE ACCEPTABLE.
- INSULATED BLANKETS FOR COVERAGE OF TANKS.

  4.49 WATER: SHOULD WATER BE PRESENT IN TANK HOLE, CONTRACTOR SHALL VERIFY AND NOTIFY OWNER
  OF STATUS.
- 4.5 PRODUCT REMOVAL: ANY REMAINING PRODUCT IN VENT LINES UPON COMPLETION OF TEST SHALL BE REMOVED BY TESTING COMPANY.

### PART 5 - START-UP INSPECTION

- 5.1 SCHEDULING: CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL SCHEDULING START-UP AND CHECK-OUT. CONTRACTOR SHALL NOTIFY OWNER AND APPLICABLE MAINTENANCE DEPARTMENT OFFICE A MINIMUM OF 48 HOURS PROR TO INTENDED FINAL START-PA
- 5.2 PERSONNEL: CONTRACTOR, PLUMBING SUBCONTRACTOR, AND ELECTRICAL SUBCONTRACTOR SHALL BE AVAILABLE ON-SITE DURING START-UP.
- 5.3 START-UP: PHYSICAL START-UP AND CHECK-OUT OF SYSTEMS AND EQUIPMENT SHALL BE DONE BY AND AT JUNEAU THE DIRECTION OF OWNERS REPRESENTATIVE ONLY CONTRACTOR SHALL BE JONE BY AND AT THE DIRECTION OF OWNERS REPRESENTATIVE ONLY, CONTRACTOR SHALL NOT START OR ACTIVATE ANY EQUIPMENT WITHOUT THE SPECIFIC DIRECTIVE OF OWNERS REPRESENTATIVE. DAMAGE TO ANY OWNERS EQUIPMENT DUE TO IMPROPER INSTALLATION AND/OR UNAUTHORIZED START-UP WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 5.4 SITE COMPLETION: ALL SITE WORK, INCLUDING CONCRETE/ASPHALT PAVEMENTS, SHALL BE COMPLETE, ALL UTILITIES SHALL BE CONNECTED AND OPERATIONAL. ALL LANDSCAPING, INCLUDING SPRINKLER SYSTEMS, SHALL BE COMPLETE.
- 5.5 VERIFICATION: PRIOR TO SCHEDULING OF START-UP, CONTRACTOR SHALL OBSERVE AND VERIFY CORRECTNESS AND COMPLIANCE TO OWNER'S DRAWINGS AND SPECIFICATIONS FOR THE FOLLOWING 5.51 NAWNELLS SHALL BE PROPERLY CHETERDINISTALLED AT OVERFILES, SUBMERSIBLES, VAPOR RECOVERY, AUTOGAUGING, OBSERVATION TUBES AND SUMP RISERS.

  5.52 PROPER HEIGHT OF GRAVEL BACKFULL AROUND SUMPRISERS

  5.53 TANK LD MARKERS INSTALLED IN CONCRETE AT PROPER LOCATIONS.

  5.54 ALB BRASS GOODS AND FITTINGS PROPERLY INSTALLED, TIGHT AND SECURE.

  5.55 (LEAK DETECTORS INSTALLED.)

  5.56 PROTECTED FLEX LINES PROPERLY INSTALLED WIG TWIST IN INSTALLATION AND STRIPE.

- 5.5.7 MANWELL EXTENDERS PROPERLY INSTALLED WIN WIND INTENDED AND SCREWED IN FRAME OF MANWELL STENDERS PROPERLY INSTALLED AND SCREWED IN FRAME OF MANWELL SUPPRISERS, PROPERLY SET AND SEALED TO TANK MANWAY OR FITTINGS AND CLEANED OUT FREE OF DEBRIS AND COMPRETE.

- CONCRETE

  5.58 TANKS (LEMA NID FREE OF WATER

  5.59 TANKS (LEMA NID FREE OF WATER

  5.59 TANKS (LEMA NID FREE OF WATER

  5.59 TANKS (LEMA NID FREE OF WATER

  5.50 TO SEPREMENT OF THE TOP TO THE TOP THE
- AUTHORITIES FOR INSPECTION PURPOSES.

  5.5.16 ALL INSPECTIONS BY GOVERNING AUTHORITIES COMPLETED AND SIGNED, SIGNED AND COMPLETED PERMIT CARD ON SITE.
  5.5.17 ELECTRICAL DEVICES INCLUDING LIGHTS, SIGNS AND INTERCOMS PROPERLY INSTALLED, SECURE AND

- AB
  5.5 18 ANY INSPECTION OR WIRING PORTS IN CANOPY COLUMNS COVERED WITH ACCEPTABLE PLATES.
  5.5 19 VENT LINES PROPERLY SECURED, PROTECTED AND INSTALLED AT PROPER HEIGHT.
  5.5.20 YERRIFICATION OF COMPLANCE FOR TANK AND LINE TEST AVAILABLE ON SITE.
  5.5.21 ALL MANNELLS FREE OF CONCRETE AND DEBRIS.
  5.5.21 ALL MANNELLS FREE OF CONCRETE AND DEBRIS.
  5.5.22 MANNELL COVERES PROPERLY PAINTED.
  5.5.22 MAL PAINTING COMPLETE INCLIDING CANOPY, DOWNSPOUTS, METALS AND MISCELLANEOUS METALS.
  5.5.24 CONCRETE A YISLANDS AND TANK PAD TRUE, PROPERLY SLOPED AND FINISHED WITH ACCEPTABLE.
- RISE TO MANWELLS.

  5.5.25 ELECTRICAL PANELS PROPERLY COMPLETED TO INCLUDE:

  (A) ONE BREAKER FOR EACH SUBMERSIBLE PUMP, DISPENSER, CONSOLE, AUTOGAUGING, DISPENSER

- ONE BIERARCH FOR EACH SUBMINISTIC FUNDITY, DISPENSER, CONSOLE, AUTOGAUE LIGHTS (ALL) AND CAMOPY LIGHTS (ALL) AND CAMOPY LIGHTS (ALL) AND CAMOPY LIGHTS (ALL) AND WIRED.

  (GAS PANEL CONTROLLED BY ONE MAIN BERN TALLED AND WIRED.

  (INTERCOM INSTALLATION COMPLETE AND PROPERTY WORKING.

  (CONSOLE INSTALLATION COMPLETE AND FOUNTIONAL.

  ALL WIRING PROPERTY IDENTIFIED WITH COLOR CODED WIRING.

  CONDUTES PROPERTY DESITION.

  ALL BIERARCES IN TOPE POSITION.

- 5.6 NOTIFICATION: CONTRACTOR SHALL VERIFY ITEMS AS INDICATED ABOVE PRIOR TO SCHEDULING OF START-UP, MONIES AND/OR TIME LOST AT START-UP DUE TO NON-COMPLIANCE SHALL BE CHARGED TO CONTRACTOR ACCORDINGLY.
- 5.7 LINE TESTING: PRIOR TO SYSTEM START-UP, A NYAROSTATIC LINE TEST SHALL BE PERFORMED ON PRODUCT LINES. TESTING METHOD SHALL BE AS APPROVED BY THE OWNER/OWNER'S AGENT. TEST SHALL BE PERFORMED WITH OWNER/OWNER'S AGENT ON SITE.
- 5.8 CATHODIC PROTECTION SYSTEMS: AS APPLICABLE, SHALL BE TESTED FOR EFFECTIVENESS AND COMPLIANCE WITH MANUFACTURER'S CRITERIA.
- 5.9 CLEAN-UP: CLEAN UP ALL DEBRIS CAUSED BY WORK OF THIS SECTION, KEEPING PREMISES CLEAN AND NEAT AT ALL TIMES

### 3 EARTHWORK

#### PART 1 - GENERAL

1.1 SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR, MATERIALS, SERVICES, EQUIPMENT AND APPLIANCES REQUIRED IN CONJUNCTION WITH OR PROPERLY INCIDENTAL TO EARTHWORK.

#### PART 2 - PRODUCTS

- 2.1 FILL MATERIAL: SHALL BE MATERIAL IN COMPLIANCE WITH TANK AND LINE MANUFACTURER'S
- SPECIFICATIONS.

  2.1. PEA GRAVEL: SHALL BE CLEAN, NATURALLY ROUNDED AGGREGATE WITH A MIX OF PARTICLE SIZES NOT LESS THAN 18" OR MORE THAN 34". PARTICLE SIZES NOT LESS THAN 18" OR MORE THAN 34". PARTICLE SIZE NOT LESS THAN 18" OR MORE THAN 18". PARTICLE SIZE NOT LESS THAN 18" OR MORE THAN 18". PARTICLE SIZE NOT LESS THAN 18" OR MORE THAN 18". C33 PARAGRAPH 7.1 FOR QUALITY AND SOUNDNESS. FILL MATERIAL SHALL NOT HAVE MORE THAN 15", PASSING A 8" SIZED FOR Y GRAVEL DENSITY MUST BE A STANDARD STANDA
- 22 GEOTEXTILE MATERIAL: SOIL STABILIZATION FILTER FABRIC MATERIAL SHALL BE ONE OF THE FOLLOWING: 2.2.1 PHILLIPS FIBERS, SURPAC ANP (PHONE #800-485-5737). 2.2.2 HOECHST CELANESE CORPORATION TREVIRA S1125 (PHONE #800-845-5797). 2.2.3 REBMAY, INC., TYPAR 3041 OR TYPAR 3041 (PHONE 1800-321-6271).

#### PART 3 - EXECUTION

- 3.1 PROTECTIONS: PROVIDE ADEQUATE SHORING, BRACING, PILING, PLANKING AND CRIBBING
- 3.2 LAYOUT: CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL WORK, OWNER RESERVES THE RIGHT TO MAKE ADJUSTMENTS IF DISCREPANCIES ARE FOUND BY CONTRACTOR. REPORT DISCREPANCIES TO OWNER/OWNER'S AGENT. SET AND MAINTAIN NECESSARY STAKES, BATTER BOARDS AND REFERENCE POINTS.
- 3.3 EXCAVATION: EXCAVATE TO LINES, ELEVATIONS AND LIMITS REQUIRED BY THE DRAWINGS, PLUS SUFFICIENT DISTANCE AND SPACE TO PERMIT INSTALLATION OF TANCS, EXCAVATE AS REQUIRED, REGARDLESS OF TYPE, CONDITION OR MOISTURE CONTENT OF THE MATERIAL ENCOUNTERED. HAUL EXCESS MATERIAL OFF THE SITE AND DISPOSE OF SAME. DIMENSIONS OF TAME KECAVATION SHALL BE MINIMAL AS ESTABLISHED BY OWNERS DRAWINGS UNLESS TAME MANUFACTURER REQUIREMENTS ARE GREATER.
- 3.4 SAWCUTTING: IF PAVING MUST BE REMOVED, THE PERIMETER OF THE TANK HOLE AND ALL TRENCHES SHALL BE CUT WITH A CONCRETE SAW. NOTE: PAVING TO BE CUT? BEYOND EDGES OF TANK HOLD IN ALL DIRECTIONS IN ORDER TO GIVE PROPER SUPPORT TO NEW SIAB TO AVOID SETTLING.
- 3.5 HAZARDOUS MATERIAL: SHOULD ROCK, WATER OR OTHER HAZARDOUS MATERIALS NOT SHOWN ON SOILS TEST BE ENCOUNTERED, THE OWNER/OWNER'S AGENT SHALL BE IMMEDIATELY CONTACTED FOR APPROVAL
- 3.6 PROTECTION: CONTRACTOR SHALL PROVIDE SUFFICIENT PROTECTION WITH EARTHEN BERMS AT ALL TIMES TO PROTECT TANK HOLE AND TRENCHES FROM DRAINAGE OF SURFACE WATERS. EXCAVATIONS SHALL BE PROPERLY MARKED, PROTECTED AND BARRICADED FOR SAFETY UNTIL BACKFILL IS COMPLETE AND SURFACING FINISHED.
- 3.7 SHORING: CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING REQUIREMENTS FOR SHORING AND PROVIDING SAME SHOULD SITE AND/DR SOIL CONDITIONS WARRANT SAME. 3.8 FILLING AND BACKFILLING: PLACE APPROVED FILL MATERIAL IN STRICT ACCORDANCE WITH TANK MANUFACTURER'S SPECIFICATIONS PROVIDE A 12 BED OF APPROVED BACKFILL OVER BOTTOM OF EXCAVATION PRIOR TO TAKK PLACEMENT AGACKFILL SHALE BE PLACED AND COMPACTED IN MAXIMUM 6"
- 3.9 CLEAN-UP: CLEAN UP ALL DEBRIS CAUSED BY WORK OF THIS SECTION, KEEPING PREMISES CLEAN AND NEAT AT ALL TIMES





 $\frac{\text{INFINITY ENGINEERING}}{\text{GROUP, LLC}}$ 

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> PACE PRODUCT #426 FUEL F SPECIF CEFCO :

T0.1 AS NOTE

### 4 TANK INSTALLATION

1.1 SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR, MATERIALS, SERVICES, EQUIPMENT AND RELATED APPLIANCES REQUIRED IN CONJUNCTION WITH OR PROPERL INCIDENTAL TO THE INSTALLATION OF UNDERGROUND FUEL STORAGE TANKS.

- 2.1 TANKS: SHALL BE DESIGNED AND MANUFACTURED SO AS TO BE CORROSION PROTECTED PER EPA
- 2.2 HOLD DOWN STRAPS: STRAPS AS REQUIRED BY SOILS/WATER CONDITION SHALL BE SUPPLIED BY TANK MANUFACTURER ONLY. FIELD FABRICATED UNITS ARE NOT ACCEPTABLE.

#### PART 3 - INSTALLATION

- 3.1 MANUFACTURING: REFER TO TANK MANUFACTURER'S CRITERIA AND SPECIFICATIONS FOR TANK INSTALLATION AND ADHERE TO AS REQUIRED.
- 3.2 CLEARANCES: MINIMUM CLEARANCE FOR TANKS SHALL BE AS FOLLOWS: SHOULD REQUIREMENTS OF TANK MANUFACTURER OR SOIL CONDITIONS DICTATE GREATER CLEARANCE, ADHERE TO
- 3.2.1 BOTTOM: PROVIDE MINIMUM OF 12" BEDDING MATERIAL BETWEEN BOTTOM OF EXCAVATION OR PAD AND BOTTOM OF TANK.
  3.2.2 SIDES: PROVIDE MINIMUM OF 2'0" BETWEEN TANKS AND 2\*0\* FROM SIDE/END OF TANK TO
- WALL OF EXCAVATION.

  3.2.3 TOP: PROVIDE 36" MIN. FILL MATERIAL OVER TANK PLUS OF CONCRETE TANK PAD.
- 3.3 TESTING: PRIOR TO INSTALLATION OF TANKS, TEST PER MANUFACTURER'S SPOCIFICATIONS SHALL BE PERFORMED ON TANK. ON DUAL WALL TANKS, CONSULT TANK MANUFACTURER FOR TESTING CRITERIA, BUT MINIMUM 4" HG VACUUM MUST BE HELD ON INTERSTIAL SPACE FOR AT LEAST ONE (1) HOUR.

- 3.4.1 REFER TO SITE PLAN FOR TANK PLACEMENT AND PRODUCT ROTATION
  3.4.2 PRIOR TO SETTING OF TANKS, REMOVE ALL FOREIGN DEBRIS, ROCKS, CLODS, GARBAGE,
  ETC. FROM EXCAVATION.
- ETC. FROM EXCAVATION.

  4.4 PLACE TANKS ONLY ON APPROVED FILL DO NOT SET ON CONCRETE OR WOOD.

  4.4 SLOPE TANKS 2" MINIMUM AND 4" MAXIMUM TOWARDS END WITH FILL OPENING.

  4.4 TANKS TANKS TO MINIMUM END TO MINIMUM DEPTH AS PER ABOVE AND AS SHOWN ON FUE DRAWINGS. TANKS MAY REQUIRE GREATER BURIAL DEPTH IF INSTALLED IN REMOTE POSITION TO ALLOW FOR PROPER SLOPE ON VENT LINES; VERIFY DEPTH AS REQ.
- PLUGS: ALL UNUSED PLUGS SHALL BE REMOVED. APPLY COMPATIBLE NON-HARDENING PIPE
   SEALANT TO INTERNAL BUSHING THREADS. PERMANENT METAL PLUGS SHALL BE INSTALLED AT
   ALL UNUSED O'PENINGS.
- 3.7 WET HOLE INSTALLATION: SHOULD GROUND WATER BE PRESENT IN TANK EXCAVATIONS,
- ANCHORING SHALL BE REQUIRED.

  3.7.1 WELL POINT: WATER SHALL BE KEPT AT LOWEST POSSIBLE POINT BY WELL POINT

  3.7.2 ANCHORE: PADAWAN SHALL BE CONSTRUCTED OF CONCRETE AS DETAILED IN DRAWINGS

  AND AS PER TANK MANUFACTURER'S RECOMMENDATIONS. PLACE 12\* FROM OUTSIDE
- AND AS PER TANK MANUFACTURERS RECOMMENDATIONS, PLACE 12-FROM OUTSIDE VERTICAL LINE OF TANK(S) AS SHOWN ON DRAWINGS.

  3.7.3 TIE DOWNS: STRAPPING MATERIAL SHALL BE AS PER TANK MANUFACTURER'S REQUIREMENTS

  3.7.4 TURNBUCKLES: TO REMOVE CABLE SLACK, UTILIZE 5/8' JAW TYPE TURNBUCKLES, ONE EACH
- 3.7.4 TURNBUCKLES: TO REMOVE CABLE SLACK, UTILIZE 195" JAW 1 1/14: LUMBUUALES, UME EAUS SIDE OF TANK (2 PER STRAP PLACEMENT AS PER TANK MANUFACTURERS SPECIFICATIONS.
  3.7.5 STRAP PLACEMENT AS PER TANK MANUFACTURERS SPECIFICATIONS.
  3.7.5 INSULATION TANKS SHALL BE INSULATED FROM TIEDOWNO BY PLACEMENT OF APPROVED DELECTING MATERIAL BET WELL STRAP AND TANK. MATERIAL SHALL BE PETROLEUM 3.7.7 COATING. COVER ALL NON-CAL VANIZED HARDWARE WITH TWO (2) COATS OF ASPHALT IMPREGNATED WITH WATERPROOFING PRIOR TO PLACEMENT OF BACKFILL.
- 3.8 LIFTING: TANKS SHALL BE LIFTED ONLY AS PER MANUFACTURER'S RECOMMENDATIONS, UTILIZING
- 3.9 BACKFILL PLACEMENT: ONCE TANKS ARE PROPERLY SET IN PLACE, CAREFULLY BACKFILL ENTIRE EXCAVATION, HAND SHOVELING AND TAMPING ALONG BOTTOM OF TANKIS) SO THEY ARE EVENLY SUPPORTED AROUND BOTTOM. SPECIAL ATTENTION SHALL BE PAID TO BOTTOM QUARTER POINTS ELIMINATING ANY VOIDS IN FILL AT THESE POINTS. DO NOT DROP BACKFILL FROM HIGH DISTANCE ONTO TANKS. TAMP AS REQUIRED TO ACHEVE ACCEPTABLE DENSITY.
- 3.10 BALLASTING: IF GROUND WATER IS PRESENT, TANKS MAY BE FILLED WITH BALLAST (PRODUCT TO BE STORED IN TANK OR WATER) TO AVOID SHIFTING MOVEMENT. IF WATER IS UTILIZED, COST OF WATER AND REMOVAL SHALL BE CONTRACTOR COST. DO NOT INSTALL SUBMERGIBLE PUMPS IN TANKS FILLED WITH WATER. DO NOT BALLAST TANKS ABOVE LEVEL OF BACKFILL.
- OTECTION: CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE PROTEC PROTECTION: COUNTRIC TOR SHALL BE RESPONSIBLE TOR PROVIDING ELECURITY FOR TANK EXCAVATION FROM SUFFACE WATERS WITH DAMS, BERMS, OR OTHER MEANS PEN COMPLETION OF INSTALLATION. EXCAVATION SHALL BE MARKED AT ALL TIMES WITH LIGHTED BARRICADES UNTIL INSTALLATION IS COMPLETE WATER SHALL NOT BE ALL OWDO TO ACCUMULATE IN EXCAVATION. DEWATER AS REQUIRED TO MAINTAIN EXCAVATION DRY AS

### 5 CONCRETE

### PART 1 - GENERAL

SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR, MATERIALS, SERVICES, EQUIPMENT AND APPLIANCES REQUIRED IN CONJUNCTION WITH OR PROPERLY INCIDENTAL TO CONCRETE.

# PART 2 - PRODUCTS

- 2.1 MATERIALS:
- 2.1.1 AIR ENTRAINING AGENT: ASTM C 260-60-T. "PROTEX" MANUFACTURED BY PROTEX INDUSTRIES 2.1.1 AIR ENTRAINING AGENT: ASTIM C 20-00-T, "PROTEX" MANUFACTURED BY PROTEX INDUSTRIES OR APPROVED EQUIAL.
  2.1.2 PORTLAND CEMENT: CONCERN TO ASTIM C-150 TYPE I; "TYPE II WHERE WATER SOLUBLE SULFATES ARE PRESENT.
  2.1.3 AGGREGATES: CONFORM TO ASTIM C-33.
  2.1.4 WATERS FAIAL BE CLEAN AND POTABLE.
  2.1.5 STEEL REINFORCING: CONFORM TO ASTIM A-615, GRADE 60 (EXCEPT WHERE NOTED OTHERWINES) YIELD STRENGTH 60.000 PSI.
  2.1.7 WELDED WHER FABRIC: CONFORM TO ASTIM A-615, GRADE 60 (EXCEPT WHERE NOTED OTHERWINES) YIELD STRENGTH 60.000 PSI.
  2.1.8 ACCESSORIES INCLUDING BAR SUPPORTS, CHAIRS, ETC., SHALL BE MANUFACTURED DEVICES OF THE HEIGHTS REQUIRED.
  2.1.9 FORMS: CLEAN, STRAIGHT LUMBER OR NOST USE RESISTANT PLYWOOD, KNOT HOLES, DEFORMATIONS, ETC., SHALL NOT BE ALLOWED.
  2.1.9 FORMS: CLEAN, STRAIGHT LUMBER OR NOST USE RESISTANT PLYWOOD, KNOT HOLES, DEFORMATIONS, ETC., SHALL NOT BE ALLOWED.
  2.1.1 LOST LUGBER OR AS SINICATED ON DRAWINGS.
  2.1.11 CALCIUM CHLORIDE: NOT PERMITTED ON DRAWINGS.

- 2.2 CONCRETE PROPORTIONS: CONCRETE SUPPLIER SHALL DESIGN CONCRETE MIX AND SHALL GIARANTEE CONCRETE STRENGTH ALL CONCRETE, UNLESS NOTED OTHERWISE ON DRAWINGS. OR REQUIRED OTHERWISE OF VOODES, SHALL BE DESIGNED FOR 4,000 PSI STRENGTH AT 28 DAYS WITH NOT LESS THAM 5 1/2 BAGS OF CEMENT PER CUBIC YARD OF CONCRETE, NOT MORE THAM 6 1/2 GALLONS OF WATER PER 9AG OF CEMENT AND NOT MORE THAN A 4" SLUMP, AIR CONTENTS SHALL RANGE BETWEEN 4% AND THE STRENGTH AND NOT MORE THAN A 4" SLUMP.

### 5 CONCRETE - continued

#### PART 3 - EXECUTION

- 3.1 GRADE CONTROL: ESTABLISH AND MAINTAIN LINES AND GRADES FOR CONCRETE ITEMS BY MEANS OF LINE AND GRADE STAKES AND SCREEDS.
- FORM WORK: BUILD FORMS TO CONFORM TO SHAPE, LINES AND DIMENSIONS OF CONCRETE MEMBERS. BRACE AND SECURE TO WITHSTAND PLACING OF CONCRETE AND MAINTAIN THEIR SHAPES AND POSITIONS. MAKE FORMS SUFFICIENTLY TIGHT AND SUBSTANTALLY ASSEMBLE TO PREVENT BUGINGO OR LEAVAGE. ASSEMBLE FORMS IN SUCH A MANNER TO FACILITATE THEIR REMOVAL WITHOUT DAMAGE TO CONCRETE. FORMS SHALL BE IN OR NEAR NEW CONDITION; CLEAN, SWOOTH AND WITHOUT INDENTATIONS OR BEINGS. INSTANTAIN SHAPE CONCRETE FORMS SHALL BE IN OR NEAR NEW CONDITION; CLEAN, SWOOTH AND WITHOUT INDENTATIONS OF BEINGS. SHAPE CONSIST OF FILLER STRESS INSTALLED WITH TO A TELEVATIONS OF FINISHED CONCRETE. RATE IN STATE AND SHAPE CONCRETE AND SHAPE CONCRETE. THE REPORT OF THE STRESS INSTALLED WITH TO A TELEVATION OF PINISHED CONCRETE ALONG JOINTS WITH A BIGHTLY ROUNDED EDGING TOOL.
- REINFORCEMENT: FURNISH AND INSTALL ALL REINFORCING STEEL INDICATED ON DRAWINGS.METAL REINFORCEMENT, AT THE TIME CONCRETE IS PLACED, SHALL BE FREE FROM COATINGS WHICH WILL DESTROY OR REDUCE THE BOND. METAL REINFORCEMENT SHALL BE STORED SO AS TO PREVENT FREEDROF OR AN MINIMUM OF 48 HOURS PRIOR TO PLACEMENT. ALL REINFORCEMENT SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH STANDARDS OF ACI, METAL REINFORCEMENT SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN POSITION, SPLICES IN ADJACENT BARS SHALL BE LAPPED 38 DIAMETERS AT CORNERS AND SPLICES. ADJACENT SHEETS OF WIRE MESH SHALL BE LAPPED AT LEAST "O' AND SECURELY WIRED. SUPPORT ALL REINFORCEMENT THAN SHALL BE LAPPED AT LEAST 10" AND SECURELY 44 DOWELS 12" 10" CINSERTED AT LEAST 10" INTO EXISTING CONCRETE SHALL HAVE 44 DOWELS 12" 10" CINSERTED AT LEAST 10" INTO EXISTING CONCRETE.
- 3.4 MIXING AND TRANSPORTING CONCRETE: CONCRETE SHALL BE READY MIXED AND SHALL MEET REQUIREMENTS OF ASTM C-94 FOR MIXING AND DELIVERY, FURNISH DUPLICATE DELIVERY TICKETS OF EACH TRUCK LOAD TO OWNER/OWNER AGEN LOCAL CONSTRUCTION OFFICE WHEN REQUIRED. TOKETS SHALL SPECIFY STRENGTH, SLUMP, AGGREGATE SIZES, AIR ENTRAINMENT (IF ANY) AND BRAND OF CEMENT. NOTE AMOUNT OF WATER ADDED AT JOB.

- PLACING CONCRETE:
   3.5 NOTIFICATION: THE CONTRACTOR SHALL NOTIFY THE OWNER/OWNER'S AGENT AT LEAST 48 HOURS BEFORE PLACING
   3.5 NOTIFICATION: THE CONTRACTOR SHALL NOTIFY ALL TRADES AFFECTED BY CONCRETE PLACEMENT AT LEAST 24
   HOURS BEFORE PLACING ANY CONCRETE IN ORDER THAT TRADES AFFECTED MAY INSTALL REQUIRED BLOCKING,
- HOURS BEFORE PLACING ANY CONCRETE IN ORDER THAT TRADES AFFECTED MAY INSTALL REQUIRED BLOCKING, SLEEVES, POCKETS, ETC.
  3.5.2 PROTECTION: PROTECT ALL WORK OF OTHER TRADES AS REQUIRED.
  3.5.3 WETTING: THOROUGHLY WET FORMS AND DAMPEN SAND CUSHIONS BEFORE PLACING CONCRETE.
  3.5.4 PLACING: PLACE ALL CONCRETE IN ACCORDANCE WITH ACI 514. MINIMUM CONCRETE COVER OVER REINFORCEMENT SHALL CONFORT TO ACI 315. USE HANDLING EQUIPMENT AND IMPRIDED TO INSURE A CONTINUOUS FLOW FROM MIXER TO PLACE OF DEPOSIT. SPACE, TAMP AND MECHANICALLY VIBBATE FRESHLY PLACED CONCRETE TO COMPACT THROROUGH VADE LIMINATE VIOLS. DO NOT ALLOW FREE FALL OF CONCRETE TO EXCEED 5.

- FINISHING CONCRETE:
  3.6 1.S.ABS SHALL BE A TRUE PLANE SURFACE WITH NO DEVIATION IN EXCESS OF 1 A\* WHEN TESTED WITH A 10'
  STRAIGHTEIDER AT 3' INTERVALS IN BOTH DIRECTIONS. SCREED AND FLOAT CONCRETE FOR SLAB WITH STRAIGHTEIDE
  BRING SUBFACT OR FOULIRED FINISHED LEVEL. WOOD FLOAT CONCRETE WHILE STILL GREEN TO A TRUE, EVEN BUSHE
  WITH NO COARSE ACCREGATE VISUEL AFTER SURFACE MOISTURE HAS DISAPPEARED. STEEL TROWEL SURFACE TO A
  SMOOTH, EVEN FINISH, FREE FROM BLEMISHES AND TROWEL MARKS. AFTER TROWELING, BRUSH SURFACE OF CONCRE
  WITH A BRISTLE BROOM TO RESULT IN A MEDIUM, UNIFORM, NONSULP TEXTURED SURFACE. STROKE CROSSWISE TO LE
- 3.7 CURING: UTMOST CARE SHALL BE TAKEN TO ACHIEVE A UNIFORM, PROTECTIVE CURE FOR ALL SLABS. DO NOT USE CALCIUM CHLORIDE. CURING METHODS SHALL CONFORM TO ACI STANDARD 605-99 AND ACI STANDARD 306-66.
- 3.8 REMOVAL OF FORMS: DO NOT REMOVE FORMS UNTIL CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO SUPPORT ANY
- 3.9 PATCHING: NO PATCHING SHALL OCCUR UNTIL APPROVED BY OWNER/OWNER'S AGENT
- TEMPERATURE:
  3.10.1 COLD WEATHER: WHEN MEAN DAILY TEMPERATURE OF THE ATMOSPHERE IS LESS THAN 40 DEGREES FAHRENHEIT
  MAINTIAN TEMPERATURE OF CONCRETE BETWEEN 50 AND 70 DEGREES FAHRENHEIT FOR MININUM OF 72 HOURS.
  3.10.2 HOT WEATHER: MAKE ARRANGEMENTS FOR INSTALLATION OF WINDBERSAKS, SHADING, FOG SPRAY, SPRINKLING,
  PONDING OR WET COVERING IN ADVANCE OF PLACEMENT. TAKE SUCH PROTECTIVE MEASURES AS QUICKLY AS
  CONCRETE HARDENING AND FINISHING OFFERATIONS WILL ALLOW.
- 3.11 TESTING: CONCRETE TESTS SHALL BE ORDERED AT THE DISCRETION OF THE OWNER/OWNERS AGENT OR CONSTRUCTION MANAGER. THE OWNER SHALL PAY FOR ALL CONCRETE TESTING. COMPACTION TESTS SHALL BE REQUIRED PRIOR TO PLACEMENT OF ANY CONCRETE ON GRADE. CONTACT OWNER'S ENGINEERING SERVICES FOR COMPACTION TESTS. TESTS PAID BY OWNER.
- 3.12 THICKNESS:
  3.12.1 SLAB OVER TANKS SHALL BE 8" CONCRETE SLAB WITH /14 REINFORCING BARS AT 12" O.C. EACH WAY ON 3 1/2"
- SUPPORTICHAIRS.
  3.12.2 PAVING AND SLABS SHALL BE 6" CONCRETE. REINFORCEMENT SHALL BE #4'S AT 12" O.C. EACH WAY. ON 2.1 /2" SUPPORT CHAIRS.
- PROTECTION OF ALL CONCRETE SURFACES: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL CONCRETE SURFACES AGAINST ANY DAMAGE WHAT SOEVER, INCLUDING EXCESSIVE LOADING, SHIPPING, CRACKING, STAINING, PAINT SPLATTERS, ETC. THE OWNER EXPECTS EXPOSED CONCRETE SURFACES TO BE CLEAN AND OF UNIFORM COLOR AND TEXTURE AT COMPLETION OF THE PROJECT. REPLACE ANY CONCRETE DAMAGE DURING CONSTRUCTION.
- 3.15 CLEAN-UP: CLEAN UP ALL DEBRIS CAUSED BY THE WORK OF THIS SECTION, KEEPING THE PREMISES CLEAN AND NEAT AT ALL TIMES

## 6 PIPING

### PART 1 - GENERAL

1.1 SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR, MATERIALS, SERVICES, EQUIPMENT AND RELATED APPLIANCES REQUIRED IN CONJUNCTION WITH OR INCIDENTAL TO A COMPLETE PLUMBING SYSTEM FOR A UNDERGROUND FUEL INSTALLATION.

### PART 2 - PRODUCTS

- 2.1 PRODUCT PIPINS: PRODUCT PIPING AND FITTINGS SHALL BE CO-FLEX DOUBLE WALL FRANKLIN UPP. TANK MANUFACTURE BY FRANKLIN SUMP PIRSERS AND DISPENSERS SHALL BE UTILIZED SO AS TO PROVIDE ACCESS TO ALL PRIMARY AND SECONDARY PIPE HITTINGS.
- 2.2 VENT PIPING: PIPING SHALL BE SCHEDULE 40, 2° BLACK IRON FOR GASOLINE AND DIESEL AND STAINLESS STEEL FOR DEF WITH 150 PBI FITTINGS. VENT LINE RISERS SHALL BE GALVANIZED PIPE AND EXTEND 4 FEET ABOVE ADJACENT STRUCTURE OR 12 FEET ABOVE FINISHED GRADE. VENT LINE RISERS SHALL NOT BE INSTALLED ON BUILDING UNLESS APPROVED IN WRITING.
- 2.4 BACKFILL: ALL MATERIAL SHALL COMPLY WITH SPECIFICATIONS FOR APPROVED MATERIAL AND AS PER MANUFACTURER'S SPECIFICATIONS.

- 3.1 ALL PRODUCT PIPING AND SPECIALTIES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND STATE AND LOCAL CODES.
- 3.2 THE DRAWINGS ARE DIAGRAMMATIC AND THE FINAL ARRANGEMENT OF THE WORK SHALL SUIT FIELD CONDITIONS, THE CHARACTERISTICS OF THE MATERIALS USED, AND THE INSTRUCTIONS OF THE CONSTRUCTION MANAGER. VERIFY ALL DIMENSIONS IN THE FIELD, ACCESS AND CLEARANCES MUST BE PROVIDED AND MAINTAINED FOR THE PROPER OPERATION, MAINTENANCE, SERVICE AND REPAIR OF THE WORK.
- 3.3 LOCATE, IDENTIFY AND MARK EXISTING UNDERGROUND UTILITIES IN THE AREA OF WORK BEFORE STARTING EARTHWORK OPERATIONS. IF UTILITIES ARE TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF PROTECTION DURING EARTHWORK PROCEDURES.
- 3.4 SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONSULT THE CONSTRUCTION MANAGER IMMEDIATELY FOR DIRECTIONS AS TO PROCEDURE. COOPERATE WITH THE OWNER/OWNERS AGENT AND PUBLIC AND PRIVATE UTILITY COMPANIES IN KEEPING THEIR RESPECTIVE SERVICES IN SATISFACTORY CONDITION.
- 3.5 VERTICAL RISERS FROM TANKS FOR ALL FILL PIPES, AND AUTO GAUGING ADAPTATIONS SHALL BE A 4" DIAMETER PIPE.
- 3.6 DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE CONSTRUCTION MANAGER, AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.
- 3.7 CONVEY WATER REMOVED FROM EXCAVATIONS AND RAIN WATER TO COLLECTING OR RUN-OFF AREA. DO NOT USE TRENCH EXCAVATIONS FOR SITE UTILITIES AS TEMPORARY DRAINAGE DITCHES. REMOVE ALL TRASH, DEBRIS AND FOREIGN MATERIAL FROM TENCHES PRIOR TO PLACING PIPING MATERIAL.
- 3.8 ALL PRODUCT AND VENT LINES SHALL SLOPE UP FROM TANKS A MINIMUM OF 2" IN 8" (18"/FT) WITH NO SAG OR TRAPS, LINES SHALL BE IN TRENCHES WITH A MINIMUM OF 6" OF BACKFILL MATERIAL ON ALL SIDES, HORIZONTAL AND VERTICAL.

# 6 PIPING - continued

#### PART 3 - INSTALLATION

- 3.9 SUBMERGED PUMP, FILL PIPE, AUTO GAUGING ADAPTORS AND VAPOR RECOVERY ADAPTOR SHALL BE LOCATED AT TANK OPENINGS AS SHOWN ON DRAWINGS
- 3.10 FILL PIPE SHALL HAVE OVERSPILL CONTAINMENT SYSTEM INSTALLED AS SHOWN ON DWGS.
- 3.11 FILL PIPE SHALL HAVE SUBMERGED FILL TUBE. FILL PIPE AND VAPOR RECOVERY RISERS SHALL BE CUT TO THE PROPER LENGTH SO THAT FINISHED HUB HEIGHT WILL BE WITHIN 5° ( + OR -1°) OF THE TOP OF THE MANNOLE.
- 3.12 OVERFILL PREVENTION DEVICES SHALL BE INSTALLED AS SHOWN IN DRAWINGS
- 3.13 SHUT-OFF VALVES SHALL BE INSTALLED ON THE PRODUCT LINES UNDER EACH DISPENSER AND SECURED TO THE ISLAND POMP BOX. THESE VALVES MUST BE INSTALLED WITH THE SHEAR SECTION AT THE SAME LEVEL OR A MAXIMUM OF 3/4" ABOVE OR BELOW THE TOP OF THE ISLAND.
- 3.14 AFTER ALL PIPING IS COMPLETE AND PRIOR TO BACKFILLING, ALL PIPING INCLUDING VENT LINES SHALL BE ISOLATED FROM THE TANK AND TESTED PER MANUFACTURER'S TESTING INSTRUCTIONS
- 3.16 ALL VALVES AND PRODUCT HANDLING EQUIPMENT SHALL BE AS SHOWN ON EQUIPMENT LIST. REFER TO LIST OF MATERIALS SUPPLIED BY OWNER/OWNER'S AGENT.
- 3.17 OBSERVATION WELLS WHEN REQUIRED SHALL BE INSTALLED. WELLS ARE TO BE POSITIONED IN EXCAVATION HOLE PRIOR TO PAGING SEDDING MATERIAL AND SUPPORTED TO REMAIN VERTICAL DURING BACKFILL OPERATIONS, BOTTOM OF OBSERVATION WELL(S) SHALL BE 12 MINIMUM BELOW THE BOTTOM OF TANK EXCAVATION PIT. TOP OF PIPE TO TERMINATE IN 12 DUMETER OBSERVATION BOX. SLOTTED SAMPLE WELL MATERIAL SHALL BE FUNDISHED BY CONTRACTOR.
- 3.18 CODES: THE NFPA 30 FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE, LATEST EDITION, IS BY REFERENCE MADE PART OF THIS SPECIFICATION. SAID CODE SHALL DICTATE MINIMUM ACCEPTABLE STANDARDS. CODE SHALL BE ADHERED TO VILLESS LOCAL GOVERNING AUTHORITIES DICTATE HIGHER OR MORE STRINGENT REQUIREMENTS WHICH SHALL TAKE PRECEDENCE.
- 3.19 START-UP: PRIOR TO START-UP AND CHECK-OUT OF SYSTEM, PRODUCT LINES SHALL PASS HYDROSTATIC LINE TEST. ALL SITE IMPROVEMENTS, INCLUDING PAVEMENTS AND UTILITIES, SHALL BE COMPLETED.
- 3.20 INSPECTIONS: PLUMBING INSPECTION SHALL BE PERFORMED BY CEFCO
- 3.21 CLEAN-UP: CLEAN UP ALL DEBRIS CAUSED BY THE WORK OF THIS SECTION, KEEPING THE PREMISES CLEAN AND NEAT AT ALL TIMES.

## 7 ELECTRICAL WORK

#### PART 1 - GENERAL

- PART 1- GENERAL

  SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR MATERIALS, SERVICES, EQUIPMENT AND APPLIANCES REQUIRED IN COMUNICTION WITH OR PROPERLY INCIDENTAL TO THE FURNISHING AND INSTALLATION OF COMPLETE ELECTRICAL WORK INCLUDING.

  1.11 ELECTRICAL SERVICE AND DISTRIBUTION SYSTEM, INCLUDING CONDUITS, PANELBOARDS, OUTLET BOXES, WIRINGS, WITCHES, OUTLETS, ETC.

  1.12 CONDUIT AND WIRING SYSTEM FOR INTERCOM.

  1.13 WIRINGS SYSTEM TO SERVE ALL ELECTRICAUSING DEVICES, LIGHTING FIXTURES, PUMPS,

  1.14 POWER AND CONTROL WIRING WITH FINAL CONNECTIONS TO ALL EQUIPMENT.

  1.15 ALL CONDUITS, CONNECTIONS, WIRE AND STUB OUTS FOR FASCAS ASSINS) (WHEN SHOWN), CANOPY LIGHTS,

  1.16 CONDUITS, AS MAY BE SHOWN FOR THUTURE EQUIPMENT ON DRAWNINS.

  1.17 ALL TRENCHING, EXCANTIONS AND BACKFILL AS REQ. IN CONJUNCTION WE LEC. WORK.

  1.18 INCIDENTAL TENS NOT INDICATED ON THE DRAWNINS OR NENTRODED IN THE SPECIFICATIONS, BUT WHICH ARE REQUIRED TO PROVIDE COMPLETE ECENTRICAL SYSTEM IS CONSUMED IN THE SPECIFICATIONS, BUT WHICH ARE REQUIRED TO PROVIDE COMPLETE ECUTIVACY SYSTEMS IN CONFORMANCE WITH REQUIREMENTS OF LOCAL CODES AND ORDINANCES AND THE NATIONAL ELECTRIC CODE.

- 1.2 CODES AND REGULATIONS: COMPLY WITH LATEST REQUIREMENTS OF LOCAL UTILITY COMPANY, LOCAL STATE, OSHA, ANTIONAL ELECTRICA CODES, ANTIONAL FIRE PROTECTIVE ASSOCIATION AND LOCAL ELECTRICAL INSPECT AUTHORITY. REPORT TO OWNER/OWNERS AGENT IMMEDIATELY ANY DISCREPANCIES ERTIVED INDIVIDUAL TO DESIGN OF THE REPORT OF THE RESPONSIBLE FOR COMPLIANCE TO THESE CODES AND REGULATIONS. PROVIDE INSTALLATION SUPERIOR TO CODE WHERE SO INDICATE DO INDIVINITION AND SPECIFIC HEREN.
- 1.3 PERMITS, FEES, TAXES: ARRANGE AND PAY FOR ALL NECESSARY PERMITS, FEES, AND TAXES.
- 1.4 PROGRESS OF WORK: SCHEDULE WORK WITH THAT OF OTHER TRADES AND IN RELATION TO
- 1.5 CUTTING AND REPAIRING: PROVIDE ALL CUTTING, CHANNELING, PATCHING, ETC. AS NECESSARY FOR ELECTRICAL WORK UNDER DIRECTION OF GENERAL CONTRACTOR: WORK FOUND TO BE DEFECTIVE OR INCORRECTLY INSTALLED IS TO BE CORRECTED AT THE DIRECTION OF THE OWNERFORMERS AGENT AT NO ADDITIONAL COST TO THE OWNER REPAIR WORK TO BE DONE BY SKILLED CRAFTSMEN IN TRADES INVOLVED, BUT PAID FOR BY THE ELECTRICAL SUBCONTRACTOR.

- 2.1 IDENTIFICATION OF EQUIPMENT AND WIRINS: PROVIDE IDENTIFICATION W/ DYMO TAPE OR EQUAL FOR ALL SERVICE ENTRANCE AND DISTRIBUTION EQUIPMENT INCLUDING MAIN SWITCHGEAR, PANELS, DISCONNECT SWITCHES, CONDUITS, ETC., AND FOR MOTOR FEEDERS INCLUDING SWITCHES, STATERES AND MOTORS.
- 2.2 LIGHT FIXTURES: TO BE PROVIDED BY OWNER.
- 2.3 CONDUITS: PROVIDE THE FOLLOWING TYPES OF RACEWAYS IN ACCORDANCE W/ THE SPECIFIC APPLICATION OF
- 3 CONDUITS: PROVIDE THE FOLLOWING TYPES OF RACEWAYS IN ACCORDANCE WITHE SPECIFIC APPLICATION OF LOCATION INDICATED.
  2.3. RIGID GALVANUZE: "WHERE EXPOSED TO THE WEST INTER- POR ENGLOSINE MAIN GROUNDING TO THE PROPERTY OF THE PROP

- 2.4 CONDUCTORS:
  2.4.1 FINISH AND INSTALL COLOR CODED COPPER CONDUCTORS, 600 VOLT, OF SIZES INDICATED MINIMUM SIZE #12
  EXCEPT FOR SIGNAL AND CONTROL CIRCUITS AND WHERE OTHERWISE NOTED. TYPE TW (60 DEGREES
  CENTIFICATED FOR GENERAL BRANCH CIRCUIT WRING, TYPE THIN (80° CENTIGRADE) FOR SUPPLY
  CONNECTIONS TO LIGHT FIXTHERS INSTALL PER INSEC OCLOR CODE
  2.4.2 SHIELDED CARLES FROVIDE SHIELDED CABLE FOR INTERCOM AS PER MANUFACTURERS SPECIFICATIONS
  AND AS REQUIRED ON DRAWINGS.
- SPLICES AND CONNECTIONS: PROVIDE SPLICES ONLY IN READILY ACCESSIBLE OUTLET BOXES, PROVIDE INSULATED PRESSURE CONNECTORS OR "CRIMP-ON" SLEEVES WI OVERALL NYLON INSULATORS FOR CONDUCTORS. CONNECTORS SHALL BE 3M "SCOTCHLOK. BUCHANNAN SPLICE CAPS WI INSULATED WRAP, OR IDEAL "CRIMP-SLEEVES" WITH SCAP CAP INSULATOR OR EQUAL.

- 2.6 PANELBOARDS:
  2.6.1 BRANCH CIRCUIT PANELBOARDS: PROVIDE FLUSH-MOUNT CIRCUIT BREAKER TYPE PANELBOARDS WITH
  THERMAL MAGNETIC. MOLDED CASE, GENERAL ELECTRIC TYPE NLAB OR APPROVED EQUAL, WITH PLUG-IN
  CIRCUIT BREAKERS, GENERAL ELECTRIC TYPE NLOT OR APPROVED EQUAL. PROVIDE GROUNDING TERMINAL
  BLOCK IN EACH PANELBOARD. SEE INDIVIDUAL PANEL SCHEDULE ON PORAMINGS.
  2.6.2 ACCEPTABLE SUBSTITUTES: DISTRIBUTION EQUIPMENT EQUIVALENT IN TYPE. CLASSIFICATION AND QUALITY IN
  ACCORDANCE WITH HAND STANDARDS AS MANUFACTURED BY CUTLERFAMMER, FEDERAP AQCIPIC, ITE,
  SQUARE D AND WESTINGHOUSE ARE ACCEPTABLE AS SUBSTITUTES, WHEN APPROVED IN WRITING.

### 7 ELECTRICAL WORK - continued

#### PART - 3 EXECUTION

- 3.1 GENERAL: COORDINATE TIME SCHEDULES, INSTALLATION, HOOK-UPS AND MISCELLANEOUS PROCEDURES WITH ALL OTHER TRADES THAT WILL BE INVOLVED TO EXPEDITE THE COMPLETION OF THE CONTRACT. THE ELECTRICAL SUBCONTRACT SHALL BE SOLLEY KERSPONISLE FOR THE PROPER INSTALLATION OF THE ELECTRICAL WORK.
- 3.2 CONDUITS: FURNISH AND INSTALL A COMPLETE OVERALL CONDUIT RACEWAY SYSTEM FOR ALL WIRING AND CONDUCTORS. PROVIDES SIZES AND RACEWAYS AS INDICATED ON DRAWINGS OR AS REQUIRED BY NATIONAL ELECTRICAL CODE FOR CONDUCTORS TO BE CONTAINED. ALL RACEWAYS SALL CONFORM TO THE FOLLOWING REQUIREMENTS:

  3.2.1 CONCEAL ALL CONDUIT RUNS EXCEPT WHERE EXPOSED RUNS ARE AUTHORIZED BY OWNER/OWNERS AGENT
- IN WRITING.

  3.2.2. ACTUAL CONDUIT RUNS ARE NOT GENERALLY INDICATED; CONDUITS AT TANKS SHALL NOT CROSS OVER
  TANKS. PLACE CONDUIT THROUGH EACH END OF TANK EXCAVATION AND PLACE FIELDS PARALLEL WITH AXIS

- TANKS, PLACE CONDUIT THROUGH EACH END OF TANK EXCAVATION AND PLACE FIELDS PARALLEL WITH AXIS OF TANKS.

  2.3. CLEAN AND BRY ALL RACEWAYS THOROUGHLY BEFORE CONDUCTORS ARE PULLLED IN.

  3.4. FLASHAND COUNTER FLASH CONDUITS WHICH PENETRATE THE CANOMY DECKING.

  3.2. FLASHAND COUNTER FLASH CONDUITS WHICH PENETRATE THE CANOMY DECKING.

  CONDITIONS SUCH AS TEMPERATURE HUMBITY. FIR.

  1.2. FLAVE HAZARDOUS AREAS OF THE HUMBITY CONDUITS AND CONTEST, AS INDICATED AND AS REQUIRED FOR INTERCOM SYSTEM, FUEL PRICE SIGNS, SECURITY LIGHTING AND CANOPY LIGHTING SYSTEM, AND LIGHTLE PASCIA SYSTEM WHERE APPLICABLE CONDUIT AMOUNTS AND SIGNAL SHALL BE SHOWN ON FUEL DRAWNINGS. ADDITIONAL CONDUITS AND CIRCUITS WILL BE REQUIRED FOR LIGHTED FASCIA SYSTEMS. PROVINE AS REQUIRED FOR LIGHTED FASCIA SYSTEMS. PROVINE AS REQUIRED.
- 3.3 LIGHTING: INSTALL ALL LIGHTING FIXTURES AND LAMPS AS INDICATED ON DRAWINGS. SECURELY MOUNT ALL FIXTURES, PROVIDE ALL ADDITIONAL HANGERS AND SUPPORTS AS NECESSARY TO SECURELY FASTEN AND SUPPORT FIXTURES. CLEAN ALL FIXTURES AND LAMPS UPON COMPLETION OF THE PROJECT CONTRACTOR SHALL VERHY AMOUNT AND TYPE OF ISLANDICANOPY LIGHTING SYSTEMS. SHOULD ADDITIONAL CONDUITS/CIRCCUITS BE REQUIRED, VERIFY THROUGH OVERFEIDERS AGENT AND PROVIDE AS REQUIRED.
- 3.4 SIGNS AND LIGHTED FASCIA; VERIFY FINAL LOCATIONS AND TYPE WITH OWNER. FURNISH AND INSTALL ALL CONDUITS AND WIRES WITH STUB-OUTS AS DIRECTED. MAKE FINAL CONNECTIONS AS REQUIRED.
- 3.5 OUTLETS: COORDINATE LOCATION OF ALL ELECTRICAL EQUIPMENT, INCLUDING INTERCOM, OUTLETS, SWITCHES, RECEPTACLES, CONTROLLERS, PARELBOARDS, SWITCHEAR, ETC., TO AVOID INTERFERENCE AND OBSTRUCTIONS WITH FEQUIPMENT OF INTER CRAFTS AND TRADES SO THAT ELECTRICAL EXOUPMENT WILL NOT BE BLOCKED OR MADE INACCESSIBLE OR INOPERABLE. PROVIDE WEATHERPROOF OUTLETS WHERE EXPOSED TO THE WEATHER OR TO MOISTURE.
- 3.6 ISOLATED GROUND: IT IS MANDATORY THAT FUEL EQUIPMENT REQUIRING ISOLATED GROUND SHALL BE PROVIDED WITH SAME. MINIMUM CIRCUITS REQUIRED, BUT NOT LIMITED TO, SHALL BE: INTERCOM, FUEL CONSOLE AND UNDERGROUND FUEL TAKIN KONITORING SYSTEM.
- 3.7 EXCAVATION AND BACKFILLING: ALL EXCAVATION AND BACKFILLING NECESSARY FOR THE INSTALLATION OF ELECTRICAL WORK SHALL BE INCLUDED IN THIS SECTION AND COMPLY WITH SECTION III, EARTHWORK.
- 3.8 OPERATING AND ACCEPTANCE TESTS:
  3.8.1 CONDUCT OPERATING TEST ON ENTIRE ELECTRICAL INSTALLATION, ALL SYSTEMS MUST BE COMPLETE AND IN GOOD OPERATING ORDER REFER TO START-UP AND FINAL CHECK-OUT OF SYSTEM COVERED ELSEWHERE. DO NOT START OR OPERATE COUPMENT WITHOUT SPECIFIC DIRECTIVES OF OWNER OWNERS AGENT ANY DAMAGE TO OWNERS COUPMENT DUE TO DEFECTIVE INSTALLATION AND/OR OPERATION WILL BE THE RESPONSIBILITY OF THAT SUBCONTRACTOR FOR CORRECTION, REPLACEMENT AND/OR MONETARY COMPENSATION, AS REQUIRED.
  3.8.2 MAKE INSULATION TESTS ON MAIN SERVICE EQUIPMENT AND ALL FEEDERS AND PANELBOARDS.
  3.8.3 TEST GROUND. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHINS.
  3.8.4 INSPECT ALL PANELBOARDS. ALL CONNECTIONS MUST BE TIGHT AND SECURE.
- 3.9 "AS-BUILT" DRAWINGS: FURNISH OWNER/OWNER'S AGENT WITH ONE SET OF MARKED-UP PRINTS SHOWING "AS-BUILT" INSTALLATION.
- 3.10 FINAL ACCEPTANCE: UPON COMPLETION OF WORK, PRESENT CERTIFICATE OF APPROVAL OF LOCATION OR GOVERNING INSPECTION AUTHORITY
- 3.11 CLEAN-UP: CLEAN UP ALL DEBRIS CAUSED BY WORK OF THIS SECTION, KEEPING THE PREMISES CLEAN AND NEAT AT ALL TIMES.

# 8 PAINTING

#### PART 1 - GENERAL

- SCOPE: THIS SECTION COVERS THE FURNISHING OF ALL LABOR, MATERIALS, SERVICES, EQUIPMENT AND APPLIANCES IN COMUNICATION WITH OR PROPERLY INCIDENTAL TO THE COMPLETION OF ALL PAINTING OF SURFACES COMPLETE, INCLUDING PAINTING OF THE FOLLOWING SURFACES:
   MISSELLANEOUS METAL, DOWNSPOUTS, COLUMNS, POSTS, ISLAND FORMS, VENT LINES, MANHOLE COVERS AND
- MISCELLANEOUS META ELECTRICAL CONDUITS
- 12 PAINTING DOES NOT INCLUDE:
- 1.2.3 PAINTING FASCIA SIGN FRAMES. 1.2.4 PAINTING FUEL EQUIPMENT. 1.3 COLOR SCHEDULE: COLOR OF PAINTS SHALL BE AS LISTED IN COLOR SCHEDULE.

# PART 2 - PRODUCTS

- 2.1 PAINT MANUFACTURERS AND PRODUCTS: PAINTING SYSTEM AS SPECIFIED HEREIN IS BASED ON PRODUCTS OF THE GLIDDEN COATING & RESINS COMPANY, A DIVISION OF SCM CORPORATION. HOWEVER, EQUAL PAINTING SYSTEMS OF PRATT & LAMBERT, PPO INDUSTRIES AND BENJAMIN MOORE WILL BE CONSIDERED.

- 2.2 PAINTING COATS AND PRODUCTS:
  2.2.1 FUEL ISLAND METALS AND VENT LINES: SHALL BE GLIDDEN SPREAD LUSTRE ALKYD SEMI-GLOSS PAINT #4656
  ARCHITECTURAL BROWN.
  2.2 PAINT ALL MANHOLE COVERS AND 4" SURROUNDING CONCRETE, INSIDE AND OUT, IN ACCORDANCE WITH
  STANDARD INDUSTRY COLOR COLOR EAS SHOWN:
- G.C. TO USE BLACK COLOR FOR ALL COVERS U.N.O. RE: FUEL DRAWINGS, API COLOR CODES

ETHANOL
UNLEADED REGULAR
UNLEADED PREMIUM
LEADED REGULAR W EXTENDER
UNLEADED REGULAR W EXTENDER
UNLEADED PREMIUM W EXTENDER
UNLEADED PREMIUM W EXTENDER
DIESEI WHITE W BLACK CROSS
RED W WHITE CROSS
BLUE W/ WHITE BAND
WHITE W BLACK CROSS & BLACK BAND
RED W/ WHITE CROSS & WHITE BAND
SOLID YELLOW
SOLID ORANGE

# DIESEL VAPOR RECOVERY

- 3.1 PROTECTION: COVER ENTIRE CONCRETE SURFACES. NO PAINT OR SOLVENT SHALL BE ALLOWED TO COME IN CONTACT WITH CONCRETE SURFACES. WHERE IT BECOMES NECESSARY, IN ORDER TO EXECUTE HIS OWN WORK, FOR PAINTER TO REMOVE COVERINGS, PLATES, ETC., PLACED BY OTHER CONTRACTORS IN ANY BRANCH OF THE WORK HE SHALL REPLACE SAME IN PROPER NANNER. IN SITUATIONS WHERE SAID COVERINGS, PLATES, ETC., CANNOT BE READLY REMOVED, PAINTER SHALL PROTECT THE WORK IN SOME OTHER SAITSFACTORY MANNER. OILY FAGS AND WASTE MUST BE REMOVED EVERY NIGHT. UNDER NO CIRCUMSTANCES SHALL THEY BE ALLOWED TO ACCUMULATE. PAINTING SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE WORK OF OTHER SUBCONTRACTORS AND SHALL REPAIR OR REPLACE AS NECESSARY TO THE SATISFACTION OF THE OWNER.
- 3.2 PREPARATION OF SURFACES: INSPECT ALL SURFACES TO BE PAINTED. REPORT ANY DISCREPANCIES TO THE CONTRACTOR PRIOR TO START OF WORK. STARTING OF PAINT APPLICATION, THE DISCHEFAVACES I UT HE SURFACES AS SULTIABLE FOR THE RECEPTION OF PAINT APPLICATION. ALL SURFACES SHALL BE CLEAN AND DRY BETWEEN SO, AND SO DEGREES TARRESHELT AT TIME OF PAINT APPLICATION. ALL SURFACES SHALL BE CLEAN AND DRY, GREASE AND FOREIGN MATTER. CLEAN GALVANIZED METAL ACCORDING TO SSPC-SP 1-63 SOLVENT CLEANING, PROTE ADJACENT AND FINISHED WORK FROM PAINT. 3.3 APPLICATION OF PAINT: DO NOT THIN, ADULTERATE OR CHANGE MATERIALS EXCEPT AS RECOMMENDED BY MANUFACTURER: EMPLOY ONLY SKILLED MECHANICS FOR WORK, ALL PAINTING SHALL BE BRUSHED, SPRAYED OR ROLLED EVENLY FOR THOROUGH COATS METHOUT RUNS, SKAS OR OTHER BELMISHES, ALLOW FACH COAT TO DRY BEFORE APPLYING SUBSEQUENT COATS. ALL SURFACES TO RECEIVE A MINIMUM OF 2 COATS AS NECESSARY TO ACHIEVE AN APPROVED FINISH. APPLICATION OF PAINT, ETC., SHALLE BE IN STRICT COMPLIANCE WITH MANUFACTURER'S
- 3.4 CLEAN-UP: CLEAN UP ALL DEBRIS CAUSED BY THE WORK OF THIS SECTION, KEEPING THE PREMISES CLEAN AND NEAT AT ALL TIMES.





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T0.2 AS NOTED

## TANK, PIPING & INSTALLATION NOTES:

## GENERAL NOTES:

- 1. ALL NEW PETROLEUM EQUIPMENT, MATERIALS, AND ACCESSORIES SHALL BE DEP APPROVED. ALL PETROLEUM EQUIPMENT, MAI IENIALS, AND ACCESSORIES SHALL BE DEP APPROVED. ALL PETROLEUM EQUIPMENT, MATERIALS, AND ACCESSORIES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE MANUFACTURER'S INSTRUCTIONS.
- 2. ALL TANKS AND PIPING INSTALLATION WORK IS TO BE PERFORMED BY A STATE REGISTERED POLLUTANT STORAGE SPECIALTY CONTRACTOR.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICANT STATE, COUNTY AND MUNICIPAL BUILDING CODE REQUIREMENT AND ORDINANCES; AND THE FOLLOWING REFERENCE STANDARDS:

NATIONAL FIRE PROTECTION ASSOCIATION:
30 FLAMMABLE AND COMBUSTIBLE LIQUID CODE
30A AUTOMOTIVE SERVICE STATION CODE
UNDERGROUND LEAKAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS
70 NATIONAL ELECTRIC CODE

AMERICAN PETROLEUM INSTITUTE:
1615 INSTALLATION OF UNDERGROUND PETROLEUM STORAGE SYSTEMS
1604 RECOMMENDED PRACTICE FOR ABANDONMENT OR REMOVAL OF USED
U.G. STORAGE TANKS

PETROLEUM EQUIPMENT INSTITUTE:
RP1DO RECOMMENDED PRACTICES FOR INSTALLATION OF U.G LIQUID
STORAGE TANKS

# OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION: CONSTRUCTION SAFETY AND HEALTH REGULATIONS SUBPART P. 1902.50 THRU 1926.653

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING REQUIRED NOTICE(S) AND SCHEDULING APPLICABLE CITY. COUNTY AND/OR STATE INSPECTIONS AS REQUIRED FOR PERMIT CLOSE OUT(S).

## GENERAL PIPING NOTES: 1. GENERAL:

# PIPING:

- PRIMARY PRODUCT PIPING TO UTILIZE UPP PIPING AND PIPING LENGTHS SHALL USE 33 FT. STICKS BETWEEN DISPENSER POINTS. THESE WILL HAVE TO BE SHORTENED. AS NEEDED.
- 1.2. STEEL PIPE TO BE SCHEDULE 40 GALVANIZED. ALL PIPING AND SEALANT TO BE ALCOHOL COMPATIBLE.

### 2. PIPE JOINT SEAL:

2.1. GASOILA SOFT SET SHALL BE USED ON ALL STEEL PIPE FITTINGS AND THREADED METAL CONNECTIONS.

3.1. ALL TANKS VENTS SHALL BE S/W F/S PIPING. RISERS WILL BE SCHEDULED 40 GALVANIZED STEEL. CANOPY MANUFACTURER SUPPLIES IN-COLUMN PORT10N OF VENT-RISER.

#### 4. BACKFILL:

- 4.1. BACKFILL OVER PRODUCT PIPING SHALL BE CLEAN. COMPACTED PEA GRAVEL. PIPING SHALL BE LAID AND CONTINUOUSLY SUPPORTED ON 6" OF COMPACTED PEA GRAVEL.
- 4.2. NO PIPING SHALL BE SUPPORTED BY BLOCKS. PLANKS OR OTHER DEBRIS.
- 4.3. PIPING SHALL BE SEPARATED BY AT LEAST THE DIAMETER OF THE LARGER PIPE.

- HPE: ALL PIPING MUST SLOPE TO UNDERGROUND TANKS. VENT AND VAPOR RECOVERY PIPING MUST SLOPE AT A MINIMUM RATE OF 1/8· PER FOOT
- MINIMUM 18" BEND RADIUS FOR CONDUIT. MINIMUM 5' RADIUS FOR PRODUCT PIPING.

# ELECTRICAL NOTES:

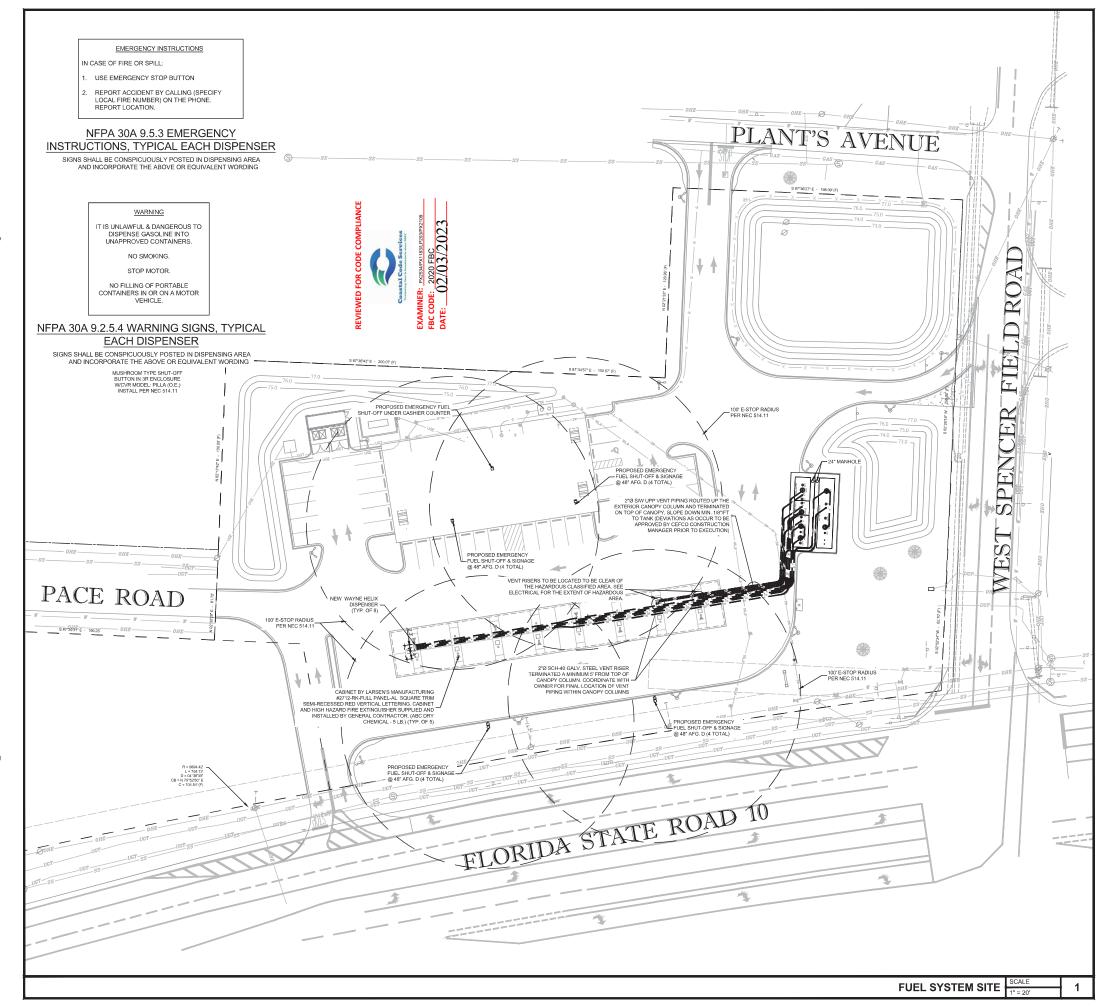
- N.E.C. ARTICLE 500 & 514 CONDITIONS FOR HAZARDOUS AREAS AND FUEL DISPENSING FACILITIES APPLY.
- PROVIDE EXPLOSION PROOF SEALS-OFFS IN ACCORDANCE WITH ARTICLES 500, 501, AND 514 (CLASS 1, DIVISION 1 & 2) OF THE 2008 NATIONAL ELECTRICAL CODE TYPICAL FOR ALL CONDUITS IN CLASS 1 LOCATIONS, INCLUDING LOW VOLTAGE CONDUITS.
- 3. ALL CONDUITS IN CLASS 1 LOCATIONS SHALL BE GROUNDED AS PER NEC. 250.100 & 501.30. MATERIALS:

# MATERIAL

- UPP SYSTEM SOLUTION PIPING IS TO PROVIDE SUFFICIENT PIPING AND FITTINGS
   TO COMPLETE ANY TYPICAL INSTALLATION TO THE INSTALLER BY THE OWNER.
   UNUSED MATERIALS SHALL BE INVENTORIED AND RETURNED CEFCO
   REPRESENTATIVE.
- 2. THERE ARE ONE TYPES OF PIPING:
- 2.1. COAXIAL, SECONDARILY CONTAINED DIRECT BURIAL FLEXIBLE PIPING "UPP UL971" WITH A 50 MM (27) LD. PRIMARY AND A 63 MM (2/5) O.D. SECONDARY. THIS PIPING IS TYPICALLY DELUVERED IN ROUND ROLLS.
- 3. INSTALLATION REQUIREMENTS ARE SIMILAR FOR BOTH THE COAXIAL AND THE SINGLE THICKNESS PIPING.
- 4. FITTINGS FOR ELBOWS, TEES, NPT ADAPTORS AND BULKHEAD PENETRATION WITH UPP ARE PROPRIETARY, AND NO SUBSTITUTIONS ARE PERMITTED.
- 5. TOOLS FOR HANDLING AND INSTALLATION ARE PROPRIETARY FOR UPP PIPING AND SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE INSTALLER.
- 6. DISPENSER SUMPS ARE POLYETHYLENE PRODUCTS OF UPP, WHILE THE TANK SUMP ARE OF FIBERGLASS CONSTRUCTION. FOR BONDING TO THE SECONDARY CONTAINMENT RING OF THE UNDERGROUND TANK. THIS SUMP IS PRESENTLY NOT A UPP PRODUCT.

# HANDLING:

- HANDLE UPP PIPING AND FITTINGS WITH CARE, AS WITH ANY PETROLEUM PIPING, DO NOT ACCEPT PIPING FOR USE WHERE SURFACE DAMAGE, CUTS, GOUGES, EXCEEDS ONE TENTHLUS% OF THE MATERIAL THICKNESS.
- 2. USE NO METALLIC SLINGS TO LIP UPP PIPING.
- UPP PIPING. WHILE FLEXIBLE. MAY CONTAIN MORE STORED ENERGY THAN COMPARABLE PRODUCTS SHIPPED IN ROLLS, USE ADDITIONAL PERSONNEL AND SLIP KNOT ROPE AROUND BUNDLE WITHIN RELEASING PACKING BANDS.
- 4. USE ONLY UPP CUTTERS AND SHAVERS FOR PIPE PREPARATIONS.
- 5. THE ELECTOR FUSION WELDER IS NOT EXPLOSION PROOF, DO NOT POSITION THE UNIT IN ANY CLASSIFIED HAZARDOUS AREAS OR WHERE AN EXPLOSIVE ATMOSPHERE MAY EXIST.
- 6. UPP SYSTEM SOLUTION PIPING USES TECHNOLOGY WHICH MAY BE UNFAMILIAR TO THE INSTALLER, DO NOT ATTEMPT INSTALLATION PRIOR TO TRAINING BY AUTHORIZED PETROTECNIK PERSONNEL.



SCALE: 1" = 30"

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Tampa, Florida 33602

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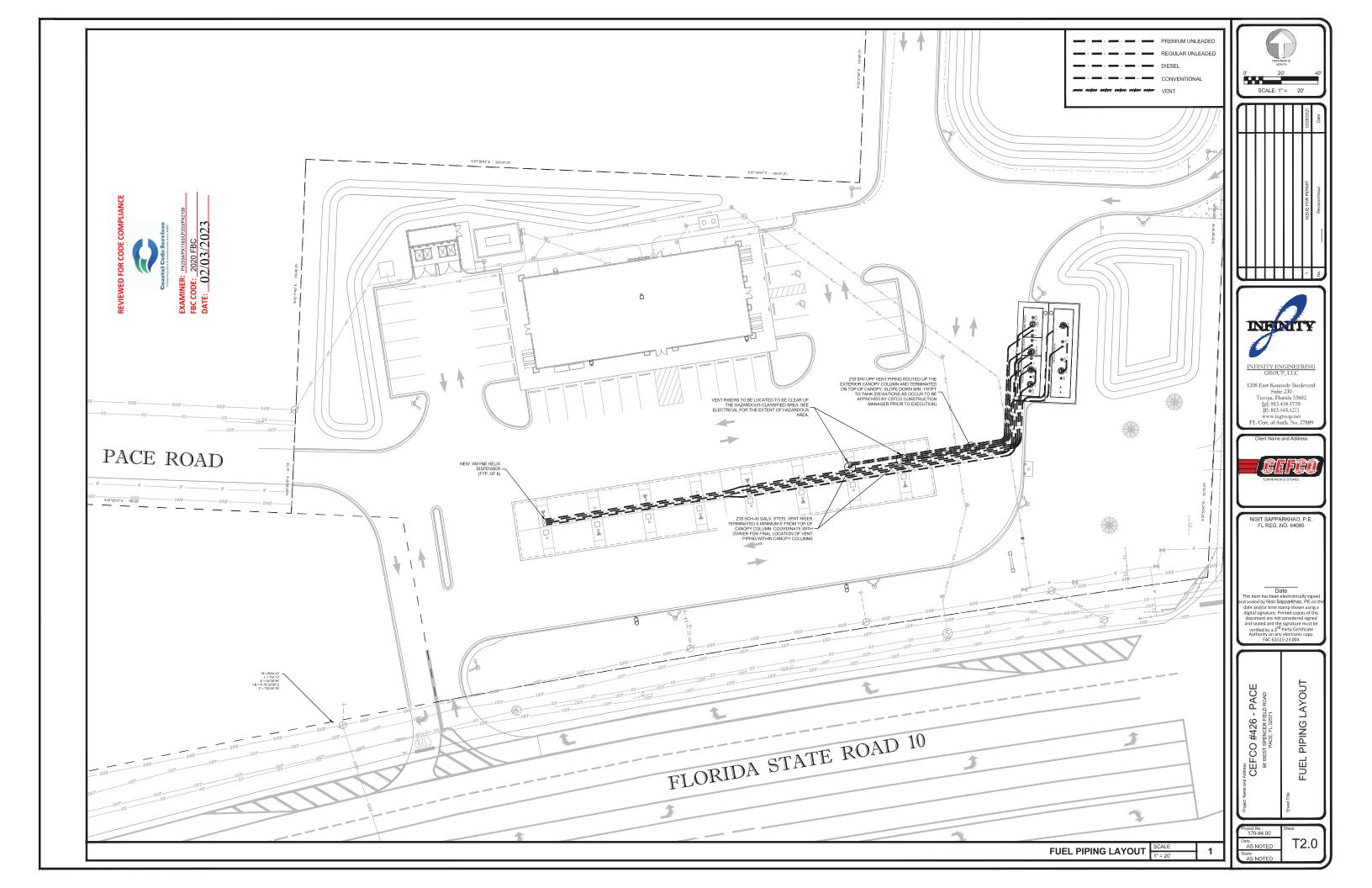
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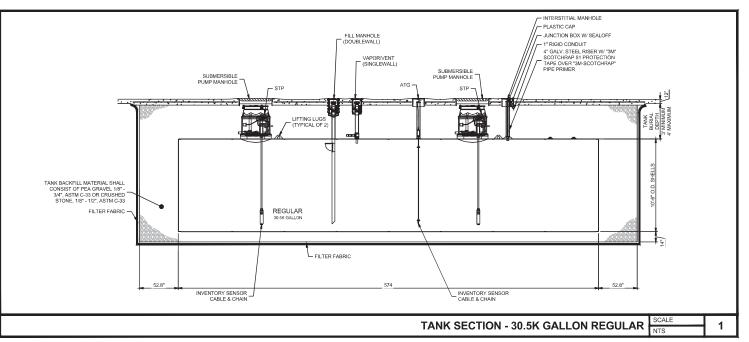
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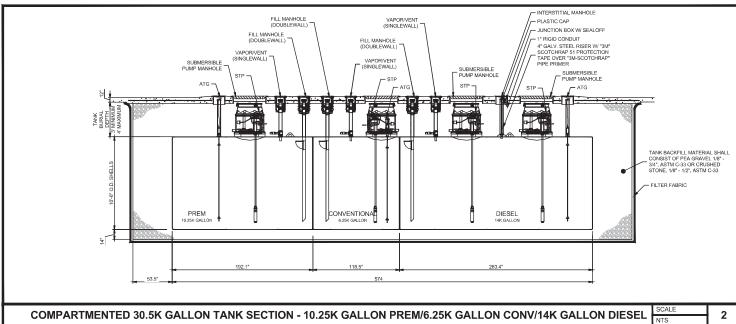
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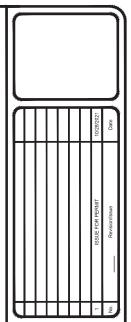


TANK INSTALLATION

- 1.0 CONTRACTOR SHALL COORDINATE DELIVERY DATE OF TANKS WITH THE MANUFACTURER, CEFCO CONSTRUCTION MANAGER, AND THE PROJECT SCHEDULE.
- 2.0 TANK MANUFACTURER'S INSTALLATION PROCEDURE SHALL BE FOLLOWED, AND THE INSTALLATION CHECKLIST SHALL BE INITIALED/SIGNED BY CONTRACTOR AND CEFCO CONSTRUCTION MANAGER, AS APPROPRIATE, AS EACH STEP IS COMPLETED.
- 3.0 AN UNDERGROUND EQUIPMENT INSTALLATION AFFIDAVIT SHALL BE FILLED OUT BY CONTRACTOR 7.0 AND SUBMITTED TO THE CEFCO CONSTRUCTION MANAGER IN BOUND PROJECT CLOSE OUT FOLDER
- 4.0 LIFTING EQUIPMENT SHALL BE ADEQUATE TO HANDLE TANK WITHOUT DRAGGING. USE ALL LIFTING LUGS AND GUIDELINES WHEN LIFTING TANKS, REST TANKS ON SMOOTH AND DEBRIS FREE GROUND. CHOCK TANKS TO PREVENT ROLLING AND TIE THEM DOWN IF HIGH WINDS ARE EXPECTED. USE MINIMUM 1/2" DIAMETER NYLON OR HEMP ROPE OVER TANK AND TIE TO WOODEN STAKES OF ADEQUATE SIZE TO PREVENT TANKS FROM BEING MOVED BY HIGH WINDS. DO NOT DRAG, ROLL, OR IMPACT TANKS.
- 5.0 TANK SHALL BE PLACED ACCORDING TO THE TANK MANUFACTURER'S INSTALLATION MANUAL AND THE CEFCO TANK DRAWINGS. PLEASE NOTE THAT IF THE SOLIL IS UNSTABLE, THE STANDARDS MAY BE INCREASED. DISTANCE BETWEEN TANKS SHALL BE GOVERNED BY MANUFACTURER'S OR STATE AND LOCAL REQUIREMENTS WHICHEVER IS GREATER.
- 5.1 TANKS SHALL BE CONTINUOUSLY VENTED. BY CONTRACTOR, AT ALL TIMES THROUGHOUT CONSTRUCTION.
- 6.0 PRE-INSTALLATION TANK TESTING.
- 6.1 CEFCO CONSTRUCTION MANAGER SHALL WITNESS PRE-INSTALLATION TANK TESTING.
- 6.2 CONTRACTOR SHALL NOTIFY CEFCO CONSTRUCTION MANAGER TWO WORKING DAYS PRIOR TO TESTING AND TANK INSTALLATION.
- 6.3 TANKS ARE TO BE SET LEVEL AND BACKFILLED TO TOP OF TANK THE SAME DAY AS TESTING.
- 6.4 CONTRACTOR TO PROVIDE TANK TEST MANIFOLD PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS
- A. CONTRACTOR TO FURNISH AIR PRESSURE GAUGE WITH A MAXIMUM FULL SCALE READING OF 15 PSIG WITH 1/4 OR 1/10 PSIG INCREMENTS. PRESSURE GAUGE TO BE IN GOOD REPAIR AND HAVE A CALIBRATION DATE WITHIN 30 DAYS OF USE. PRESSURE GAUGES DAMAGED OR OUT OF CALIBRATION WILL NOT BE PERMITTED.
- B. THE PRESSURE RELIEF VALVE ON THE TEST MANIFOLD MUST BERATED AT 6 PSIG TO REDUCE THE RISK OF OVER PRESSURIZING THE TANK
- 6.5 TESTING THE PRIMARY (INTERNAL) TANK
- A. CONNECT THE TEST MANIFOLD TO AN AVAILABLE SERVICE FITTING. CHECK EACH REMAINING SERVICE FITTING TO ENSURE TANK SERVICE FITTINGS ARE PROPERLY SEATED, ADEQUATELY DOPED, PLUGGED, AND TIGHTENED.
- PRESSURIZE THE PRIMARY TANK TO 5 PSIG. ADD OR REMOVE AIR AS NECESSARY AND ALLOW THE PRESSURE TO STABILIZE. CLOSE THE VALVE ON THE TEST MANIFOLD AIR SUPPLY LINE,
- C. MONITOR THE PRESSURE FOR 1 HOUR. SOAP TEST (USING HIGH FOAMING TEST SOLUTION SEAM TEST SOLUTION MANUFACTURED BY WITHIN PRODUCTS, CHARLOTTE, NC, AMWAY LOC SOAP, OR APPROVED EQUAL) ALL SERVICE FITTING, MANWAYS AND PLUGS. WATCH FOR ACTIVE AIR BUBBLES WHICH INDICATE A LEAK.
- D. CONNECT THE TEST MANIFOLD TO AN AVAILABLE SERVICE FITTING. CHECK EACH REMAINING SERVICE FITTING TO ENSURE TANK SERVICE FITTINGS ARE PROPERLY SEATED, ADEQUATELY DOPED, PLUGGED, AND TIGHTENED.
- 6.6 THE SECONDARY (EXTERNAL) TANK
- A. MAINTAIN PRESSURE ON THE PRIMARY TANK, PLUG ALL OPEN FITTINGS ON THE SECONDARY TANK.
- B. FREE THE HOSE FROM THE SERVICE TINTING BY CUTTING THE NYLON SAFETY TIE.
- C. INSERT THE HOSE INTO THE QUICK DISCONNECT CHECK VALVE. THIS WILL ALLOW AIR TO TRANSFER FROM THE PRIMARY TO THE SECONDARY
- D. PRESSURIZE THE 5 PSIG. ADD OR REMOVE AIR VIA THE SUPPLY VALVE AS NEEDED AND ALLOW PRESSURE TO STABILIZE. CLOSE THE VALVE ON THE TEST MANIFOLD TO THE AIR SUPPLY LINE. DO NOT USE AN AIR COMPRESSOR TO PRESSURIZE THE SECONDARY TANK.
- E. MONITOR THE PRESSURE FOR 1 HOUR, SOAP THE ENTIRE EXTERIOR OF THE TANK AND WATCH FOR ACTIVE AIR BUBBLES WHICH INDICATE A

### INSTALLATION

- 7.1 INSTALLING CONTRACTOR SHALL BE CERTIFIED BY TANK MANUFACTURER ON PROPER TANK INSTALLATION PROCEDURES
- 7.2 BEDDING AND BACKFILL MATERIAL SHALL BE WELL WASHED AND FREE OF ICE AND SNOW AND MEET ASTM D-448. ASTM C-33 AND AASHTO M-43 FOR QUALITY AND SOUNDNESS. CONTRACTOR SHALL PROVIDE SIEVE ANALYSIS ACCEPTABLE TO CEFCO CONSTRUCTION MANAGER. THE TANK WARRANTY IS AUTOMATICALLY VOIDED IF MATERIAL OTHER THAN THE FOLLOWING APPROVED BED AND BACKFILL MATERIALS ARE EMPLOYED WITHOUT PRIOR WRITTEN APPROVAL FROM THE TANK MANUFACTURER.
- 7.2.1 PEA GRAVEL WITH PARTICLE SIZE NOT LESS THAN 1/8" OR MORE THAN 3/4" DIAMETER WITH NO MORE THAN 5% PASSING A NO.8 SIEVE.
- 7.2.2 CRUSHED STONE WITH PARTICLE SIZE NOT LESS THAN 1/8" OR MORE THAN 1/2" DIAMETER WITH NO MORE THAN 5% PASSING A NO. 8 SIEVE.
- 7.3 STANDARD INSTALLATION: PROCEDURE DRY HOLE:
- 7.3.1 PLACE MINIMUM 12" BEDDING MATERIAL SMOOTH AND LEVEL OVER EXCAVATION FLOOR, TANK TO BE SET LEVEL.
- 7.3.2 SET TANKS LEVEL ON BEDDING MATERIAL. USE ALL LIFTING LUGS PROVIDED AND GUIDE ROPES AT EACH TANK END. 00 NOT SET TANKS DIRECTLY ON DEADMEN OR CONCRETE SLAB IF USED. MEASURE TANK DIAMETER.
- 7.3.3 PLACE 12" BACKFILL MATERIAL EVENLY AROUND TANKS. USE WOODEN DOWEL PROBE TO WORK BACKFILL COMPLETELY UNDER TANK BETWEEN RIBS AND UNDER ENDCAPS. USE EXTREME CARE IN BACKFILLING BENEATH TANK BOTTOM, BETWEEN RIBS AND UNDER END CAPS TO PROVIDE A SOLID SUPPORT FREE OF VOIDS. IT IS EXTREMELY IMPORTANT THAT CARE BE EXERCISED IN THE BACKFILLING OF THE TANKS UP TO TWO FEET IN DEPTH FROM THE TANK BOTTOM AS TANK FAILURES HAVE RESULTED WHERE VOIDS WERE EVIDENT UNDER THE TANKS. GOOD COMPACTION AND SUPPORT FOR THE TANK CAN BE OBTAINED BY SHAPING THE GRAVEL WITH A SHOVEL ALL AROUND THE PERIMETER OF EACH TANK.
- $7.3.4~\text{RPPEAT}~7.3.3~\text{FOR}~\text{NEXT}~12\text{"}, \text{PROBING}~\text{TO}~\text{FILL}~\text{ALL}~\text{VOIDS}~\text{AT}~\text{THE}~\text{CRITICAL}~5~\text{TO}~7~\text{O'CLOCK}~\text{SUPPORT}~\text{AREAS}~\text{OF}~\text{THE}~\text{TANK}~\text{CRITICAL}~\text{SUPPORT}~\text{CRITICAL}~\text{$
- 7.3.5 FREELY ADD ADDITIONAL BACKFILL TO TANK TOPS, (ADDITIONAL PROBING NOT REQUIRED.) MEASURE TANK DIAMETER.
- 7.4 INSTALLATION PROCEDURE WET HOLE
- 7.4.1 THE FOLLOWING PROCEDURE SHALL APPLY WHERE HIGH WATER TABLE IS EVIDENT OR WHERE A FUTURE WATER CONDITION IS ANTICIPATED.
- 7.4.2 WATER LEVEL SHOULD BE MAINTAINED AT THE LOWEST PRACTICAL LEVEL DURING INSTALLATION. A SUMP AND PUMP OR A SYSTEM OF WELL POINTS AND PUMPS IS THE RECOMMENDED METHOD TO MINIMIZE WATER LEVEL IN THE HOLE. IT IS RECOMMENDED THAT AN EXPERIENCED DEWATERING CONTRACTOR BE EMPLOYED TO DEWATER THE EXCAVATION. THE TYPE OF SYSTEM REQUIRED WILL DEPEND ON THE WATER FLOW RATE INTO THE HOLE. THE HOLE BOTTOM SHOULD BE LEVEL AND FREE OF ROCKS AND DEBRIS.
- 7.4.3 PROVIDE A MINIMUM 12" THICK PEA GRAVEL BED AT BOTTOM OF HALE. PEA GRAVEL MUST BE GRADED SMOOTH, COMPACTED AND LEVEL TO RECEIVE TANKS. CAREFULLY PLACE TANKS ON PEA GRAVEL BED. TANK IS TO BE SET LEVEL.
- 7.4.4 BALLASTING:
- 7.4.4.1 IF WATER IS REQUIRED TO SINK TANKS IN HIGH WATER TABLE CONDITION, THE MANUFACTURER'S TANK INSTALLATION INSTRUCTIONS MUST
- 7.4.4.3 BALLAST TANKS USING POTABLE WATER. REMOVE WATER ONLY AFTER TANK SLAB IS CURED. CONSULT CEFCO CONSTRUCTION MANAGER FOR PROPER DISPOSAL OF WATER REMOVED FROM TANK.
- 7.4.5 WHILE LEVELING TANKS, INSURE THAT A MINIMUM DISTANCE OF 2-0" FOR 8" DIAMETER TANKS AND 3"-0" FOR 10" DIA. TANKS IS MAINTAINED BETWEEN TANKS. WHEN ANCHORING, PLACE STRAPS OVER TANKS AND FOLLOW PROCEDURE AS OUTLINED HEREINAFTER.
- 7.4.6 TANKS MUST BE ANCHORED WITH DEADMAN ON ALL WET HOLE INSTALLATIONS. ANCHORING SHALL BE DONE IN ACCORDANCE WITH THE TANK MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 7.4.7 USE PERFORMED FIBERGLASS HOLD DOWN STRAPS FURNISHED BY TANK FABRICATOR ON TOP OF DESIGNATED RIBS. DO NOT USE STRAPS OR CABLES AGAINST THE TANK SHELL BETWEEN RIBS. ATTACH HOLD DOWN STRAP FO ANCHOR POINTS WITH 1/2" DIA. 6X19 PLOW STEEL WIRE ROPE LOOPS USING AT LEAST THREE CABLE CLAMPS. ALL STRAPS SHOULD BE TIGHTENED WITH TURNBUCKLES TO GIVE SNUG FIT OF STRAPS TO TANK RIB. TURNBUCKLE DIA. TO BE 11/2" HOOK TYPE OR 3/4" TYPE. ONE TANK AT A TIME SHALL BE SET ON PEA GRAVEL AND SECURELY ANCHORED AND TIGHTENED WITH THE ANCHORING STRAPS.





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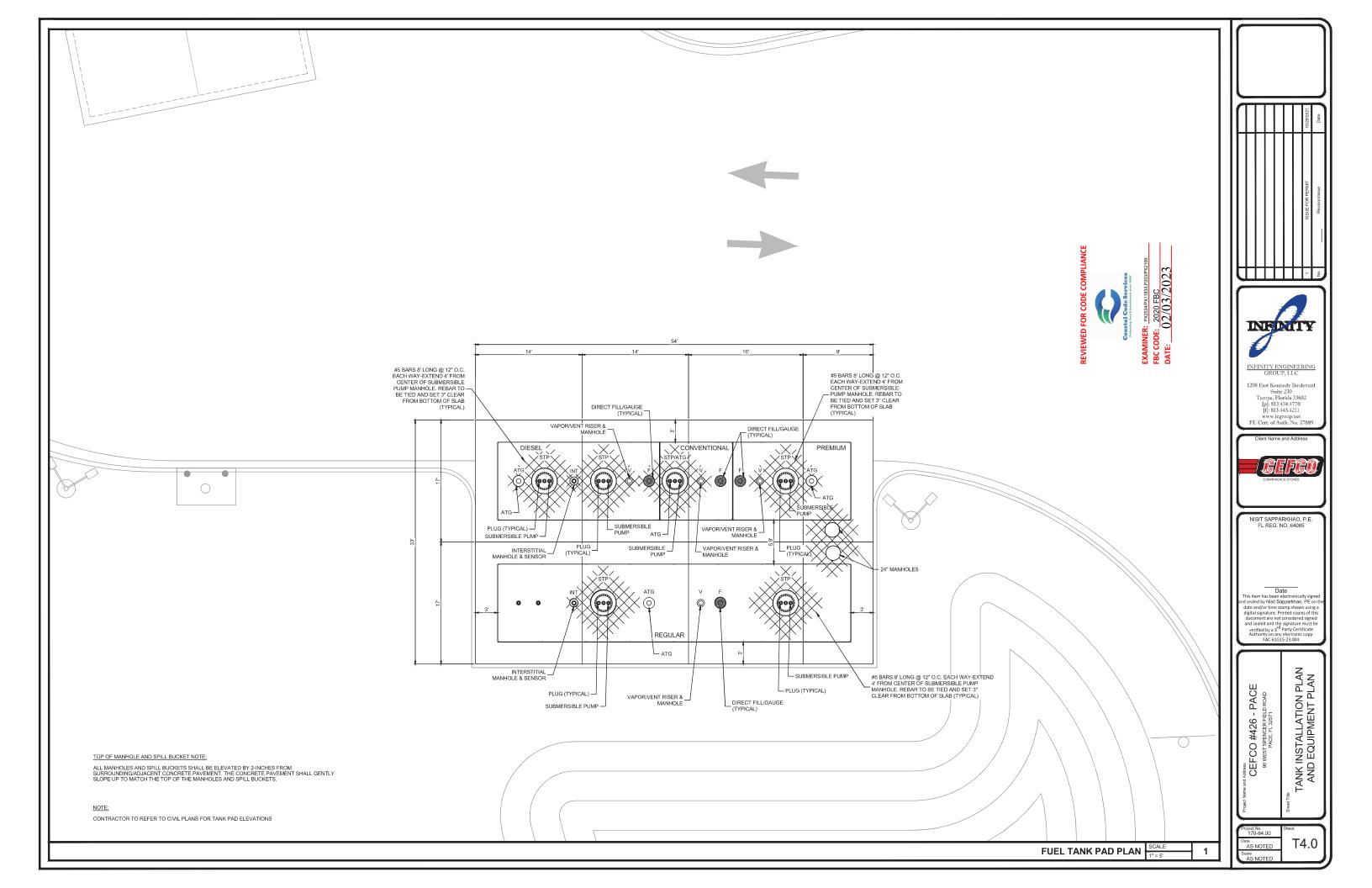
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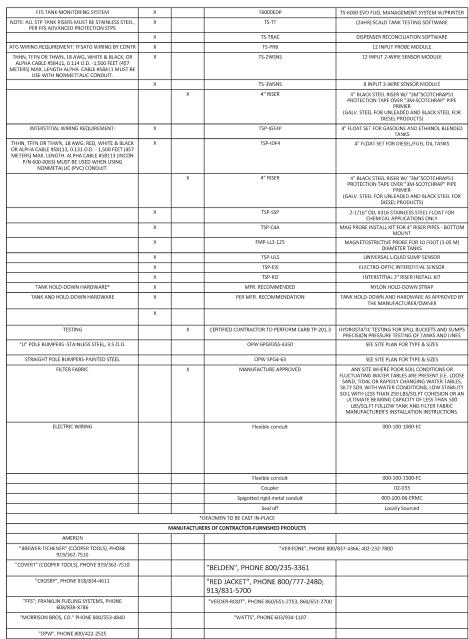
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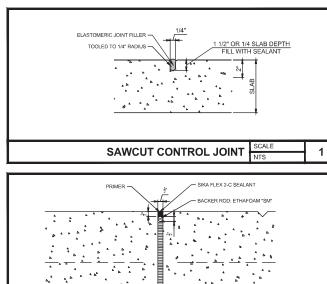


EQUIPMENT	FURNISHED	BY: (TO	FITTINGS AND EQUIPMENT LIST - AUTO & TRUCK FUELIN  MODEL No.	DESCRIPTION
SQUITIFERE	BE INSTA	ALLED BY ACTOR)	WOOL NO.	DESCRIPTION
DISPENSER PRODUCT CONTROL SYSTEM	X		VERIFONE COMMANDER	RUBY2/COMM TRIPLE NO UPS/DISPENSER BOARD
	х		GIBARCO D-BOX	TRUCK SIDE DISPENSERS
V169-RUBY2/COM-TTERM	X		Comdata SmartDESQ  COMMAND SITE CONTROLLER, STANDARD, 1PCB, 1HDD,	Include NexGen detail M149-111-00-NAA
V169-RUBY2/CUM-TTERM			1PWR	
OC-DISPENSER BOARD	X X		FORECOURT FUEL CONTROLLER, FCI KIT, (CLGB) SPP CURRENT LOOP	M149-901-01-R 29721-01
OC DISTERS FOR TO	X		KIT, RS485 8-CHANNEL INTERFACE BOARD SFC	29376-01
	х		RUBY 2	M169-000-01-NAA
	х		CUSTOMER DISPLAY, TOPAZ 2X20	P050-01-101-R
	X		MEDIA DRAWER, PETRO SYSTEMS PRINTER, RECEIPT, THERMAL, RP-310	P050-01-200 P040-02-020
	×		ROUTER, CYBERA ZONE ROUTER (6462)	P039-09-001-NAA
	х		CABLE, SHLD RS232, RJ45-RJ45, GEM II	13836-01
	х		ADAPTER, NULL MODEM, DB25M-RJ45	13581-01
	X X		CABLE, ETHERNET SAPPHIRE 7.62M  CABLE, ETHERNET SAPPHIRE 15.2M	22278-25 22278-50
	X		CABLE, ETHERNET SAPPHIRE 15.2M  CABLE, ETHERNET SAPPHIRE 100'	22278-50
	X		CABLE, SHLD RS232, RJ45-RJ45, 100FT	13836-100
	Х		Onceac UPS - Conditioned 250VA	PO40-07-050
	Х		MX 915 PCI 3. X, 4.3"	M132-409-01-R
	×		MX9XX - PWR, AUD, BERG W/TAILGATE, ETH, USB OTG, COM2	132-602-00-R
	х		PS+FERRITE, 120VAC/12VDC/1A, 5.5X2.1MM/C-, USA	PWR132-003-01-A
	х		STAND, MX915, LOW CONTOUR, LOCKING, ANTI-SKIMMING, DATA PORT BLOCKING	MET132-019-01-A
	х		STAND, MX915/925 LOW CONTOUR	MET132-009-01-A
	х		DATALOGIC GRYPHON GD440030 2D IMAGER	GD440030-BC-B
	×		DATALOGIC CAB-327 SH3630 RUBY VERIFONE SERIAL CABLE, 8	90A051939
	х		20 STATION INTERCOM W/ COUNT BEING X 2	20 STATION (78-6911-4799-1) FOR AUTO AND 8 STATION (79-6911-4796-7) FOR TRUCK
DISPENSERS				STATION (13-0311-4/30-/) FOR TRUCK
	х		DRESSER WAYNE HELIX SERIES - 3+2 PRODUCT	FUSION GATEWAY (IX) PRODUCT NO. 000-920895
			VERSION 4 FLINT LOCS SHOULD BE PRESENT	BOTH MANUFACTURERS PETROCLEAR ETHANOL 40510AAD & FOR DIESEL IT WILL
			OR	BE THE PETROCLEAR 40530WAD
	х		DRESSER WAYNE OVATION 2 SERIES - HI SPEED W/ALPHA	
			NUMERIC (NO FLINT LOC'S W/THESE) (PETROCLEAR	FUSION GATEWAY (IX) PRODUCT NO. 000-920895
			4093WAD)	
DISPENSER CONTAINMENT BOX, VALVES & FITTINGS	X		UPP SUMP FOR ENCORE OR HELIX UPP ENTRY FITTING FOR ENCORE	POLY DISPENSER SUMP
DISPENSER HOSE, NOZZLE & FITTINGS	X		006310 SWIVEL/STB COMBO 3/4" AND 159504 N, 10S	AUTO MPD
			UNL W CP UL HUSKY 3/4" FOR UNLEADED AND 159503 N, 10S LDD W/CP UL HUSKY 3/4" DSL NOZZLE FOR DIESEL	
	×		HUSKY 005969 SWIVEL/STB 1" COMBO ASSEMBLY AND HUSKY 173310N, 8 W/CP PHG NL HUSKY 1" DSL NOZZLE	HI FLOW
			AND UPDATE THE CURB HOSE TO THE FLEXING HOSE, FLHFR301000BLK, ASSY HW 1" X 10' BLK, FIXED ENDS	
TANKS	х		WATCO TANKS INC. 10' DIA. 30.5K GALLON REGULAR	DOUBLE WALL STEEL TANKS - SEE SITE PLAN FOR TANK
	x		AND	CONFIGURATION
	х		WATCO TANKS INC. 10' DIA. 30.5K GALLON THREE	
			COMP. W/10.25K GALLON PREMIUM, 14K GALLON DIESEL, 6.25K GALLON CONVENTIONAL	
SUBMERSIBLE MANHOLE COVER	х		14U-RT4210	STP 42" COMPOSITE STANDARD
UBMERSIBLE PUMP TURBINE ENCLOSURE & FITTINGS	X		FFS # 602402922 22 IN MANWAY ADAPTER, MA-22	42" DIA. FIBERGLASS WATERTIGHT TANK SUMP
	×		BRAVO ENTRY FITTING PART # F-10-F	
	х		2" DOUBLE WALL ELECTROFUSION, 303-075-EIF-U	
			FFS ADHESIVE KIT; PART # 602366924	
			FFS SEAL KIT; PART # 602366901	
			BRAVO EPOXY KIT; PART # EP100 2" UPP ENTRY BOOT; PART # FEB-075	UPP ENTRY BOOT FOR FIBERGLASS SUMP
SUBMERSIBLE PUMPS & FITTINGS (ADVANCE	Х		REGULAR x2, PREMIUM x 1, DIESEL x 2 (4 HP VARIABLE)	WITH MECHANICAL LEAK DIRECTOR
PROTECTION PUMPS)			CONVENTIONAL x 1 (4 HP VARIABLE STP)	
	Х		FE-PETRO MAG VFC CONTROLLER, STP-MLD+G (GASOLINE), 403168901	VFC CONTROLLER 4H.P
	х		FFS, STP-MLD+G (GASOLINE), 403168901	MECHANICAL LINE LEAK DIRECTOR
	X X		FFS, STP-MLD+D (DIESEL), 403170901 FLEXING FF20X24HMXM346	MECHANICAL LINE LEAK DIRECTOR 2"X24" FLEXIBLE CONNECTOR
	X		UNIVERSAL 213 FP	2 AZ# FLEAIBLE CONNECTUR
	X		JEFFERSON 1731 - 400	2" STAINLESS STEEL UNION
VAPOR RECOVERY/VENT	х		FFS 4" PLUG CAP	GALV. STEEL
	х		FFS 4" RISER	GALV. FOR UNLEADED PRODUCTS AND STAINLESS STL FOR DIESEL
REMOTE DIRECT VAPOR RECOVERY	х		FFS DEFENDER SERIES SPILL BUCKETS	SINGLE WALL SPILL BUCKET
DIRECT FILL/GAUGE	x	<del>                                     </del>	#705545012CI-GKT FFS DEFENDER SERIES SPILL BUCKETS	5 GAL DOUBLE WALL NPT, ND
· -	X		#705555102CI-GKT FFS DEFENDER OPV #708591902	4" FILL TUBE W/OVERFILL PREVENTION VALVE
	×		FFS; SWIVEL ADAPTOR (SWF-100-SS),	→ FILE TODE W/OVERFILL PREVENTION VALVE
	×		FFS; VAPOR CAP (777-201-02)	VENT CAP
	х		FFS; FILL CAP (4" EVR 304-301-01)	FILL CAP
	x		2" PRESS VAC. VENT EVR	
	X X		FFS; SWIVEL ADAPTOR (SWV-100-SS) FFS; 78710009	RU-REGULAR UNLEADED KIT
	X		FFS; 78710009 FFS; 78710006	SU-SUPER UNLEADED KIT
	X		FFS; 78710003	D-DIESEL KIT
		х	4" RISER	4" BLACK STEEL RISER W/ "3M"SCOTCHRAP51 PROTECTION TAPE OVER "3M-SCOTCHRAP" PIPE PRIMER
				(GALV. STEEL FOR UNLEADED AND BLACK STEEL FOR DIESEL PRODUCTS)
INVENTORY SENSOR MANHOLE/COVER	x		EMCO	18" EMCO PROBE MANHOLE PART # A1005-015TMF
	х		EMCO	18" EMCO PROBE MANHOLE PART # A1005-015TMF
MONITORING WELL & MANHOLE/COVER	х		FFS EQUIVALENT	24" DIA MANHOLE
	X		FFS EQUIVALENT	MONITORING WELL WITH BOTTOM 4"X15'  4" WATERTIGHT LOCKING TEST WELL CAP
	х		FFS EQUIVALENT	4 WATERTIGHT LOCKING TEST WELL CAP
RODUCT PIPING, SECONDARY CONTAINMENT PIPING				
RODUCT PIPING, SECONDARY CONTAINMENT PIPING  SYSTEM AND FITTINGS	x		UPP ELECTRO PIPING UL971	UPP PIPING, FITTINGS, ADHESIVE, ETC, (USE ALL PRODUCTS OF A SINGLE MANUFACTURER)

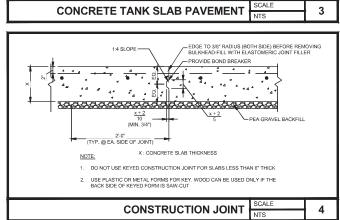


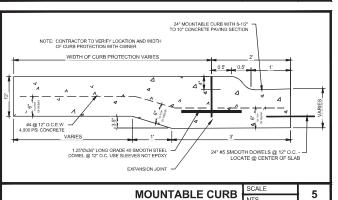






4.4 24" #5 SMOOTH DOWELS @ 12" O.C. -LOCATE @ CENTER OF SLAB PROVIDE NON-BONDING EXPANSION JOINT @ VERTICAL FACE OF FIRST POLIR







EXP. JOINT FILLER: SEAL TITE FIBRE

EXPANSION JOINT SCALE NTS





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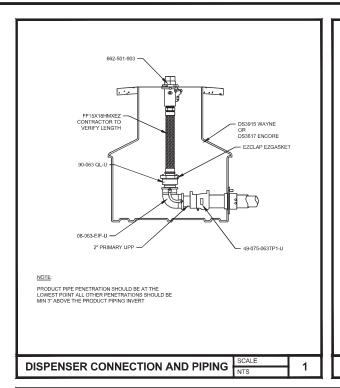
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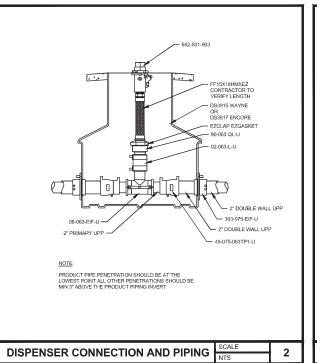
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TANK INSTALLATION PLAN AND EQUIPMENT PLAN - PACE Address CEFCO #426 -

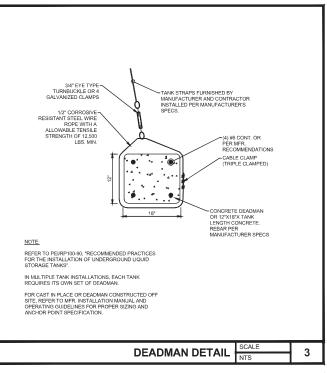
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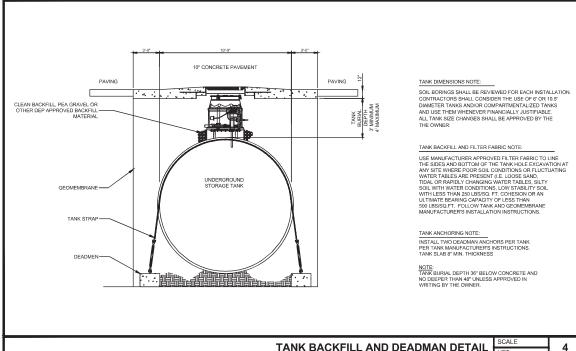


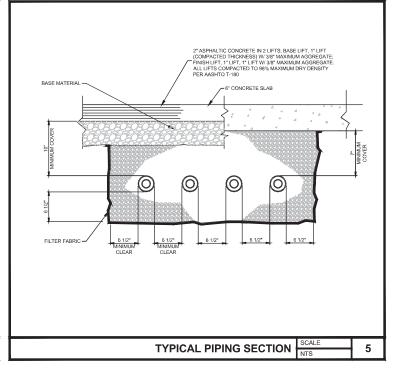




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### DISPENSER SUMP FITTING INSTALLATION

- 1. UPP BULKHEAD FITTINGS ARE ELECTRO-FUSED TO THE POLYETHYLENE SUMP WALL.
- 2. POLY OR FIBERGLASS SUMP UNITS ARE TO BE SEALED PER MANUFACTURER INSTALLATION INSTRUCTIONS. EACH SUMP SHALL BE FILLED WITH WATER FOR 24 HOURS BEFORE BACKFILL TO VERIFY WATER TIGHTNESS

- LAY OUT THE BULKHEAD FITTING LOCATIONS ACCORDING TO THE APPLICABLE PIPING DIAGRAM FOR THE SITE. IN ORDER THAT THE REQUIRED SCOPE BACK TO THE TANK CAN BE ACCOMMODATED. IT IS RECOMMENDED THAT THE CALCULATIONS BE MADE AFTER THE TANKS HAVE BEEN SET TO HEIGHT. THERE IS NO NEED TO ACCOUNT FOR SLOPE WITHIN THE SUMPS THEMSELVES.
- MARK A CENTERLINE ON THE SUMP FACE SUCH THAT FITTING FLANGES ALL NO INTERFERE. POSITION THE BULKHEAD FITTING SO THAT ITS EDGE WILL BE AT LEAST ONE INCH FROM ANY SUMP EDGE. NOW MARK VERTICAL CENTERLINE INTERSECTION
- USING APPROPRIATE DIAMETER HOLE, SAW CUT THE HOLE FOR THE BULKHEAD FITTING USING A SHARP KNIFE, TRIM ANY BURRS FROM THE RESULTING WORK PIECE.
- 4. USING TOOL SKA, DE-GLAZE SUMP IN CONTACT AREA OF FITTING PIPE, WIPE DE-GLAZED AREA USING CLOTH
- 5. ROUGHEN CONTACT AREA OF BULKHEAD FITTING USING EMERY CLOTH, NOT STEEL WOOL OR SAND PAPER. WIPE PREPARED AREA WITH ACETONE CLOTH.
- 6. POSITION BULKHEAD FITTING AND CLAMP TO SUMP WALL USING TOOL 305.
- AUTO FORECOURT ONLY, ALL UPP PIPING SHALL BE 33 FT STICKS THAT SHOULD BE USED BETWEEN DISPENSER POINTS. THESE WILL HAVE TO BE SHORTENED. AS NEEDED.

#### ENTRY BOOT WELD

WELD FITTING TO SUMP USING ELECTRO FUSION WELDER PER MANUFACTURERS INSTRUCTIONS. MARK TIME OF WELD COMPLETION ON A SUMP ABOVE WELDING LEADS. DO NOT REMOVE CLAMP UNTIL TWENTY MINUTES HAVE PASSED.

#### PIPE PREPARATION AND JOINT MAKING

- 1. MEASURE SUMP-TO-SUMP CENTERLINE DISTANCE, ACCOUNTING FOR NECESSARY DETOURS AROUND INTERVENING OBJECTS, AND OTHER PIPES.
- 2. USING THE PIPES CUTTING TOOL, P. CUT, MAKE A BURR-FREE, AND SQUARE CUT ON THE PIPE

- 3. IF USING COAXIAL PIPE, USE CUTTING TOOL TO PREPARE CONTAINMENT SLEEVE. CUT SLEEVE BACK END OF THE PRIMARY PIPE.
- 4. DE-GLAZE SECONDARY PIPE SKIN IN PREPARATION FOR WELDING.

AS AN ALTERNATE, A RAZOR EDGED SCRAPER, SCR. SKA CAN BE USED TO LONGITUDINALLY ROUGHEN THE SKIN OF THE PRIMARY PIPE, AND HOWEVER, CARE MUST BE TAKEN TO LEAVE NO UNSCRAPED AREAS.

- 5. WIPE THE MATING SURFACES USING AN ACETONE MOISTENED LINT FREE CLOTH.
- 6. POSITION FITTINGS ON THE PIPE, INSERT PIPE THROUGH BULKHEAD FITTING. POSITION TEST FITTING.
- INSERT THE PREPARED PIPE END(S) IN TO THE FITTING TO THE SPECIFIED DEPTH. CLAMP PIPES TOGETHER USING UPP TOOL CLAM(S) OR CLAMP (A) AS APPROPRIATED. IF COUPLING OCCURS IN CURVED RUN, LAY OUT JOINT STRAIGHT, WELD, ALLOW TO COOL, THEN BEND INTO POSITION. FAILURE TO PROPERLY MAINTAIN JOINT GEOMETRY FOR AT LEAST 20 MINUTES AFTER WELDING IS COMPLETE WILL RESULT IN AN UNSATISFACTORY
- 8. COMPLETE THE JOINT WELDING AS SPECIFIED BY UPP. USING CHINA MARKER, NOTE TIME OF COMPLETION NEXT
- TO WELD. DO NOT REMOVE CLAMPS BEFORE TWENTY (20) MINUTES HAVE PASSES BEYOND THIS ITEM 9. RECORD BATCH NUMBERS FROM PIPING MARKING INTO UPP INSTALLATION CHECKLIST.

# 3.1 TANK HOLD-DOWNS (TIE-DOWNS):

- A. HOLD-DOWN, WHEN SPECIFIED THE HOLD-DOWN LOGS SHALL BE INSTALLED PRIOR TO THE BED MATERIAL.
- CAUTION DO NOT PLACE FRP TANKS ON CONCRETE SLABS, TIMBERS, BEAMS, CRADLES OR GROUT THE TANKS IN WET CEMENT. THE TANK, WHETHER TIED DOWN OR NOT, MUST NEVER BE LEFT ON THE BED WITHOUT A BACKFILL TO THE TOP OF THE TANK IF THERE IS ANY CHANCE OF WATER, 12" OR MORE ABOVE THE TANK BOTTOM, IN THE HOLE.

### 3.2 TANK HOLD-DOWN INSTALLATION

- A. GENERAL REQUIREMENTS
- GENERAL REQUIREMENTS AND ANAMORD STORAGE TANKS WITH CONCRETE HOLD-DOWNS ("LOGS" OR "DEADMEN") WHEN SPECIFIED IN THE SCOPE OF WORK. TANK BEDDING, BALLASTING AND TANK HOLE BACKFILL PROCEDURE ARE DESCRIBED IN THESE SPECIFICATIONS. THE TANK ANCHORAGE SYSTEM SHOWN ON THE DRAWINGS IS DESIGNED FOR A MAXIMUM LEVEL OF GROUND WATER EQUAL TO THE SUBGRADE LEVEL.

A. CONCRETE HOLD-DOWNS: PRECAST, REINFORCED CONCRETE "LOGS", FURNISHED BY THE TANK MANUFACTURE WITH CHAMFERED EDGES. LENGTH, AS SHOWN ON THE DRAWINGS. 1/2" DIAMETER GALVANIZED STEEL ANCHOR LOOPS ARE TO BE CAST INTO "LOGS" AT LOCATIONS SHOWN, PRECAST MATERIAL SHALL HAVE ACHIEVED ITS ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI (28 DAYS) PRIOR TO INSTALLATION.

NOTE: PRECAST CONCRETE FOUNDATION PILES WHICH MEET OR EXCEED ABOVE SPECIFICATIONS ARE ACCEPTABLE.

- B. WIRE ROPE CABLE: HOT-DIP GALVANIZED STEEL WIRE ROPE, MINIMUM 1/2" DIAMETER, BREAKING STRENGTH. 20AK.
- HARDWARE: CABLE CLAMPS, CABLE GUIDES, GUARDS, ETC., FURNISHED BY THE TANK MANUFACTURER, SHALL BE HOT-DIP GALVANIZED STEEL.
- PROTECTIVE COATING: PRIOR TO BACKFILLING TANKS, APPLY A GENEROUS QUANTITY OF "ASPHALT COATING" BY BRUSH TO ALL EXPOSED STEEL CABLES, LOOPS AND HARDWARE.
- A. PREPARE THE TANK HOLE TO RECEIVE THE HOLD-DOWN "LOGS". INSTALL SHORING (OR SIDE SLOPING) IN ACCORDANCE WITH SECTION 1.3.
- PUMP THE WATER OUT OF THE TANK HOLE. KEEP WATER OUT OF THE TANK HOLE UNTIL TANKS HAVE BEEN SET, TIED DOWN, BALLASTED AND BACKFILLED.
- C. INSERT EACH CABLE THROUGH ITS OWN ANCHOR LOOP IN THE "LOG" RESERVING SUFFICIENT CABLE SO THAT BOTH ENDS OF THE CABLE WILL BE KEPT AT THE TOP OF THE TANK HOLE AFTER THE "LOGS" ARE SET LOWER AND POSITION THE "LOGS" IN THE TANK HOLE KEPING BOTH ENDS OF THE CABLES AT THE TOP OF THE HOLE. INSTALL THE 12" MINIMUM THICK BEDDING MATERIAL IN TANK HOLE. SMOOTH AND SLOPE PER THE TANK
- D. PROCEED WITH SETTING THE TANKS BY ADDING BALLAST AS NECESSARY TO SINK AND KEEP DOWN THE TANKS, USE ONLY ENOUGH BALLAST TO HOLD THE TANKS DOWN UNTIL THE BACKFILL IS EVEN WITH THE TOP OF THE TANKS, (REFER TO SECTION 1.1 FOR TANK SETTING REQUIREMENTS.) CAUTION: BALLAST LEVEL IN TANK MUST NEVER EXCEED WATER (OR BACKFILL) LEVEL IN TANK HOLE DURING INSTALLATION.
- E. INSTALL THE CABLE GUARDS, GUIDES, ETC., FURNISHED BY THE TANK MANUFACTURER ON THE DESIGNATED RIBS OF THE TANK. (NOTE: "DESIGNATED RIBS" ARE MARKED BY ARROWS ON THE TANK SURFACE.) CAUTION: DO NOT PLACE STRAPS OR CABLES BETWEEN THE RIBS OF THE TANK.
- PASS EACH SET OF CABLES (A SET OF CABLES ARE THOSE PASSING THROUGH THE MATCHING, OR OPPOSITE, LOOPS ON THE "LOGS") THROUGH THE GUIDES AND LOOPS AS SHOWN ON THE DRAWING.
- ONE END OF EACH CABLE IS TO BE CROSSED OVER THE TOP OF THE TANK IN THE RETAINER PORTION OF THE HOLD-DOWN STRAP. USING THREE CABLE CLAMPS ON EACH SET OF CABLES, CLAMP BOTH CABLES TOGETHER ON TOP OF THE TANK. PRIOR TO TIGHTENING THE CLAMPS. TENSION THE CABLES WITH "COME-AL ONGS" SECURED, OUTSIDE THE TANK HOLE. USE ENOUGH TENSION TO TIGHTEN THE CABLES BUT TO TO LIFT THE LOGS" OR CRUSH THE TANK CAUTION: ALL SETS OF CABLES ON A TANK MUST BE TIGHTENED EQUALLY TO AVOID TANK DEFORMATION.
- 2. THE CABLE MUST REST ON THE TOP OF THE HOLD-DOWN STRAP BETWEEN THE GUIDES PROVIDED. REPEAT THIS PROCESS FOR EACH SET OF TIE-DOWN CABLES.
- 3 AFTER ALL TIE-DOWNS ARE COMPLETED, COMMENCE THE BACKEILL PROCEDURES TO THE TOP OF THE TANKS





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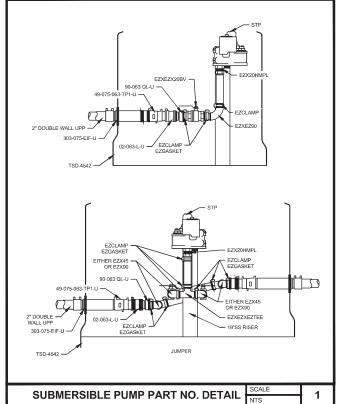
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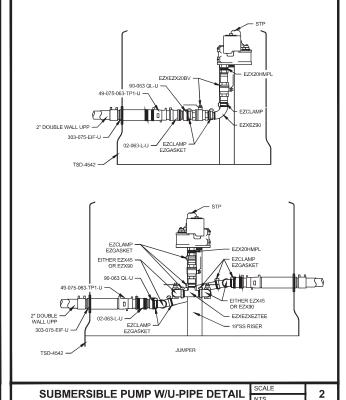
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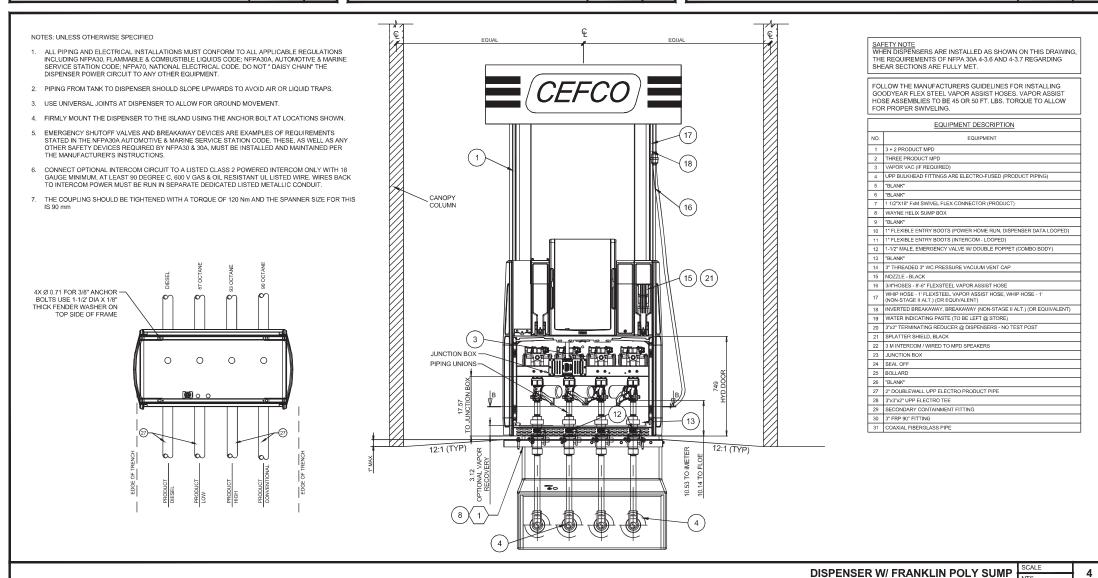
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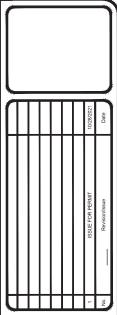






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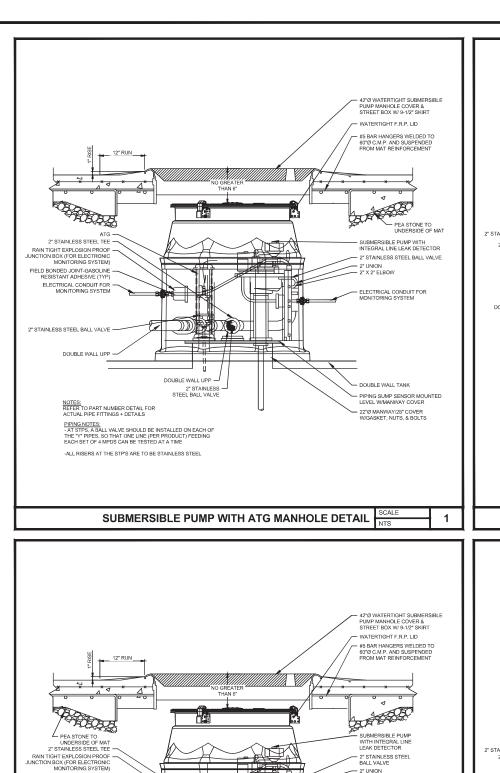


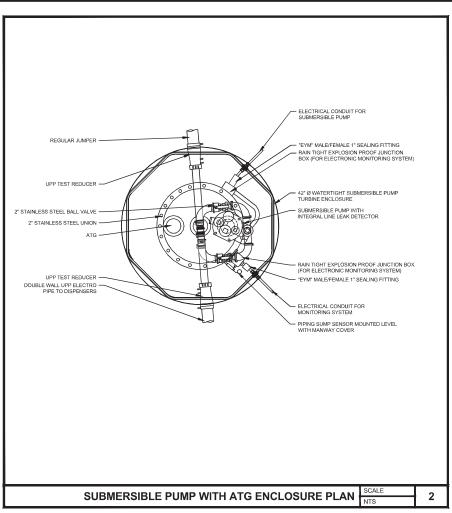
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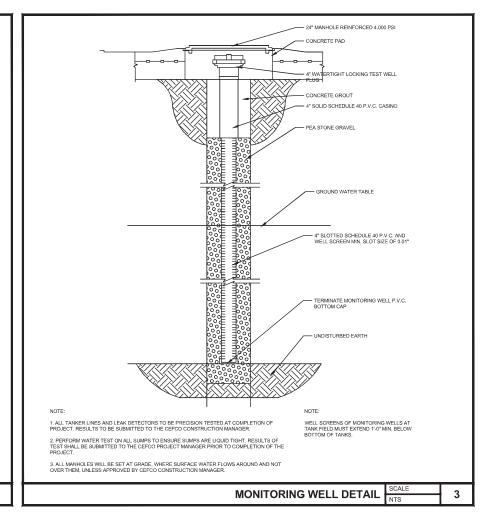
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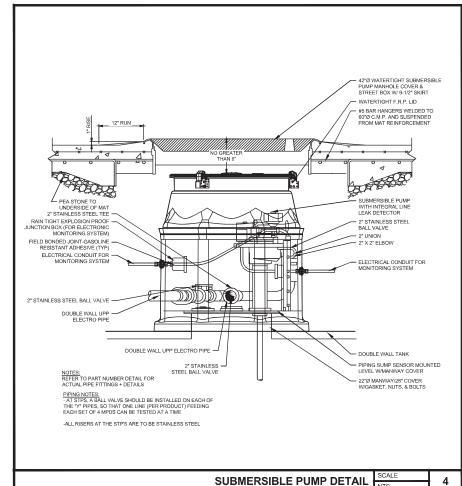
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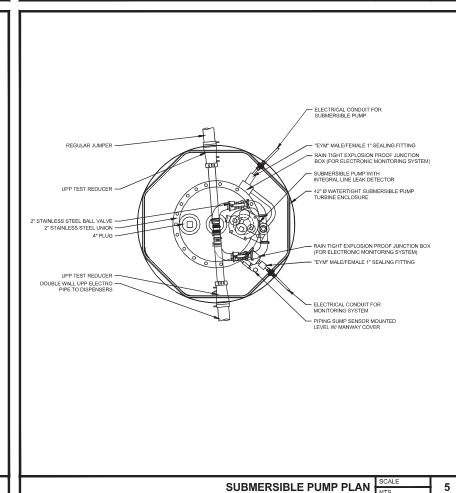
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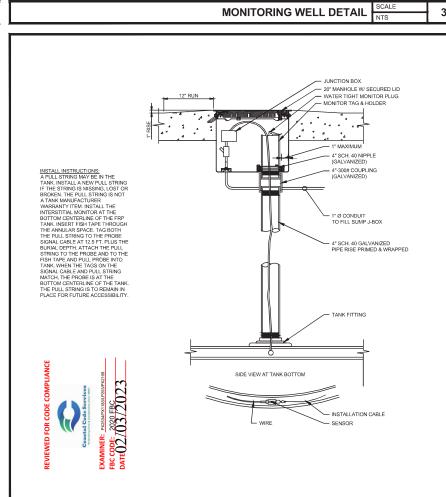








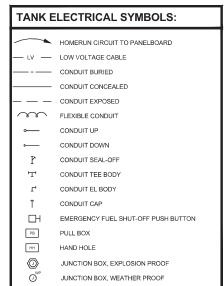




INTERSTITIAL SPACE MONITORING

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# TANK ELECTRICAL CODES IN EFFECT

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH:

- NATIONAL ELECTRICAL CODE 2017
- FLORIDA BUILDING CODE 2020 (7TH EDITION)
- NFPA 30A 2018

WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE WITH THE CODES, STANDARDS, AND PRACTICES LISTED HEREIN. THEIR RESPECTIVE DATES ARE FURNISHED AS THE MINIMUM REQUIREMENTS (UNLESS OTHERWISE DETERMINED BY THE LOCAL AUTHORITIES

# TANK ELECTRICAL ABBREVIATIONS:

AMPERE AVAILABLE FAULT CURRENT ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AUTHORITY HAVING JURISDICTION AMPERE INTERRUPTING CAPACITY
BACK ROOM COMMUNICATION MODULE CONDUIT COMMUNICATIONS MULTIPURPOSE CABLE CMP PLENUM COPPER CENTER EMERGENCY FUEL SHUT-OFF EQUIPMENT GROUND
FLUORINATED ETHYLENE PROPYLENE FULL LOAD AMPS GROUND FAULT CIRCUIT INTERRUPTER GND GRS HOA GROUND GALVANIZED RIGID STEEL HAND-OFF-AUTO ISOLATED GROUND INTRINSICALLY SAFE JUNCTION BOX KILOVOLT-AMPERE KILOWATT MCA MCB MDP MINIMUM CIRCUIT AMPS MAIN CIRCUIT BREAKER MAIN DISTRIBUTION PANEL MLO MTD N.C. N.O. NTS OH MAIN LUG ONLY MOUNTED NORMALLY CLOSED NORMALLY OPEN NOT TO SCALE OVERHEAD PH PNL SS TBB TYP UG UNO UTP PHASE STAINLESS STEEL TELEPHONE BACKBOARD UNDERGROUND UNLESS NOTED OTHERWIS UNSHIELDED TWISTED PAI VERIFY IN FIELD WEATHERPROOF WEATHER RESISTANT

### TANK ELECTRICAL GENERAL NOTES:

- PRE-BID. SITE VISIT: CONTRACTOR PROPOSING TO UNDERTAKE WORK UNDER THIS DIVISION SHALL VISIT THE SITE OF THE WORK AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT EFFECT THE WORK AND COST THEREOF AND EXAMINE THE DRAWINGS AS RELATED TO THE SITE CONDITIONS. BIDDERS WHO DO NOT VISIT THE SITE MAY BE UNILATERALLY NOT PERMITTED TO SUBMIT A BID IF THE 16
- OWNER SO DESIGNATES.

  BID TERMS AND CONDITIONS: THE ELECTRICAL CONTRACTOR SHALL OBTAIN A FULL SET OF PLANS AND SPECIFICATIONS FROM THE GENERAL CONTRACTOR PRIOR TO BID. CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUNDERSTANDINGS OF THE AMOUNT OF WORK TO BE PERFORMED. TENDER OF PROPOSAL SHALL CONVEY FULL AGREEMENT TO THE ITEMS AND CONDITIONS INDICATED N THE PLANS AND SPECIFICATIONS, ANY DISCREPANCIES OR OMISSIONS FOUND IN THE CONTRAC IN THE PLANS AND SPECIFICATIONS. ANY DISCREPANCIES OR OMISSIONS FOUND IN THE CONTRACT DOCUMENTS OR DOUBT AS TO THE INTENT THEREOF, SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING TO OBTAIN CLARIFICATION FROM THE ENGINEER AND/OR OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING PROPOSAL FOR WORK. WHERE CLARIFICATION CANNOT BE PROVIDED PRIOR TO BIO, THE CONTRACTOR SHALL ASSUME THE MORE RESPENSIVE METHOD FOR THE BID. WITHOUT FORMAL AUTHORIZATION, THE ENGINEER AND OWNER RESERVE THE 17. RIGHT TO RECUIRE THE MORE RESTRICTIVE SPECIFICATION.

  EXCLUSIONS: MATERIAL AND LABOR EXCLUDED BY THE ELECTRICAL CONTRACTOR SHALL NOT RELIEVE THE GENERAL CONTRACTOR FROM PROVIDING SAME.

  18. COMPLETE SYSTEM. ELIBINISH ALL LABOR MATERIALS EQUIRIMENT. TOOLS, TRANSPORTATION.
- RELIEVE THE GENERAL CONTRACTOR FROM PROVIDING SAME.

  COMPLETE SYSTEM: FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION,

  SUPERINTENDENTS AND SERVICES REQUIRED TO CONSTRUCT, INSTALL, AND MODIFY THE ELECTRICAL

  SYSTEMS AS HEREIN SPECIFIED AND SHOWN ON THESE DRAWINGS FOR A COMPLETE AND FULLY

  OPERATIONAL SYSTEM. COORDINATE WORK TO BE PERFORMED OR INSTALLED BY OTHERS AFFECTING

  THE ELECTRICAL WORK AND FURNISH AND INSTALL ALL NECESSARY STEEL SHAPES, STRUCTURES

  SUPPORTS, ETC., FOR ATTACHING OR CONNECTING ELECTRICAL WORK TO RELATED WORK OF OTHER

  TRADES, ALL LITEMS NOT SPECIFICALLY MENTIONED HEREIN OR NOT INDICATED IN THE DRAWINGS.

  MULCUL ADE INCESSARY TO MAKE A COUNTET WORK WINSTALL ALL NICES, SAME, SAME WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER, DRAWINGS AND SPECIFICATIONS DO NOT UNDERTAKE TO INDICATE EVERY ITEM OF MATERIAL, EQUIPMENT, OR LABOR REQUIRED TO PRODUCE A COMPLETE 1 AND PROPERLY OPERATING INSTALLATION.

- AND PROPERLY OPERATING INSTALLATION.

  PERMITS: OBTAIN ALL NECESSARY PERMITS, LICENSES, AND INSPECTIONS AS REQUIRED BY ANY OF
  THE FOREGOING AUTHORITIES AND PAY FOR ALL OTHER COSTS IN CONNECTION WITH THE WORK.
  INSPECTIONS: CONTRACTOR SHALL NOT CONCEAL ANY WORK UNTIL INSPECTED AND APPROVED BY
  ELECTRICAL INSPECTOR ANDIOR ARCHITECTENGINEER.

  REGULATIONS: ALL ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE
  LATEST ADOPTED NATIONAL ELECTRICAL CODE (INEC) AND ALL OTHER APPLICABLE FEDERAL, STATE,
  AND LOCAL BUILDING CODES, RULES, REGULATIONS, ORDINANCES AND AUTHORITES HAVING
  JURISDICTION, ALL ELECTRICAL WORK IN THE AREA OF THE FUEL STORAGE TANK AND DISPENSING EQUIPMENT SHALL BE PER NEC ARTICLE 514 AND NFPA 30A. INTRINSICALLY SAFE WIRING SHALL BE
- DETAIL BE PER NEC ARTICLE 514 AND NFPA 30A. INTRINSICALLY SAFE WIRING SHALL BE PER NEC ARTICLE 504 AND ANSI/SA RP 12.6.

  PER NEC ARTICLE 504 AND ANSI/SA RP 12.6.

  ACCORDANCE WITH APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE OWNER OR ACCORDANCE WITH APPLICABLE NECA STANDARDS SUBJECT TO THE APPROVAL OF THE OWNER OR OWNERS AUTHORIZED REPRESENTATIVE. RACEWAY, JUNCTION BOXES AND FITTINGS SHALL BE TYPE RMC.

  OWNERS AUTHORIZED REPRESENTATIVE. RACEWAY, JUNCTION BOXES AND FITTINGS SHALL BE TYPE RMC.

  OWNERS AUTHORIZED REPRESENTATIVE. RACEWAY, JUNCTION BOXES AND FITTINGS SHALL BE TYPE RMC.

  OWNERS AUTHORIZED ROPRISED THE DESIGN APPECTING THE TANK ELECTRICAL CONTRACTOR BUILDING ELECTRICAL CONTRACTOR AND LOW OUTLAGE CONTRACTOR IN ORDER AND LOW OUTLAGE CONTRACTOR IN ORDER AND LOW OUTLAGE CONTRACTOR IN ORDER AND LOW OUTLAGE FOR THE TANK ELECTRICAL WORK AND TO CONFIRM SITE SPECIFIC INSTALLATION REQUIREMENTS REFER TO FURTHER AND ELECTRICAL TANK ELECTRICAL WORK AND TO CONFIRM SITE SPECIFIC INSTALLATION REQUIREMENTS. REFER TO FURTHER AND ELECTRICAL TANK ELECTR DRAWINGS AND EQUIPMENT INSTALLATION MANUALS FOR EQUIPMENT POWER/CONTROL/DATA OR ANY 22.
- OTHER REQUIREMENTS.

  GOUIPMENT AND DEVICE LOCATIONS: LOCATIONS ON THE TANK ELECTRICAL PLANS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED FROM FUEL TANK DRAWINGS, SECTIONS, AND ELEVATIONS, FINAL LOCATION OF EQUIPMENT AND DEVICES TO BE COORDINATED WITH TANK: EQUIPMENT INSTALLER, OWNER, AND/OR OWNER'S REPRESENTATIVE. VERIFY STUB-UP LOCATION FOR ALL UNDER SLAB CONDUITS PRIOR TO ROUGH-IN.
- ALL UNDER SLAB CONDUITS PRIOR TO ROUGH-IN.

  PRODUCTS: ALL TANK ELECTRICAL MATERIALS SHALL BE NEW EXCEPT WHERE SPECIFICALLY NOTED 24.

  AS EXISTING TO BE REUSED. MATERIALS AND METHODS OF INSTALLATION SHALL CONFORM TO THE STANDARDS OF EQUIPMENT MANUFACTURER INSTALLATION INSTRUCTIONS, UNDERWRITERS 25.

  DISPENSER CIRCUITS: ALL DISPENSER POWER BRANCH CIRCUITS MUST BE FED FROM THE SAME PANEL 'PHASE'.

  PANEL 'PHASE'.

  DISPENSER CONDUIT PENETRATIONS: DETERMINE EXACT DISPENSER SUMP TO BE PROVIDED WITH CAUCHY PRIOR TO ROUGH-IN, PROVIDE CONDUIT PENETRATION AS APPLICABLE: STANDARDS OF EQUIPMENT MANUFACTURER INSTALLATION INSTRUCTIONS, UNDERWRITERS 25. DISPENSER CONDUIT PENETRATIONS: DETERMINE EXACT DISPENSER SUMP TO BE PROVIDED WITH LABORATORIES, INC. (UL), ANDS, INFA, ADA, API, AND ALL OTHER APPLICABLE LOCAL ORDINANCES.

  DEFECTIVE EQUIPMENT AND/OR EQUIPMENT DAMAGED DURING INSTALLATION AND/OR TESTING SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING THE APPROVAL OF THE ARCHITECT AND THE ENGINEER, PROPOSED EQUIPMENT SHALL BE NRTL LISTED, LABELED, OR APPROVED.

  25.1. DIRECT ENTRY INTO SUMP VIA FLEXIBLE BOOT.

  25.2. BOTTOM ENTRY WITH CONDUITS CONCEALED

  25.3. SIDE ENTRY WITH CONDUITS CONCEALED

  25.4. DIRECT ENTRY WITH CONDUITS CONCEALED

  25.5. BOTTOM ENTRY WITH CONDUITS CONCEALED

  25.6. SIDE ENTRY WITH THE USE OF CAPPED EL.

  25.7. SIDE ENTRY WITH THE USE OF CAPPED EL.

  25.8. SIDE ENTRY WITH THE USE OF CAPPED EL.

  25.9. SIDE ENTRY WITH THE USE OF CAPPED EL.

  25.1. DIRECT ENTRY WITH CONDUITS CONCEALED

  25.2. BOTTOM ENTRY WITH CONDUITS CONCEALED

  25.3. SIDE ENTRY WITH CONDUITS CONCEALED

  25.4. DISPENSER HOOK ISOLATION RELAYS TO ISOLATE DISPENSER HOOK ISOLATION IS A DELEGATED DESIGN. THE INFORMATION NECESSARY FOR ENGINEER TO ENSURE COMPLIANCE WITH SPECIFICAL AND ADDRESS AND
- DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING AND INSTALLING ANY 27 EQUIPMENT, SUBMITTALS AND SHOP DRAWINGS SHALL CLEARLY INDICATE ITEMS TO BE REVIEWED BY EQUIPMENT: SUBMITTALS AND SHOP DRAWINGS SHALL CLEARLY INDICATE ITEMS TO BE REVIEWED BY HIGHLIGHTING, AND ITEMS NOT TO BE REVIEWED SHALL BE CROSSED OUT. SUBMITTALS WITHOUT HIGHLIGHTING, AND INTRINSICALLY SAFE CIRCUITING SEPARATE BY USING INDIVIDUAL SUBMITTALS WITHOUT HIGHLIGHTING, AND CROSSED OUT ITEMS SHALL NOT BE REVIEWED. ALL SUBMITTALS MUST BE RECEIVED BY THE ENGINEER WITHIN 30 DAYS OF CONTRACT AWARD TO THE GENERAL CONTRACTOR; NO EXCEPTIONS, EQUIPMENT ORDERED OR INSTALLED WITHOUT A FAVORABLY REVIEWED SUBMITTAL IS DONE AT THE CONTRACTORS OWN RISK.

  SUBSTITUTIONS AND ALTERATIONS OF OTHER DISCIPLINE'S EQUIPMENT: SUBSTITUTED AND ALTERED EQUIPMENT BY OTHER DISCIPLINE'S SHALL INCLUDE ALL MATERIAL AND LABOR COSTS FOR EXTERIOR AND NEMAL SERVING FILL FOR PROJECT.

  28. RIGID FIBERGLASS ENTRY BOOT. ONLY ONE POWER AND ONE INTRINSICALLY SAFE PENETRATION IS PERMITTED PER SUMP.

  ELECTRICAL CONTRACTOR TO PROVIDE COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SECONDARY OF TYPE.

  ACCOMMODATE THESE SUBSTITUTED AND ALTERED EQUIPMENT. THESE ADDITIONAL ELECTRICAL SECONDARY OF TYPE.

  WIST BE EXPLOSION PROOF TYPE.

  WIST BE EXPLOSION PROOF SEALING ENTINGS WITH III LISTED SEALING COMPOINT.
- SUBSTITUTIOU OF ALTERED GEAR TO BE ACCEPTED.

  VOLTAGE DROP: WIRE SIZES SPECHED IN THESE PLANS ARE MINIMUM WIRE SIZES. THE ELECTRICAL
  CONTRACTOR IS RESPONSIBLE FOR INCREASING WIRE SIZES BASED ON ACTUAL CIRCUIT LENGTH TO
  MAINTAIN VOLTAGE DROP AT A MAXIMUM OF 3% FOR PRANCH CIRCUITS AND 2% FOR FEEDERS. THE
  CUMULATIVE VOLTAGE DROP FROM THE SOURCE TO THE END DEVICE SHALL NOT EXCEED 5% OF
- NOMINAL SYSTEM VOLTAGE.
  WIRNING: CONDUCTOR SHEATHS SHALL BE GAS AND OIL RESISTANT TYPE.

  5.1. POWER CONDUCTORS CARRYING 50 VOLTS OR MORE SHALL BE MINIMUM #12 AWG, CU, UNO. PROVIDE DUAL RATED TYPE THIN-THWN OR XHHW, COORDINATE INSULATION TYPES WITH ENVIRONMENTAL CONDITIONS NEC REQUIREMENTS AND CONDUIT FILL REQUIREMENTS CONDUCTORS #12 AND #10 SHALL BE SOLID. CONDUCTORS #8 AND LARGER SHALL BE STRANDED
- CONDUCTORS #12 AND #19 SHALL BE SOLID, CONDUCTORS #3 AND LARGER SHALL BE STRANDED.
  ALL CONDUCTOR SIZES ARE BASED ON COPPER WITH 60°C INSULATION FOR CIRCUITS RATED 100A
  OR LESS AND 75°C FOR CIRCUITS RATED MORE THAN 100A.
  INTRINSICALLY SAFE WIRING SHALL BE HIGH TEMPERATURE ELECTRONIC, 2 OR 3 CONDUCTOR, #18
  AWG TINNED CU, FEP INSULATION, OVERALL SHIELDING AND FEP OUTER JACKET, CMP, AN
  COUPPMENT GROUND CONDUCTOR SHALL BE ROLED IN ALL INTRINSICALLY SAFE RACEWAYS.
  DISPENSER HOOK LINE WIRING SHALL BE HE ALD CONDUCTOR SHALL BE CALCED TO THE THIN-THINW OR XHIW GAS
  AND OUR PESISTANT PROVIDET YMO CONDUCTORS PEP PROPIOLICE FROM DISPENSER TO EACH 15.3 AND OIL RESISTANT, PROVIDE TWO CONDUCTORS PER PRODUCT FROM DISPENSER TO EACH
- RESPECTIVE PRODUCT STP ISOLATION RELAY. DISPENSER DATA
- SPENSER DATA:
  ONLY WAYNE OVATION 2 AND GILBARCO 700S SHALL BE CONSIDERED FOR NEW DISPENSERS.
  USE OF ANY OTHER DISPENSER TYPE SHALL REQUIRE ADDITIONAL ENGINEERING HOURS TO BE INCLUDED BY CONTRACTOR AS A VALUE ENGINEERING OPTION.
  ROUTE THE BELOW CONDUCTORS FROM DISPENSER TO D-BOX(DISTRIBUTION BOX)
  WAYNE OVATION 2.
- 15.4.2.1.1. #18 AWG 600V OIL AND GASOLINE RESISTANT MINIMUM. 15.4.2.1.2.
- GILBARCO 700S TWO-WIRE COMMUNICATION WIRING INCLUDING SMART CONNECT WIRING:
- 1542211 PROVIDE LITE DATA WIRES ONLY. SHIELDED WIRING IS NOT ACCEPTABLE
- PROVIDE UTP DATA WIRES ONLY. SHIELDED WIRING IS NOT ACCEPTABLE.

  TWO-WIRE UTP WITH 10 TO 12 TWISTS PER FOOT, STRANDED ANNEALED COPPER

  34. TINNED WITH 18 AWG MINIMUM REQUIRED FOR RUNS UP TO 1000 FEET. DO NOT DAISY CHAIN COMMUNICATION WIRING.

  CONDUCTORS SHALL HAVE PVC INSULATION OF TYPE THERMOPLASTIC FLEXIBLE

  35. FIXTURE WIRE NYLON JACKETED (TFFN) OF MACHINE TOOL WIRE (MTW), UNDERWRITERS LABORATORIES APPROVED, GASOLINE AND OIL RESISTANT, 300V C8M TECHNOL OCIES GPOIL BILLY BAPT #72755 (18JAMCA) C&M TECHNOLOGIES GROUP INC PART #27525 (18AWG)
- INSTALL IN SAME CONDUIT WITH POWER BRANCH CIRCUIT AND HOOK LINE CONDUCTORS.
- 15.5. DISPENSER INTERCOM AND CALL BUTTONS(AS APPLICABLE):
- ONLY WAYNE OVATION 2 AND GILBARCO 700S SHALL BE CONSIDERED FOR NEW DISPENSERS.

  USE OF ANY OTHER DISPENSER TYPE SHALL REQUIRE ADDITIONAL ENGINEERING HOURS TO BE INCLUDED BY CONTRACTOR AS A VALUE ENGINEERING OPTION.
- AYNE OVATION 2
  DEDICATED LAN CABLES. WIRES TO BE RUN IN SEPARATE CONDUIT(NEC CLASS 2)
- DEDICATED LAN CABLES. WIRES TO BE RUN IN SEPARATE CONDUIT(NEC CLASS 2) 15.4.4.1.1. ALL OTHER DISPENSER WIRING PROVIDE ALL OTHER WIRING AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL FUEL
- ALL OTHER WIRING MUST BE PROVIDED PER THE DISPENSER MANUFACTURER INSTALLATION

- REQUIREMENTS NO EXCEPTIONS
- 15.5.3
- REQUIREMENTS. NO EXCEPTIONS.

  15.5.3. NO CHANGE ORDERS WILL BE CONSIDERED FOR ADDITIONAL WIRING REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL FUEL DISPENSING SYSTEM.

  COLOR CODING: FOR EXISTING WIRING SYSTEMS, COLOR CODING SHALL FOLLOW EXISTING SITE REQUIREMENTS. FOR NEW INSTALLATIONS OR WHERE EXISTING INSTALLATIONS DO NOT HAVE A COLOR CODING CONVENTION, THE FOLLOWING SYSTEMS OF COLOR CODING SHALL BE STRICTLY

CONDUCTOR	480Y/277V, 3-F	PH 208Y/120V, 3-PH	240D/120V, 3-PH	240/120V, 1-PH
PHASE A:	BROWN	BLACK	BLACK	BLACK
PHASE B:	ORANGE	RED	ORANGE	RED
PHASE C:	YELLOW	BLUE	BLUE	
NEUTRAL:	GRAY	WHITE	WHITE	WHITE
EQUIPMENT GROUND:	GREEN	GREEN	GREEN	GREEN
ISOLATED GROUND:		GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW
SHARED CIRCUIT NEUTRA	LS: SHARED	CIRCUIT NEUTRALS	SHALL NOT BE USE	D UNLESS INDICA

- OTHERWISE ON PANEL SCHEDULE. WHERE USED, CIRCUIT BREAKER HANDLE TIES SHALL BE PROVIDED
- OTHERWISE ON PANEL SCHEDULE. WHERE USED, CIRCUIT BREAKER HANDLE TIES SHALL BE PROVIDED TO DISCONNECT POWER TO EACH PHASE CONDUCTOR OF THE SHARED NEUTRAL CIRCUIT.

  8. GROUNDING: ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED GREEN COPPER EQUIPMENT GROUND CONDUCTORS SHALL BE INCREASED IN SIZE BY EQUAL PROPORTION TO THE PHASE CONDUCTORS WHENEVER THE PHASE CONDUCTORS HAVE BEEN USIZED TO MAINTAIN ACCEPTABLE VOLTAGE DROP LEVELS. EQUIPMENT GROUNDS SHALL BE BONDED TO ALL EQUIPMENT AND DEVICES. USE OF METALLIC CONDUIT SHALL NOT TAKE THE PLACE OF AN EQUIPMENT GROUND CONDUCTOR.

  18.1. FUEL MONITOR SHALL BE PROVIDED WITH AN ADDITIONAL BARRIER GROUND.

  18.2. DISPENSERS SHALL HAVE A MINIMUM #10 CU AWG EG.
- UNDERGROUND TANKS SHALL HAVE ELECTROSTATIC GROUND CONDUCTORS BONDED TO THE 18.3.
- STEEL FILL PIPING. CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT, MINIMUM 3/4" FOR OUTDOOR AND UNDER SLAB. ALL HOMERUNS SHALL BE HARD PIPED TYPE. RIGID METALLIC CONDUIT SHALL BE GALVANIZED STEEL OR STAINLESS STEEL
- SERVING EQUIPMENT LOCATED IN NON-HAZARDOUS (CLASSIFIED) AREAS:
- REVING EQUIPMENT LOCATED IN NON-HAZARIDOUS (CLASSIFIED) AREAS:

  ABOVE GRADE:

  INDOORS: EMT, IMC, RMC, PVC

  OUTDOORS: IMC, RMC, PVC

  BELOW GRADE: RMC, PVC
- SERVING EQUIPMENT LOCATED IN HAZARDOUS (CLASSIFIED) AREAS:
- ABOVE GRADE: RGS 19.2.2. BELOW GRADE: RGS

- TRENCHING: FIELD VERIFY UNDERGROUND UTILITIES PRIOR TO TRENCHING. ALL PROPOSED EXCAVATION IN THE VICINITY OF EXISTING UTILITIES. PIPING SYSTEMS, OR SIMILAR SHALL BE HAND. ECONATION IN THE VICINITY OF EXISTING UTILITIES, PIPING SYSTEMS, OR SIMILAR SHALL BE HAND EXCAVATED, HAND EXCAVATE IN THE VICINITY OF EXISTING TREES WHERE TRENCHING MAY DAMAGE TREE ROOT SYSTEM.
- SWITCHED NEUTRAL CIRCUIT BREAKERS: FUEL DISPENSING EQUIPMENT AND EQUIPMENT FOR REMOTE PUMPING SYSTEMS REQUIRE A NEUTRAL AND SHALL BE FED FROM SWITCHED NEUTRAL CIRCUIT

- WIRING TROUGH: WIRING TROUGHS SHALL BE USED AS COLLECTION POINTS AT THE BUILDING KEEP
  POWER, COMMUNICATION AND INTRINSICALLY SAFE CIRCUITING SEPARATE BY USING INDIVIDUAL

- COSTS MUST BE ABSORBED BY THE OTHER DISCIPLINE'S CONTRACTOR IN ORDER FOR THE 30, SEALOFE FITTINGS, EXPLOSION PROOF TYPE.

  OULTAGE DROP, WIRE SIZES SPECIFIED IN THESE PLANS ARE MINIMUM WIRE SIZES. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INCREASING WIRE SIZES BASED ON ACTUAL CIRCUIT LENGTH TO

  - EMERGES FROM GRADE.

    1. PROVIDE SEAL-OFF FITTINGS AT FUEL ISLAND, DISPENSERS, FUEL PUMPS, SUMP SENSORS, TANK PROBES, AND ALL OTHER EQUIPMENT IN HAZARDOUS (CLASSIFIED) AREAS.

    2. PROVIDE SEAL-OFF FITTINGS FOR ITEMS ABOVE AT THE POINT OF EMERGENCE WHERE THE CONDUITS LEAVE THE HAZARDOUS (CLASSIFIED) AREA.

    EMERGENCY FUEL SHUT-OFF(EFSO): EACH CIRCUIT LEADING TO OR THROUGH DISPENSING EQUIPMENT, INCLUDING ALL ASSOCIATED POWER (AND RESPECTIVE NEUTRAL), COMMUNICATIONS, DATA AND VIDEO CIRCUITS AND EQUIPMENT FOR REMOTE PUMPING SYSTEMS. SHALL BE PROVIDED DATA AND VIDEO CIRCUITS, AND EQUIPMENT FOR REMOTE PUMPING SYSTEMS, SHALL BE PROVIDED WITH A CLEARLY IDENTIFIED AND READILY ACCESSIBLE SWITCH OR OTHER APPROVED MEANS, LOCATED REMOTE FROM THE DISPENSING DEVICES, TO DISCONNECT SIMULTANEOUSLY FROM THE SOURCE OF SUPPLY, ALL CONDUCTORS OF THE CIRCUITS AS WELL AS THE RESPECTIVE NEUTRALS. THE EFSO LOW VOLTAGE DISCONNECT IS A DELEGATED DESIGN. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL AND LABOR FOR THIS SYSTEM.

    1.1. SIGNAGE SHALL BE AT EACH EFSO LOCATION THAT STATES 'EMERGENCY PUMP SHUTOFF' IN 2"

    PED CAPITAL LETTERS.
  - RED CAPITOL LETTERS
  - 31.2. EFSO SHALL BE LOCATED GREATER THAN 20'-0" FROM DISPENSERS BUT LESS THAT 100'-0" FROM
  - DISPENSERS.

    DISPENSER MAINTENANCE SWITCH: EACH DISPENSING DEVICE SHALL BE PROVIDED WITH A MEANS TO REMOVE ALL EXTERNAL VOLTAGE SOURCES, INCLUDING POWER, COMMUNICATIONS, DATA, AND VIDEO CIRCUITS AND INCLUDING FEEDBACK, DURING PERIODS OF MAINTENANCE AND SERVICE OF THE DISPENSING EQUIPMENT: THE LOCATION OF THIS MEANS SHALL BE PERMITTED TO BE OTHER THAN INSIDE OR ADJACENT TO THE DISPENSING DEVICE. THE MEANS SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION. THE DISPENSER MAINTENANCE SWITCH IS A DELEGATED DESIGN. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL AND LABOR FOR THIS SYSTEM.
  - 33. FUEL MONITORING SYSTEM: PROVIDE ALL SUMP SENSORS, TANK PROBES, INTERSTITIAL SENSORS, OVERFILL ALARMS, OVERFILL ALARMS ACKNOWLEGGE SWITCHES AND ELECTRONIC LINE LEAK DETECTIONS OF THE PROPERTY OF THE PROVIDENCE OF THE PROPERTY OF THE PROPERTY OF THE PROVIDENCE OF THE PROPERTY OF THE DETECTION(AS REQUIRED) FOR A COMPLETE A FULLY FUNCTIONAL FUEL MONITORING SYSTEM PROVIDE SENSOR WIRING PER MANUFACTURER'S RECOMMENDATIONS
  - PROVIDE SENSOR WIRING PER MANUFACTURER'S RECOMMENDATIONS.

    STP\_LINE\_LEAK\_ DETECTION: MOST STP PUMPS ARE PROVIDED WITH MECHANICAL TYPE LEAK
    DETECTION. IN THE EVENT THAT ELECTRONIC LINE LEAK DETECTORS ARE REQUIRED, PROVIDE ALL
    MATERIALS AND LABOR FOR A COMPLETE AND FULLY FUNCTIONAL ELECTRONIC LINE LEAK DETECTOR.

    CLEANING: UPON COMPLETION OF WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE
    CONTRACT AREA AND ALL OTHER AREAS USED FOR STORAGE, STAGING, ETC. ALL EQUIPMENT AND
    DEVICES SHALL BE CLEANED AND POLISHED IN ACCORDANCE WITH MANUFACTURER'S
    RECOMMENDATIONS, SOAP AND WATER CLEANING OR OTHER METHODS THAT LEAVE A FILM SHALL BE
    CORPECTED LIPON BEQUIEST BY THE EXPINIESE OR A RECHITECT.
  - CORRECTED UPON REQUEST BY THE ENGINEER OR ARCHITECT.

    TESTING: THE CONTRACTOR SHALL TEST ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATION. AT THE TIME OF FINAL INSPECTION AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATION. AT THE TIME OF FINAL INSPECTION AND TESTS, ALL CONNECTIONS AT PANELBOARDS, CONTROL PANELS, DEVICES, AND EQUIPMENT AND ALL SPLICES MUST BE COMPLETED. EACH BRANCH CIRCUIT AND ITS RESPECTIVE CONNECTED EQUIPMENT MUST TEST FREE OF SHORT CIRCUITS.

    7. TRAINING: OWNER AND/OR OWNER'S REPRESENTATIVE SHALL BE TRAINED ON THE USE OF ANY NEW ELECTRICAL EQUIPMENT AND LIGHTING CONTROLS PRIOR TO FINAL ACCEPTANCE.

    8. FINAL ACCEPTANCE: AT THE END OF CONSTRUCTION, A FINAL WALK-THROUGH SHALL BE PERFORMED. ALL DEFICIENCIES IDENTIFIED DURING FINAL INSPECTION SHALL BE CORRECTED.

    OF CERTIFICATES OF ADDROVAL ALL CERTIFICATES OF ADDROVAL SHALL BE CORRECTED.

  - CERTIFICATES OF APPROVAL: ALL CERTIFICATES OF APPROVAL SHALL BE IN DUPLICATE, DELIVERED TO THE ARCHITECT, AND BECOME THE PROPERTY OF THE OWNER.
  - 40. OPERATIONS AND MAINTENANCE (O&M) MANUALS. PROVIDE TWO COPIES OF OPERATIONS AND MAINTENANCE MANUALS TO THE BUILDING OWNER IN HARD COPY AND ELECTRONIC FORMAT. HARD

- COPIES SHALL BE COMPILED AND ORGANIZED IN A BINDER. THE MANUALS SHALL INCLUDE, AT A
- JM, THE FULLOWING:
  SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF
  EQUIPMENT REQUIRING MAINTENANCE.
  OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING
  MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
- NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
- D. WARRANTY INFORMATION.

  WARRANTY: THE ENTIRE TANK AND FUEL DISPENSING ELECTRICAL AND FUEL SYSTEM INSTALLED UNDER THIS CONTRACT SHALL BE HANDED OVER IN PROPER WORKING ORDER. ANY WORK OR MATERIALS WHICH DEVELOP DEFECTS, EXCEPT FROM ORDINARY WEAR AND TEAR, WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE SHALL BE REPLACED WITHOUT CHARGE. IF MATERIALS HAVE A STANDARD WARRANTY GREATER THAN ONE YEAR. THE MANUFACTURER'S STANDARD WARRANTY SHALL APPLY. BENEFICIAL USE SHALL NOT BE CONSTRUED AS FINAL ACCEPTANCE. THE ECTRICAL CONTRACTOR SHALL, DURING THE ONE YEAR GUARANTEE PERIOD, BE RESPONSIBLE FOR THE PROPER REPAIR AND ADJUSTMENTS OF ALL ELECTRICAL SYSTEMS AND EQUIPMENT, APPARATUS, DEVICES, ETC. INSTALLED BY HIM, AND DO ALL WORK NECESSARY TO ENSURE EFFICIENT AND PROPER FINICTIONING. WARRANTY INFORMATION.





INFINITY ENGINEERING GROUP, LLC

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ANDREW MOHR, P.E FL REG. NO. 73077

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and sealed and the signature r verified by a 3<sup>rd</sup> Party Certif Authority on any electronic

AND

NOTES

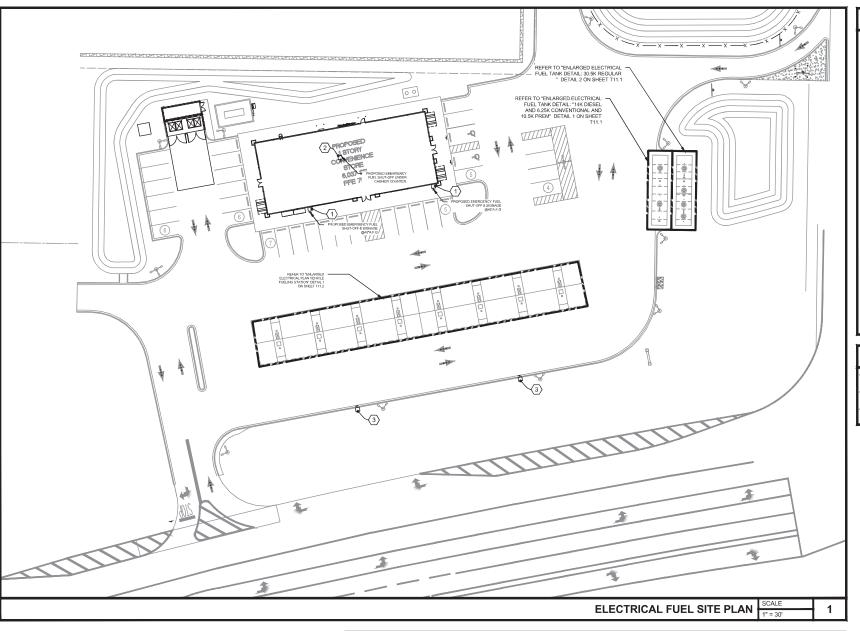
FUEL

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PACE #426 Address CEFCO 3

T9.0 AS NOTED

DE: 2020 FBC 02/03/2023



Remote E Stop

#### STANDARD CEFCO FUEL WIRE SIZES Init Size Of Wire QTY Of Wire In Conduit Size Of Wire QTY Of Wire In Conduit Size Of Wire #12 4 #14 2 #18/2 Twisted Pair # 12 # 18/4 Cable Cat 5 Intercom Data Spare Sensor 3/4 inch 3/4 inch 3/4 inch 3/4 inch 9 18/2 Cable 1 # 12 Ground W14 # 18/2 Twisted Pair Master Dispense 3/4 Inch 3/4 Inch 3/4 Inch 3/4 Inch # 18/4 Cable # 18/2 Cable 1 # 12 Ground Sensor Satellite 3/4 Inch # 18/2 Cable 1 # 12 Ground Power W14 #12 Ground 5 Master/Satelite Loop Auto Gas Canoov Truck Canopy # 12 Ground 1-1" to each stp Sump for sen's wt. 1 spare # 12 Ground 1-1\* Home Run for ATG & Int. Loops

# **GENERAL NOTES:**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRE. EDITION OF THE NATIONAL ELECTRICAL CODE, CURRENT EDITION OF BUILDING CODE AND APPLICABLE LOCAL ORDINANCES.
- VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO ROUGH-IN.
- COORDINATE ALL INSTALLATIONS WITH OTHER TRADES.
- ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA 30A.
- STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NEPA 30/A.
  ALL INTRINSICALLY SAFE(IS) WIRING SHALL BE PER NEC ARTICLE 504 AND
  ANSI/ISA RP 12.6. IN ADDITION, SPECIAL (IS) WIRING REQUIREMENTS FOR THE
  UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION
  FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS).
  TROUGHS SHALL HAVE A PERMANENTLY ATTACHED METAL DIVIDER THAT IS
  EQUIPOTENTIALLY BONDED TO EARTH.
- FURNISH AND INSTALL POURED SEALING FITTINGS AT BOTH ENDS OF ALL CONDUITS FROM FUEL DISPENSERS AND UNDERGROUND FUEL STORAGE TANKS.
- REFERENCE MANUFACTURER INSTALLATION MANUALS FOR UNDERGROUND FUEL STORAGE TANK EQUIPMENT WIRING INTERCONNECTIONS.
- ALL POWER CONDUCTORS SHALL BE STRANDED WITH DUAL RATED THHN/THWN INSULATION.
- INTERMEDIATE METAL CONDUIT(IMT) SHALL NOT BE USED.
- HOMERUN CONDUITS TO DISPENSERS AND TANKS TO BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT AND SCHEDULE 40 PVC PER NEC ARTICLE 514.8, EXCEPTION #2.
- ALL CONDUIT ROUTED BETWEEN TANK SUMPS SHALL BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT.
- PENETRATE SUBMERSIBLE TURBINE PUMP(STP) WITH ONLY (1) VEEDER-ROOT CONDUIT.
- PROVIDE 'EYS' SEALING FITTINGS WHERE CONDUITS ENTER OR LEAVE ANY HAZARDOUS CLASSIFIED AREA.
  INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL POWER AND
- INTRINSICALLY SAFE CONDUITS.
- REFER TO BUILDING ELECTRICAL DRAWINGS FOR PANEL SCHEDULES. THE TERM PROVIDE MEANS THAT THE CONTRACTOR WILL 'FURNISH' AND

# **KEYED NOTES:**

- (2) CASHIER EFSO PUSHBUTTON STATION: PROVIDE SIGNAGE AND PUSHBUTTONS FOR EMERGENCY OFF AND RESET.
- (3) REMOTE EFSO PUSHBUTTON STATION: PROVIDE SIGNAGE AND PUSHBUTTON PER DETAIL 5 ON SHEET T10.0.





 $\frac{\text{INFINITY ENGINEERING}}{\text{GROUP, LLC}}$ 

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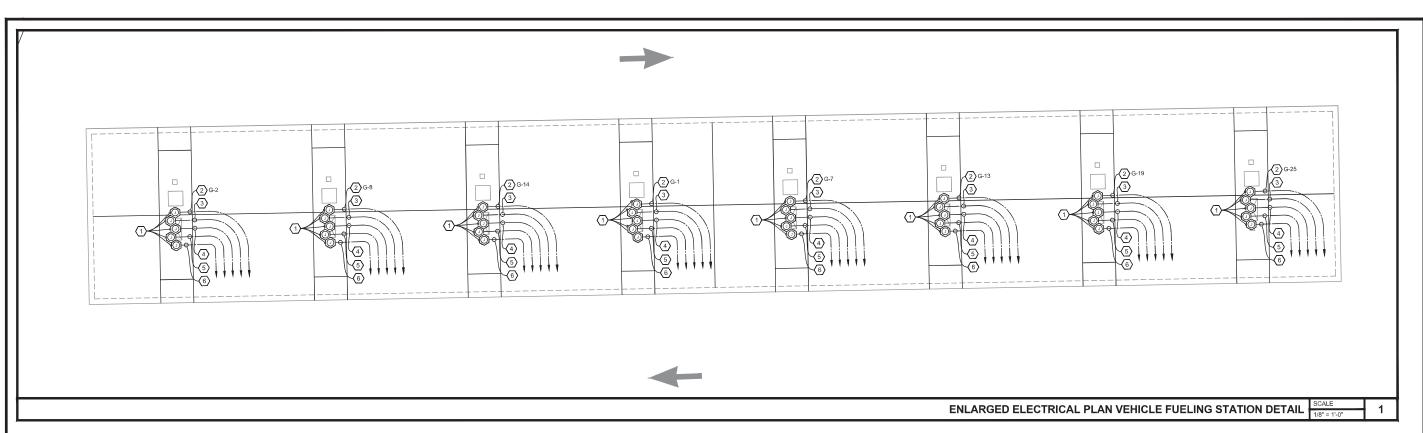
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ELECTRIC AN CEFCO #426 - PACE SYSTEM E SITE PLA FUEL

T10.0 AS NOTED

#### **KEYED NOTES: GENERAL NOTES:** 1) EXPLOSION PROOF JUNCTION BOX: CROUSE-HINDS GUA SERIES OR EQUAL. OF THE NATIONAL ELECTRICAL CODE, CURRENT EDITION OF BUILDING CODE AN APPLICABLE LOCAL ORDINANCES. 2 FUEL FILL GROUND FOR UST: REFER TO DETAIL 4 ON SHEET T10.0 VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO ROUGH-IN. 3) SUBMERSIBLE TURBINE PUMP(STP) POWER: 3-#10 & 1-#10 GND, 1°C. STP POWER ROUTE TO PUMP CONTROL PANEL. PROVIDE HOME RUN FROM CONTROL PANEL COORDINATE ALL INSTALLATIONS WITH OTHER TRADES. TO PANEL 'G'. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA 30A. (4) SENSOR CONDUIT AND CONDUCTORS: PROVIDE (1) 3/C #18 SHIELDED(AUTOMATI TANK GUAGE) AND (1) 3/C #18 SHIELDED(SPARE) IN 1" CONDUIT. ALL INTRINSICALLY SAFE(IS) WIRING SHALL BE PER NEC ARTICLE 504 AND 5 SENSOR CONDUIT AND CONDUCTORS: PROVIDE (1) 3/C #18 SHIELDED(AUTOMATIC TANK GUAGE), (1) 2/C SHIELDED(PUMP SUMP LEAK DETECTOR) AND (1) 3/C #18 ANSI/ISA RP 12.6. IN ADDITION, SPECIAL (IS) WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION SHIELDED(SPARE) IN 1" CONDUIT. FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS). TROUGHS SHALL HAVE A PERMANENTLY ATTACHED METAL DIVIDER THAT IS 6) SENSOR CONDUIT AND CONDUCTORS: PROVIDE (1) 2/C #18 SHIELDED(PUMP SUMFLEAK DETECTOR) IN 1" CONDUIT. EQUIPOTENTIALLY BONDED TO EARTH. FURNISH AND INSTALL POURED SEALING FITTINGS AT BOTH ENDS OF ALL TO SENSOR CONDUIT AND CONDUCTORS: PROVIDE (1) 2/C #18 SHIELDED(INTERSTITIAL SENSOR) AND (1) 3/C #18 SHIELDED(SPARE) IN 1" CONDUITS FROM FUEL DISPENSERS AND UNDERGROUND FUEL STORAGE TANKS. REFERENCE MANUFACTURER INSTALLATION MANUALS FOR UNDERGROUND FUEL STORAGE TANK EQUIPMENT WIRING INTERCONNECTIONS. CONDUIT. 24" STEEL HANDHOLE; COLLECT CONDUITS FROM SENSORS AND PROBES IN HANDHOLE FOR ROUTING IN ONE CONDUIT TO FUEL MONITORING PANEL. PROVIDE CLASS 1, DIV. 1 WIRING INCLUDE CONDUIT SEAL-OFF FITTINGS AND EXPLOSION PROOF JUNCTION BOX IN HANDHOLE. PROVIDE RIGID GALVANIZED ALL POWER CONDUCTORS SHALL BE STRANDED WITH DUAL RATED THHN/THWN INSULATION. INTERMEDIATE METAL CONDUIT(IMT) SHALL NOT BE USED. STEEL CONDUIT IN HANDHOLE AND MIN 24" OUTSIDE OF HANDHOLE. FRANKLIN FUELING 'CABLE TIGHT' WIRE MANAGEMENT SYSTEM; THESE (2) CONDUITS SHALL UTILIZE THE CABLE TIGHT' SYSTEM FOR THE FIRST 12"-0". TRANSITION TO SCHEDULE 40 PVC FOR THESE CONDUIT RUNS BEYOND THE 12"-0" HOMERUN CONDUITS TO DISPENSERS AND TANKS TO BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT AND SCHEDULE 40 PVC PER NEC ARTICLE 514.8, EXCEPTION #2. ALL CONDUIT ROUTED BETWEEN TANK SUMPS SHALL BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT. DISTANCE. FUEL MONITORING PANEL: ROUTE CONDUIT AND CONDUCTORS TO FUEL MONITORING PANEL PORTION OF THE CPI UNITIZED GEAR. SENSOR CONDUIT AND CONDUCTORS: PROVIDE (1) 3/C #18 SHIELDED(AUTOMATIC TANK GUAGE), (1) 2/C SHIELDED(INTERSTITIAL SENSOR) AND (2) 3/C #18. PENETRATE SUBMERSIBLE TURBINE PUMP(STP) WITH ONLY (1) VEEDER-ROOT CONDUIT. PROVIDE 'EYS' SEALING FITTINGS WHERE CONDUITS ENTER OR LEAVE ANY HAZARDOUS CLASSIFIED AREA. SHIELDED(SPARE) IN 1" CONDUIT. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL POWER AND INTRINSICALLY SAFE CONDUITS. (12) SENSOR CONDUIT AND CONDUCTORS: PROVIDE (2) 3/C #18 SHIELDED(AUTOMATI TANK GUAGE), (1) 2/C SHIELDED(INTERSTITIAL SENSOR) AND (2) 3/C #18 SHIELDED(SPARE) IN 1" CONDUIT. No. 1 2 REFER TO BUILDING ELECTRICAL DRAWINGS FOR PANEL SCHEDULES. THE TERM PROVIDE MEANS THAT THE CONTRACTOR WILL 'FURNISH' AND INFINITY (5)~ 5> 1 INFINITY ENGINEERING GROUP, LLC (2) Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 SUBMERS TURBINE PUMP @ kg 9 (e) <sup>5</sup>/<sub>2</sub> 9 PUMP SUMP LEAK DETECTOR FL Cert. of Auth. No. 2788 PUMP SUMP EAK DETECTOR 1 VENT *IGEFGO* $\bigcirc$ 4 12 SUBMERSIBLE TURBINE PUMP PUMP SUMP 1 1 1 10.25K PREM 4 **14K DIESEL** 6.25K CONV. (7)~ ANDREW MOHR, P.E. -(8) FL REG. NO. 73077 **ENLARGED ELECTRICAL FUEL TANK DETAIL:** 1 Date (000) 600 000 is item has been electronically sign d sealed by Andrew Mohr, PE on t $\bigcirc$ $\bigcirc$ ate and/or time stamp shown using gital signature. Printed copies of thi 6 3 and sealed and the signature must be verified by a 3<sup>rd</sup> Party Certificate Authority on any electronic com-**~11** 8 TO HANDHOLE WITH DRIVEN GROUND ROD (P) CEFCO #426 - PACE 9 PUMP SUMP LEAK DETECTOR 30.5K REGULAR 1 4 T10. **ENLARGED ELECTRICAL FUEL TANK DETAIL:** AS NOTED

ENLARGED ELECTRICAL



NO CABLE TIGHT STYLE WIRE MANAGEMENT SHALL BE UTILIZED FOR THE DISPENING UNIT CONDUIT SYSTEMS

# **GENERAL NOTES:**

- VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO ROUGH-IN.

- ALL POWER CONDUCTORS SHALL BE STRANDED WITH DUAL RATED THHN/THWN INSULATION.
- INTERMEDIATE METAL CONDUIT(IMT) SHALL NOT BE USED.
- HOMERUN CONDUITS TO DISPENSERS AND TANKS TO BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT AND SCHEDULE 40 PVC PER NEC ARTICLE 514.8, EXCEPTION #2.

- PROVIDE 'EYS' SEALING FITTINGS WHERE CONDUITS ENTER OR LEAVE ANY HAZARDOUS CLASSIFIED AREA.
- INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL POWER AND INTRINSICALLY SAFE CONDUITS.
- THE TERM PROVIDE MEANS THAT THE CONTRACTOR WILL 'FURNISH' AND



- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRE EDITION OF THE NATIONAL ELECTRICAL CODE, CURRENT EDITION OF BUILDING CODE AND APPLICABLE LOCAL ORDINANCES.
- COORDINATE ALL INSTALLATIONS WITH OTHER TRADES.
- ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND
- ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA 30A.

  ALL INTRINSICALLY SAFE(IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSWISA RP 12.6. IN ADDITION, SPECIAL (IS) WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS). TROUGHS SHALL HAVE A PERMANENTLY ATTACHED METAL DIVIDER THAT IS EQUIPOTENTIALLY BONDED TO EARTH.
- FURNISH AND INSTALL POURED SEALING FITTINGS AT BOTH ENDS OF ALL CONDUITS FROM FUEL DISPENSERS AND UNDERGROUND FUEL STORAGE TANKS.
- REFERENCE MANUFACTURER INSTALLATION MANUALS FOR UNDERGROUND FUEL STORAGE TANK EQUIPMENT WIRING INTERCONNECTIONS.

- ALL CONDUIT ROUTED BETWEEN TANK SUMPS SHALL BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT.

- REFER TO BUILDING ELECTRICAL DRAWINGS FOR PANEL SCHEDULES.





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> ENLARGED ELECTRICAL FUEL STATION PLANS CEFCO #426 - PACE

Γ10.2 AS NOTED



**KEYED NOTES:** 

(1) EXPLOSION PROOF JUNCTION BOX: CROUSE-HINDS GUA SERIES OR EQUAL.

(2) VEHICLE FUEL DISPENSER CONDUITS AND CONDUCTORS: 2.#10 (DISPENSER PWR), 10-#14 (FIVE PRODUCT DISPENSER CONTROL), 1- CABLE (DISPENSER DATA PER TAMK ELECTRICAL GENERAL NOTE #15), 1- CABLE (CARD READER PER TAMK ELECTRICAL GENERAL NOTE #15), 4-19 GDD, 1°C, ROUTE TO PANELBOARD, PUMP CONTROL PANEL & FUEL MANAGEMENT SYSTEM.

3) DISPENSER INTERCOM: PROVIDE (2) 2/C #18 SHL'D CABLES IN 1" CONDUIT. ROUTE TO INTERCOM MASTER STATION IN CPI UNITIZED SWITCHGEAR.

DISPENSER VGA SCREEN: PROVIDE (1) CAT5 UL AWM STYLE 21146 CABLE IN 1\*CONDUIT. ROUTE TO VEEDER-ROOT ADVERTISEMENT EQUIPMENT IN C-STORE. COORDINATE WITH OWNER FIELD REPRESENTATIVE FOR EXACT LOCATION PRIOR TO SLAB POUR.

5 DISPENSER SUMP SENSOR: PROVIDE 2/C #18 SHL'D & 2/C #18 SHL'D (SPARE) II 3/4"CONDUIT. ROUTE TO FUEL TANK MONITOR PANEL.

6 DISPENSER SPARE CONDUIT: PROVIDE (1) SPARE 1" CONDUIT W/ PULL STRIN TO CPI UNITIZED SWITCHGEAR.

TRUCK DISPENSER INTERCOM: (2) 2/C #18 SHIELDED CABLES (DISPENSER INTERCOM) ROUTE FROM DISPENSER TO INTERCOM MASTER STATION IN CPI UNITIZED GEAR.

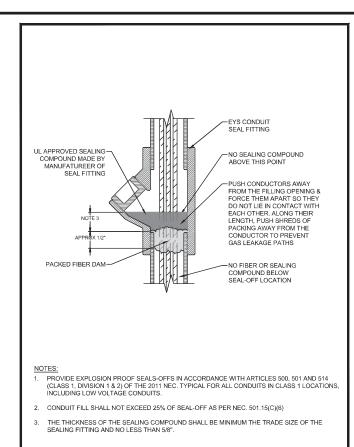
TRUCK DISPENSER VGA SCREEN: PROVIDE (1) CAT 5 UL AWM STYLE 21146 IN CONDUIT FROM DISPENSER TO VEEDER-ROOT ADVERTISEMENT EQUIPMENT IN C-STORE. OBTAIN EXACT LOCATION OF VEEDER ROOT EQUIPMENT FROM OWNER FIELD REPRESENTATIVE.

THEUR DISPENSOR POWER AND CONTROL: PROVIDE 2-#10 (DISPENSER POWER), 6-#14 (3 PRODUCT DISPENSER CONTROL), 1- CABLE (DISPENSER DATA PER TANK ELECTRICAL GENERAL NOTE #15), 1- CABLE (CARD READER PER TANK ELECTRICAL GENERAL NOTE #15), 1- (THEUR DESTRUCTION) IN 1 CONDUIT. ROUTE FROM DISPENSER TO GAS 'G' PANELBOARD, PUMP CONTRO

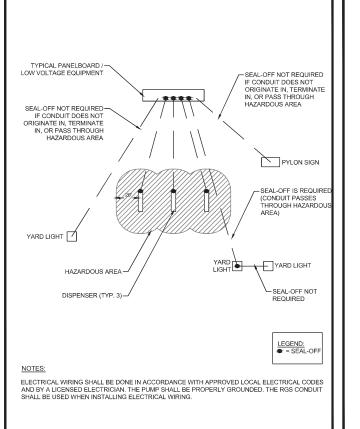
(10) MASTER/SLAVE DISPENSER CONDUCTORS: PROVIDE (1) SHIELDED CABLE (SLAVE DISPENSER HANDLE) AND (1) SHIELDED CABLE (SLAVE DISPENSER

VALVE). ROUTE 1" CONDUIT FROM MASTER DISPENSER TO SLAVE DISPENSE

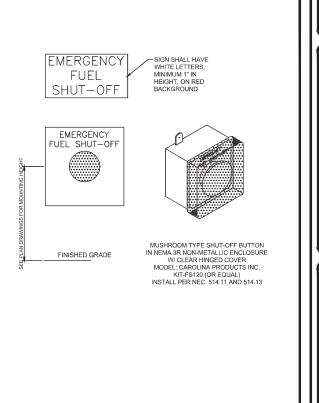
PANEL & FUEL MANAGEMENT SYSTEM.

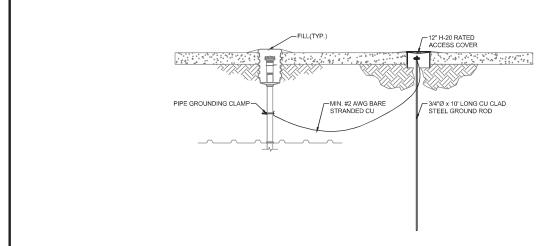


**SEAL-OFF DETAIL** 



TYPICAL SEAL-OFF REQUIREMENTS DETAIL





### NOTES:

- 1. ALL FILL AND VAPOR RISER ADAPTERS SHALL BE ELECTRICALLY GROUNDED TO PROMOTE THE RELAXATION OF STATIC CHARGE. SEE MANUFACTURER'S GROUNDING INSTALLATION FOR ADDITIONAL REQUIREMENTS.
- 2. THE BONDING AND GROUNDING FOR STATIC ELECTRICITY PROTECTION SHALL BE IN COMPLIANCE PER ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES INCLUDING NFPA 30, FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE, NFPA 77, RECOMMENDED PRACTICE ON STATIC ELECTRICITY, NFPA 70, 2011 EDITION OF THE NATIONAL ELECTRIC CODE, AND THE CALIFORNIA CODE OF REGULATIONS, SUBCHAPTER 15, PETROLEUM SAFETY ORDERS-REFINING, TRANSPORTATION AND HANDLING, ARTICLE 5, FIRE AND EXPLOSIONS.
- 3. PER SECTION 6.4.1.3 OF NFPA 77, THE MEASURED TOTAL RESISTANCE IN THE GROUND PATH TO EARTH SHALL BE LESS THAN 1 MEGACHM WHICH IS CONSIDERED ADEQUATE FOR RELAXATION OF STATIC CHARGE. THE MAXIMUM ALLOWABLE GROUND PATH TO EARTH RESISTANCE FOR STATIC ELECTRICITY GROUNDING APPLICATIONS SHALL NOT EXCEED 100,000 OHMS.
- 4. PER SECTION 6.4.1.3 OF NFPA 77, THE RESISTANCE IN METALLIC BONDING AND OR GROUNDING SYSTEMS SHALL BE LESS THAN 10 OHMS. RESISTANCE HIGHER THAN 10 OHMS INDICATES INADEQUATE
- 5. A GROUNDING SYSTEM PER NEC CODE FOR CURRENT CARRYING CONDUCTORS SHALL BE CONSIDERED MORE THAN ADEQUATE FOR A STATIC ELECTRICITY GROUNDING SYSTEM.
- 6. PER THE NFPA 30, SECTION 5-6.3.4 ALL PARTS OF THE FILL PIPE ASSEMBLY, INCLUDING THE DROP TUBE, SHALL FORM A CONTINUOUS ELECTRICALLY CONDUCTIVE PATH.
- 7 THE MINIMUM WIDE SIZE FOR BONDING AND GROUNDING SHALL BE CORDER AWG #2
- 8. A 3/4" Ø BY 10" LONG COPPER CLAD STEEL GROUND ROD SHALL BE DRIVEN INTO NATIVE SOIL ONLY, PLACING THE GROUND ROD INTO TANK PIT AREA GRAVEL SHALL NOT BE PERMITTED UNDER ANY CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR CLEARING ANY UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF THE GROUND.
- 9. THE GROUND ROD TO GROUND WIRE CONNECTION SHALL BE ACCESSIBLE THROUGH A H-20 RATED 12" DIAMETER MINIMUM ACCESS COVER TO ASSIST INSPECTION, MAINTENANCE AND TESTING. THE SCREW TYPE GROUND ROD CLAMP SHALL BE UL LISTED FOR DIRECT BURIAL.
- 10. ONE MAIN STRANDED #2 THHN CONDUCTOR SHALL BE RUN PAST EACH FILLSUMP. ONE STRANDED #2 THHN CONDUCTOR SHALL BE ROUTED TO EACH FILL SUMP.



EMERGENCY FUEL SHUT-OFF

SCALE
NTS

3

TOP VIEW

SIDE VIEW

SIDE VIEW

SIDE VIEW

SCALE
NTS

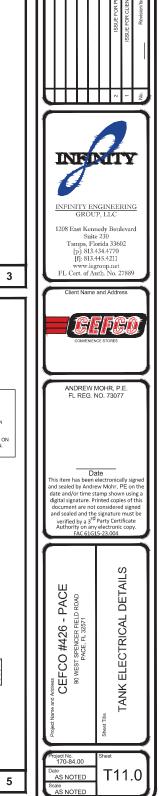
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SCALE
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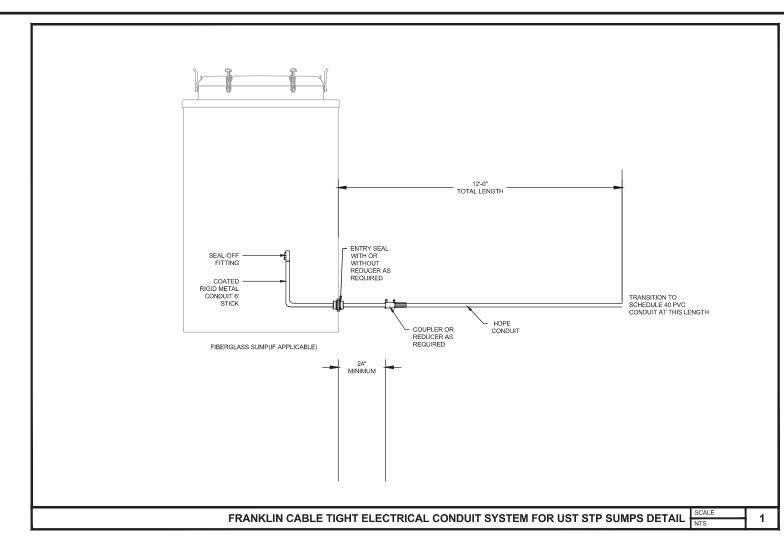
SCALE
NTS

3

SCALE
NTS









### FRANKLIN FUELING CABLE TIGHT WIRE MANAGEMENT SPECIFICATION

#### PART 1 GENERAL

SECTION INCLUDES:

1. THE UNDERGROUND WIRE MANAGEMENT SYSTEM SHALL BE CABLE TIGHT AS MANUFACTURED BY FRANKLIN FUELING SYSTEMS. SYSTEM SHALL CONSIST OF IMPACT RESISTANT, CORROSION-RESISTANT HDPE (HIGH DENSITY POLYETHYLENE) CONSTRUCTION.

RESISTANT FUFE (UNDIT DELIGNATION OF REFERENCES:

2.1. NFPA 30 - CODE FOR MOTOR FUEL DISPENSING FACILITIES AND REPAIR GARAGES

2.3. UNDERWEITERS LABORATORIES - UL-651 HDDE CONDUIT

2.4. FFS 4080/1007 UPP PIPING SYSTEMS ELECTROFUSION WELDING INSTRUCTIONS

FES 4080/1007 PET-22/IV HAND-HELD WELDER OPERATING MANUAL

FFS 408001010 EF1-230V HAND-HELD WELDER OPERATING MANUAL FFS 408001016 UPP PIPING INSTALLATION GUIDE FFS 408001017 UPP ELECTROFUSION ENTRY SEAL INSTALLATION GUIDE

FFS 771-125-00 CONDUIT RIGID ENTRY BOOTS INSTALLATION INSTRUCTIONS

UL6 & UL971 RIGID METAL CONDUITS UL 971 ELECTROFUSION FITTINGS

QUALITY ASSURANCE: 1.1. THE WIRE MANAGEMENT SYSTEM SHALL BE INSTALLED AS SPECIFIED ON CONTRACT DRAWINGS AND OR AT THE DISCRETION OF THE RESPONSIBLE INSTALLING CONTRACTOR TO PROVIDE A COMPLETE AND TESTED WIRE MANAGEMENT SYSTEM AS REQUIRED FOR THE PROJECT AND PER FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

DELIVERY, STORAGE, AND HANDLING:

1. CONDUIT AND FITTINGS SHALL BE PROTECTED FROM DAMAGE DUE TO IMPACT AND POINT LOADING.
THE CONTRACTOR SHALL NOT ALLOW DIRT, DEBRIS OR OTHER EXTRANEOUS MATERIALS TO GET INTO
THE CONDUIT AND FITTINGS.

PROJECT CONDITIONS:

1. PERFORM GROUND PENETRATING RADAR STUDY, SITE SURVEY, RESEARCH PUBLIC UTILITY RECORDS AND VERIFY EXISTING UTILITY LOCATIONS. CONTACT UTILITY-LOCATING SERVICE FOR AREA WHERE PROJECT IS LOCATED.

### PART 2 PRODUCTS

ACCEPTABLE MANUFACTURERS:
6.1. ALL CONDUIT, FITTINGS AND SPECIALTY COMPONENTS FOR COMPLETE AND CODE COMPLIANT CONDUIT SYSTEMS PER FRANKLIN FUELING CABLE TIGHT.

CABLE TIGHT FITTINGS AND ENTRIES SHALL BE UL971 LISTED ELECTROFUSION TYPE AND MADE OF MOLDED HDPE WITH NYLON BASED POLYMERS. FITTINGS INCLUDE COUPLERS, REDUCERS, TERMINATION FITTINGS. UNIONS AND ENTRY FITTINGS

CONDUIT

CONDUIT SHALL BE AVAILABLE IN 3/4" THRU 1" DIAMETERS

6.4.2. ALL PART NUMBER BELOW ARE FRANKLIN FUELING (ONLY PROVIDE WHAT IS NEEDED FOR THE APPLICATION):

• 000-075-1000-EC-U 3/4" FLEXIBLE CONDUIT REEL 1000' %" FLEXIBLE CONDUIT REEL 1500'
%" COATED RIGID METAL CONDUIT-12 PACK 000-075-1500-EC-U • 000-075-06-ERMC-PE

• 000-075-06-ERMC 3/4" SPIGOTTED RIGID METAL CONDUIT(6' STICK) 12 PACK %" SPIGOTTED RIGID METAL CONDUIT(8" STUB)
%" FIBERGLASS ENTRY SEAL(FLAT SURFACE) • 91-027 NPT • REB-C-0075

 REB-C-R-0075 3/" FIBERGLASS ENTRY SEAL (ROUND SURFACE) POLYETHYLENE ENTRY SEAL (USED FOR % AND 1" SYSTEMS)
% POLYETHYLENE ENTRY SEAL REDUCER

• 49-063-031

• 02-027 3/4" COUPLER

• 000-100-1000-EC-U 1" FLEXIBLE CONDUIT REEL 1000

1" COATED RIGID METAL CONDUIT(6' STICK) 12 PACK 000-100-06-ERMC-PE 000-100-06-ERMC 1" SPIGOTTED RIGID METAL CONDUIT(6' STICK) 12 PACK REB-C-0100 1" FIBERGLASS ENTRY SEAL(FLAT SURFACE)

 REB-C-R-0100 1" FIRERGLASS ENTRY SEAL (ROLIND SURFACE)

POLYETHYLENE ENTRY SEAL (USED FOR BOTH 3/4" AND 1" SYSTEMS) 49-063-038

1" REDUCING COUPLER • 02-033 1" COUPLER

• EF1-110V-A ELECTROFUSION WELDER 110V

 EF1-230V HANDHELD ELECTROFUSION WELDER, 230V

STEP -UP TRANSFORMER REQUIRED FOR HAND-HELD WELDER OPERATION EF1 WELDER BRIDGING CABLE

 EF1-BC 2MM ROTOSCRAPER075 3/4" SPEED SCRAPER TOOL 1" SPEED SCRAPER TOOL ROTARY SCRAPER ROTOSCRAPER100 • SCR-025-125

 SCR.HAR HANDHELD SCRAPER

 SCR.HAR(B)
 303-CLAMP-1 SPARE BLADES FOR HANDHELD SCRAPER
POLYETHYLENE ENTRY SEAL WELDING CLAMP

• 408179001 3/4" SPIGOTTED RIGID METAL CONDUIT TO 3/4" FLEXIBLE CONDUIT CLAMP 1" SPIGOTTED RIGID METAL CONDUIT TO 1" FLEXIBLE CONDUIT CLAMF

3/4" COATED RIGID METAL CONDUIT TO 3/4" FLEXIBLE CONDUIT CLAMP 408179003 • 408179004 1" COATED RIGID METAL CONDUIT TO 1" ELEXIBLE CONDUIT CLAMP

408005901 CONSUMABLES KIT INCLUDING LINT FREE RAGS, MARKERS, SPRAY BOTTLES, NITRILE GLOVES, EMERY CLOTH AND PAINT SCRAPERS.

# **IMPORTANT:**

**EC SHALL PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND CODE COMPLIANT WIRE MANAGEMENT** SYSTEM BY FRANKLIN FUELING **SYSTEMS 'CABLE TIGHT' FOR THE (2) CONDUITS FROM EACH STP SUMP EXTENDING 12'-0" FROM THE STP SUMP** AND TRANSITION TO SCHEDULE 40 PVC CONDUIT UNDERGROUND ONLY.





Suite 230 Tampa, Florida 33602 [p]: 813.434.4770 [f]: 813.445.4211 FL Cert, of Auth. No. 2788



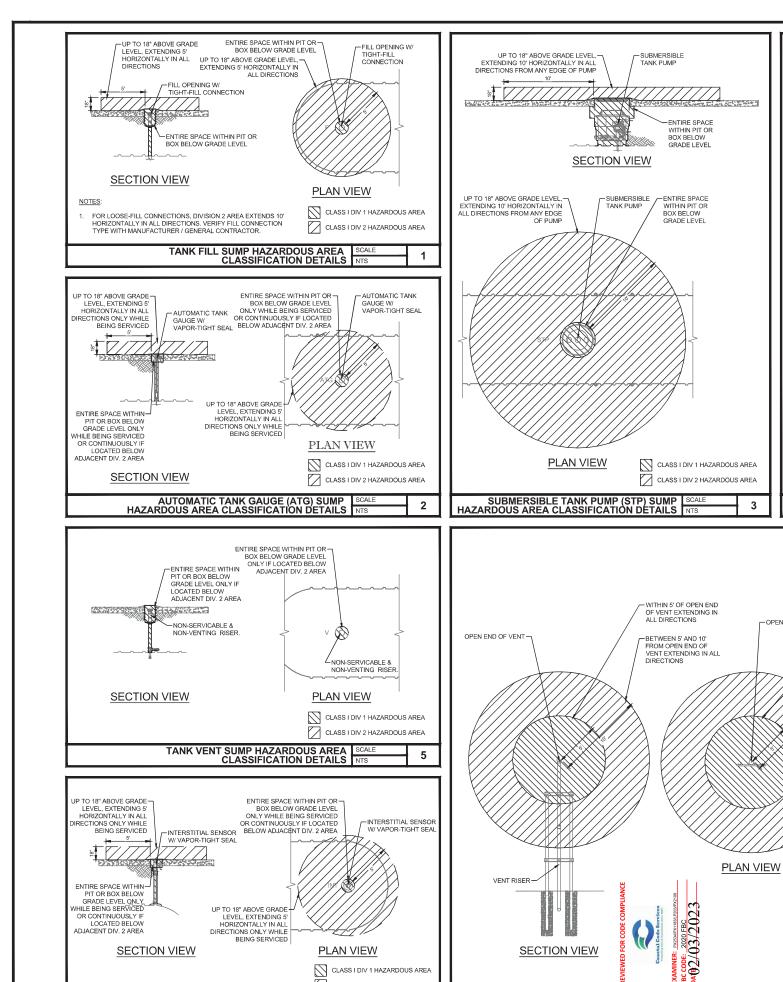
FL REG. NO. 79067

ANDREW MOHR, P.E. AL REG. NO. 35471

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**DETAILS** #426 - PACE ELECTRICAL CEFCO 7

T11.



**SECTION VIEW** 

VENT HAZARDOUS AREA CLASSIFICATION DETAILS

DIRECTIONS ONLY WHILE BEING SERVICED

TANK INTERSTIAL SUMP HAZARDOUS AREA CLASSIFICATION DETAILS

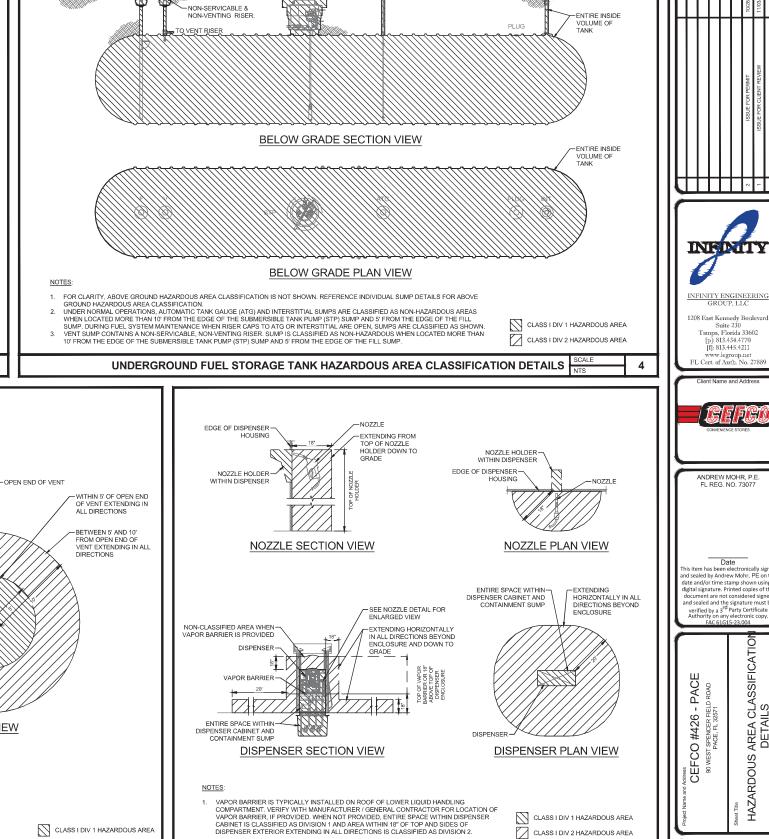
PLAN VIEW

CLASS I DIV 1 HAZARDOUS AREA

CLASS I DIV 2 HAZARDOUS AREA

6

**SECTION VIEW** 



**DISPENSER HAZARDOUS AREA CLASSIFICATION DETAILS** 

BOX BELOW

GRADE LEVE

5777 V 5500 S (No.)

-ENTIRE SPACE WITHIN PIT OR BOX BELOW GRADE LEVEL ONLY IF

ADJACENT DIV. 2 AREA THE STORY WAS IN A TIPE

LOCATED BELOW

ENTIRE SPACE-WITHIN PIT OR

GRADE LEVEL

BOX BELOW

CLASS I DIV 1 HAZARDOUS AREA

CLASS I DIV 2 HAZARDOUS AREA

ENTIRE SPACE WITHIN PIT OR

OR CONTINUOUSLY IF LOCATED

BELOW ADJACENT DIV. 2 AREA

ENTIRE SPACE WITHIN PIT OR BOX BELOW GRADE LEVEL
ONLY WHILE BEING SERVICED
OR CONTINUOUSLY IF LOCATED
BELOW ADJACENT DIV. 2 AREA

CANCEL DE LA CONTRACTOR DE LA CONTRACTOR

BOX BELOW GRADE LEVEL ONLY WHILE BEING SERVICED



Date item has been electronically sign sealed by Andrew Mohr, PE on

e and/or time stamp shown using

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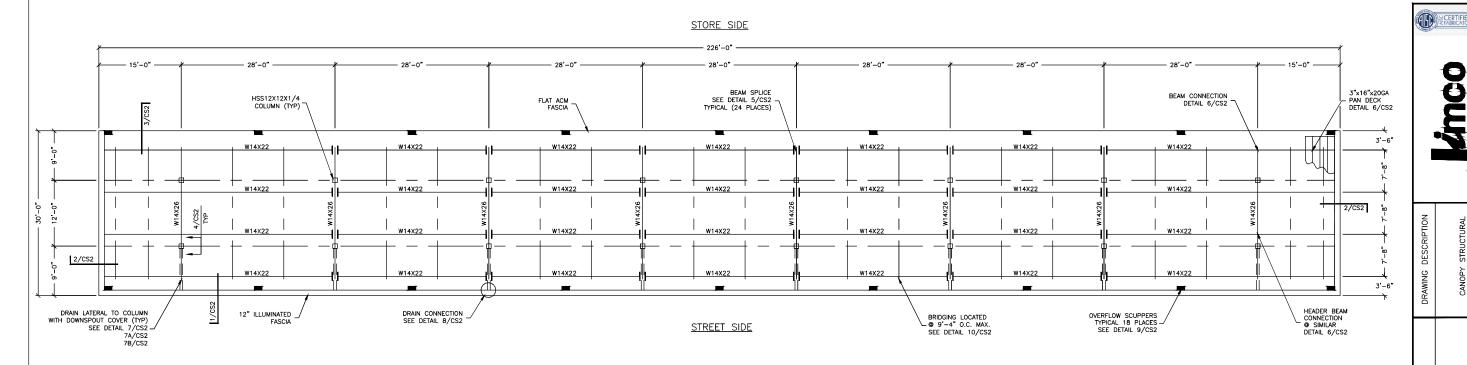
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T12.0

#426

8

CLASS I DIV 2 HAZARDOUS AREA



FRAMING PLAN

SCALE: 1/8"=1'-0"

SPECIAL NOTE: ALL STEEL TO BE HOT DIPPED GALVANIZED.

2020 FBC 02/03/2023

— 30'-0" -FASCIA FRAMING - @ 48" O.C. MAX. ALL SIDES. W14X22 PURLINS W14X26 HEADERS 20gaX3"X16" - PAN DECK NOA#21.0617.06 HSS12X12X1/4 COLUMN (TYP) TOP OF GRADE 1/AB1 2'-6" SPREAD FOOTING (INSTALLED BY G.C.) TYP SEE DETAIL SHEET AB1 2'-6"

SCALE: 1/4"=1'-0"

SECTION/ELEVATION

### SPECIAL INSPECTIONS FOR THE CANOPY

SPECIAL INSPECTIONS FOR THE CANOPY SHALL BE PROVIDED BY THE OWNER PER CHAPTER 17 OF THE IBC.

THE FOLLOWING SYSTEMS ARE SUBJECT TO THE SPECIAL INSPECTION REQUIREMENTS OF THE IBC CHAPTER 17.

B. COLLIMN BASE PLATE.
C. FOOTINGS UNLESS EXEMPT

THE SPECIAL INSPECTION OF THE SPECIAL INSPECIAL INSPECTION OF THE SPECIAL INSPECTION OF THE SPECIAL INSPECTION OF THE SPECIAL INSPECIAL I

SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK.

- WELDING 1. PRIOR TO WELDING (TABLE N.5.4—1, 360–16)
   2. DURING WELDING (TABLE N.5.4—2, 360–16)
   3. AFTER WELDING (TABLE N.5.4—3, 360–16)
   4. NONDESTRUCTIVE TESTING (SECTION N.S. 360–16)
   PER IGC 1705.2. SPECIAL INSPECTION IS NOT REQUIRED WHERE WELDING IS PERFORMED IN AN APPROVED SHOP, JIMCO SALES AND MANUFACTURING IS AN AISC APPROVED FABRICATOR
  (218031061–10INIT).
- CONCRETE PER IBC 1705.3; EXCEPTION 1 SPECIAL INSPECTION IS NOT REQUIRED FOR ISOLATED SPREAD CONCRETE FOOTINGS FULLY SUPPORED ON EARTH OR FOCK. \*THIS EXCEPTION DOES NOT APPLY IN THE STATE OF NEVADA.\*
- ANCHOR BOLTS PERIODIC SPECIAL INSPECTION OF ANCHORS CAST IN CONCRETE REQUIRED PER IBC TABLE 1705.3. ITEM 3
- STRUCTURAL OBSERVATIONS: NONE REQUIRED

# SEISMIC FORCE RESISTING SYSTEM (SFRS)

- A REFER TO ASC 341—18 SECTION A4 AND ASCE 7—16.

  B. DESIGNATION OF SFRS: G.Z. STEEL ORDINARY CANTILLYER COLUMN SYSTEMS (ASSENTED A5) AND ASCE 7—16 TABLE 1.22—1) SEE AISC 341—16 SECTION E5 (OCCS).

  C. R. = 1.25, CS. = 0.07

  C. R. = 1.25, CS. = 0.07

  D. ANALYSIS PROCEDURE = COUNALENT LATERAL FORCE

  E. MEMBERS AND CONNECTIONS THAT ARE PART OF THE SFRS:

  1. COLUMNS

  2. COLUMN SSE CONNECTION

  5. BEAMS

  PROTECTED ZONES: N/A

  G. SEE DETAILS AND NOTE FOR CONNECTION CONFIGURATIONS, MATERIALS SPECIFICATIONS AND SIZES.

  H. WELD FILLER MATERIALS FOR WELDS PART OF THE SFRS:

  1. YELD STRENGTH SS MSS MIN

  2. TENSILEST SHEWIST SS MSS MIN

  3. TENSILEST SHEWIST SS MSS MIN

  4. CVAY TOUGHNESS 20 FT—LB MIN © OF SEE DETAILS AND NOTES FOR OTHER WELDING REQUIREMENTS

  J. DEMAND CRITICAL WILLS N/A

  K. LOWEST ANTICIPATED SERVICE TEMPERATURE O' F

C	AN	OP	Y	NC	TES	

- GENERAL NOTES:
  A. THE SECONTRACTOR SHALL YEAR'S ALL CONDITIONS AND DIMENSIONS AT THE SITE.
  B. CONSTRUCTION TO THE SITE BY THE DESIGN EMONITED SHALL NEITHER BE
  CONSTRUCTED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
  C. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS
  ON THE STRUCTURE WITHIN LIMITS OF DESIGN LOADS.
  D. TYPICAL DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT
  SHOWN.

- 1. BUILDING CODE: 2020 FLORIDA BUILDING CODE / 2018 INTERNATIONAL BUILDING CODE |
  2. USE GROUP: M, CONSTRUCTION TYPE − IIB |
  3. DESIGN LOADS: 20 PSF (REDUCIBLE) |
  3. DESIGN LOADS: 20 PSF (REDUCIBLE) |
  6. CANOPY DEAD LOAD: 10.60 PSF |
  7. C. GROUND SNOW LOAD Pg: 0 PSF | PLAT ROOF SNOW LOAD Pg: 0 PSF |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
  7. RAIN ON SNOW SURCHARGE: 1.0 PSF | Pg<20 |
- ZONE 3
   ZONE 2
   ZONE 1

   67
   -63
   67
   -63
   44
   -41
- LEARTHOLAKE DESIGN:

  MORTANCE FACTOR:
  55 = -0.083
  S1 = 0.083
  S1 = 0.083
  S1 = 0.083
  S1 = 0.089
  S1 = 0.099
  S1 = 0.089
  S1 = 0.089
  S1 = 0.099
  S1 = 0.099
  S1 = 0.099
  S1 = 0.099
  S1 = 0.07
  S1 = 0.

- . FOUNDATION DESIGN:
  ALLOWABLE BEARING PRESSURE: 1500 PSF
  PER GEOTECHNICAL REPORT BY: NOVA ENGINEERING AND ENVIRONME
  DATED: 15 JULY 2022 (PROJECT NO. 10116-2022107).
  LATERAL EARTH PRESSURE PREPARED FOR THE FOUNDATION IN
  ACCORDANCE WITH THE GEOTECHNICAL REPORT REFRENCED ABOVE.

- 3. CONCRETE AND REINFORCEMENT:

  A. CONCRETE FOOTINGS (EXPOSURE CLASSES FO, SO, WO, CO) TYPE II

  CEMENT COMPRESSIVE STRENGTH OF f°c = 3000 p.s.i.

  S. SLAB ON GRADE (BY OTHERS)

  C. CONCRETE DESIGNED USING f°c = 2500 p.s.i. OR ABOVE SHALL HAVE

  SPECIAL INSPECTIONS PERFORMED, UNLESS ISOLATED SPREAD FOOTINGS

  ARE UTILIZED. SEE SPECIAL INSPECTIONS FOR THE CANOPY CONCRETE

  NOTE OF THE CANOPY CONCRETE

  OF THE CANOPY CONCRETE

  OF THE CANOPY CONCRETE

  FOR HALL CONCRETE EXPOSED TO GROUND — 2°

  FOR HED CONCRETE EXPOSED TO GROUND — 2°

  FOR HED CONCRETE EXPOSED TO GROUND 1/2°

  GROUT UNDER COLUMN BASE PLATES SHALL BE NOW—SHRINK GROUT

  COMPLYING WITH ASTM C1107, f°c=5000p.s.i. AND INSTALLED PER

  MANUFACTURERS RECOMMENDATIONS

  H. GENERAL CONTRACTOR IS RESPONSIBLE FOR LOCATING TOP OF FOOTING

  ELECATIONS AS REQUIRED FOR UNDERGROUND PLUMBING AND

  STRUCTURAL STEEL:

- . STRUCTURAL STEEL.
  A. ALL STRUCTURAL STEEL SHALL COMPLY WITH AISC "SPECIFICATION FOR FOR THE DESIGN OF STRUCTURAL STEEL FOR BUILDINGS" 15TH EDITION.
  B. AISC "CODE OF STANDARD PRACTICE" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, 4.4.2, AND 7.15.
  C. AISC "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STRUCTURAL

JOB NO 22-2960R0 DWG. NO. CS1

OF 3 SHEETS

3113

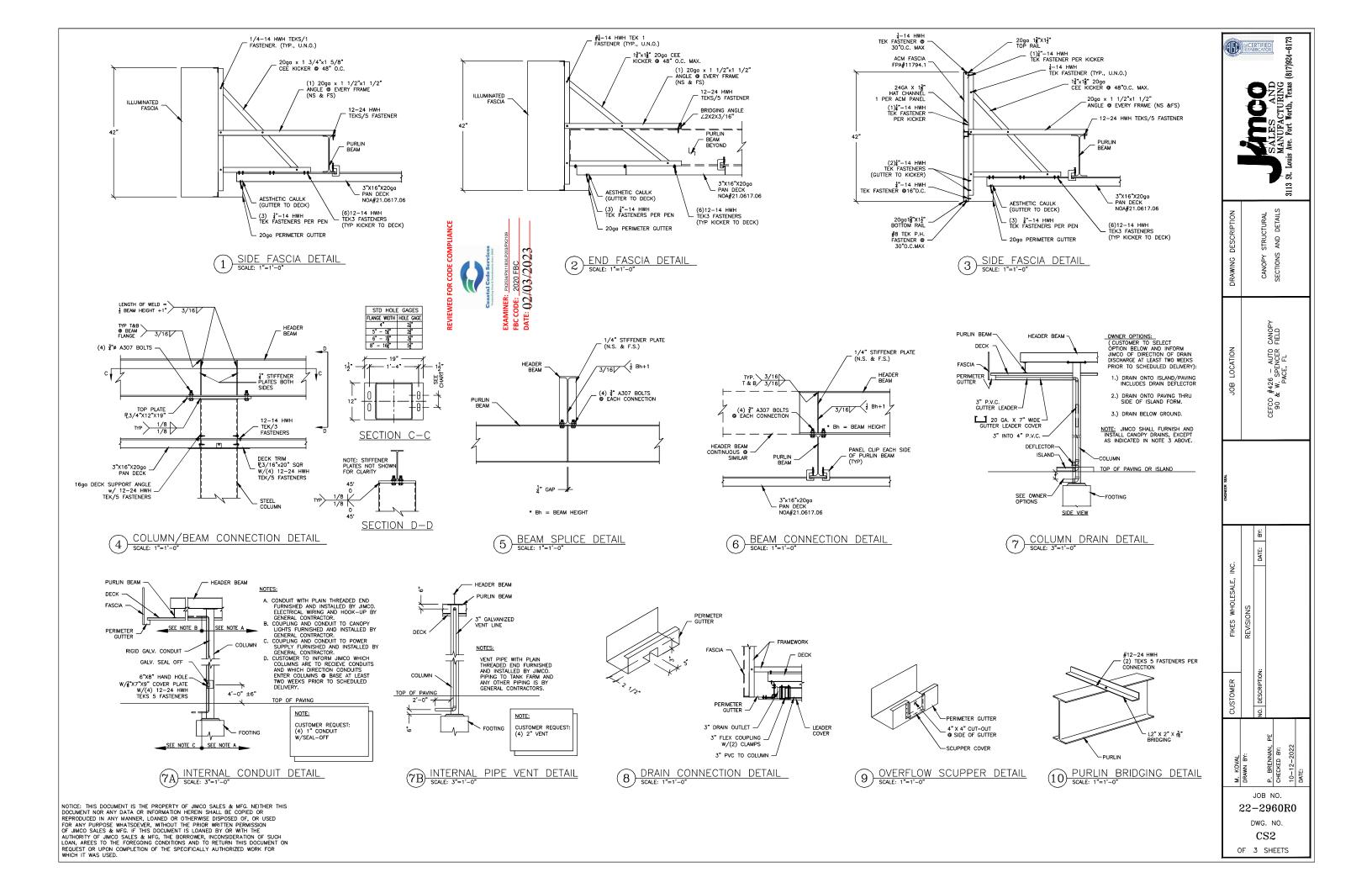
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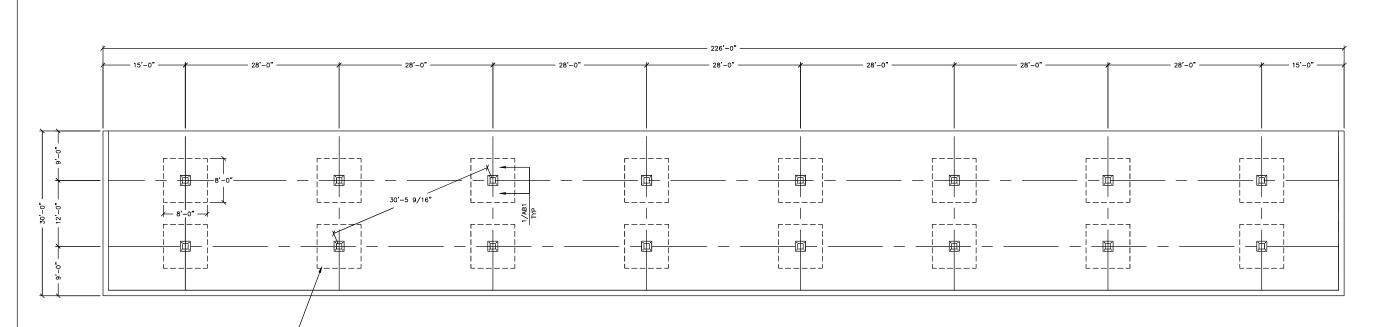
CANOP) FIELD

SPENCER I

#426 & W. S PA CEFCO 90 a

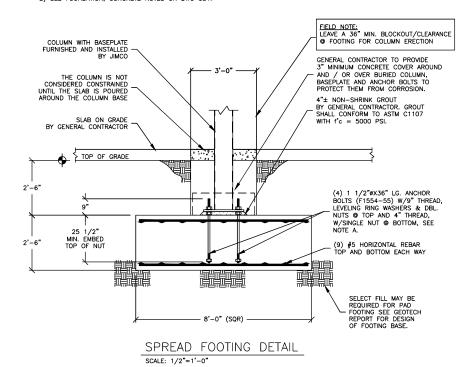
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FOUNDATION PLAN SCALE: 1/8"=1'-0"

NOTE:
A) FOOTINGS INCLUDING CONCRETE, REBAR, FORMWORK AND
ASSOCIATED EARTHWORK SHALL BE FURNISHED AND INSTALLED BY
GENERAL CONTRACTOR EXCEPT ANOTHOR BOLTS SHALL BE
FURNISHED BY JIMCO AND INSTALLED BY GENERAL CONTRACTOR. B) SEE FOUNDATION, CONCRETE NOTES ON DWG CS1.



**REVIEWED FOR** 

EXAMINER: PX5534PX183LP203IPX2 FBC CODE: 2020 FBC DATE: 02/03/2023

P. BRENNAN, CHECKED BY: JOB NO. 22-2960R0

> DWG. NO. AB1 OF 3 SHEETS

SALES AND MANUFACTURING Louis Ave. Fort Worth, Texas (8

DETAILS AND

CANOPY

CANOPY FIELD

CEFCO #426 - AUTO C 90 & W. SPENCER FI PACE, FL

1 3/4*6  (TYP)  HOLE  1 1/2"X22"X22" BASE PLATE	3". (TYP)
1 BASE PLATE DETAIL SCALE: 1"=1'-0"	

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SPREAD FOOTING (TYP) SEE DETAIL THIS SHEET