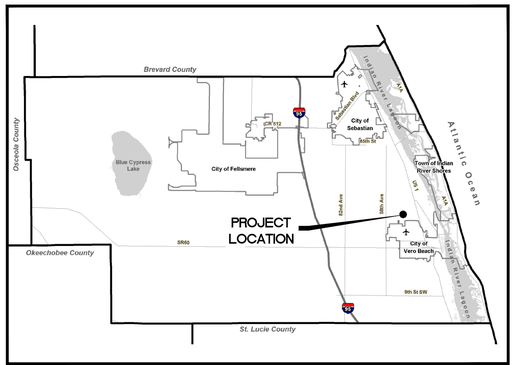
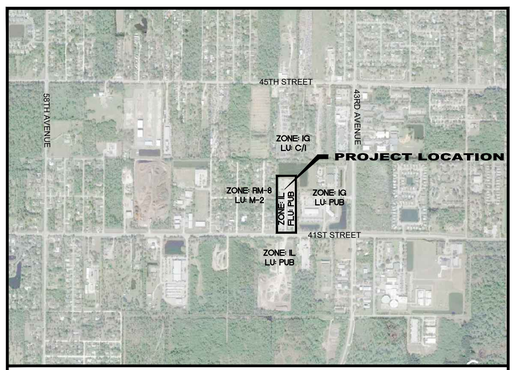
NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY

SECTION 28, TOWNSHIP 32S, RANGE 39E
INDIAN RIVER COUNTY, FLORIDA

TRC SUBMISSION - NOVEMBER 2021
2ND SUBMISSION - FEBRUARY 2022
3RD SUBMISSION - APRIL 2022



LOCATION MAP



VICINITY MAP

OWNER / APPLICANT

Indian River County
Board of County Commissioners
ircgov.com

BOARD OF COUNTY COMMISSIONERS

JOE EARMAN - CHAIRMAN
SUSAN ADAMS - VICE-CHAIRMAN
JOE FLESCHER - COMMISSIONER
DERYL LOAR - COMMISSIONER
LAURA MOSS - COMMISSIONER
JOHN TITKANICH - COUNTY ADMINISTRATOR
RICHARD B. SZPYRKA, P.E. - PUBLIC WORKS DIRECTOR

1801 27TH STREET
VERO BEACH, FL 32960
PH: (772) 226-1283

ENGINEER

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES

CIVIL ▪ STRUCTURAL ▪ SURVEYING ▪ ENVIRONMENTAL
1835 20TH STREET
VERO BEACH, FL 32960
PH: (772) 569-0035
MELBOURNE, FL - PH: (321) 253-1510
FT. PIERCE, FL - PH: (772) 468-9055

SURVEYOR

IRC PUBLIC WORKS DEPARTMENT,
ENGINEERING DIVISON
1801 27TH STREET
VERO BEACH, FLORIDA 32960
PHONE (772) 567-8000

ARCHITECT

DONADIO & ASSOCIATES,
ARCHITECTS, P.A.
2001 9th AVENUE, SUITE 308
VERO BEACH, FL 32960
PH: (772) 794-2929

INDEX OF DRAWINGS

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O:\DRAWINGS\2021\21-0082\PDC\New Traffic Operations Building\Drawings\21-0082 COVER - DETAILS.dwg 6/30/2023 8:51 AM STEVE SMITH

This item has been digitally signed & sealed by Aaron Stanton, P.E. on the date adjacent to the seal.

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

BID SET: 06/30/2023

AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

DATE: 6/30/2023

PROJECT: 21-0082

SHEET
C1

PRE-CONSTRUCTION REQUIREMENTS:

1. THE CONTRACTOR IS REQUIRED TO PERFORM HIS WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE VARIOUS PERMITS WHICH WILL BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE (SEQUENCE OF OPERATIONS) PRIOR TO THE PRE-CONSTRUCTION MEETING.
3. CONTRACTOR WILL ATTEND A PRE-CONSTRUCTION MEETING WITH THE DESIGN ENGINEER, MUNICIPALITY AND/ OR OWNER PRIOR TO LAND DISTURBANCE.
4. SHOP DRAWINGS SHALL BE SUBMITTED BEFORE ORDERING MATERIAL FOR PLANNED PROJECT. CORRESPONDING SHALL BE BETWEEN THE DESIGN ENGINEER AND THE LOCAL GOVERNING AGENCY AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION NOTES:

1. THE CONTRACTOR IS ADVISED TO THOROUGHLY REVIEW THIS PLAN PACKAGE SO AS TO BE TOTALLY PREPARED TO PRESENT HIS BID PRICES IN THE CONTRACT DOCUMENTS. THE PLAN PACKAGE SUFFICIENTLY DELINEATES THE SCOPE AND INTENT OF THE WORK TO BE ACCOMPLISHED. IT WILL, THEREFORE, BE INCUMBENT ON THE CONTRACTOR TO ADJUST HIS FEE DOLLARS TO REFLECT ANY AND ALL ITEMS WHICH MAY NOT BE CLEARLY OUTLINED OR THOSE ITEMS WHICH MAY NOT BE INDICATED BUT WHICH ARE NECESSARY FOR THE SUCCESSFUL COMPLETION OF THIS PROJECT WITHOUT ADDITIONAL COSTS TO THE OWNER.z
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH INDIAN RIVER COUNTY AND FDOT STANDARDS AND SPECIFICATIONS.
3. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR THE COORDINATION OF UTILITY RELOCATION.
4. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN THE FIELD WITH UTILITY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. UTILITY PROVIDERS:
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION, AS REQUIRED BY THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT. NOTIFY SUNSHINE AT 811.
6. CONTRACTOR SHALL TAKE EXTREME CAUTION WHEN EXCAVATING NEARBY EXISTING UTILITIES.
7. CONTRACTOR SHALL INFORM ENGINEER OF ANY CONFLICT BEFORE ANY FURTHER WORK IS COMPLETED.
8. UTILITIES ARE TO BE ADJUSTED BY UTILITY OWNER OR AS DIRECTED BY THE ENGINEER.
9. SURFACE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING DESIGN CRITERIA FOR THE PROJECT. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE OF THE ENGINEER IF ADDITIONAL INFORMATION IS AVAILABLE, TO MAKE ARRANGEMENTS TO REVIEW SAME PRIOR TO BIDDING, AND IS TO MAKE HIS OWN DETERMINATION AS TO ALL SUBSURFACE CONDITIONS.
10. CONTRACTOR SHALL NOTIFY THE ENGINEER IF SOIL OR SUBSURFACE CONDITIONS UNSUITABLE FOR CONSTRUCTION ARE ENCOUNTERED.
11. ALL EXCAVATED SOILS DEEMED SUITABLE AS FILL MATERIAL AS DETERMINED BY THE ENGINEER SHALL BE UTILIZED ON SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. THE EXACT LOCATION OF DELIVERY ON SITE SHALL BE DETERMINED BY THE ENGINEER. ALL EXCAVATED SOILS DEEMED UNSUITABLE SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE.
12. ITEM IN CONFLICT WITH DESIGN SUCH AS EXISTING CURBS AND GUTTERS, SIDEWALKS, DRAINAGE STRUCTURES, PAVEMENT AND EXCESS EXCAVATIONS ARE TO BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A LEGAL AND PROPER MANNER AWAY FROM THE JOB SITE AT HIS OWN EXPENSE.
13. CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS FOR CONSTRUCTION.
14. IT SHOULD BE NOTED THAT THE OCCUPATIONAL SAFETY AND HEALTH ACT PROHIBITS THE OPERATING OF EQUIPMENT OR MACHINES CLOSER THAN TEN (10) FEET TO ENERGIZED ELECTRIC LINES RATES AT FIFTY KILOVOLTS OR BELOW. ALSO, NO EXCAVATION IS PERMITTED WITHIN FIVE (5) FEET OF POWER POLE FACILITIES.
15. ALL IRONS AND MONUMENTS (P.R.M.'S) SHOWN ON PLANS, OR FOUND, SHALL BE PRESERVED. THOSE SHOWN IN PROPOSED PAVEMENT SHALL BE PROTECTED WITH A CAST IRON VALVE BOX.
16. ANY PUBLIC LAND CORNERS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED OR DISTURBED, THE CONTRACTOR WILL NOTIFY THE ENGINEER.
17. ALL EXISTING TREES WITHIN THE RIGHT OF WAY ARE TO BE REMOVED AS CLEARING AND GRUBBING UNLESS OTHERWISE NOTED.
18. WHEN REFERENCED TO, FDOT REFERS TO FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS,CURRENT EDITION.
19. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO A CONDITION EQUAL TO, OR BETTER THAN THAT WHICH IS NOW EXISTING.
20. BACKFILL, GRADE AND SOD AS REQUIRED AROUND ALL NEW CONSTRUCTION AND ALL DEVELOPED LOTS TO PREVENT EROSION. SEED AND MULCH WILL ONLY BE ALLOWED TO RESTORE UNDEVELOPED LOTS AFFECTED BY CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
21. SODDING TO BE USED AT LOCATIONS AS DIRECTED BY THE ENGINEER. SOD ALL DISTURBED AREAS UPON COMPLETION.
22. ALL EXCESS CONSTRUCTION MATERIAL AND WASTE TO BE HAULED OFF-SITE AND DISPOSED OF PROPERLY AT CONTRACTOR'S EXPENSE.
23. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH FDOT STANDARDS FOR TRAFFIC CONTROL THROUGH WORK ZONES AND MUTCD (PART VI).
24. PROPERTY OWNERS AND BUSINESSES WITHIN THE AREA OF CONSTRUCTION SHALL BE GIVEN ACCESS TO THEIR PROPERTY AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION.
25. ALL MAILBOXES SHALL BE RELOCATED BY THE CONTRACTOR AS DIRECTED BY THE U.S. POSTAL MAIL CARRIER.
26. THE CONTRACTOR SHALL REMOVE, COVER OR OBLITERATE EXISTING ROADWAY SIGN AND PAVEMENT MARKINGS THAT CONFLICT WITH THE CONSTRUCTION TRAFFIC CONTROL PLANS.
27. CONTRACTOR TO PROTECT ALL SPRINKLER HEADS NOT IN CONFLICT WITH DESIGN AND RELOCATE ALL THOSE WHICH ARE IN CONFLICT TO A LOCATION DETERMINED IN FIELD.
28. SOD TWO (2) FEET MINIMUM ALONG SIDE PROPOSED EDGE OF PAVEMENT.
29. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY DRAINAGE MEASURES AS REQUIRED TO ADEQUATELY DRAIN THE PROJECT AND ANY TEMPORARILY TRAVELED ROADWAYS. TEMPORARY DRAINAGE DESIGN, CONSTRUCTION AND MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY; HOWEVER, ALL SUCH MEASURES MUST BE APPROVED BY THE ENGINEER.
30. THE EXISTING SIDEWALK SHALL NOT BE DISTURBED UNLESS OTHERWISE NOTED.
31. GRADES SHOWN ARE FINISHED GRADES.
32. SAWCUT CONCRETE OR ASPHALT DRIVEWAYS AS REQUIRED FOR REPLACEMENT.
33. ALL ABANDONED UTILITIES (INCLUDING PIPES, CABLES AND STRUCTURES) FOUND IN THE RIGHT OF WAY AND NOT SHOWN ON THE PLANS, ARE TO BE REMOVED AND PROPERLY DISPOSED OF AT THE EXPENSE OF THE CONTRACTOR. THIS INCLUDES ALL EXOTIC PIPES LIKE ASBESTOS-CEMENT PIPE. COST TO BE INCLUDED IN CLEARING AND GRUBBING ITEM.
34. DRIVEWAY LOCATIONS AND WIDTHS ARE APPROXIMATE AND ARE TO BE ADJUSTED AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
35. BENCHMARK DATUM IN NAVD 88.
36. BACKFILL AND SOD AS REQUIRED BEYOND RIGHT OF WAY LINES ON INDIVIDUAL LOTS TO MAINTAIN POSITIVE DRAINAGE FLOW INTO CURB AND GUTTER.
37. GRADE AND SOD SWALES TEN (10) FEET FROM PROPOSED DITCH BOTTOM INLETS AND MITERED END SECTIONS ON SIDE STREETS, AS REQUIRED.
38. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ℄ (BASELINE) AND ℄ (CENTERLINE) CONSTRUCTION THROUGHOUT THE PROJECT.
39. THE CONTRACTOR SHALL REMOVE DRIVEWAY APRONS AND DRIVEWAY CULVERTS AND SHALL MAINTAIN ROUGH GRADE FOR UTILITY MODIFICATIONS.
40. ALL EXISTING SWALES SHALL BE PROTECTED BY THE CONTRACTOR. ANY DAMAGE TO THE SWALE LINE SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
41. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT PRICES FOR BID ITEMS.
42. MAINTAIN A MINIMUM OF ONE (1) FOOT CLEARANCE BETWEEN POWER POLE AND EDGE OF SIDEWALK.
43. WHEN ALL OTHER PERMANENT CONSTRUCTION IS COMPLETE, THE FINAL SURFACE COURSE SHALL BE PLACED.
44. CONSTRUCTION OPERATIONS FOR PLACEMENT OF THE FINAL SURFACE COURSE SHALL BE LIMITED TO A DISTANCE, AS DIRECTED BY THE ENGINEER, THE CONTRACTOR CAN COMPLETE IN ONE (1) DAY.
45. THE CONTRACTOR SHALL IMPLEMENT TEMPORARY PAVEMENT MARKINGS UNTIL THE FINAL SURFACE COURSE HAS CURED (MINIMUM THIRTY (30) DAYS AFTER FINAL SURFACE COURSE PLACEMENT). ANY TEMPORARY PAINTED MARKINGS PLACED ON THE FINAL.
46. PAVEMENT TRANSITION SHALL BE MADE IN ACCORDANCE WITH PAVEMENT TRANSITION DETAIL.
47. ALL APPROVED PERMIT CONDITIONS, INCLUDING BUT NOT LIMITED TO FDOT, FDEP AND INDIAN RIVER COUNTY, SHALL BE MET BY CONTRACTOR PRIOR TO CERTIFICATION OF COMPLETION BY ENGINEER.

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PRIMARY BENCHMARK:
THIS EXHIBIT WAS TIED TO INDIAN RIVER COUNTY BENCHMARK'S, "BM065031" (EL.=23.15') AND "BM576003" (EL.=23.98'). ELEVATIONS SHOWN HEREON HAVE A RELATIVE POSITION ACCURACY OF 0.3 FOOT, MORE OR LESS FOR GROUND SHOTS AND 0.1 FEET, MORE OR LESS FOR HARD SURFACES.

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TODD HOWDER

ROADWAY SPECIFICATIONS

GENERAL

IT IS INTENDED THAT THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" MOST CURRENT EDITION BE USED WHERE APPLICABLE FOR VARIOUS WORK, AND THAT WHERE SUCH WORDING THEREIN REFERS TO THE STATE OF FLORIDA AND ITS DEPARTMENT OF TRANSPORTATION AND PERSONNEL, SUCH WORDING IS INTENDED TO BE REPLACED WITH THAT WORDING WHICH WOULD PROVIDE PROPER TERMINOLOGY, THEREBY MAKING SUCH "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS THE "STANDARD SPECIFICATIONS" FOR THIS PROJECT.

IF WITHIN THAT PARTICULAR SECTION ANOTHER SECTION, ARTICLE OR PARAGRAPH IS REFERRED TO, IT SHALL BE A PART OF THE STANDARD SPECIFICATIONS ALSO.

THE CONTRACTOR SHALL GIVE THE ENGINEER 48 HOURS NOTICE PRIOR TO REQUESTING INSPECTIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO PROPERLY TEST AND INSPECT THE COMPLETED WORK.

THE CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF TWO YEARS FROM THE DATE OF PROJECT ACCEPTANCE, DURING WHICH ALL FAULTY CONSTRUCTION AND/OR MATERIALS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

GRADING

THE CONTRACTOR SHALL PERFORM ALL GRADING NECESSARY TO ACHIEVE THE PROPOSED PLAN GRADES INCLUDING TYPICAL SECTIONS.

ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 120 OF THE STANDARD SPECIFICATIONS.

STAKING

CONSTRUCTION STAKING WILL BE PERFORMED BY THE CONTRACTOR.

STABILIZING

STABILIZED SUBGRADE SHALL BE CONSTRUCTED TO THE FLORIDA BEARING VALUE AS PER PLAN FOR THE DEPTH AND LIMITS SHOWN ON THE PLAN, AND IN ACCORDANCE WITH SECTION 160 OF THE STANDARD SPECIFICATIONS.

(TYPE C STABILIZATION). ALL STABILIZED AREAS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

BASE COURSE

THE BASE SHALL BE CONSTRUCTED OF EITHER LIMEROCK MATERIAL IN ACCORDANCE WITH SECTION 911 OR CEMENTED COQUINA SHELL MATERIAL IN ACCORDANCE WITH SECTION 915 OF THE STANDARD SPECIFICATIONS.

LIMEROCK BASE AND CEMENTED COQUINA SHELL BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE ROCK PIT CERTIFICATION FOR CEMENTED COQUINA SHELL MATERIAL. BASE SHALL BE COMPACTED BY AT LEAST 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. BASE SHALL BE APPROVED PRIOR TO PRIME COAT.

PRIME AND TACK COAT

PRIME AND TACK COAT FOR THE BASE SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE STANDARD SPECIFICATIONS.

ASPHALTIC CONCRETE SURFACE COURSE (A.C.S.C.)

TYPE SP-9.5 ACSC SHALL BE CONSTRUCTED FOR THE DEPTH AND LIMITS SHOWN ON THE PLAN, IN ACCORDANCE WITH SECTIONS 320, AND 330 OF THE STANDARD SPECIFICATIONS.

TESTING

THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN APPROVED INDEPENDENT TESTING LABORATORY TO CONDUCT ALL REQUIRED TESTS ON SUBGRADE, BASE AND SURFACE COURSE MATERIALS. TEST RESULTS MUST BE SUBMITTED PRIOR TO ANY REQUEST FOR PAYMENT ON THE ABOVE ITEMS.

THE SCHEDULE FOR TESTING OF THE ROAD CONSTRUCTION SHALL BE AS FOLLOWS:
- A. SUBGRADE:
  1. FLORIDA BEARING VALUE TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 200 FEET, OR CLOSER AS MIGHT BE NECESSARY IN THE EVENT OF VARIATIONS IN SUBSOIL CONDITIONS.
  2. DENSITY TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 200 FEET OR CLOSER AS MIGHT BE NECESSARY.
- B. BASE:
  1. DENSITY TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 500 FEET OR CLOSER AS MIGHT BE NECESSARY.

ALL TESTING SHALL BE TAKEN IN A STAGGERED SAMPLING PATTERN FROM A POINT 1 1/2 INCHES INSIDE THE LEFT EDGE, TO THE CENTER, TO A POINT 12 INCHES INSIDE THE RIGHT EDGE OF THE ITEM TESTED.

IF ANY TEST INDICATES THAT THE WORK DOES NOT MEET THE SPECIFICATIONS, THE SUBSTANDARD AREA SHALL BE REWORKED OR CORRECTED AND RETESTED, AT THE CONTRACTOR'S EXPENSE, UNTIL THE PROVISIONS OF THESE SPECIFICATIONS ARE MET.

ALL PASSING TESTS SHALL BE PAID FOR BY THE OWNER. ALL FAILING TESTS SHALL BE PAID FOR BY THE CONTRACTOR.

CLEAN-UP

THE CONTRACTOR MUST PROVIDE CLEAN-UP OF EXCESS CONSTRUCTION MATERIAL UPON COMPLETION OF THE PROJECT. THE SITE MUST BE LEFT IN A NEAT, CLEAN, GRADED CONDITION.

CONSTRUCTION IN STREETS AND ROAD RIGHT-OF-WAYS

1. OPEN ROAD CUTS REQUIRES PRIOR APPROVAL OF THE CITY, COUNTY, STATE OR ANY OTHER AGENCY WHICH MAY HAVE JURISDICTION.
2. ALL CONSTRUCTION, MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND STANDARDS.
3. ALL AREAS IN EXISTING RIGHT-OF-WAYS DISTURBED BY CONSTRUCTION SHALL RECEIVE SOLID SOD.
4. STREET RESTORATION TO BE DONE AS PER INDIAN RIVER COUNTY STANDARDS.
5. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE STATE, COUNTY AND CITY AUTHORITIES REGARDING CLOSING OR RESTRICTING THE USE OF PUBLIC STREETS OR HIGHWAYS.
6. TRAFFIC CONTROL ON ALL COUNTY AND STATE HIGHWAY RIGHT-OF-WAYS SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION.

DRAINAGE SPECIFICATIONS

STORM INLETS AND MANHOLES SHALL BE CONSTRUCTED IN GENERAL ACCORDANCE WITH SECTION 425 OF THE STANDARD SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION.

CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 3000 PSI.

ALL REINFORCING STEEL TO BE ASTM A 615-72 GRADE 40, FYP = 40,000 PSI, AND SHALL BE HANDLED AND PLACED IN ACCORDANCE WITH ACI 318-71.

PRECAST CONCRETE MANHOLES AND STORM INLETS MAY BE USED UPON THE ENGINEER'S APPROVAL OF THE MANUFACTURER'S SHOP DRAWINGS.

STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 430 AND RELATED SECTIONS OF THE STANDARD SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION.

CONCRETE

UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI. ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE AND THE APPLICABLE BUILDING CODES HAVING JURISDICTION IN THE AREA.

CULVERT PIPES

REINFORCED CONCRETE PIPE (R.C.P.) SHALL BE IN ACCORDANCE WITH SECTION 449 OF THE STANDARD SPECIFICATIONS.

PRECAST CONCRETE DRAINAGE PRODUCTS

ALL PRECAST CONCRETE DRAINAGE PRODUCTS (INCLUDING BUT NOT LIMITED TO ROUND CONC. PIPE. ELLIPTICAL CONC. PIPE, UNDERDRAINS, MANHOLES, INLETS, ENDWALLS, JUNCTION BOXES, THREE SIDED CONC. CULVERTS, AND CONC. BOX CULVERTS) SHALL BE IN ACCORDANCE WITH SECTION 449 OF THE STANDARD SPECIFICATIONS.

GROUNDWATER
GROUNDWATER MAY BE ENCOUNTERED ON THIS SITE. THE CONTRACTOR IS TO PLAN ACCORDINGLY.

DRAINAGE SPECIFICATIONS CONT.

RECORD DRAWINGS

CONTRACTOR SHALL KEEP AND MAINTAIN RECORD DRAWINGS ON THE PROJECT SITE AT ALL TIMES WHICH SHALL BE ANNOTATED BY THE CONTRACTOR DEPICTING ANY CHANGES MADE IN THE FIELD WHICH DIFFER FROM THE CONTRACT DRAWINGS. RECORD DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, INVERT AND TOP ELEVATIONS OF CULVERTS AND INLET STRUCTURES. CONTRACTOR SHALL SUBMIT COMPLETE AND FINAL RECORD DRAWINGS TO ENGINEER UPON COMPLETION OF PROJECT AND PRIOR TO FINAL INSPECTION AND FINAL PAYMENT.

INSPECTION

MINIMUM CONSTRUCTION INSPECTION CHECKPOINTS

THE ENGINEER SHALL BE NOTIFIED:
1. PRIOR TO ANY MAJOR DEVIATION FROM THE APPROVED PLANS.
2. PRIOR TO BACKFILLING ANY PIPE TRENCHES.
3. UPON COMPLETION OF SUBGRADE GRADING AND COMPACTION.
4. UPON BEGINNING OF SPREADING OF ROCK BASE MATERIAL.
5. UPON COMPLETION OF GRADING AND COMPACTION OF THE BASE MATERIAL AND PRIOR TO PRIMING.
6. IMMEDIATELY PRIOR TO AND UPON APPLICATION OF A.C.S.C.
7. UPON COMPLETION OF CONSTRUCTION.

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CHECKING ACTUAL SITE CONDITIONS BEFORE STARTING CONSTRUCTION.
2. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK.
3. ALL WORK SHALL BE IN WORKMANLIKE MANNER AND SHALL CONFORM WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL REGULATIONS AND/OR CODES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LICENSES REQUIRED TO BEGIN WORK.
4. ALL MATERIALS AND LABOR UNDER THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH REQUIREMENTS OF THE INDIAN RIVER COUNTY, WATER MANAGEMENT DISTRICT, FDEP AND THESE PLANS AND SPECIFICATIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE FOR CONSTRUCTION OPERATIONS.
6. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
7. CONTRACTOR SHALL SUPPLY DENSITY TESTS TO ENGINEER ON ALL SUB-GRADE AND BASE. TESTS SHALL BE PREPARED PER AASHTO T-180 METHOD.
8. SLOPE GRADES FROM ELEVATIONS SHOWN TO EXISTING GRADE AT PROPERTY LINE. MAXIMUM SLOPE 4:1.
9. ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE FOR ANY INSPECTION.
10. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH M.U.T.C.D. STANDARDS, INDIAN RIVER COUNTY AND F.D.O.T.
11. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.
12. THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTORS BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE. WHEN GROUNDWATER IS ENCOUNTERED THE CONTRACTOR SHALL PLAN ACCORDINGLY.
13. ALL INLETS SHALL HAVE A 6" MIN. SUMP BELOW LOWEST INVERT.
14. EROSION CONTROL FENCING MUST BE IN PLACE PRIOR TO GRADING.
15. PIPE LENGTHS AND SLOPES SHOWN ARE APPROXIMATE.
16. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
17. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
18. CONTRACTOR SHALL ADJUST INLET/STRUCTURE OR CONNECTION LOCATION AS REQUIRED TO ENSURE PROPOSED STRUCTURES AND PIPES ARE IN PROPER ALIGNMENT AND MATCH SLOPE OF EXISTING PIPES OR CONNECTIONS.
19. THIS PLAN CONTEMPLATES ACCESS CONNECTIONS TO ADJACENT ROADS AS SHOWN.
20. FILL MATERIAL MAY NOT BE STOCKPILED HIGHER THAN TWENTY FIVE (25) VERTICAL FEET ONSITE PER INDIAN RIVER COUNTY CODE.
21. DIMENSIONS SHOWN ARE TO EDGE OF GUTTER OR PAVEMENT. RADII SHOWN ARE TO FACE OF CURB.
22. ALL SIGNS SHALL BE PER M.U.T.C.D. STANDARDS.
23. ALL PAVEMENT MARKINGS, EXCEPT PARKING STALL STRIPING, SHALL BE THERMOPLASTIC PER INDIAN RIVER COUNTY REQUIREMENTS.
24. THE USES PROPOSED AS PART OF THIS PLAN DO NOT REQUIRE A SUBMITTAL OF A RISK MANAGEMENT PLAN PURSUANT TO U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATIONS AND SHALL NOT EXCEED THE EPA'S RMP THRESHOLD QUANTITIES OF LISTED SUBSTANCES.
25. WATER FOR FIRE FIGHTING PURPOSES SHALL BE INDICATED WITH A BLUE ROADWAY REFLECTOR, PLACE ONE FOOT OFF OF THE CENTERLINE OF THE ROAD FACING THE FIRE HYDRANT. THIS INCLUDES NEW AND EXISTING SOURCES.
26. REGARDLESS OF PRIVATE OR PUBLIC DEDICATIONS, THERE SHALL BE NO UTILITY CONNECTIONS, METER BOXES OR VALVE BOXES IN EXISTING OR PROPOSED SIDEWALK OR DRIVEWAY AREAS.
27. CONTRACTOR SHALL ADJUST INLET/STRUCTURE OR CONNECTION LOCATION AS REQUIRED TO ENSURE PROPOSED STRUCTURES AND PIPES ARE IN PROPER ALIGNMENT AND MATCH SLOPE OF EXISTING PIPES OR CONNECTIONS.
28. ANY STATE AND FEDERAL PERMITS THAT MAY BE REQUIRED AS A RESULT OF LAND CLEARING AND LANDSCAPING ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
29. CONTRACTOR IS RESPONSIBLE TO PROTECT AND/OR REPLACE ALL SURVEY MONUMENTATION BY A LICENSED SURVEYOR IN THE STATE OF FLORIDA.
30. ALL PARKING SPACES WITH EXCEPTION OF THE HANDICAPPED PARKING SPACES SHALL BE STRIPED IN WHITE, TRAFFIC PAINT AND BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR FOR ROAD & BRIDGE CONSTRUCTION, SECTION 710, LATEST EDITION.
31. ALL HANDICAPPED PARKING SPACES SHALL BE PROPERLY SIGNED AND STRIPED IN ACCORDANCE WITH FDOT STANDARD INDEX 711-001, LATEST EDITION.
32. BUILDINGS USING VERTICAL OR HORIZONTAL LIGHT-FRAME CONSTRUCTION IN ANY PORTION OF THE STRUCTURE SHALL BE MARKED WITH A SIGN AS REQUIRED BY FLORIDA STATE STATUTE 633-027 AND THE SIGN SHALL BE REQUIRED TO COMPLY WITH THE FLORIDA ADMINISTRATIVE CODE 69A-3.012 AND/OR 69A-60.0081. REQUIRED SIGN MUST BE 8 INCHES BY 8 INCHES.
33. THERMOPLASTIC PAVEMENT MARKINGS SHALL BE REQUIRED ON EXISTING / PROPOSED DRIVEWAYS THAT CONNECT TO THE COUNTY RIGHT-OF-WAY (ROW) AND PROPOSED PAVEMENT MARKINGS WITHIN 25' OF EDGE OF PAVEMENT.
34. ALL SUBDIVISION CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE INDIAN RIVER COUNTY ORDINANCES.
35. ALL NUISANCE EXOTIC VEGETATION EXISTING WITHIN DEVELOPMENT PROJECT SITE PROPERTY MUST BE REMOVED IN CONJUNCTION WITH SITE DEVELOPMENT.

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	ROADWAY PAY ITEMS		
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-10-3	SEDIMENT BARRIER	LF	761
110-1-1	CLEARING AND GRUBBING	AC	2.05
110-23	TREES TO BE REMOVED (OAKS: 10" - 40")	EA	9
110-4-10	REMOVAL OF EXISTING CONCRETE (SIDEWALKS)	SY	226
120-1	REGULAR EXCAVATION	CY	1,150
160-4A	TYPE B STABILIZATION (CAR PARKING, SIDEWALKS AND SERVICE YARD AREAS), 6" THICK	SY	4,727
160-4B	TYPE B STABILIZATION - (HEAVY DUTY CONCRETE AREAS), 12" THICK	SY	413
285-704	OPTIONAL BASE, GROUP 04 (CAR PARKING AREAS)	SY	456
285-709	OPTIONAL BASE, GROUP 06 (SERVICE YARD)	SY	3,200
334-1-13	SUPERPAVE ASPHALT CONCRETE TRAFFIC C (SP 9.5, 1.5") (CAR PARKING AREAS)	TN	37.7
334-1-13	SUPERPAVE ASPHALT CONCRETE TRAFFIC C (SP 12.5, 1.5"- 1st LIFT) (SERVICE YARD)	TN	260.5
334-1-13	SUPERPAVE ASPHALT CONCRETE TRAFFIC C (SP 9.5, 1"-2nd LIFT) (SERVICE YARD)	TN	173.7
400-2-10	CONCRETE CLASS II, APPROACH SLABS, 7" THICKNESS, REINFORCED, 4,000 PSI	CY	413
425-1-54	INLET, DITCH BOTTOM, TYPE F	EA	7
425-2-41	MANHOLE, P-7, <10'	EA	3
430-175-112	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 12" S/CD (SCH 80 PVC)	LF	30
430-175-115	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 15" S/CD (RCP)	LF	142
430-175-118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" S/CD (RCP)	LF	259
430-175-124	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" S/CD (RCP)	LF	129
430-964-6	PVC PIPE FOR NON-STANDARD DRAINAGE, 8" SCH 80	LF	52
430-964-7	PVC PIPE FOR NON-STANDARD DRAINAGE, 6" SCH 80 (ROOF LEADERS)	LF	70
507-70	ALUMINUM SIDEWALK FLOOR	SF	35
515-1-2	PIPE HANDRAIL - GUARDRAIL, ALUMINUM	LF	12
520-1-10	CONCRETE CURB AND GUTTER, TYPE F	LF	51
520-2-4	CONCRETE CURB, TYPE D	LF	1,520
522-2	CONCERTE SIDEWALK AND DRIVEWAYS (FIBER REINFORCE) (6" THICK)	SY	658
527-2	DETECTABLE WARNINGS (YELLOW)	SF	120
550-60-236	FENCE GATE, TYPE B, SLIDING/CANTILEVER, 24'-30' OPENING	EA	2
570-1-2	PERFORMANCE TURF, SOD (MATCH EXISTING)	SY	3,200
580-4343	LANDSCAPE- PALMS, SABAL PALMETTO, 9'-12- CLEAR TRUNK	EA	11
580-5223	LANDSCAPE- TREES, LIVE & LAUREL OAK, QUERCUS VIRGIANIANA & LAURIFOLIA, 11'-14' OVERALL HEIGHT	EA	13
580-5-242	LANDSCAPE- TREES, NATCHEZ CREPE MYRTLE & SILVER BUTTONWOOD, 6' OVERALL HEIGHT	EA	12
580-5783	LANDSCAPE- TREES, TAXODIUM ASCENDENS, POND CYPRESS, 11'-14' OVERALL HEIGHT	EA	2
580-5-67	LANDSCAPE- SMALL SHRUB, SPECIFIED, 7 GALLON	EA	125
590-1	LANDSCAPE- IRRIGATION SYSTEM, MODIFICATION	LS	1
700-1-11	SINGLE SIGN POST, UP TO 12 SF	AS	10
710-90	PAINTED PAVEMENT MARKINGS (808 LF 4" PARKING STALL STRIPES)	LS	1
710-90	PAINTED PAVEMENT MARKINGS (50 LF 6" DOUBLE YELLOW STRIPES)	LS	1
711-11-123	THERMOPLASTIC, PAVEMENT MARKINGS, STANDARD SOLID WHITE, 12"	LF	253
711-11-125	THERMOPLASTIC, PAVEMENT MARKINGS STANDARD, SOLID WHITE, 24"	LF	84
711-11-160	THERMOPLASTIC, PAVEMENT MARKINGS, SYMBOL	EA	1
711-11-170	THERMOPLASTIC, PAVEMENT MARKINGS, ARROW	EA	6
715-4-70	LIGHT POLE AND ELECTRIC BOX COMPLETE, REMOVAL	EA	2
1050-31202	UTILITY PIPE-POLY VINYL CHLORIDE, FURNISH & INSTALL, WATER, 2"	LF	240
1050-31206	UTILITY PIPE-POLY VINYL CHLORIDE, FURNISH & INSTALL, SEWER, 6"	LF	55
1060-11211	UTILITY STRUCTURE, BELOW GROUND, FURNISH & INSTALL, STORM, 0-6' (500 GAL OIL/WATER INTERCEPTOR)	EA	1
1080-21102	UTILITY FIXTURE - VALVE, FURNISH & INSTALL, 2"	EA	2
1080-23102	UTILITY FIXTURE - TAPPING SADDLE, FURNISH & INSTALL,2"	EA	1
1080-23106	UTILITY FIXTURE - TAPPING SADDLE/SLEEVE, FURNISH & INSTALL,6" WITH 2" CORP STOP	EA	1
	UNDERGROUND UTILITY - MISC., EXISTING 4" FM ABANDONED IN PLACE	LF	122

SUMMARY OF PAY ITEMS

101-1	Mobilization: The lump sum price paid includes, but is not limited, to, all costs associated with insurance, bonds, required permits and fees, preparation and submittal of FDEP Notice of Intent (NOI) and Notice of Termination (NOT), Shop Drawings and Submittals, moving onto the job (mobilization), moving off the job (demobilization), project phasing, supervision, coordination of concurrent work with other contractors, meetings, surveying, resetting survey monuments, videotaping site prior to start of work, potholing, "as-built" plans, and clean up of work indicated in the contract documents.
102-1	Maintenance of Traffic: Includes, but is not limited to, barrier walls, vertical panels, attenuators, temporary striping, including temporary striping for 30 day cure period, construction signs, business signs, message boards, barricades, permanent relocation of signs and all other traffic incidental items required for the maintenance of traffic on a 24 hour / 7 day basis. Variable changing message sign shall be in place 2 weeks prior to all road closings, all costs for each phase of work and the overall project shall be included. Cost shall include any drainage elements beyond what is specified in the contract documents, and all items necessary to meet the maintenance of traffic requirements of the Florida Department of Transportation as prescribed in section 102-1 of the FDOT Standard Plans. Included MOT plans prepared for each phase of work and the overall project.
110-1-1	Clearing and Grubbing: The lump sum price paid included but not limited to vegetation, topsoil & shrubs removal, saw cut and/or removal of existing drainage structures, piping, flexible pavement, curb, the removal of existing guardrail and chain link fencing, poles, fence and the removal of existing pipes, headwalls and/or structures. Work also includes relocation of existing drainage structures, if applicable. Where existing pipes are removed and the existing structure remains, the resulting hole shall be formed and repaired with concrete. The contractor shall comply with the State of Florida Trench Safety Act. Clearing and grubbing does not include the removal of the existing trees or sidewalks. Contractor is to refer to pay item 110-23 and 110-4-10 for tree and sidewalk removal. Clearing and grubbing does not include demolition of buildings. Refer to architectural plans and documents for building demolition quantities, and information.
120-1	The unit price paid per cubic yard includes all costs for excavation shown on the plans, protection and relocation of substructures (if applicble), and placing excavated fill on site in applicable areas. This quantity represents the net balance of cut/fill for the site and assumes all excavated material can be utilized for fill areas on site, but shall be verified by the selected geotechincal consultant. Any excess fill shall be removed from the site at contractor's expense.
160-4 A	Includes 6" thick stabilization for car parking areas, sidewalks and service yard areas.
160-4 B	Includes 12" thick stabilization for washrack and building approach apron areas.
400-2-10	All 7" concrete shall be fiber reinforced and minimum 4,000 psi strength. Includes washrack and building approach slab.
522-2	All 6" concrete shall be fiber reinforced and minimum 3,000 psi strength. Includes on-site and off-site sidewalks, and lay-down area.
570-1-2	Cost to include, sod, fertilizer, mowing, watering, tools, equipment, pegging, labor and all incidental items necessary. Sod to be placed at 2' thickness from edge of trails and driveway and over disturbed areas.
590-1	Civil plans do not reflect Irrigation plan for any modifications needed for the project, but advise contractor that modifications to the existing irrigation system will be required and shall coordinate with a licensed irrigation consultant for this service. Bid shall include costs for this service.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

8	–	–
7	–	–
6	–	–
5	–	–
4	–	–
3	IRC COMMENTS	04-11-2022
2	SJRWMD COMMENTS	03-28-2022
1	IRC COMMENTS	01-06-2022
△	**REVISIONS**	**DATE**

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

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GENERAL NOTES AND SUMMARY OF QUANTITIES

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

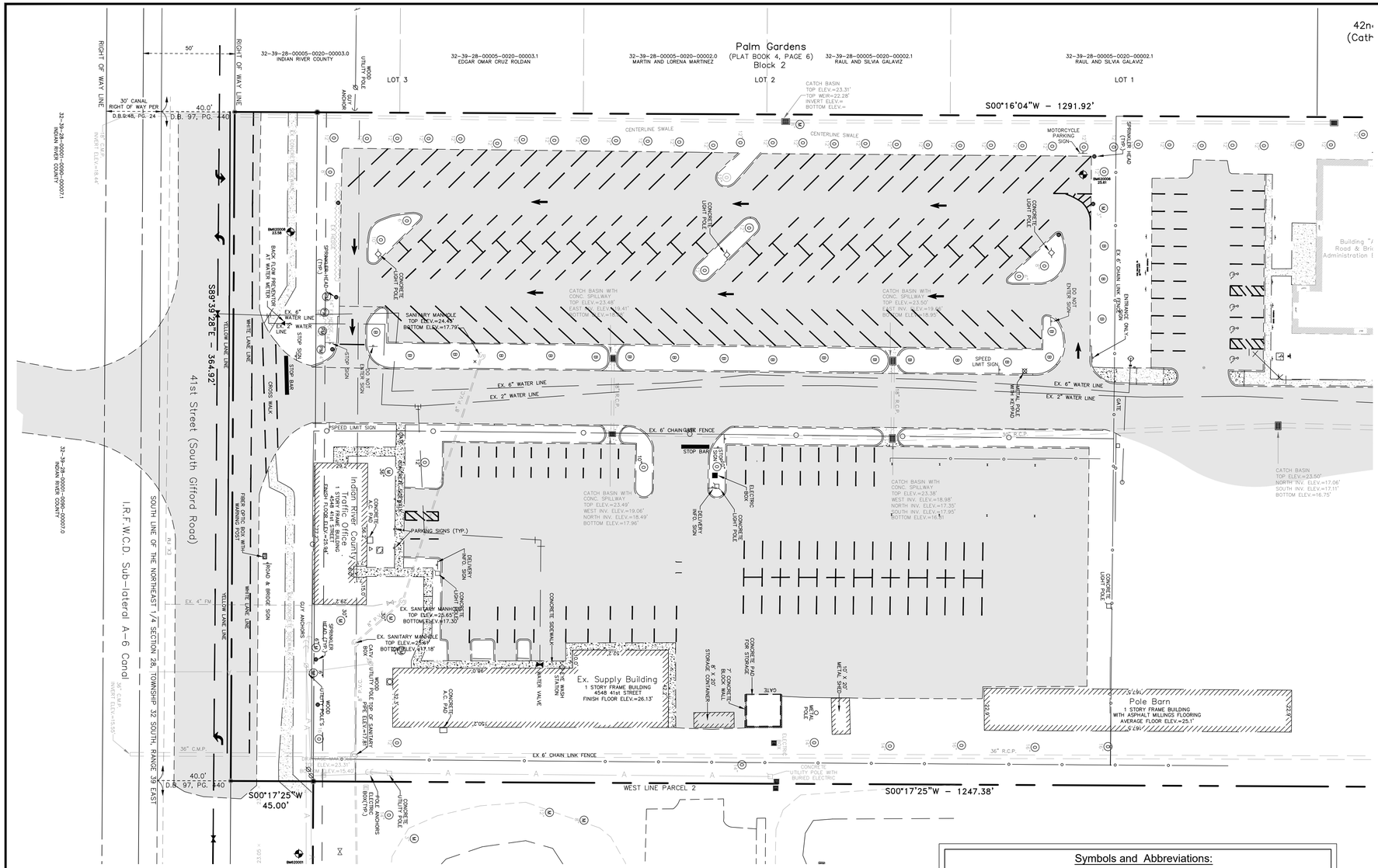
INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C2

21-0082



EXISTING CONDITIONS

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

Legal Description

BEING A PARCEL OF LAND LYING IN TRACT 8, SECTION 28, TOWNSHIP 32 SOUTH, RANGE 39 EAST, ACCORDING TO THE LAST GENERAL PLAT OF LANDS OF THE INDIAN RIVER FARMS COMPANY SUBDIVISION, AS RECORDED IN PLAT BOOK 2, PAGE (S) 25, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, SAID LANDS NOW LYING AND BEING IN INDIAN RIVER COUNTY, FLORIDA. SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST ONE QUARTER CORNER OF SAID SECTION 28, SAID CORNER ALSO BEING THE SOUTHEAST CORNER OF SAID TRACT 8, THENCE NORTH 89°39'28" WEST, ALONG THE SOUTH LINE OF SAID NORTHEAST ONE QUARTER AND TRACT 8, A DISTANCE OF 980.40 FEET TO THE SOUTHWEST CORNER OF THE EAST 30.0 ACRES OF SAID TRACT 8; THENCE DEPARTING SAID SOUTH LINE, NORTH 00°18'46" EAST, ALONG THE WEST LINE OF SAID EAST 30.0 ACRES, A DISTANCE OF 40.00 FEET TO A POINT IN THE NORTH RIGHT OF WAY LINE OF 41st STREET (SOUTH GIFFORD ROAD) PER DEED BOOK 97, PAGE 440, PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA, SAID POINT BEING POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL:

THENCE NORTH 89°39'28" WEST, ALONG SAID NORTH RIGHT OF WAY LINE (SAID LINE BEING 40.0 FEET NORTH OF, AS MEASURED AT RIGHT ANGLES TO, THE SOUTH LINE OF SAID NORTHEAST ONE QUARTER) A DISTANCE OF 365.63 FEET TO THE WEST LINE OF SAID TRACT 8 (SAID LINE ALSO BEING THE EAST LINE OF THE PLAT OF PALM GARDENS, AS RECORDED IN PLAT BOOK 4, PAGE 6, OF THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA); THENCE NORTH 00°19'52" EAST, ALONG THE WEST LINE OF SAID TRACT 8 AND EAST LINE OF SAID PLAT OF PALM GARDENS, A DISTANCE OF 1291.72 FEET TO THE NORTHWEST CORNER OF SAID TRACT 8 (SAID CORNER ALSO BEING THE NORTHEAST CORNER OF SAID PLAT OF PALM GARDENS) THENCE SOUTH 89°44'18" EAST, ALONG THE NORTH LINE OF SAID TRACT 8, A DISTANCE OF 365.21 FEET TO THE NORTHWEST CORNER OF THE EAST 30.0 ACRES OF SAID TRACT 8; THENCE SOUTH 00°18'46" WEST, ALONG THE WEST LINE OF SAID EAST 30.0 ACRES, A DISTANCE OF 1292.24 FEET TO THE NORTH RIGHT OF WAY LINE OF SAID 41st STREET (SOUTH GIFFORD ROAD) AND THE POINT OF BEGINNING.

CONTAINING 472,113.94 SQUARE FEET (10.84 ACRES±)

Surveyors Notes

1. THIS BOUNDARY AND TOPOGRAPHIC SURVEY WAS PREPARED FOR THE PURPOSE OF ADDING NEW BUILDINGS WITHIN THE TRAFFIC OPERATIONS FACILITY AT THE INDIAN RIVER COUNTY MUNICIPAL COMPLEX.
2. THE BEARINGS SHOWN HEREON ARE BASED ON THE 1983 NORTH AMERICAN DATUM, 2011 ADJUSTMENT, AND PROJECTED IN THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE. THIS SURVEY WAS TIED TO THE FLORIDA PERMANENT REFERENCE NETWORK (MAINTAINED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION'S SURVEY DEPARTMENT) DERIVING A GRID BEARING OF N89°39'28"W ALONG THE SOUTH LINE OF THE NORTHEAST ONE QUARTER SECTION 28, TOWNSHIP 32 SOUTH, RANGE 39 EAST, OF THE LAST GENERAL PLAT OF THE LANDS OF THE INDIAN RIVER FARMS COMPANY (I.R.F.C. LAST GENERAL PLAT), AS RECORDED IN PLAT BOOK 2, PAGE 25, OF THE PUBLIC RECORDS OF St. LUCIE COUNTY, FLORIDA.
3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE POLICY. THEREFORE THERE MAY BE EASEMENTS, RESTRICTIONS AND/OR RESERVATIONS NOT SHOWN HEREON, BUT FOUND IN THE PUBLIC RECORDS.
4. SYMBOLS SHOWN HEREON DEPICT THE HORIZONTAL POSITION OF THAT SPECIFIC IMPROVEMENT. THE SYMBOLS (FOR GRAPHICAL PURPOSE) ARE NOT DRAWN TO SCALE. PARKING STALLS AS SHOWN WERE DIGITIZED FROM AN AERIAL PHOTOGRAPH.
5. THE FIELD WORK FOR THIS SURVEY WAS COMPLETED BY INDIAN RIVER COUNTY PERSONNEL ON THE DATE OF JUNE 23, 2021. ONLY THOSE TOPOGRAPHIC FEATURES AND IMPROVEMENTS SHOWN HEREON WERE LOCATED PER THE SCOPE OF THIS SURVEY.
6. THIS SURVEY MEETS AND/OR EXCEEDS THE ACCURACY REQUIREMENTS PER CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE. THE HORIZONTAL CONTROL POINTS USED TO CREATE THIS SURVEY WERE VERIFIED BY MULTIPLE OBSERVATIONS.
7. THE MEASUREMENTS FOR THIS SURVEY WERE MADE UTILIZING CONVENTIONAL AND REAL TIME KINEMATIC SURVEYING METHODS WITH THE FOLLOWING EQUIPMENT: LEICA VIVA GLOBAL POSITIONING SYSTEM, A LEICA NA AUTOMATIC LEVEL AND A TOPCON GTS 500 ROBOTIC TOTAL STATION WITH MAGNET SOFTWARE.
10. ALL DISTANCES SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET.
11. SHEET 2 OF THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=50' OR SMALLER. SHEET 3 IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=30' OR SMALLER.
12. THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE INDIAN RIVER COUNTY VERTICAL CONTROL NETWORK (I.R.C.V.C.N.) AND ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88). ALL BENCHMARKS IN THE I.R.C.V.C.N. MEET OR EXCEED THE ACCURACY REQUIRED PER CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE. THIS EXHIBIT WAS TIED TO INDIAN RIVER COUNTY BENCHMARK'S, "BM065031" (EL.=23.15') AND "BM576003" (EL.=23.98'). ELEVATIONS SHOWN HEREON HAVE A RELATIVE POSITION ACCURACY OF 0.3 FOOT, MORE OR LESS FOR GROUND SHOTS AND 0.1 FEET, MORE OR LESS FOR HARD SURFACES.
13. THE BURIED WATERMAIN AND WATER SERVICE LINES SHOWN HEREON WERE PLOTTED UTILIZING AN ENGINEERING DESIGN PLAN ENTITLED "PAVING, DRAINAGE AND UTILITY PLAN FOR INDIAN RIVER COUNTY ROAD AND BRIDGE AND TRAFFIC ENGINEERING MAINTENANCE COMPLEX" AND WATER VALVES AND WATER METERS LOCATED BY INDIAN RIVER COUNTY PERSONNEL, WHICH ARE SHOWN ON THE PLANS, THE DESIGN PLANS WERE CREATED BY MASTELLER & MOLER, INCORPORATED, ON THE DATE OF JUNE 25, 2002.
14. THE FOUNDATIONS OF ALL EXISTING BUILDINGS SHOWN HEREON, WERE NOT LOCATED.

Symbols and Abbreviations:

ATT	= AMERICAN TELEPHONE AND TELEGRAPH	I.R.F.W.C.D.	= INDIAN RIVER FARMS WATER CONTROL DISTRICT
(C)	= CALCULATED	L.F.	= LINEAR FEET
℄	= CENTERLINE	LLC	= LIMITED LIABILITY CORPORATION
C.C.R.	= CERTIFIED CORNER RECORD	(M)	= FIELD MEASURED
C.M.	= CONCRETE MONUMENT	MAG	= MAGNETIC
C.M.P.	= CORRUGATED METAL PIPE	N/A	= NON APPLICABLE
COR.	= CORNER	NTS	= NOT TO SCALE
C.R.	= COUNTY ROAD	N/V	= NOT VERIFIED
D.B.	= DEED BOOK	O.R.B.	= OFFICIAL RECORDS BOOK
D.B.S.	= ST. LUCIE COUNTY DEED BOOK	(P)	= PLATTED COURSE
D.I.P.	= DUCTILE IRON PIPE	P.B.	= PLAT BOOK
EL OR ELEV.	= ELEVATION	P.B.S.	= St. LUCIE COUNTY PLAT BOOK
F.D.E.P.	= FLORIDA DEPARTMENT OF ENVOROMENTAL PROTECTION	P.C.	= POINT OF CURVATURE
F.D.O.T.	= FLORIDA DEPARTMENT OF TRANSPORTATION	P.I.P.	= POURED IN PLACE
FNC	= FENCE	P.K.	= PARKER KAYLON
FND	= FOUND	P.T.	= POINT OF TANGENT
I.D.	= IDENTIFICATION	P.S.M.	= PROFESSIONAL SURVEYOR AND MAPPER
I.P.	= IRON PIPE	P.V.C.	= POLYVINYL CHLORIDE
INC	= INCORPORATED	R	= RANGE
INV.	=INVERT	R.C.P.	= REINFORCED CONCRETE PIPE
I.R.	= IRON ROD	T	= TOWNSHIP
I.R.C.	= INDIAN RIVER COUNTY	T.I.I.F.	= TRUSTEES OF THE INTERNAL IMPROVEMENT FUND
I.R.&C.	= IRON ROD AND CAP		= ASPHALT PAVING
X 19.2	= SPOT ELEVATION		= GRAVEL AND CONCRETE SURFACE
℄	= PROPERTY LINE		= DIRT SURFACE
(B)	= BUSH		= BENCHMARK
(M)	= MISCELLANEOUS TREE TYPE		= SPRINKLER HEAD
(O)	= OAK TREE		= WATER METER
(PM)	= PALM TREE		
(P)	= PINE TREE		

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

O:\DRAWINGS\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 C3 EXISTING CONDITIONS.dwg 6/30/2023

DATE	REVISIONS
04-11-2022	3 IRC COMMENTS
03-28-2022	2 SJRWMD COMMENTS
01-06-2022	1 IRC COMMENTS

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
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MELBOURNE FL. PH (321) 253-1510
FT. PIERCE FL. PH (772) 465-9053

EXISTING CONDITIONS

NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY

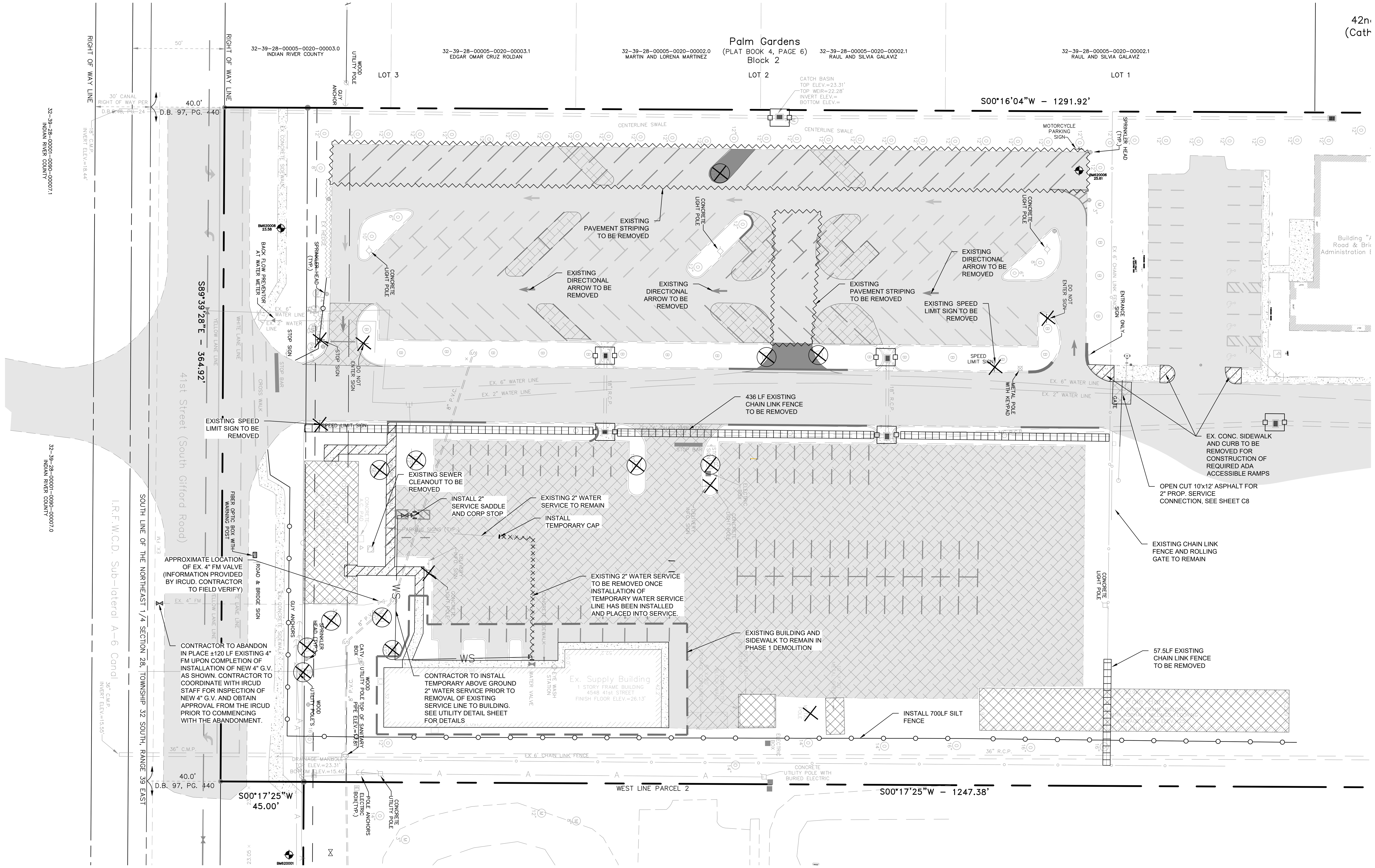
INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C3

21-0082



SEE NOTE NO. 4 BELOW UNDER THE DEMOLITION NOTES FOR SPECIAL INSTRUCTIONS FOR ROPOSED DEMOLITION AREAS THAT WILL RECEIVE EITHER SOD OR LANDSCAPING POST DEMOLITION

DEMOLITION / EROSION CONTROL PLAN - PHASE 1

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND

▩	EXISTING BUILDING TO BE DEMOLISHED.
▩	EXISTING PAVEMENT AND ASSOCIATED CURB TO BE REMOVED.
▨	EXISTING CONCRETE TO BE REMOVED.
■	EXISTING LANDSCAPE TO BE PAVED.
⊗	EXISTING TREE TO BE REMOVED.
✕	EXISTING LIGHTING AND PULL BOX TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND WIRING, SIGNAGE AND FLAG POLE TO BE REMOVED.
—o—	PROPOSED SILT FENCE
⊡	PROPOSED INLET PROTECTION
⌒	ADDITIONAL CURB TO BE REMOVED

DEMOLITION NOTES:

1. ALL DEMOLISHED MATERIALS (I.E. SIGNS, CONCRETE, ASPHALT, ETC...) TO BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, BY CALLING SUNSHINE ONE AT 811.
3. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING REQUIRED WASTE MANAGEMENT PRACTICES AS DEFINED IN THE INDIAN RIVER COUNTY MUNICIPAL CODE, WHICH MAKES IT UNLAWFUL FOR ANY PERSON TO DUMP, LEAVE OR BURY ANY SOLID WASTE ON PUBLIC OR PRIVATE PROPERTY.
4. IN ADDITION TO DEMOLITION OF BUILDINGS , CONCRETE AND ASPHALT AS SHOWN, CONTRACTOR SHALL EXCAVATE AND REMOVE 2 FT OF THE SOIL UNDERNEATH THOSE DEMOLISHED AREAS THAT WILL NO LONGER SUPPORT IMPERVIOUS SURFACE AND WILL BE CONVERTED TO EITHER SOD OR LANDSCAPED AREAS. CONTRACTOR TO REPLACE EXCAVATED AREAS TO IN SITU SOIL CONDITION REPRESENTATIVE OF THE SURROUNDING AREA AND SOD/LANDSCAPE IN ACCORDANCE WITH THE LANDSCAPE PLAN.

72 HOURS BEFORE DIGGING
CALL TOLL FREE
811
Know what's below. Call before you dig.

O:\DRAWINGS\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 C4a DEMO-EROSION PH1.dwg 6/30/2023 8:41 AM STEVE SMITH

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

	REVISIONS	DATE
8	–	–
7	–	–
6	–	–
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DEMOLITION / EROSION CONTROL PLAN - PHASE 1

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON
LICENSE
No. 72460
STATE OF
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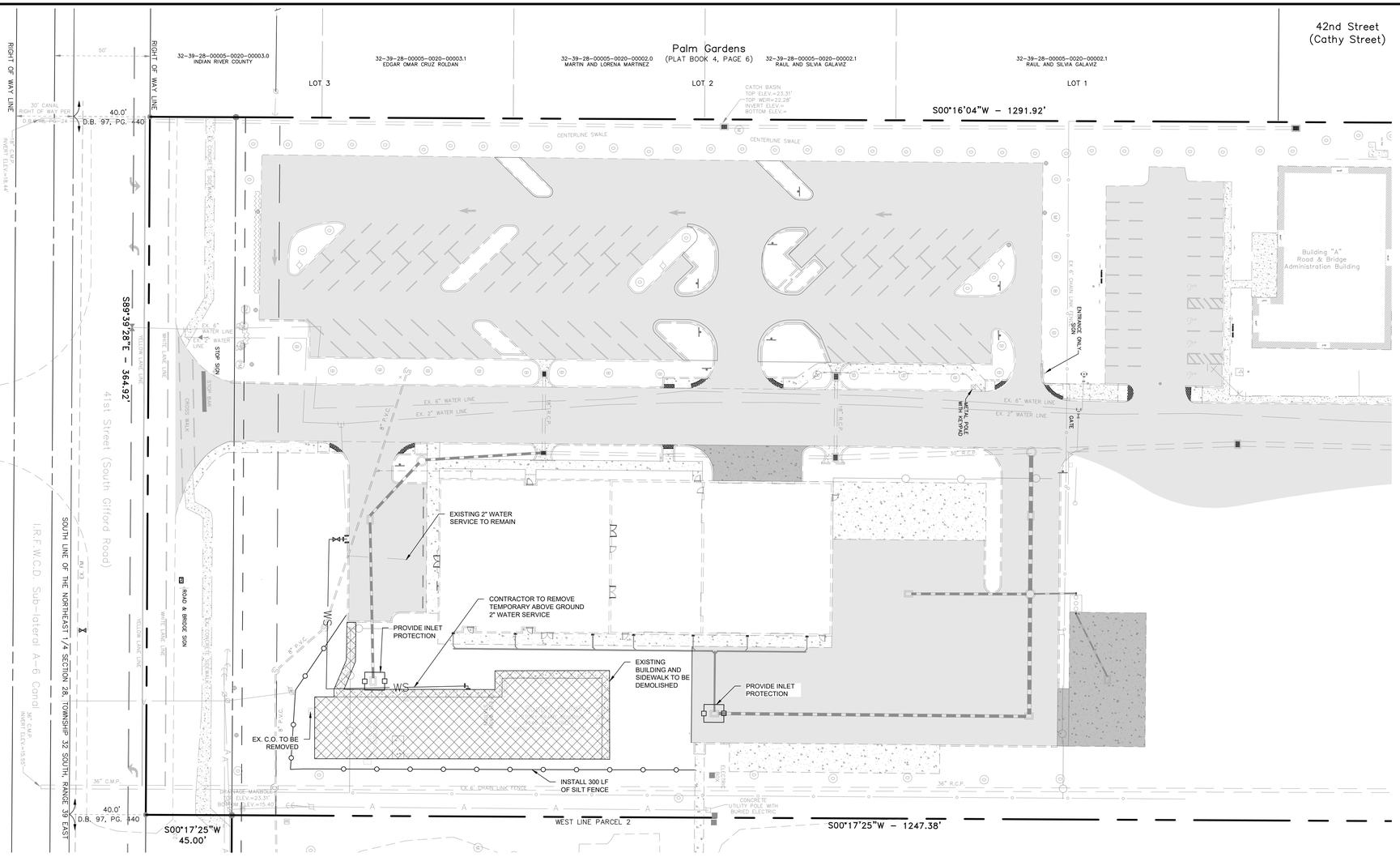
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C4a

21-0082



SEE NOTE NO. 4 BELOW UNDER THE DEMOLITION NOTES FOR SPECIAL INSTRUCTIONS FOR ROPOSED DEMOLITION AREAS THAT WILL RECEIVE EITHER SOD OR LANDSCAPING POST DEMOLITION

CONTRACTOR TO REFER TO CIVIL PLANS C5-C14 FOR BUILD-OUT UPON COMPLETION OF PHASE 2 DEMOLITION AREA

DEMOLITION / EROSION CONTROL PLAN - PHASE 2

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING BUILDING TO BE DEMOLISHED.
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION

DEMOLITION NOTES:

1. ALL DEMOLISHED MATERIALS (I.E. SIGNS, CONCRETE, ASPHALT, ETC...) TO BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, BY CALLING SUNSHINE ONE AT 811.
3. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING REQUIRED WASTE MANAGEMENT PRACTICES AS DEFINED IN THE INDIAN RIVER COUNTY MUNICIPAL CODE, WHICH MAKES IT UNLAWFUL FOR ANY PERSON TO DUMP, LEAVE OR BURY ANY SOLID WASTE ON PUBLIC OR PRIVATE PROPERTY.
4. IN ADDITION TO DEMOLITION OF BUILDINGS , CONCRETE AND ASPHALT AS SHOWN, CONTRACTOR SHALL EXCAVATE AND REMOVE 2 FT OF THE SOIL UNDERNEATH THOSE DEMOLISHED AREAS THAT WILL NO LONGER SUPPORT IMPERVIOUS SURFACE AND WILL BE CONVERTED TO EITHER SOD OR LANDSCAPED AREAS. CONTRACTOR TO REPLACE EXCAVATED AREAS TO IN SITU SOIL CONDITION REPRESENTATIVE OF THE SURROUNDING AREA AND SOD/LANDSCAPE IN ACCORDANCE WITH THE LANDSCAPE PLAN.

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

DATE	REVISIONS
04-11-2022	3 IRC COMMENTS
03-28-2022	2 SJRWMD COMMENTS
01-06-2022	1 IRC COMMENTS

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
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CONSULTING ENGINEERING CA #3728
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MELBOURNE FL. PH (321) 253-1510
FT. PIERCE FL. PH (772) 465-9053

DEMOLITION / EROSION CONTROL PLAN - PHASE 2

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

FLORIDA

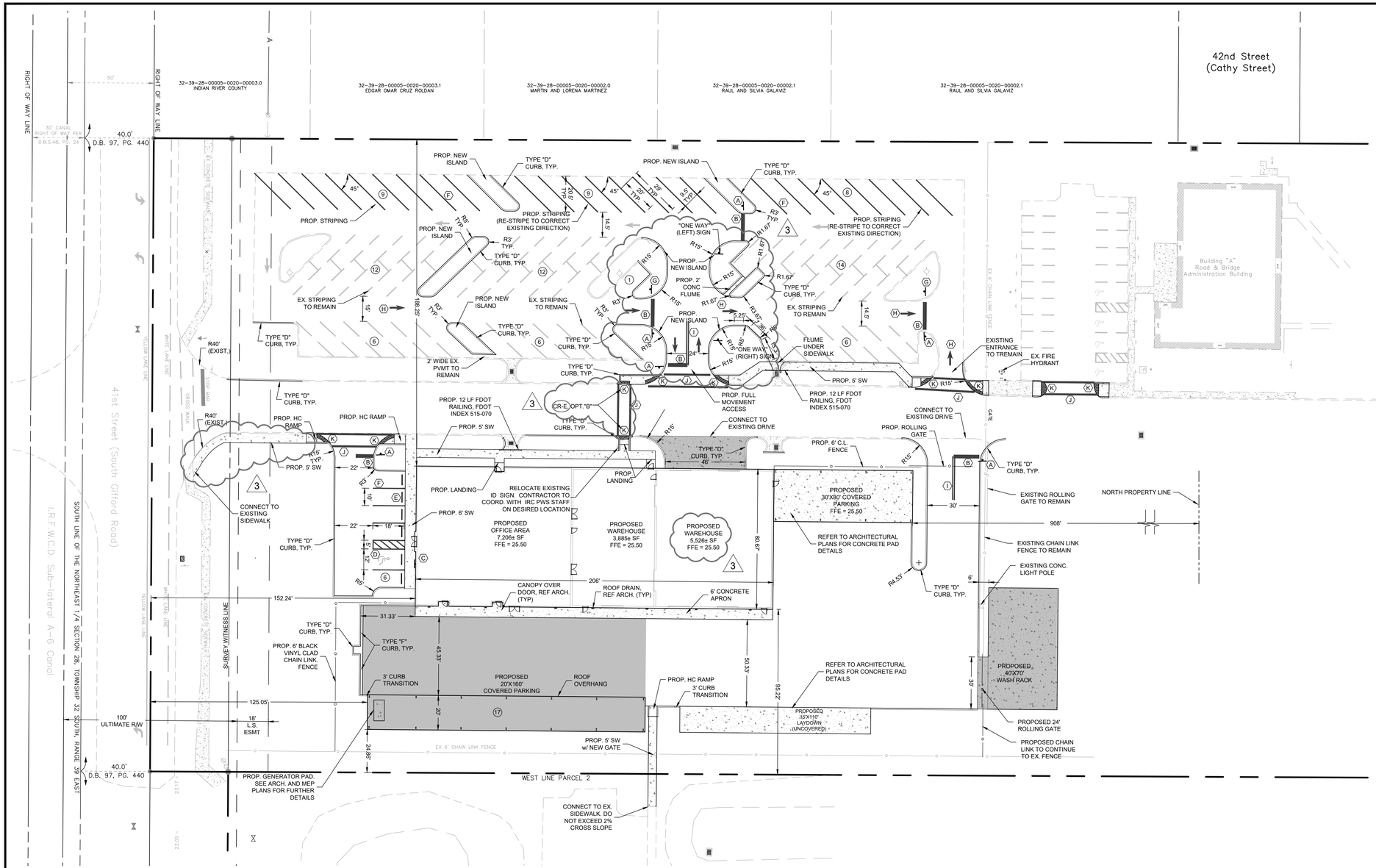
INDIAN RIVER COUNTY

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C4b

21-0082



SITE PLAN

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED CONCRETE SIDEWALKS
- PROPOSED HEAVY DUTY CONCRETE

SIGNAGE & PAVEMENT MARKING SCHEDULE

SIGN ID NUMBER	SIZE	DESIGNATION / NOTES
A	30"	R1-1 "STOP" SIGN
B	24"	SOLID WHITE STOP BAR
C	12"	FTP-20-06 HC PARKING SIGN (WALL MOUNTED)
D		PAINTED PAVEMENT MARKINGS PER FDOT INDEX #711-001
E		CONCRETE WHEEL STOP
F	4"	PAINTED WHITE STRIPE
G		R5-1 "DO NOT ENTER" SIGN
H		DESIGNED TRAFFIC FLOW INDICATOR PER FDOT INDEX #711-001
I	6"	25 LF DOUBLE YELLOW STRIPE
J		10' PAINTED CROSSWALK PER FDOT INDEX #711-001
K		DETECTABLE WARNINGS PER FDOT INDEX #522-002 CURRENT EDITION, CR-D OPTION "A" (EXCEPT AS NOTED ON PLAN). FDOT YELLOW IN COLOR

NOTE: EXTERIOR LIGHTING SHALL BE SO ARRANGED AS TO SHIELD OR DEFLECT THE LIGHT FROM ADJOINING PROPERTIES AND PUBLIC STREETS AND CUTOFF LIGHTING SHALL BE USED FOR ANY NON-RESIDENTIAL PARKING LOT

3

STOP
R1-1

DO NOT ENTER
R5-1

72 HOURS BEFORE DIGGING CALL TOLL FREE 811
Know what's below. Call before you dig.

TRAFFIC STATEMENT

EXISTING OFFICE TO BE REMOVED:
PER ITE, 10TH EDITION:
(730) GOVERNMENT OFFICE
2,255 / 1,000 SF BLDG = 2.255 X 22.5 (KSF) = 51 TRIPS

PROPOSED OFFICE:
PER ITE, 10TH EDITION:
(730) GOVERNMENT OFFICE
7,000 / 1,000 SF BLDG = 7 X 22.5 (KSF) = 158 TRIPS

NET NEW ADT: 107 TRIPS

PARKING DATA

PARKING REQUIRED:
OFFICE: = 1 SP / 300 SF = 7,000 / 300 = 24 SPACES
WAREHOUSE: = 1 SP / 500 SF = 9,100 / 500 = 18 SPACES
TOTAL = 42 SPACES

PARKING PROVIDED = 106 SPACES TOTAL
(23 NEW PARKING AND 83 EXISTING)

PERMITS REQUIRED

INDIAN RIVER COUNTY MINOR SITE PLAN APPROVAL
INDIAN RIVER COUNTY RIGHT-OF WAY PERMIT
INDIAN RIVER COUNTY UTILITIES PERMIT
INDIAN RIVER COUNTY STORMWATER PERMIT
INDIAN RIVER COUNTY CONCURRENCY APPROVAL (INITIAL / FINAL)
INDIAN RIVER COUNTY FIRE REVIEW
INDIAN RIVER COUNTY TREE REMOVAL PERMIT
INDIAN RIVER COUNTY LAND CLEARING PERMIT
INDIAN RIVER COUNTY DEPARTMENT OF HEALTH (WASHRACK O/W SEPARATOR)
SJRWMD ERP STORMWATER MODIFICATION
IRFWCD STORMWATER MODIFICATION
FDEP DOMESTIC WASTEWATER PERMIT
FDEP POTABLE WATR PERMIT
FDEP INDUSTRIAL WASTEWATER PERMIT (WASHRACK O/W SEPARATOR)
FDEP NPDES NOI PERMIT
FAA FORM 7460-1 NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

CONSTRUCTION SCHEDULE

START OF CONSTRUCTION: MAY 2022
END OF CONSTRUCTION: MAY 2023

FLOOD ZONE

THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE 'X' PER FLOOD INSURANCE RATE MAP #12061C0241 H, DATED DEC. 4, 2012.

WASTEWATER SOURCE

PROJECT WILL CONNECT TO THE EXISTING ON-SITE IRCUD GRAVITY SEWER MAIN

POTABLE WATER SOURCE

PROJECT WILL CONNECT TO THE EXISTING ON-SITE IRCUD WATERMAIN

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

PROJECT INFORMATION

SITE ADDRESS
4548 41ST STREET
VERO BEACH, FL 32967

OWNER/APPLICANT
INDIAN RIVER COUNTY PUBLIC WORKS DEPARTMENT
1801 27TH STREET
VERO BEACH, FL 32960

ENGINEER
MBV ENGINEERING, INC.
1835 20TH STREET
VERO BEACH, FL 32960
PH: 772-569-0035

ARCHITECT
DONADIO & ASSOCIATES, INC.
2001 9TH AVENUE, SUITE 308
VERO BEACH, FL 32960
PH: 772-794-2929

SURVEYOR
INDIAN RIVER COUNTY
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
1801 27TH STREET
VERO BEACH, FL 32960
PH: 772-567-8000

TAX PARCEL I.D. NUMBER(S)
32-39-28-00001-0080-00001.0

ZONING
IL

LAND USE
PUB

LATITUDE
27°38'8.3688"

LONGITUDE
80°23'21.6096"

PROJECT DESCRIPTION

THIS PROJECT IS TO SUPPORT THE INDIAN RIVER COUNTY TRAFFIC OPERATIONS DEPARTMENT LOCATED AT 4548 41 ST STREET. THE PROJECT PROPOSES DEMOLITION OF THE EXISTING TRAFFIC OPERATIONS OFFICE BUILDING AND SUPPLY WAREHOUSE AND CONSTRUCTION OF A NEW OPERATIONS OFFICE BUILDING AND SUPPLY / WAREHOUSE AREA.

SITE DATA

EXISTING SITE DATA

	SF	AC	%
TOTAL PARCEL SITE AREA	472,114 SF	10.84 AC	100.00 %
EXISTING ROAD & BRIDGE OFFICE	6,480 SF	0.15 AC	1.37 %
EXISTING ROAD & BRIDGE SUPPLY BLDG.	3,376 SF	0.08 AC	0.72 %
EXISTING ROAD & BRIDGE COVERED PRKG.	4,690 SF	0.11 AC	0.99 %
EXISTING TRAFFIC OPs OFFICE	2,255 SF	0.05 AC	0.48 %
EXISTING TRAFFIC OPs SUPPLY BLDG.	5,375 SF	0.12 AC	1.14 %
EXISTING TRAFFIC OPs POLE BARN	3,835 SF	0.09 AC	0.81 %
EXISTING ASPHALT	166,582 SF	3.83 AC	35.28 %
EXISTING CONCRETE	4,885 SF	0.11 AC	1.03 %
EXISTING STABILIZED PARKING	58,885 SF	1.35 AC	12.47 %
TOTAL IMPERVIOUS AREA	256,363 SF	5.88 AC	54.29 %
TOTAL PERVIOUS AREA	126,889 SF	2.92 AC	26.89 %
TOTAL WET POND (AT CONTROL)	88,862 SF	2.04 AC	18.82 %

PROPOSED SITE DATA

	SF	AC	%
TOTAL PARCEL SITE AREA	472,114 SF	10.84 AC	100.00 %
IMPERVIOUS DEMOLITION:			
EXISTING TRAFFIC OPs OFFICE	(-) 2,255 SF	0.05 AC	0.48 %
EXISTING TRAFFIC OPs SUPPLY BLDG.	(-) 5,375 SF	0.12 AC	1.14 %
EXISTING TRAFFIC OPs POLE BARN	(-) 3,835 SF	0.09 AC	0.81 %
EXISTING ASPHALT	(-) 50,055 SF	1.15 AC	10.60 %
EXISTING CONCRETE	(-) 2,070 SF	0.05 AC	0.44 %
EXISTING STABILIZED PARKING	(-) 2,853 SF	0.06 AC	0.60 %
TOTAL	(-) 66,443 SF	(-)1.52 AC	14.07%
EXISTING IMPERVIOUS TO REMAIN:			
EXISTING ROAD & BRIDGE OFFICE	6,480 SF	0.15 AC	1.37 %
EXISTING ROAD & BRIDGE SUPPLY BLDG.	3,376 SF	0.08 AC	0.72 %
EXISTING ROAD & BRIDGE COVERED PRKG.	4,690 SF	0.11 AC	0.99 %
EXISTING ASPHALT	116,713SF	2.67 AC	24.68 %
EXISTING CONCRETE	2,815 SF	0.06 AC	0.60 %
EXISTING STABILIZED PARKING	56,032 SF	1.29 AC	11.87 %
TOTAL	190,106 SF	4.36 AC	40.23 %
PROPOSED IMPERVIOUS:			
NEW TRAFFIC OPs OFFICE	7,206 SF	0.17 AC	1.53 %
NEW TRAFFIC OPs SUPPLY BLDG.	9,411 SF	0.22 AC	1.99 %
NEW TRAFFIC OPs COVERED PRKG.	5,600 SF	0.13 AC	1.19 %
NEW ASPHALT	32,812 SF	0.74 AC	6.95 %
NEW CONCRETE	8,681 SF	0.20 AC	1.84 %
FUTURE ROAD & BRIDGE POLE BARN	3,853 SF	0.09 AC	0.82 %
TOTAL	67,563 SF	1.55 AC	14.31 %
TOTAL IMPERVIOUS AREA	257,669 SF	5.91 AC	54.50 %
TOTAL PERVIOUS AREA	125,583 SF	2.89 AC	26.68 %
TOTAL WET POND (AT CONTROL)	88,862 SF	2.04 AC	18.82 %
	472,114 SF	10.84 AC	100%
NET NEW IMPERVIOUS	(+) 1,306 SF	(+) 0.03 AC	0.27 %

ZONING DATA

IL - CRITERIA	REQUIRED	EXISTING	PROPOSED
LOT SIZE	15,000 SF (MIN)	472,190 SF	NO CHANGE
LOT WIDTH	100' MIN.	365.63'	NO CHANGE
BUILDING SETBACKS**			
FRONT (SOUTH)	25'	44.2'	125.05'
SIDE (EAST)	10'	29.8'	24.86'
SIDE (WEST)	10'	191.3'	188.25'
REAR (NORTH)	20'	714.46'	908'
BUILDING COVERAGE	40% MIN.	5.51% (26,001SF)	8.60% (40,616 SF)
OPEN SPACE	15% MIN.	29.06%	28.74%
BUILDING HEIGHT	35' MAX.	35' MAX.	35' MAX.
FLOOR AREA RATIO (FAR)	0.50	0.04	0.06

** SETBACK DIMENSIONS DEPICTED REPRESENT THE CLOSEST STRUCTURE WALL TO THE APPLICABLE PROPERTY LINE.

DRAINAGE STATEMENT

THE TRAFFIC OPERATIONS COMPLEX IS PART OF A PREVIOUSLY PERMITTED MASTER STORMWATER SYSTEM. STORMWATER ASSOCIATED WITH THIS PROJECT WILL BE ROUTED TO THE EXISTING DRAINAGE PIPING SYSTEM INTERIOR TO THE OPERATIONS SITE AND WILL BE ROUTED TO THE EXISTING ON-SITE WET DETENTION SYSTEM. THE PROPOSED PROJECT WILL INCREASE THE PARCEL'S IMPERVIOUS AREA BY 1,306 SF (0.27%). THIS MINOR INCREASE IS CONSIDERED DE MINIMIS AND THEREFORE NO REVISIONS TO THE EXISTING WET DETENTION SYSTEM AND OUTFALL STRUCTURE ARE REQUIRED.

TOTAL AREA OF PERMITTED MASTER DRAINAGE BASIN:	24.18 AC
TOTAL ALLOWABLE IMPERVIOUS AREA:	14.90 AC
TOTAL IMPERVIOUS AREA INCLUDING THIS PROJECT:	10.36 AC
TOTAL IMPERVIOUS AREA REMAINING FOR FUTURE DEVELOPMENT:	4.54 AC

3

DATE	REVISIONS
04-11-2022	3 IRC COMMENTS
03-28-2022	2 SJRWMD COMMENTS
01-06-2022	1 IRC COMMENTS

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
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MBV ENGINEERING, INC.
MOJA BOWLES VILLAMIZAR & ASSOCIATES CONSULTING ENGINEERING CA #3728
1835 - 20TH STREET
VERO BEACH, FL 32960
PH: (772) 569-0035
FX: (772) 778-7417
MELBOURNE, FL - PH (321) 253-1510
FT. PIERCE, FL - PH (772) 465-9053

SITE PLAN

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

FLORIDA

INDIAN RIVER COUNTY

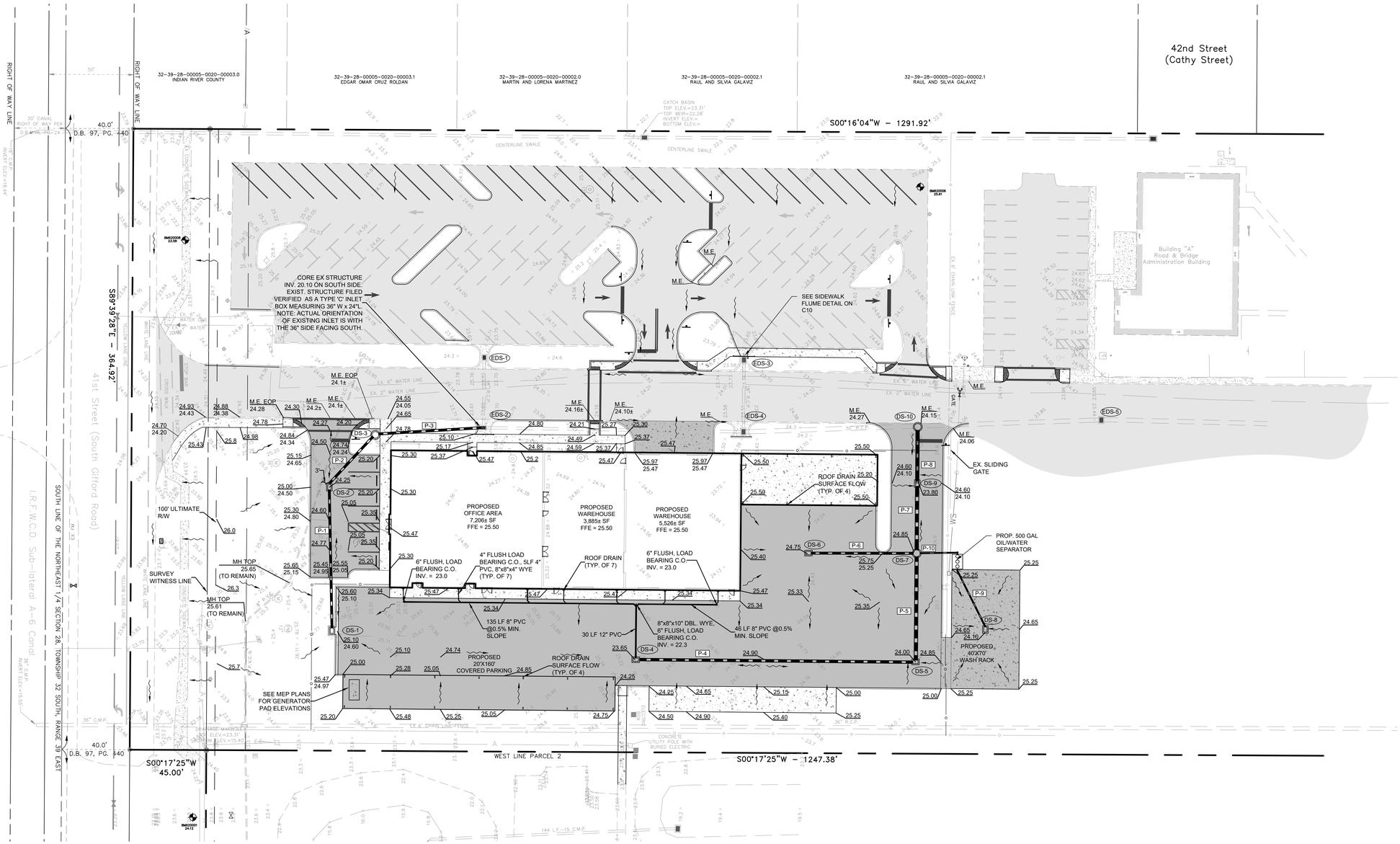
AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C5

21-0082

O:\DRUWINGS\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 CS SITE PLAN.dwg 6/30/2023 9:43 AM STEVE



PAVING, GRADING & DRAINAGE PLAN

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED HEAVY DUTY CONCRETE
- P-# PROPOSED DRAINAGE PIPE
- DS-# PROPOSED DRAINAGE STRUCTURE
- 24.35 PROPOSED GRADE ELEVATION
- × 25.4 EXISTING GRADE ELEVATION
- PROPOSED SURFACE FLOW DIRECTION

SEE SHEET C7 FOR CROSS SECTIONS

DRAINAGE PIPE SCHEDULE

PIPE NUMBER	SIZE	LENGTH	DESCRIPTION	CLASS / DR RATING
P 1	15"	82 LF	RCP	III
P- 2	18"	38 LF	RCP	III
P- 3	18"	61 LF	RCP	III
P- 4	18"	160 LF	RCP	III
P- 5	24"	61 LF	RCP	III
P- 6	15"	60 LF	RCP	III
P- 7	24"	38 LF	RCP	III
P- 8	24"	30 LF	RCP	III
P- 9	8"	37 LF	SCH 80 PVC	SDR 16
P- 10	8"	22 LF	SCH 80 PVC	SDR 16

EXISTING DRAINAGE STRUCTURE SCHEDULE

STRUCTURE NUMBER	RIM ELEV.	INVERT ELEVATION N	INVERT ELEVATION S	INVERT ELEVATION E	INVERT ELEVATION W	BOTTOM ELEV.	DESCRIPTION
EDS- 1	23.48			19.41		18.88	EXISTING CATCH BASIN
EDS- 2	23.49	18.49	CORE 20.10		19.06	17.96	EXISTING CATCH BASIN
EDS- 3	23.50			19.66		18.95	EXISTING CATCH BASIN
EDS- 4	23.38	17.35	17.95		18.98	16.81	EXISTING CATCH BASIN
EDS- 5	23.50	17.06	17.11			16.75	EXISTING CATCH BASIN
PROPOSED DRAINAGE STRUCTURE SCHEDULE							
DS- 1	24.60				21.00 SW	20.80	FDOT TYPE "F" INLET
DS- 2	24.25			20.70	20.60	20.40	FDOT TYPE "F" INLET
DS- 3	24.68	20.30	20.40 SE			20.10	FDOT TYPE 7 MANHOLE (INDEX 425-001)
DS- 4	23.65	19.60			21.00	19.40	FDOT TYPE "F" INLET
DS- 5	24.00	18.90	19.00			18.65	FDOT TYPE "F" INLET
DS- 6	24.75	20.70				20.50	FDOT TYPE "F" INLET
DS- 7	24.85	20.50	20.45	18.65	18.55	18.30	FDOT TYPE 7 MANHOLE (INDEX 425-001)
DS- 8	24.10				21.00	18.90	FDOT TYPE "F" INLET
DS- 9	23.80			18.35	18.25	18.00	FDOT TYPE "F" INLET
DS- 10	24.15	17.24	17.24	18.10		17.00	FDOT TYPE 7 MANHOLE (INDEX 425-001)

NOTE

STRUCTURE DS-2:
CONTRACTOR TO MAINTAIN A MINIMUM SEPARATION OF 3' BETWEEN EXISTING GRAVITY SEWER AND PROPOSED DRAINAGE STRUCTURE.

3

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

72 HOURS BEFORE DIGGING
CALL TOLL FREE 811
Know what's below. Call before you dig.

8	–	–	–	–
7	–	–	–	–
6	–	–	–	–
5	–	–	–	–
4	–	–	–	–
3	IRC COMMENTS			04-11-2022
2	SJRWMD COMMENTS			03-28-2022
1	IRC COMMENTS			01-06-2022
△	REVISIONS			DATE

JOB NO.	21-0082
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PAVING, GRADING & DRAINAGE PLAN

NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY
INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON
LICENSE
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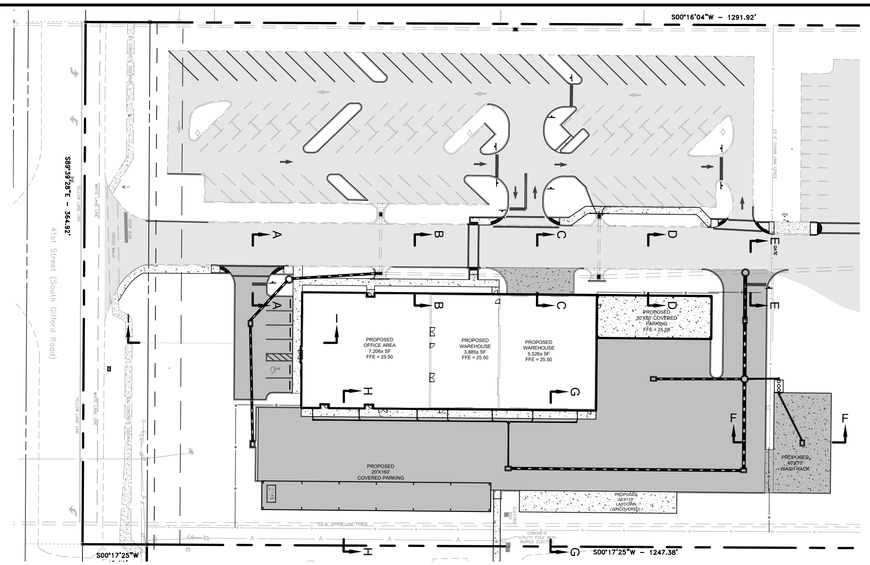
SHEET
C6

21-0082

O:\DRAWINGS\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 OS PSD PLAN.dwg 6/30/2023 11:06 AM TODD



SECTION KEY MAP

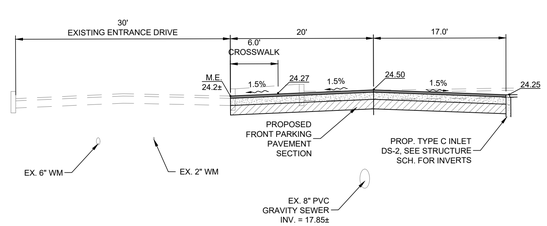
SCALE: 1" = 50'

GRAPHIC SCALE

0 50 100

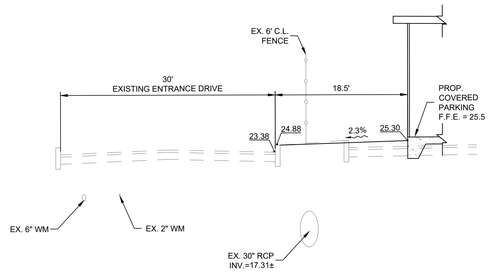
(IN FEET)

1 inch = 50 ft.



SECTION A-A

N.T.S.



SECTION D-D

N.T.S.

SECTION B-B

N.T.S.

SECTION E-E

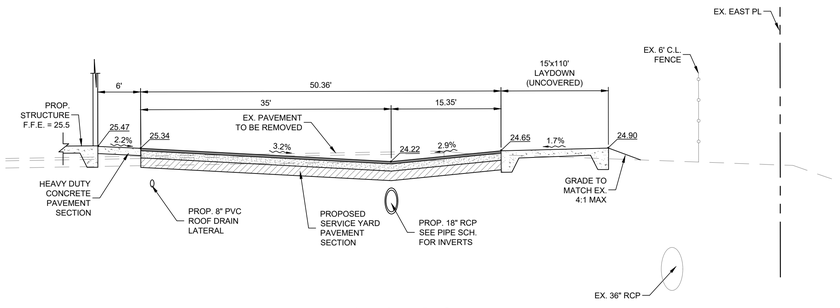
N.T.S.

SECTION C-C

N.T.S.

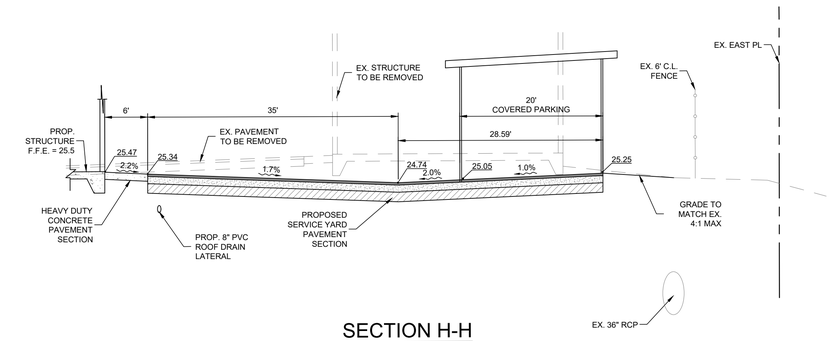
SECTION F-F

N.T.S.



SECTION G-G

N.T.S.



SECTION H-H

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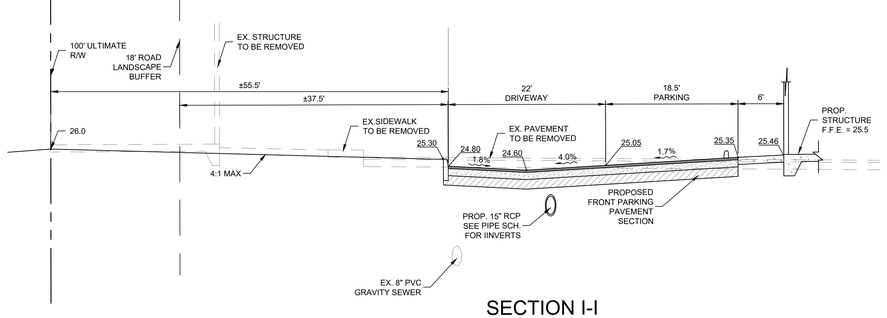

SECTION I-I

N.T.S.

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BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

8				
7				
6				
5				
4				
3	IRC COMMENTS	04-11-2022		
2	SJRWMD COMMENTS	03-28-2022		
1	IRC COMMENTS	01-06-2022		
	REVISIONS	DATE		

JOB NO.	21-0082
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CROSS SECTIONS

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

FLORIDA

INDIAN RIVER COUNTY

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AARON G. STANTON
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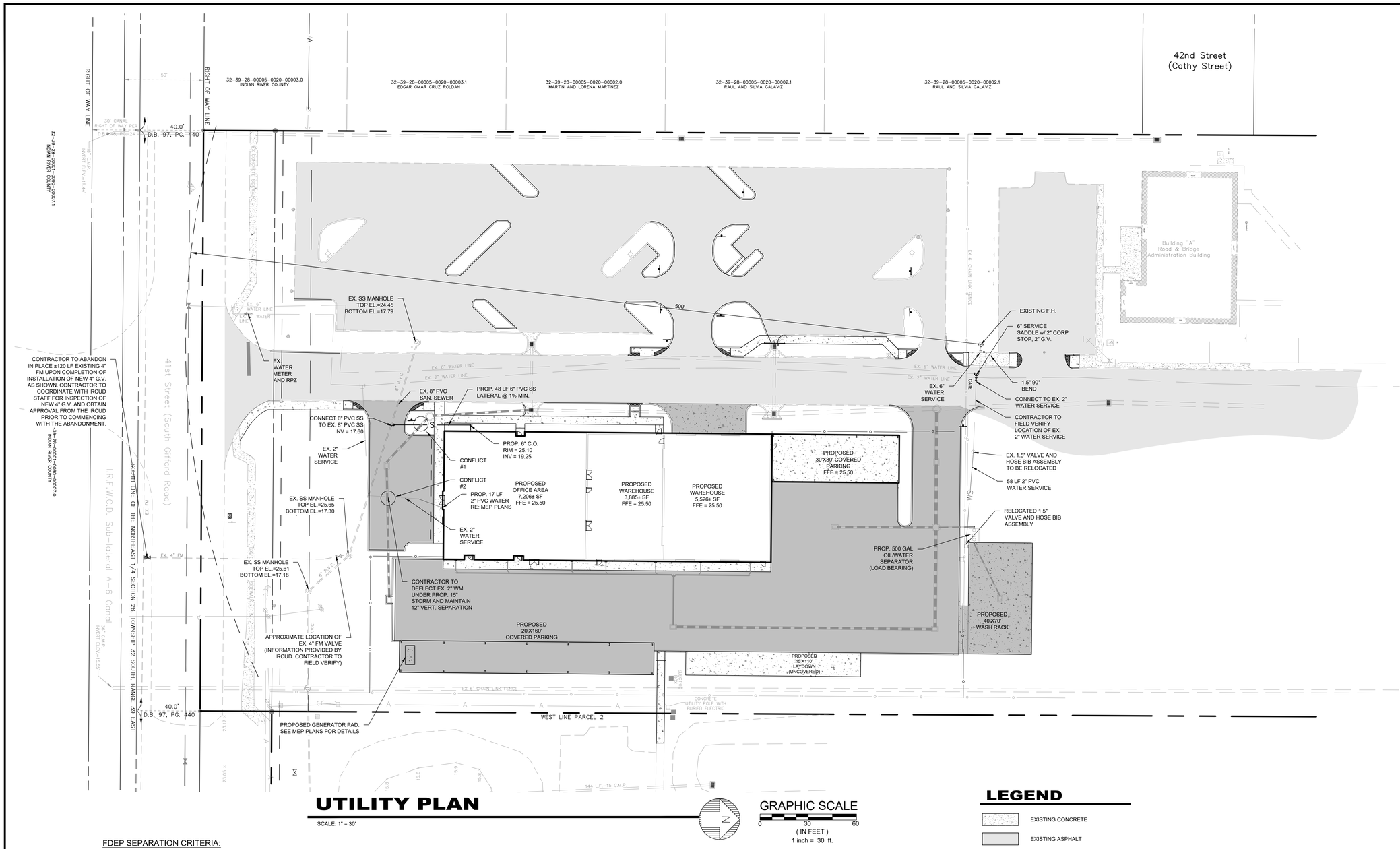
SHEET

C7

21-0082



UTILITY PLAN

SCALE: 1" = 30'

GRAPHIC SCALE

0 30 60

(IN FEET)

1 inch = 30 ft.

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED HEAVY DUTY CONCRETE
- EXISTING 8" PVC SS & MANHOLE
- S — PROPOSED 6" PVC SS
- WS — PROPOSED 1.5" WATER SERVICE

FDEP SEPARATION CRITERIA:

(1) HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, SANITARY SEWER, FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610,F.A.C.

(B)NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.

(C) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PREASSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610,F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

(D) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2),F.S., AND RULE 64E-6.002, F.A.C.

(2) VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM - TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(B) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(C) AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL THE WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

(3) SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES

(A) NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.

(B)EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.

(4) SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

NEW OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS SHALL BE LOCATED SO THAT THE DRAINS ARE AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C; AT LEAST THREE FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED GRAVITY-OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

UTILITY CONFLICT TABLE

CONFLICT NUMBER	GROUND ELEV.	UPPER PIPE	UPPER PIPE BOTTOM	LOWER PIPE	LOWER PIPE TOP	SEPARATION (FT)
1	24.70	18" STORM	20.43	6" SAN.	18.50	1.93
2	24.60	15" STORM	20.77	2" WATER	19.75	1.02

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

NO.	DATE	REVISIONS
8		
7		
6		
5		
4		
3	04-11-2022	IRC COMMENTS
2	03-28-2022	SJRWMD COMMENTS
1	01-06-2022	IRC COMMENTS

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOJA, BOWLES, VILAMIZAR & ASSOCIATES CONSULTING ENGINEERING CA #3728
MELBOURNE FL.-PH (321) 253-1510
FT. PIERCE FL.- PH (772) 465-9503
1893 - 28TH STREET
VERO BEACH, FL 32960
PH. (772) 778-7378
FX. (772) 778-7417

UTILITY PLAN

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

FLORIDA

INDIAN RIVER COUNTY

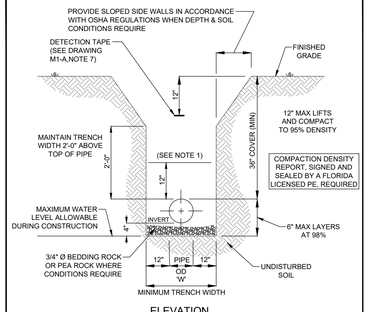
AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET

C8

21-0082



ELEVATION

SEE TRENCH DETAIL NOTES DRAWING M-1A

NOTES:

1. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL OTHER THAN HAND VIBRATORY MEANS.
2. ALL RESTORATION IN EASEMENTS OR RIGHT-OF-WAYS OR WHEN REQUIRED BY OTHER JURISDICTIONAL AGENCIES SHALL CONFORM TO IRCDUS SPECIFICATIONS OR THE OTHER JURISDICTIONAL AGENCY SPECIFICATION, WHICHEVER IS MORE STRINGENT.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRENCH DETAIL (UNPAVED EASEMENT)	DRAWING NO. M-1

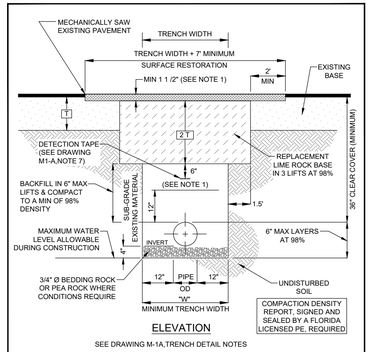
MAY 2019

NOTES:

1. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE METHOD OF CONSTRUCTION TO IRCDUS FOR APPROVAL.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD IN ACCORDANCE WITH OSHA REGULATIONS.
3. COMPACTION PERCENTAGES SHOWN REFER TO AASHTO T-180 MODIFIED PROCTOR METHOD.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL OTHER THAN HAND VIBRATORY MEANS.
5. COMPACTION REPORTS REQUIRED.
6. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0".
7. 2" DETECTION TAPE WITH METALLIC BACKING TO BE INSTALLED OVER MAIN 6" BELOW BOTTOM OF BASE COURSE. TAPE TO BE MARKED "CAUTION-WATER LINE BELOW", "CAUTION-FORCE MAIN BELOW", OR "CAUTION-REUSE MAIN BELOW". TRACE WIRE SHALL BE USED CONTINUOUSLY ON ALL PIPE. SEE DRAWING, No. M-14, TRACE WIRE DETAIL.
8. ALL RESTORATION IN EASEMENTS OR RIGHT-OF-WAYS OR WHEN REQUIRED BY OTHER JURISDICTIONAL AGENCIES SHALL CONFORM TO IRCDUS SPECIFICATIONS OR THE OTHER JURISDICTIONAL AGENCY SPECIFICATION, WHICHEVER IS MORE STRINGENT.
9. ALL PIPE TO BE LOCATED A MINIMUM OF 5' O.C. (TYPICAL) FROM EDGE OF PAVEMENT.
10. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY PUBLIC WORKS ENGINEER OR DESIGNEE.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRENCH DETAIL NOTES	DRAWING NO. M-1 A

MAY 2019



ELEVATION

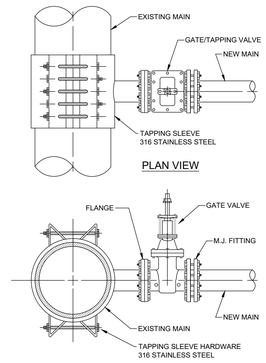
SEE DRAWING M-1A,TRENCH DETAIL NOTES

NOTES:

1. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL OTHER THAN HAND VIBRATORY MEANS.
2. NEW SURFACE MATERIALS SHALL BE CONSISTENT IN DEPTH WITH EXISTING MATERIALS AND SHALL HAVE LAPPED JOINTS, (1 1/2" MINIMUM THICKNESS). PAVEMENT MATERIAL TO BE SPECIFIED.
3. MINIMUM TRENCH WIDTH "W" = PIPE OD PLUS 2'-0".
4. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY PUBLIC WORKS ENGINEER OR DESIGNEE.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRENCH DETAIL (PAVED AREAS & SHOULDERS)	DRAWING NO. M-2

MAY 2019



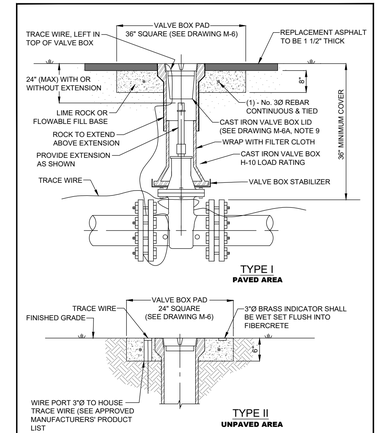
ELEVATION

NOTES:

1. NEW MAIN SHALL BE RESTRAINED PER IRCDUS ENGINEERING. THRUST BLOCK ON EXISTING MAIN AT TAPPING SLEEVE LOCATION MAY BE REQUIRED.
2. ALL MATERIALS SHALL BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TAPPING SLEEVE AND VALVE ASSEMBLY	DRAWING NO. M-5

MAY 2019



ELEVATION

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	VALVE AND BOX DETAIL	DRAWING NO. M-6

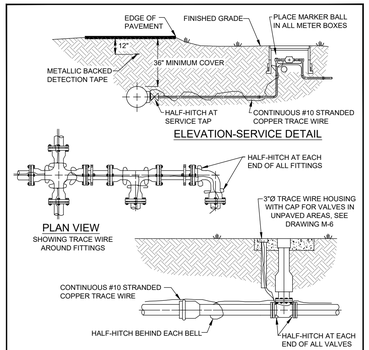
MAY 2019

NOTES:

1. VALVE BOXES SHALL BE CONSTRUCTED PER MANUFACTURERS' SPECIFICATION.
2. ALL VALVE BOXES SHALL BE SHAFT/SCREW TYPE AND CANNOT REST ON THE VALVE.
3. ALL VALVE BOLTS SHALL BE STAINLESS STEEL WITH BRASS NUTS.
4. VALVE MARKERS ARE TO BE INSTALLED ADJACENT TO ALL VALVES IN UNPAVED AREAS AS DIRECTED BY IRCDUS. (SEE DRAWING, No. M-10, VALVE MARKER)
5. ALL VALVES REQUIRE STATE PLANE COORDINATES.
6. TRACE WIRE IS REQUIRED. (SEE DRAWING, No. M-14, TRACE WIRE DETAILS)
7. BLUE REFLECTIVE MARKERS (RPM'S)ARE TO BE LOCATED IN MID-LANE OF ROADWAY FOR ALL HYDRANT VALVES. (SEE DRAWING, No. W-1, FIRE HYDRANTS & VALVE LOCATIONS)
8. REFLECTIVE MARKERS SHALL NOT BE PLACED IN BIKE LANES.
9. VALVE BOX LID LOCATED IN PAVEMENT SHALL BE A MINIMUM 24 LBS. WITH A MINIMUM 6" LONG THROAT.
10. VALVE BOX SHALL COMPLY WITH FDOT STANDARDS AS APPLICABLE.
11. VALVE EXTENSIONS OVER 36" REQUIRE IRCDUS ENGINEERING APPROVAL.
12. VALVE SPACING ON WATER MAINS SHALL NOT EXCEED 1,000' MAXIMUM.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	VALVE AND BOX DETAIL NOTES	DRAWING NO. M-6 A

MAY 2019

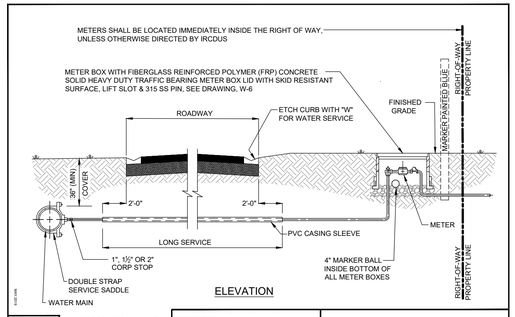


NOTES:

1. TRACE WIRE IS REQUIRED ON ALL PIPES REGARDLESS OF MATERIAL.
2. INCLUDE ALL COST OF MATERIAL AND LABOR TO INSTALL TRACE WIRE IN PRICE OF PIPE.
3. CONTRACTOR IS RESPONSIBLE FOR CONTINUITY THROUGHOUT ENTIRE PROJECT OF ALL TRACE WIRE.
4. ALL CONNECTIONS SHALL BE MADE WITH DIRECT BURY CONNECTORS.
5. ALL MATERIALS ARE TO BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.
6. COLOR OF TRACE WIRE SHALL BE: BLUE FOR WATER, GREEN FOR SEWER, AND PURPLE FOR RECLAIMED WATER.

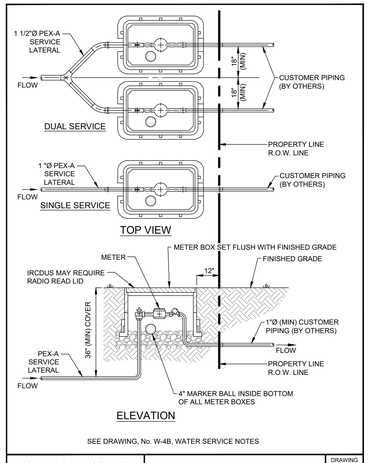
INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRACE WIRE DETAILS	DRAWING NO. M-14

MAY 2019



SEE DRAWING No. W-4 B WATER SERVICE NOTES

W-4 (SEE DRAWING NO.	INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	WATER SERVICE INSIDE OF RIGHT OF WAY



ELEVATION

SEE DRAWING, No. W-4B, WATER SERVICE NOTES

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	METER BOX INSTALLATION	DRAWING NO. W-6

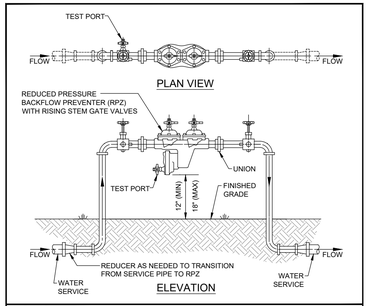
MAY 2019

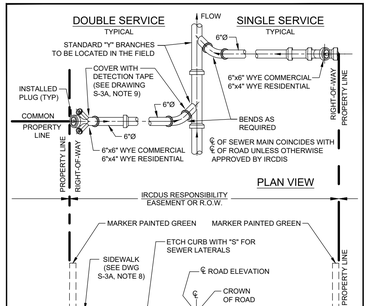
NOTES:

1. ALL BUILDINGS WITH FIRE SPRINKLER SYSTEMS INCLUDING COMMERCIAL, SINGLE FAMILY RESIDENTIAL, AND MULTI-FAMILY ARE REQUIRED TO INSTALL A DOUBLE CHECK BACKFLOW PREVENTER WITH A REDUCED PRESSURE ZONE (RPZ) FEATURE AS DETERMINED BY IRCDUS.
2. ALL FASTENERS SHALL BE 316 STAINLESS STEEL (OR APPROVED EQUAL).
3. APPROVED EQUALS HAVING FULL UL,USC, AND AWWA CERTIFICATIONS MAY BE INSTALLED ONLY AFTER SPECIFIC APPROVAL BY IRCDUS.
4. SUPPORT BACKFLOW PREVENTER FROM WALL, IF REQUIRED, WITH APPROVED PIPE SUPPORT SYSTEM. PIPE SUPPORT SYSTEM SHALL BE BRASS, COPPER OR D.I.P., AS APPROVED BY IRCDUS.
5. PIPING 2 ½" Ø OR GREATER SHALL BE FLANGED DUCTILE IRON PIPE.
6. ALL MATERIALS ARE TO BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.
7. RPZ'S SHALL BE INSPECTED, CERTIFIED AND REPORTED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE INDIAN RIVER COUNTY CONNECTION CONTROL PROGRAM REQUIREMENTS.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	REDUCED PRESSURE BACKFLOW PREVENTER RPZ	DRAWING NO. W-11

MAY 2019

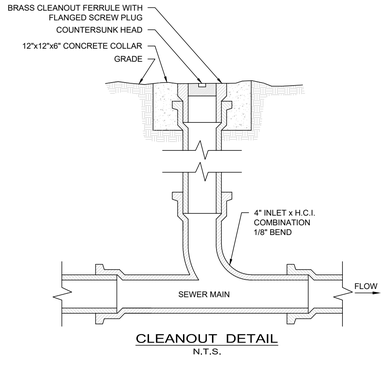




SEE DRAWING, No. S-3A SEWER LATERAL NOTES

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	STANDARD LATERAL (SHALLOW SEWER)	DRAWING NO. S-1

MAY 2019



CLEANOUT DETAIL

N.T.S.

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

O:\DRAWING\S\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 COVER - DETAILS.dwg 6/30/2023 8:52 AM JESSE BARTER

8				
7				
6				
5				
4				
3	IRC COMMENTS	04-11-2022		
2	SJRWMD COMMENTS	03-28-2022		
1	IRC COMMENTS	01-06-2022		
△	REVISIONS	DATE		

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
3300 DUNCAN ROAD
VERO BEACH, FL 32960
(772) 778-3317
FX: (772) 778-3417
MELBOURNE, FL - PH (321) 253-3110
ATTENTION: MATTHEW MOIA

UTILITY DETAILS

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

FLORIDA

INDIAN RIVER COUNTY

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

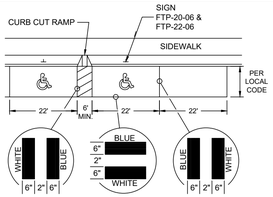
SHEET

C9

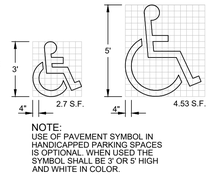
21-0082

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

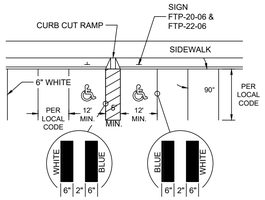


PARALLEL SPACE PAVEMENT MARKING

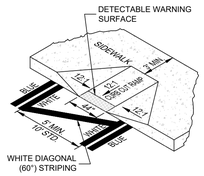


NOTE:
USE OF PAVEMENT SYMBOL IN HANDICAPPED PARKING SPACES IS OPTIONAL. WHEN USED THE SYMBOL SHALL BE 3' OR 5' HIGH AND WHITE IN COLOR.

HANDICAPPED PAVEMENT SYMBOL



STANDARD SPACE PAVEMENT MARKING

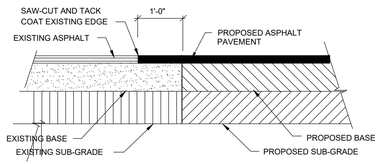


CURB CUT RAMP (TYP.)

GENERAL NOTES
1. CRITERIA FOR PAVEMENT MARKING ONLY, NOT CURB CUT RAMP LOCATIONS. FOR RAMP CRITERIA REFER TO FDOT STANDARD DESIGN INDEX #304, LATEST EDITION.
2. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARD 595a.
3. CURB AND WHEELSTOP LOCATIONS SHALL BE AS PER DEPICTED ON THE PLANS.
4. FOR ANGLED PARKING APPLICATIONS, REFER TO FDOT STANDARD DESIGN INDEX #17346, LATEST EDITION.
5. PARKING STALL WIDTHS SHALL BE DIMENSIONED FROM CENTERLINE TO CENTERLINE OF THE WHITE STRIPES.

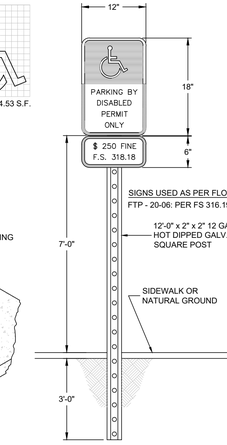
HANDICAPPED RAMP AND PAVEMENT MARKING DETAIL

N.T.S.



PAVEMENT SAW-CUT AND BUTT JOINT DETAIL

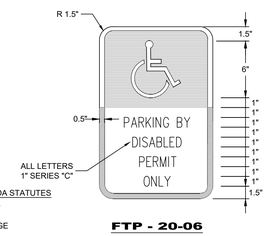
N.T.S.



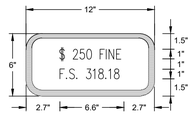
GENERAL NOTES
1. TOP PORTION OF FTP-20-06 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
2. BOTTOM PORTION OF FTP-20-06 SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
3. THE SIGN SHALL BE PLACED A MINIMUM OF 3' FROM THE WHEEL STOP OR THE BACK OF CURB (WHERE APPLICABLE).

HANDICAPPED SIGN DETAIL

N.T.S.

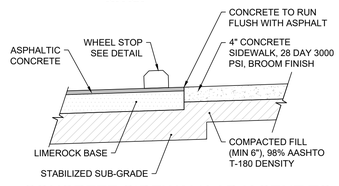


FTP - 20-06



FTP - 22-06

1' x 6"
1-1/2" RADII
3/4" BORDER
1" SERIES C LETTERS
WHITE BACKGROUND
BLACK LEGEND & BORDER



CONCRETE SIDEWALK ADJACENT TO ASPHALT PARKING DETAIL

N.T.S.

STORMWATER/UTILITY PIPE INSTALLATION

NOTES:
1. UTILITY CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH COUNTY CODE CHAPTER 312.
2. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE METHOD OF CONSTRUCTION FOR APPROVAL BY COUNTY ENGINEER OR DESIGNEE PRIOR TO INSTALLATION.
3. SHORING MAY BE REQUIRED IN ACCORDANCE WITH ALL INDUSTRY STANDARDS.
4. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0" ON EACH SIDE.

Ⓐ MATCH EXISTING GROUND WITH SMOOTH, LEVEL TRANSITION.

Ⓑ UNPAVED ROADS IN ROW SHALL CONSIST OF 8" LIMEROCK BASE OR COQUINA SHELL IN A MINIMUM OF (2) 4" LIFTS WITH A MINIMUM LBR OF 100 COMPACTED TO 98% MAXIMUM DENSITY PER A.A.S.H.T.O. T-180. WHEN INSTALLATION IS NOT LOCATED IN A TRAVEL LANE, RESTORATION SHALL BE ACCORDING TO Ⓒ BELOW WITH SOD LAID WITHIN THREE DAYS OF FINAL GRADING.

Ⓒ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 6" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.

Ⓓ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 4" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY ENGINEER OR DESIGNEE.

Ⓔ ¾" DIAMETER. WASHED BEDDING ROCK OR PEA ROCK WHERE UNSUITABLE BEDDING MATERIAL EXISTS OR DEWATERING IS REQUIRED. SUITABLE MATERIAL IS DEFINED AS STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION, OTHER FOREIGN FORMATIONS AND CONSTRUCTED TO UNIFORM GRADE AND LINE.

LAND DEVELOPMENT DESIGN STANDARDS AND SPECIFICATIONS	TRENCH (UNPAVED AREAS)
DATE: 11/1/2016	James William Ennis, P.E.
INDEX: 2	Florida Reg. No. 71938
	Public Works – County Engineer

STORMWATER/UTILITY PIPE INSTALLATION

NOTES:
1. UTILITY CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH COUNTY CODE CHAPTER 312.
1.1. ALL INSTALLATIONS LESS THAN 12" DIAMETER AND NON GRAVITY UTILITIES SHALL BE BY DIRECTIONAL BORE.
1.2. PARTIAL LANE CUTS REQUIRE A MINIMUM OF SINGLE LANE RESTORATION.
2. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION FOR APPROVAL BY THE COUNTY ENGINEER OR DESIGNEE PRIOR TO INSTALLATION.
3. SHORING MAY BE REQUIRED IN ACCORDANCE WITH ALL INDUSTRY STANDARDS.
4. NEW SURFACING MATERIALS SHALL BE CONSISTENT OR BETTER THAN EXISTING CONDITIONS AND SHALL HAVE BUTT JOINTS (2.5 INCH MINIMUM THICKNESS).
5. ALL ROADWAY RESTORATION SHALL COMPLY WITH INDIAN RIVER COUNTY PUBLIC WORKS AND FDOT STANDARDS (LATEST EDITION).
6. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0" ON EACH SIDE.

Ⓐ MINIMUM EXISTING PAVEMENT DEPTH OR PER COUNTY ROADWAY DESIGN CRITERIA DETAIL, WHICHEVER IS GREATER.

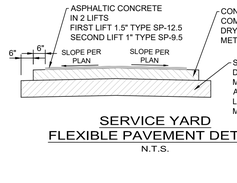
Ⓑ FLOWABLE FILL AS DEFINED AS NON-EXCAVATABLE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 121, WITH STRENGTH OF 125–300 PSI.

Ⓒ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 6" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.

Ⓓ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 4" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY THE COUNTY ENGINEER OR DESIGNEE.

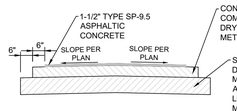
Ⓔ ¾" DIAMETER, WASHED BEDDING ROCK OR PEA ROCK WHERE UNSUITABLE BEDDING MATERIAL EXISTS OR IF DEWATERING IS REQUIRED. SUITABLE MATERIAL IS DEFINED AS STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION, OTHER FOREIGN FORMATIONS AND CONSTRUCTED TO UNIFORM GRADE AND LINE.

LAND DEVELOPMENT DESIGN STANDARDS AND SPECIFICATIONS	TRENCH (PAVED AREAS) 10' OR LESS CUT
DATE: 11/1/2016	James William Ennis, P.E.
INDEX: 1B	Florida Reg. No. 71938
	Public Works – County Engineer



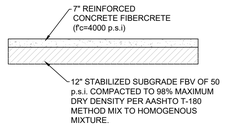
SERVICE YARD FLEXIBLE PAVEMENT DETAIL

N.T.S.



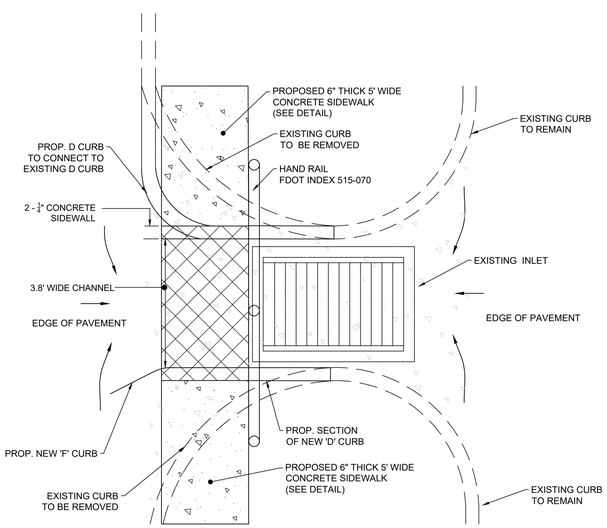
REGULAR DUTY FLEXIBLE PAVEMENT DETAIL (FRONT PARKING)

N.T.S.



HEAVY DUTY CONCRETE DETAIL

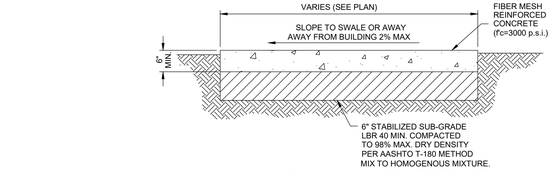
N.T.S.



NOTE:
METAL PLATE AND FRAME TO BE PEDESTRIAN RATED, NON-SLIP, AND SOLID.

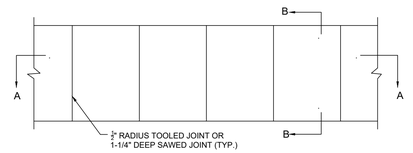
ALUMINUM SIDEWALK FLOOR DETAIL

N.T.S.



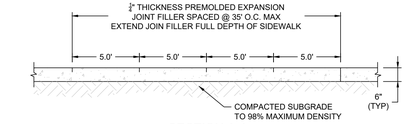
CONCRETE SIDEWALK & LAYDOWN AREA DETAIL

N.T.S.



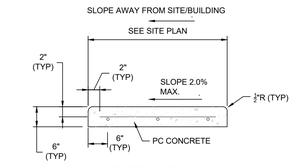
NOTE:
PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS

PLAN VIEW



SECTION A-A

NOTE:
WHERE REQUIRED REINFORCEMENT WILL BE No. 3 BARS 24" O.C. EACH WAY MAX. SPACING, OR 6 x 6 - W1.4 X W1.4 WWF

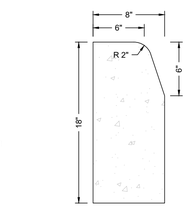


SECTION B-B

NOTE:
SLOPE SIDEWALK AS INDICATED AWAY FROM SITE/BUILDING

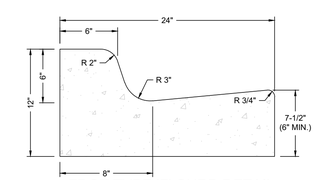
CONCRETE SIDEWALK DETAIL

N.T.S.



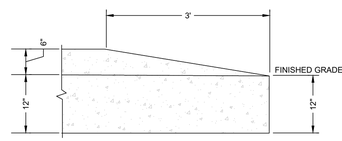
FDOT TYPE 'D' CURB DETAIL

N.T.S.



FDOT TYPE 'F' CURB DETAIL

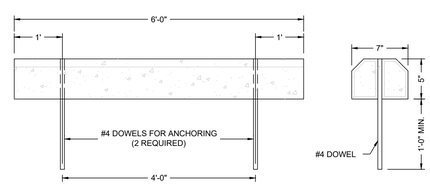
N.T.S.



ELEVATION VIEW

CURB TRANSITION DETAIL

N.T.S.



PRE-CAST CONCRETE WHEEL STOP DETAIL

N.T.S.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

72 HOURS BEFORE DIGGING
CALL TOLL FREE
811
Know what's below.
Call before you dig.

	DATE	REVISIONS
8		
7		
6		
5		
4	04-11-2022	IRC COMMENTS
3	03-28-2022	S.R.W.M.D. COMMENTS
2	01-06-2022	IRC COMMENTS
1		

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
MELBOURNE, FL - PH (321) 253-5110
FT PIERCE, FL - PH (772) 882-5552
VERO BEACH, FL 32960
(772) 562-3820
FX: (772) 778-3417

GENERAL DETAILS

NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY

FLORIDA

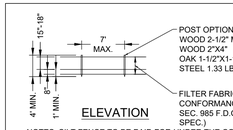
INDIAN RIVER COUNTY

AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C10

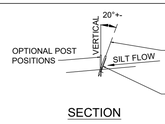
21-0082



POST OPTIONS:
WOOD 2-1/2" MIN. DIA.
WOOD 2"X4"
OAK 1-1/2"X1-1/2"
STEEL 1.33 LBS./FT. MIN.

FILTER FABRIC (IN CONFORMANCE WITH SEC. 985 F.D.O.T. SPEC.)

ELEVATION



OPTIONAL POST POSITIONS

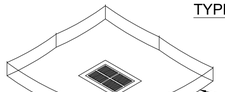
PRINCIPLE POST POSITION (CANTED 20° TOWARD FLOW)

FILTER FABRIC

SECTION

NOTES: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (L.F.)

TYPE III SILT FENCE



NOTE: SPACING FOR TYPE III FENCE TO BE IN ACCORDANCE WITH CHART I, SHEET 1 OF 3 AND DITCH INSTALLATIONS AT DRAINAGE STRUCTURES SHEET 2 OF 3

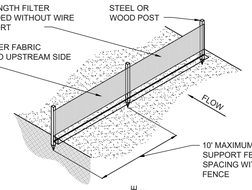
TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

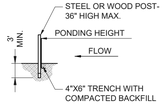
DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

SILT FENCE APPLICATIONS

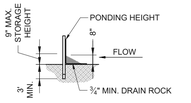
N.T.S.

NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.





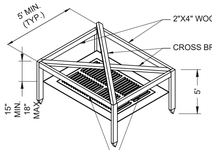
TRENCH DETAIL



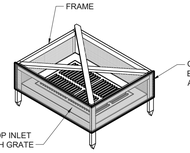
INSTALLATION WITHOUT TRENCHING

TYPE IV SILT FENCE

N.T.S.



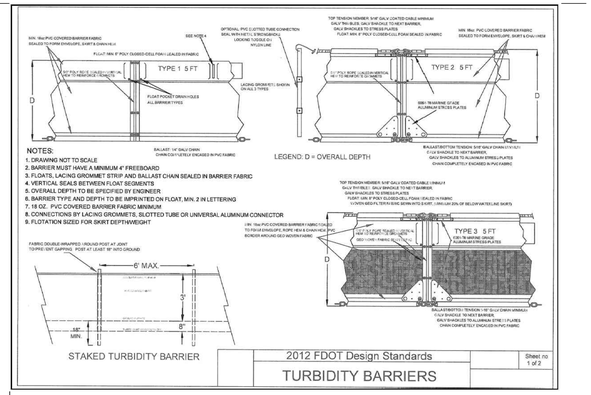
VIEW OF FRAME WITHOUT SILT FENCE



VIEW OF FRAME WITH SILT FENCE

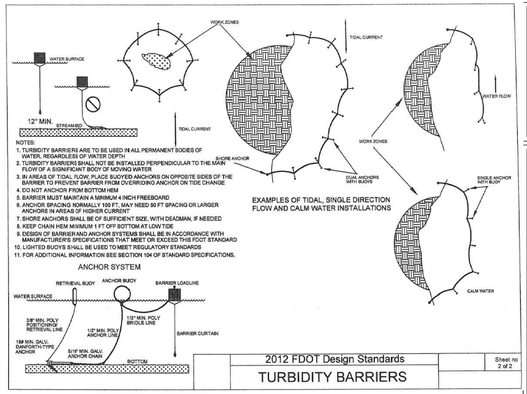
SILT FENCE INLET PROTECTION

N.T.S.



NOTES:
1. DRAWING NOT TO SCALE
2. BARRIER MUST HAVE A MINIMUM 4" FREEBOARD
3. FLOATS, LACING GROMMET STRIP AND BALLAST CHAIN SEALED IN BARRIER FABRIC
4. VERTICAL SEALS BETWEEN FLOAT SEGMENTS
5. OVERALL DEPTH TO BE SPECIFIED BY ENGINEER
6. BARRIER TYPE AND DEPTH TO BE IMPRINTED ON FLOAT, MIN. 2 IN LETTERING
7. 18 OZ. PVC COVERED BARRIER FABRIC MINIMUM
8. CONNECTIONS BY LACING GROMMETS, SLOTTED TUBE OR UNIVERSAL ALUMINUM CONNECTOR
9. FLOTATION SIZED FOR 5KRT DEPTH/WEIGHT

2012 FDOT Design Standards	Sheet no 1 of 2
TURBIDITY BARRIERS	

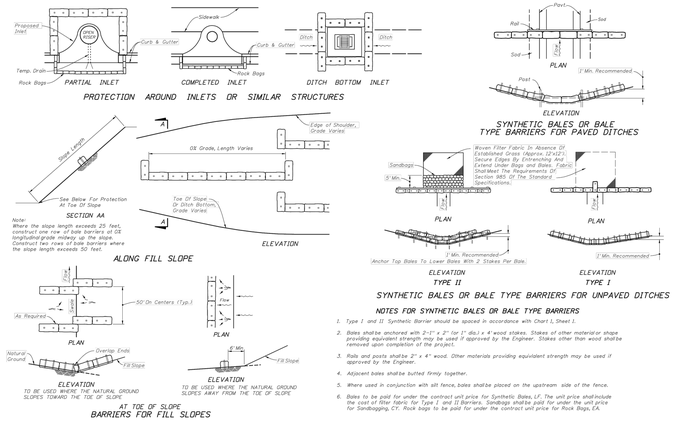


NOTES:
1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER, REGARDLESS OF WATER DEPTH
2. TURBIDITY BARRIERS SHALL NOT BE INSTALLED PERPENDICULAR TO THE MAIN FLOW OF A SIGNIFICANT BODY OF MOVING WATER
3. IN AREAS OF TIDAL FLOW, PLACE BUOYED ANCHORS ON OPPOSITE SIDES OF THE BARRIER TO PREVENT BARRIER FROM OVERDOING ANCHOR OR TIDE CHANGE
4. DO NOT ANCHOR FROM BOTTOM MESH
5. BARRIER MUST MAINTAIN A MINIMUM 4 INCH FREEBOARD
6. ANCHOR SPACING NORMALLY 100 FT., MAY NEED 50 FT SPACING OR LARGER ANCHORS IN AREAS OF HIGHER CURRENT
7. SHORE ANCHORS SHALL BE OF SUFFICIENT SIZE, WITH DEADMAN, IF NEEDED
8. KEEP CHAIN HEM MINIMUM 1 FT OFF BOTTOM AT LOW TIDE
9. DESIGN OF BARRIER AND ANCHOR SYSTEMS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS THAT MEET OR EXCEED THIS FDOT STANDARD
10. LIGHTED BUOYS SHALL BE USED TO MEET REGULATORY ETHOGROS
11. FOR ADDITIONAL INFORMATION SEE SEOTION 104 OF STANDARD SPECIFICATIONS.

2012 FDOT Design Standards	Sheet no 2 of 2
TURBIDITY BARRIERS	

TURBIDITY BARRIER APPLICATIONS

N.T.S.



NOTES FOR SYNTHETIC BALES OR BALE TYPE BARRIERS

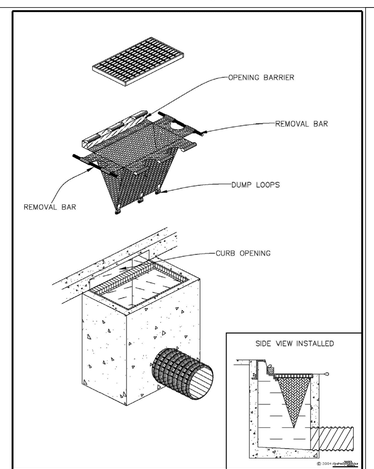
1. Type I and II Synthetic Barrier should be spaced in accordance with Chart I, Sheet 1.
2. Bales shall be anchored with 2"-1" x 2" (or 1" dia.) x 4' wood stakes. Stakes of other material or shape providing equivalent strength may be used if approved by the Engineer. Stakes other than wood shall be removed upon completion of the project.
3. Rails and posts shall be 2" x 4" wood. Other materials providing equivalent strength may be used if approved by the Engineer.
4. Adjacent bales shall be butted firmly together.
5. Where used in conjunction with silt fence, bales shall be placed on the upstream side of the fence.
6. Bales to be paid for under the contract unit price for Synthetic Bales, Lf. The unit price shall include the cost of filter fabric for Type I and II Barriers. Sandbags shall be paid for under the unit price for Sandbagging, CY. Rock bags to be paid for under the contract unit price for Rock Bags, EA.

EROSION AND SEDIMENTATION CONTROL NOTES

CONSTRUCTION ACTIVITIES CAN RESULT IN THE GENERATION OF SIGNIFICANT AMOUNTS OF POLLUTANTS WHICH MAY REACH SURFACE OR GROUND WATERS. ONE OF THE PRIMARY POLLUTANTS OF SURFACE WATERS IS SEDIMENT DUE TO EROSION. EXCESSIVE QUANTITIES OF SEDIMENT WHICH REACH WATER BODIES OF FLOOD PLAINS HAVE BEEN SHOWN TO ADVERSELY AFFECT THEIR PHYSICAL, BIOLOGICAL AND CHEMICAL PROPERTIES. TRANSPORTED SEDIMENT CAN OBSTRUCT STREAM CHANNELS, REDUCE HYDRAULIC CAPACITY OF WATER BODIES OF FLOOD PLAINS, REDUCE THE DESIGN CAPACITY OF CULVERTS AND OTHER WORKS, AND ELIMINATE BENTHIC INVERTEBRATES AND FISH SPAWNING SUBSTRATES BY SILTATION. EXCESSIVE SUSPENDED SEDIMENTS REDUCE LIGHT PENETRATION AND THEREFORE, REDUCE PRIMARY PRODUCTIVITY.

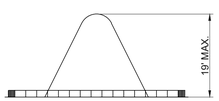
MINIMUM STANDARDS

1. SEDIMENT BASIN AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UNSLOPE LAND DISTURBANCE TAKES PLACE.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN ONE YEAR.
4. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
5. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE REVIEWER, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
6. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
7. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE SEDIMENT BASIN SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE ANTICIPATED SEDIMENT LOADING FROM THE LAND-DISTURBING ACTIVITY. THE OUTFALL DEVICE OR SYSTEM DESIGN SHALL TAKE INTO ACCOUNT THE TOTAL DRAINAGE AREA FLOWING THROUGH THE DISTURBED AREA TO BE SERVED BY THE BASIN.
8. AFTER ANY SIGNIFICANT RAINFALL, SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
9. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
10. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
11. SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAIN SYSTEM, DITCH OR CHANNEL. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
12. BEFORE TEMPORARY OR NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
13. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
14. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
16. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED TO ENSURE INTENDED PURPOSE IS ACCOMPLISHED. THE DEVELOPER, OWNER AND/OR CONTRACTOR SHALL BE CONTINUALLY RESPONSIBLE FOR ALL SEDIMENT LEAVING THE PROPERTY. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
17. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
    A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
    B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
    C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
    D. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
18. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE, WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE WITH TIRES AND GRIPPERS, THESE ROADS SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
19. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, IN THE OPINION OF THE REVIEWER. DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
20. PROPERTIES AND WATERWAYS DOWNSTREAM FROM CONSTRUCTION SITE SHALL BE PROTECTED FROM SEDIMENT DISPOSITION AND EROSION.
21. PHASED PROJECTS SHOULD BE CLEARED IN CONJUNCTION WITH CONSTRUCTION OF EACH PHASE.
22. EROSION CONTROL DESIGN AND CONSTRUCTION SHALL FOLLOW THE REQUIREMENTS IN INDEX NOS. 104 AND 105 OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS.
23. THE REVIEWER MAY APPROVE MODIFICATIONS OR ALTER PLANS TO THESE EROSION CONTROL CRITERIA DUE TO SITE SPECIFIC CONDITIONS.



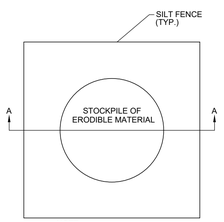
INLET INSERT SEDIMENT CONTAINMENT SYSTEM

N.T.S.



NOTE:
ALL STOCKPILES SHALL BE A MAXIMUM OF 25' HIGH.

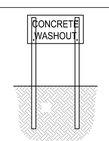
SECTION A-A



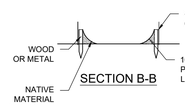
NOTE:
FOR STOCKPILING ERODIBLE MATERIAL FOR EXTENDED PERIODS, THE AREA SHALL BE SEEDED AND MULCHED.

SEDIMENT CONTROL DETAIL FOR STOCKPILING OF ERODIBLE MATERIAL

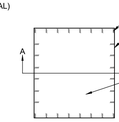
N.T.S.



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



SECTION B-B



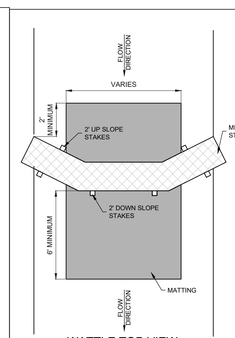
PLAN

NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

TYPE "ABOVE GRADE" WITH SILT FENCE

CONCRETE & STUCCO WASTE MANAGEMENT

N.T.S.



WATTLE TOP VIEW

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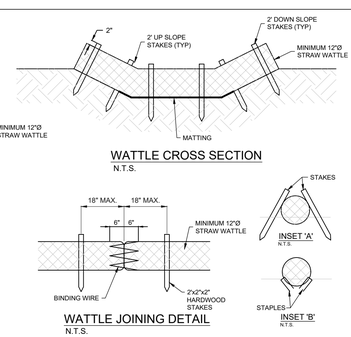


WATTLE CROSS SECTION

N.T.S.

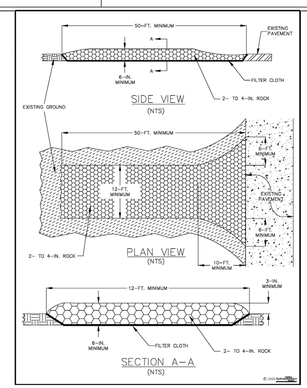
WATTLE JOINING DETAIL

N.T.S.

NOTES:
1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2"-3" DEEP x 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD OVERLAP 24" - SHINGLE IN DIRECTION OF FLOW.
3. SECURE THE WATTLE WITH 18"-24" STAKES EVERY 3'-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE, LEAVING AT LEAST 2"-3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKE SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.
4. USE MINIMUM 12"Ø COIR (COCONUT FIBER)/STRAW WATTLE.
5. USE 2' WOODEN STAKES WITH A 2"x2" NOMINAL CROSS SECTION.
6. ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AS DIRECTED.
7. INSTALL A MINIMUM OF 2 UP SLOPE STAKES AND 4 DOWN SLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
8. PROVIDE STAPLES MADE OF 0.125"Ø STEEL SIRE FORMED INTO A 'U;' SHAPE NOT LESS THAN 12" IN LENGTH.
9. INSTALL STAPLES APPROX. EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE DETAILS

N.T.S.



SOIL TRACKING PREVENTION DEVICE DETAIL

N.T.S.

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

NO.	DATE	REVISIONS
8	--	--
7	--	--
6	--	--
5	--	--
4	--	--
3	04-11-2022	IRC COMMENTS
2	03-28-2022	SJRWMD COMMENTS
1	01-06-2022	IRC COMMENTS

JOB NO. 21-0082
DESIGNED TH
DRAWN SS
DATE NOVEMBER 2021
CHECKED AS
DATE ISSUED 6/30/2023

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
1250 S. CENTRAL BLVD.
VERO BEACH, FL 32960
PH. (772) 778-3417
FX. (772) 778-3417
MELBOURNE, FL - PH (321) 253-3159
JACKSONVILLE - PH (772) 562-3523

EROSION CONTROL DETAILS

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

FLORIDA

INDIAN RIVER COUNTY

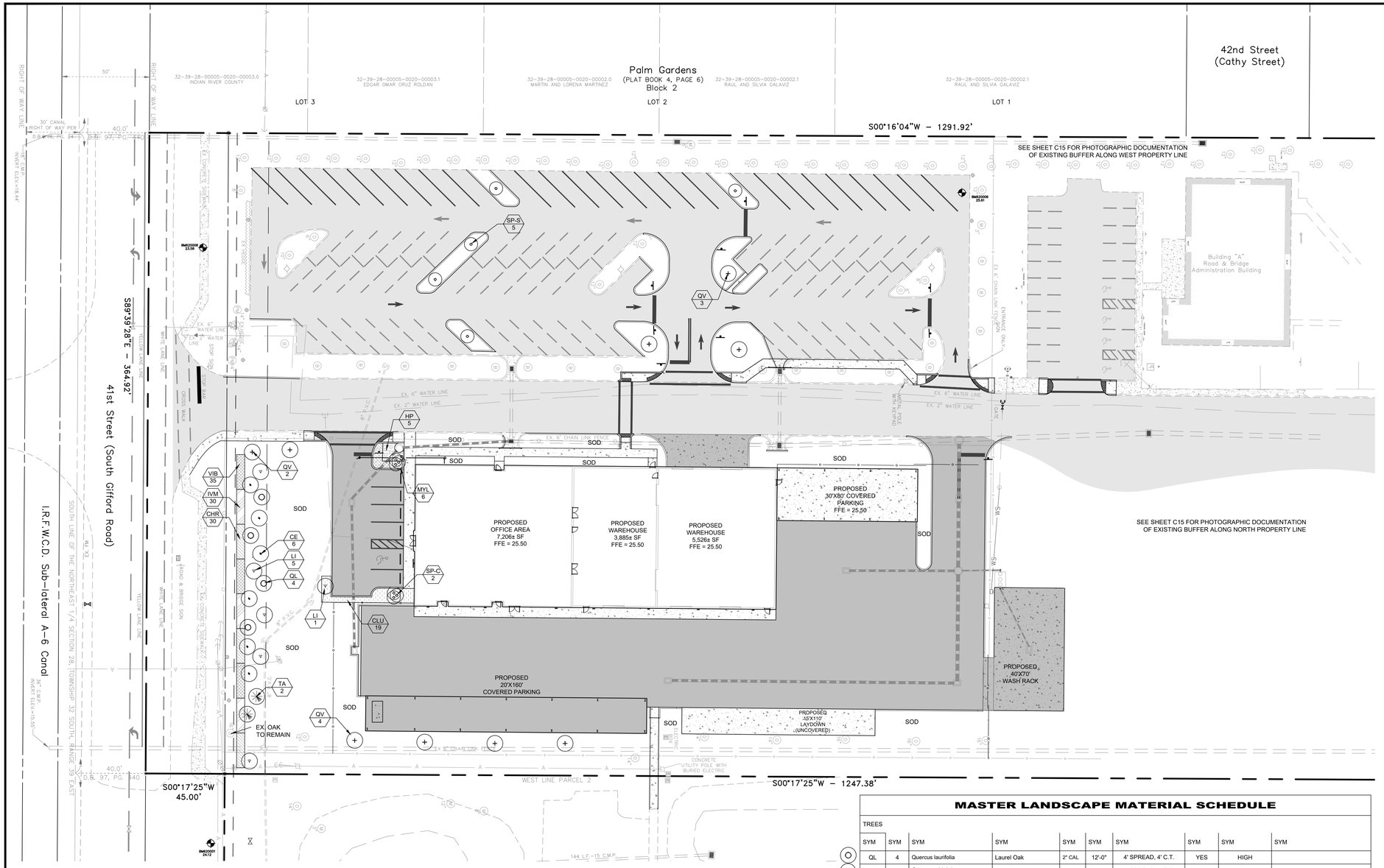
AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C11

21-0082

O:\DRAWINGS\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 COVER - DETAILS.dwg 6/30/2023 8:51 AM
STEVE SMITH



LANDSCAPE PLAN

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

CALLOUT SYMBOL LEGEND

QV 3 — SPECIES / QUANTITY

EX. TREE LEGEND

- (B) = EX. BUSH
- (O) = EX. OAK TREE
- (PM) = EX. PALM TREE
- (P) = EX. PINE TREE

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED HEAVY DUTY CONCRETE

LANDSCAPE POINT SYSTEM

SEVENTY-SIX (76) TO ONE HUNDRED (100) PERCENT OF TOTAL QUANTITY OF PLANTS RATED "VERY DROUGHT TOLERANT"	10
SEVENTY-SIX (76) TO ONE HUNDRED (100) PERCENT OF TOTAL QUANTITY OF TREES RATED "VERY DROUGHT TOLERANT"	10
SEVENTY-FIVE (75) TO NINETY-NINE (99) PERCENT OF LANDSCAPE AREA IS PRESERVED OR RE-ESTABLISHED FLORIDA NATIVE VEGETATION, OR NEW NATIVE PLANTINGS OF SPECIES LISTED IN APPENDIX A AND APPENDIX C. PLAN MUST INCLUDE TREES, UNDERSTORY, AND GROUNDCOVER WITH A MAXIMUM OF FIFTY (500 PERCENT OF SITE SODDED/GRASSED	15
TOTAL	35

MASTER LANDSCAPE MATERIAL SCHEDULE

SYM									
TREES									
QL	4	Quercus laurifolia	Laurel Oak	2" CAL	12'-0"	4' SPREAD, 4' C.T.	YES	HIGH	
QV	9	Quercus virginiana	Live Oak	2" CAL	12'-0"	4' SPREAD, 4' C.T.	YES	HIGH	
TA	2	Taxodium ascendens	Pond Cypress	2"CAL	12'-0"	3.5' SPREAD	YES	HIGH	PLANTED AT LEAST 15' O.C.
TOTAL	15								
PALMS									
SP-C	6 =2 trees	Sabal palmetto	Cabbage Palm	-	6'-18'	10' AVG. CLR. HURRICANE CUT	YES	HIGH	STAGGER HEIGHTS IN GROUPS OF 3 OR MORE.
SP-S	5	Sabal palmetto	Cabbage Palm	-	20'	10' MIN. CLR. HURRICANE CUT	YES	HIGH	
TOTAL	11								
UNDERSTORY TREES									
LI	6	Lagerstromiea indica 'Natchez'	'Natchez' Crape Myrtle	1.5" CAL	6'-0"	3' SPR., MULTI-TRUNK	YES	HIGH	
CE	6	Conocarpus erectus 'sericeus'	Silver Buttonwood	1.5"CAL	6'-0"	3' SPR., STANDARD	YES	HIGH	
TOTAL	12								
SHRUBS									
CHR	30	Chrysobalanus icaco 'Red Tip'	Red Tip Cocoplum	-	-	24"w. x 24"h., FULL, 24" O.C.	YES	HIGH	
IVM	30	Ilex vomitoria 'Nana'	Dwarf Yaupon Holly	-	-	12" w. x 12" h., FULL, 24" O.C.	YES	HIGH	
VIB	35	Viburnum obovatum	Walter Viburnum	-	-	24"-36"w. x 48"h., FULL, 24" O.C.	YES	HIGH	
CLU	19	Clusia guttifera	Small Leaf Clusia	-	-	24"-36"w. x 24"h., FULL, 24" O.C.	NO	HIGH	
HP	5	Hamelia patens 'Compacta'	Dwarf Firebush	-	-	24"-36"w. x 24"h., FULL, 24" O.C.	NO	HIGH	
MYL	6	Myrcianthes fragrans	Simpson's Stopper	-	-	24"-36"w. x 24"h., FULL, 24" O.C.	YES	HIGH	
TOTAL	125								
GROUNDCOVER									
MULCH	TBD	'FLORIMULCH'	-	-	-	Shredded, Grade B	-	-	
SOD	TBD	Paspalum notatum	Bahia Grass	-	-	100% Insect/Diease Free	-	-	

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

LANDSCAPE CALCULATIONS

*LANDSCAPE CALCULATIONS REFLECT TABULATIONS FOR THE TRAFFIC OPERATIONS BUILDING AREA ONLY AS THIS IS THE ON .

1. BUFFERS:

NORTH PROPERTY LINE - NO IMPROVEMENTS REQUIRED. EXISTING LANDSCAPE TO REMAIN

SOUTH PROPERTY LINE - ADJACENT 41ST STREET
NOTE: LANDSCAPE BUFFER CALCULATIONS REFLECT THE PROPOSED TRAFFIC OPERATIONS BUILDING SIDE ONLY (185 LF EAST OF EXISTING DRIVEWAY
REQUIRED:
15' WIDE BUFFER ALONG LOCAL ROAD - LANDSCAPING IS PER 100 LF

185 LF OF FRONTAGE EXCLUDING THE DRIVEWAY AND SIDEWALK.
185 LF / 100 = 1.85 x 4.5 CANOPY TREES = 8.32 or 9 TREES
185 LF / 100 = 1.85 x 5.5 UNDER STORY TREES = 10.18 or 11 TREES
185 LF / 100 = 1.85 x 50 SHRUBS = 92.5 or 93 SHRUBS

REQUIRED:
CANOPY TREES: = 9 CANOPY TREES
UNDERSTORY TREES: = 11 UNDERSTORY TREES
SHRUBS = 93 SHRUBS

PROVIDED:
CANOPY TREES: = 9 CANOPY TREES (1 EXISTING)
UNDERSTORY TREES: = 11 UNDERSTORY TREES
SHRUBS = 95 SHRUBS

EAST PROPERTY LINE - ADJACENT TO EXISTING IRCDUS (SAME ZONING AND USE TYPE)
REQUIRED:
0' WIDE BUFFER ALONG EAST P.L.

WEST PROPERTY LINE - NO IMPROVEMENTS REQUIRED. EXISTING LANDSCAPE TO REMAIN.

2. PARKING AREA INTERIOR LANDSCAPING

REQUIRED:
12% OF PAVED AREA SHALL BE PROVIDED WITH INTERIOR LANDSCAPE
WITH 1 CANOPY TREE PER 300 SF
25,840 SF OF PAVED AREA x 12% = 3,100 SF
3,100 SF/ 300 SF = 11 CANOPY TREES REQUIRED
1 CANOPY TREE PER NEW END ISLAND (WEST PARKING LOT)

PROVIDED:
9,210 SF OF LANDSCAPE AREA ALONG EAST SIDE OF PROJECT AREA

CANOPY TREES (1 / 40 LF): = 11 CANOPY TREES (7 EXISTING)
CANOPY TREE (END ISLAND) = 3 CANOPY TREES (WEST PARKING LOT)

3. FOUNDATION PLANTING AREA
ALONG SOUTHERN FACADE ONLY

REQUIRED:
40% OF BUILDING'S SOUTHERN FACADE LENGTH EXCLUDING ENTRANCE DOOR

74 LF X 40% = 29.6 LF
29.6 LF X 10' AVG. DEPTH = 296 SF FOUNDATION PLANTING AREA

1 CANOPY TREE PER 150 SF = 2 CANOPY TREES
1 UNDERSTORY TREE PER 300 SF = 1 UNDERSTORY TREES
1.5 SHRUBS PER 10 SF = 30 SHRUBS

PROVIDED:
565 SF FOUNDATION PLANTING AREA
CANOPY TREES = 2 CANOPY TREES
UNDERSTORY TREES: = 1 UNDERSTORY TREES
SHRUBS = 30 SHRUBS

4. NON-VEHICULAR OPEN SPACE (NVOS):

REQUIRED:
1 CANOPY TREE PER 2,000 SF OF NVOS
NVOS = 8,700 SF
NVOS = 8,700 SF / 2,000 SF = 5 CANOPY TREES

PROVIDED:
CANOPY TREES = 5 CANOPY TREES (TO BE LOCATED IN WEST EXISTING PARKING LOT)

TOTAL REQUIRED (ALL SECTIONS)
CANOPY TREES 30
UNDERSTORY TREES 12
SHRUBS 123

TOTAL PROVIDED (ALL SECTIONS)
CANOPY TREES 30 (22 PROPOSED, 8 EXISTING)
UNDERSTORY TREES 12 PROPOSED
SHRUBS 125 PROPOSED

EXISTING TREES REMOVED

COUNT	SIZE	SPECIES
2	12" DBH	OAK
2	10" DBH	OAK
1	±12' CT	PALM
5	6"-30" DBH	CARROTWOOD
4	±6' HT	BUSH

* SEE DEMOLITION PLANS 4a AND 4b FOR TREES TO BE REMOVED.

LANDSCAPING NOTES

1. EXISTING IRRIGATION SYSTEM TO BE REROUTED TO PROVIDE IRRIGATION TO PROPOSED LANDSCAPE AREAS.

LAND CLEARING NOTES

(A) ALL NATIVE UPLAND VEGETATION CONTRIBUTING TO THE STABILIZATION OF BANKS OR EXISTING CANALS, DITCHES OR NATURAL WATERCOURSES SHALL BE RETAINED.
(B) ALL NUISANCE EXOTIC VEGETATION EXISTING ON SITE SHALL BE REMOVED IN CONJUNCTION WITH ANY SITE DEVELOPMENT.
(C) ANY ABANDONED FLOW WELLS EXISTING ON SITE SHALL BE PLUGGED IN CONJUNCTION WITH SITE DEVELOPMENT.

TREE PROTECTION NOTES

(A) ALL TREES RETAINED ON A SITE SHALL BE PROTECTIVELY BEFORE AND DURING CONSTRUCTION ACTIVITIES.
(B) UNDERGROUND UTILITY LINES SHALL BE ROUTED AROUND EXISTING TREES TO THE OUTSIDE OF THE DRIPLINE WHERE ABLE.
(C) INSTALLATION OF FENCES AND WALL SHALL TAKE INTO CONSIDERATION THE ROOT SYSTEMS OF EXISTING TREES.
(D) FENCE/ BARRICADE SHALL BE INSTALLED AT PERIMETER OF ALL TREES OR GROUPS OF TREES TO BE PRESERVED. FENCE SHALL BE MAINTAINED DURING CONSTRUCTION.

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

DATE	REVISIONS
04-11-2022	3 IRC COMMENTS
03-28-2022	2 SJRWMD COMMENTS
01-06-2022	1 IRC COMMENTS

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOAL BOWLES VILLAMIZAR & ASSOCIATES CONSULTING ENGINEERING CA #3728
1893 - 28TH STREET
VERO BEACH, FL 32960
PH. (561) 353-1510
FX. (772) 778-7417
MELBOURNE FL - PH (321) 253-1510
FT. PIERCE, FL - PH (772) 465-9051

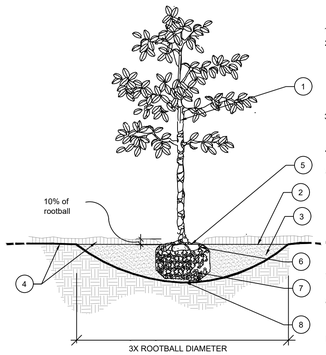
LANDSCAPE PLAN

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY
INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER
AARON G. STANTON
FL. P.E. #72460

SHEET
C12

21-0082



1. TRUNK
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW/ WIDE PLANT HOLE; TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. B & B OR CONTAINER (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
7. REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL.
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

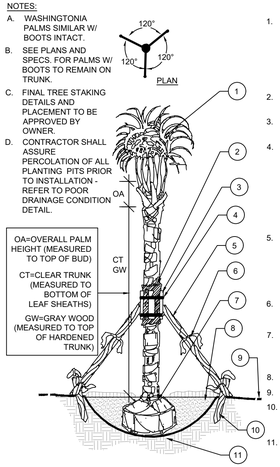
NOTES:
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

TREE PLANTING

SECTION NTS

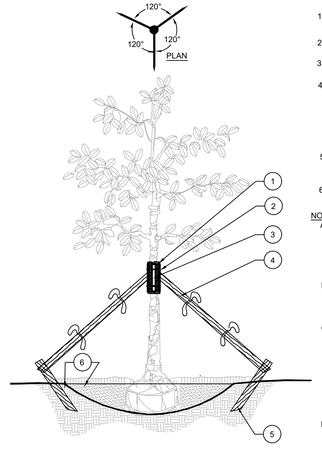
NOTES:
A. WASHINGTONIA PALMS SIMILAR W/ BOOTS INTACT.
B. SEE PLANS AND SPECS. FOR PALMS W/ BOOTS TO REMAIN ON TRUNK.
C. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
D. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION - REFER TO POOR DRAINAGE CONDITION DETAIL.



1. MINIMUM OF NINE (9) GOOD PALM FRONDS; PRUNE AND TIE FRONDS WITH HEMP TWINE. SABAL PALMS TO BE SELECTIVELY "HURRICANE CUT", LEAVING ONLY NEWLY-EMERGING GROWTH.
2. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
3. FIVE (5) 18"L, 2X4 WOOD BATTENS. UNTREATED, #2
4. SECURE BATTENS WITH TWO (2) 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED PROPORTIONATELY TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
5. THREE (3) 8'L 2X4 SUPPORTS. NAIL (DRILL AND NAIL IF NECESSARY) TO BATTENS AND 2" X 4" STAKES. PALMS SHALL BE PLUMB VERTICALLY UNLESS OTHERWISE NOTED.
6. PROVIDE FLAGGING AT MIDPOINT AND BASE OF SUPPORTS.
7. TOP-MOST ROOT SHALL BE VISIBLE AT THE SURFACE OF THE ROOTBALL, SLIGHTLY ABOVE SURROUNDING GRADE.
8. 3" SPECIFIED MULCH
9. FINISH GRADE
10. 24"L (MIN.) 2X4 P.T. WOOD STAKES, NAIL TO SUPPORT POLES
11. PREPARED PLANTING SOIL AS SPECIFIED

PALM PLANTING AND STAKING

SECTION NTS



1. FIVE (5) LAYERS OF BURLAP TO PROTECT TRUNK
2. TWO STEEL BANDS TO SECURE BATTENS
3. FIVE 2 X 4 X 18"L WOOD BATTENS
4. THREE (3) 2" X 8" LODGE POLES. DRILL, USING GALVANIZED SCREWS, TO BATTENS AND 2" X 4" STAKES. NO SCREWS SHALL PENETRATE TREE. FLAG AT MIDPOINT AND AT BASE.
5. 2" x 4" x 3' (MIN), P.T. WOOD STAKES BURIED 3" BELOW FINISHED GRADE.
6. FINISHED GRADE (SEE GRADING PLAN)

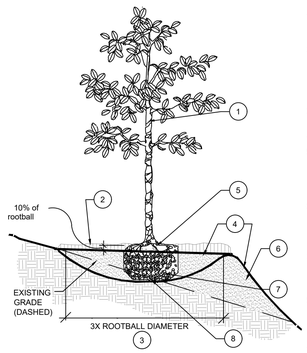
NOTES:
A. ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. ALTERNATE TREE ANCHORING SYSTEMS MAY BE SUBSTITUTED FOR WOOD STAKING SYSTEM UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE

PRE-APPROVED SYSTEMS:
*BROOKS TREE BRACING
*ARBOR TIE TREE BRACING

D. RUBBER HOSE/WIRE SYSTEMS ARE NOT ALLOWED.

LARGE TREE STAKING - 100 GAL + OR B&B 4" +

SECTION NTS



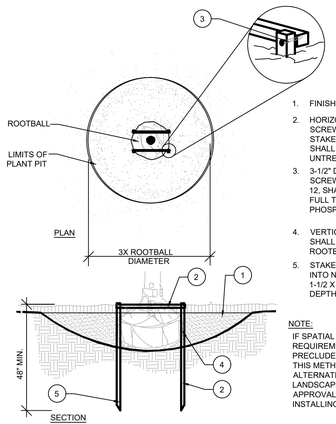
1. TREES, PALMS, AND LARGE SHRUBS (15 GAL OR GREATER) SHALL BE PLANTED IN SIMILAR MANNER
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW/ WIDE PLANT HOLE; TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. BERM SOIL SO THAT TOP OF BERM IS JUST BELOW THE TOP 10% OF THE TOP OF THE ROOTBALL. SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE.
7. B & B OR CONTAINER REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL. (SEE SPECIFICATIONS FOR OTHER ROOT BALL REQUIREMENTS)
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

NOTES:
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

PLANTING ON A SLOPE

SECTION NTS



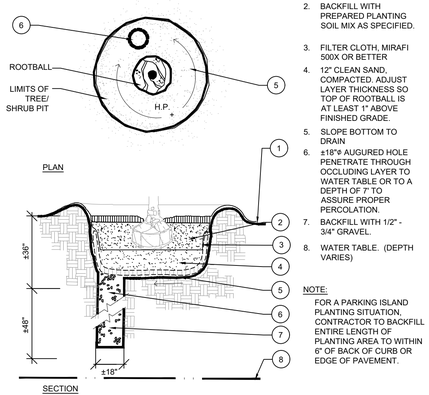
1. FINISH GRADE
2. HORIZONTAL 2X2 SCREWED TO 2X2 STAKE. ALL WOOD SHALL BE #2 UNTREATED.
3. 3-1/2" DRYWALL SCREW, THREAD SIZE 12, SHARP POINT, FULL THREAD, BLACK PHOSPHATE FINISH
4. VERTICAL STAKES SHALL ABUT SIDE OF ROOTBALL
5. STAKES TO EXTEND INTO NATIVE SOIL BY 1-1/2 X THE ROOTBALL DEPTH MIN.

NOTE:
IF SPATIAL REQUIREMENTS PRECLUDE STAKING WITH THIS METHOD, SUBMIT ALTERNATE FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLING PLANT.

SECTION

STAKING - UP TO 65 GAL. OR B&B TO 3-1/2" CAL.

PLAN/SECTION NTS



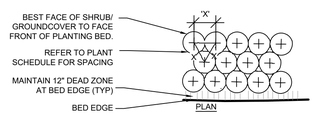
1. FINISH GRADE
2. BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
3. FILTER CLOTH, MIRAFI 500X OR BETTER
4. 12" CLEAN SAND, COMPACTED. ADJUST LAYER THICKNESS SO TOP OF ROOTBALL IS AT LEAST 1" ABOVE FINISHED GRADE.
5. SLOPE BOTTOM TO DRAIN
6. ±18"ø AUGURED HOLE PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
7. BACKFILL WITH 1/2" - 3/4" GRAVEL.
8. WATER TABLE. (DEPTH VARIES)

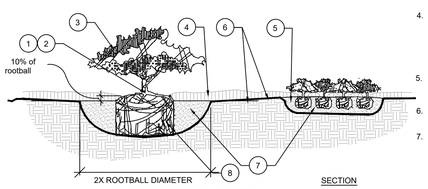
NOTE:
FOR A PARKING ISLAND PLANTING SITUATION, CONTRACTOR TO BACKFILL ENTIRE LENGTH OF PLANTING AREA TO WITHIN 6" OF BACK OF CURB OR EDGE OF PAVEMENT.

SECTION

POOR DRAINAGE CONDITION

PLAN/SECTION NTS



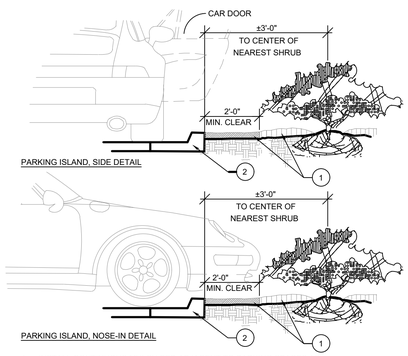


* ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

1. FIND POINT WHERE TOPMOST ROOT EMERGES FROM TRUNK WITHIN 2" OF SURFACE. CLEAR EXCESS SOIL IF NECESSARY.
2. TOP 10% OF SHRUB AND GROUNDCOVER ROOTBALLS TO BE PLANTED ABOVE THE LANDSCAPE GRADE. DO NOT COVER EXPOSED 10% ON SIDES WITH SOIL.
3. PRUNE ALL LIKE SHRUBS WITHIN A PLANTED MASS TO ACHIEVE A UNIFORM MASS/HEIGHT.
4. 3" MINIMUM MULCH AS SPECIFIED - DO NOT COVER ENTIRE SHRUB ROOTBALL OR CREATE 'WATER RINGS' ONLY COVER SIDES OF ROOTBALL WITH MULCH
5. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
6. FINISHED GRADE (SEE GRADING PLAN).
7. PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
8. SCARIFY ROOTBALL SIDES AND BOTTOM.

SHRUB / GROUNDCOVER PLANTING

PLAN/SECTION NTS

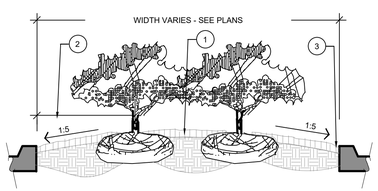


1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP. NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE

2. CURB OR PARKING LOT EDGE, BY OTHERS

PARKING SPACE/CURB PLANTING

SECTION NTS



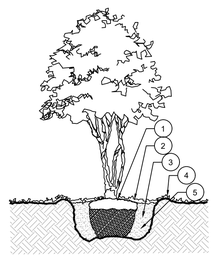
PLANTER ISLAND NOTES

1. CROWN ISLANDS @ 5:1 SLOPES (OR AS SPECIFIED ON THE LANDSCAPE PLANS).
2. CLEAR ZONE: 36" MIN. FROM BACK OF CURB TO CENTER OF NEAREST SHRUB. CLEAR ZONE SHALL CONTAIN 3" CONTINUOUS MULCH OR TURF, SEE PLANS. SEE DETAIL 'I' FOR PLANTER MEDIANS ADJACENT TO PARKING SPACES.
3. 1" MIN VERTICAL CLEARANCE, TOP OF CURB TO TOP OF MULCH.

- EXCAVATE CONTINUOUS 36" DEEP (FROM TOP OF CURB) FOR ENTIRE LENGTH AND WIDTH OF ISLAND & BACKFILL WITH APPROVED PLANTING MIX.
- PROTECT AND RETAIN ALL CURBS AND BASE. COMPACTED SUBGRADE TO REMAIN FOR STRUCTURAL SUPPORT OF CURB SYSTEM (TYP).
- ALL ISLANDS SHALL UTILIZE POOR DRAINAGE DETAIL WHEN PERCOLATION RATES ARE 2" PER HOUR OR LESS.

PLANTED PARKING LOT ISLANDS / MEDIANS

SECTION NTS

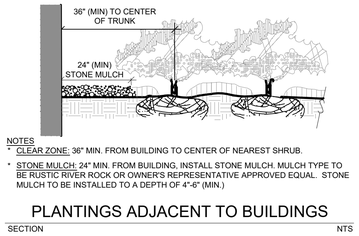


1. BASE OF TREE SHALL BE PLANTED SLIGHTLY ABOVE ADJACENT FINISH GRADE. REMOVE ALL TWINE & STRAPS & CUT BURLAP FROM TOP 1/3 OF ROOTBALL. NO SYNTHETIC BURLAP WILL BE ACCEPTED.
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 8' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. DIAMETER OF TREE PIT TO BE TWICE THE DIAMETER OF ROOTBALL-ROUGHEN SIDES OF TREE PIT.
4. 3" HIGH SOIL SAUCER/WATER RING AROUND TREE.
5. TOPSOIL MIX BACKFILL

NOTE:
IF SITE CONDITIONS REQUIRE GUYING OF THE TREE, GUYING DETAILS FROM SMALL TREE PLANTING SHALL BE USED.

MULTI-TRUNK TREE PLANTING DETAIL

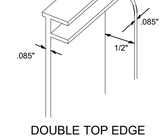
SECTION NTS



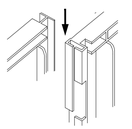
NOTES
* CLEAR ZONE: 36" MIN. FROM BUILDING TO CENTER OF NEAREST SHRUB.
* STONE MULCH: 24" MIN. FROM BUILDING, INSTALL STONE MULCH. MULCH TYPE TO BE RUSTIC RIVER ROCK OR OWNER'S REPRESENTATIVE APPROVED EQUAL. STONE MULCH TO BE INSTALLED TO A DEPTH OF 4"-6" (MIN.)

PLANTINGS ADJACENT TO BUILDINGS

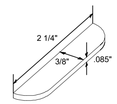
SECTION NTS



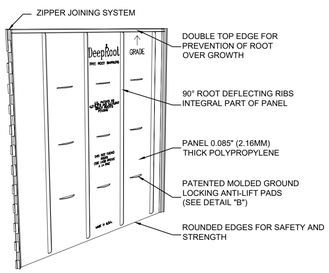
DOUBLE TOP EDGE



ZIPPER JOINING SYSTEM



ANTI-LIFT GROUND LOCK



NOTES:
SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING HARD- SCAPES AND LANDSCAPES. ASSEMBLED IN 2' LONG MODULES TO CREATE VARYING SIZES OF CYLINDERS FOR SURROUNDING ROOT BALLS (SURROUND PLANTING STYLE) OR FOR LINEAR APPLICATIONS DIRECTLY BESIDE A HARDSCAPE ADJACENT TO ONE SIDE OF THE TREES (LINEAR PLANTING STYLE).

A. MATERIALS
1. THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 24-2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P. 345 LORTON AVE. #103, BURLINGAME, CA (800-458-7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, INJECTION MOLDED PANELS, OF 0.085" WALL THICKNESS IN MODULES 24" LONG BY 24" DEEP. MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET INHIBITORS; RECYCLABLE. EACH PANEL SHALL HAVE:

B. CONSTRUCTION AND INSTALLATION
1. THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE NUMBER OF PANELS AND IN THE MANNER SHOWN ON THE DRAWINGS. THE VERTICAL ROOT DEFLECTING RIBS SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP OF THE DOUBLE EDGE SHALL BE 1/2" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE CONNECTED TO FORM A CIRCLE AROUND THE ROOT BALL OR WHERE SPECIFIED JOINED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE. ALL STREET TREES WITH TRUNKS CLOSER THAN 4 FT. TO PAVED SURFACES SHALL BE PLANTED WITH ROOT BARRIER BETWEEN THE ROOT BALL AND PAVING. PLANTINGS WITHIN TREE WELLS REQUIRE ROOT BARRIERS ALONG ALL SIDES OF THE TREE WELL.
2. EXCAVATION AND SOIL PREPARATION SHALL CONFORM TO THE DRAWINGS
3. THE TREE ROOT BARRIERS SHALL BE BACKFILLED ON THE OUTSIDE WITH 3/4" TO 1 1/2" GRAVEL OR CRUSHED ROCK AS SHOWN ON THE DRAWINGS. NO GRAVEL BACKFILL IS REQUIRED FOR A LINEAR PLANTING

24" DEEPROOT TREE ROOT BARRIERS

SECTION NTS

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

#	DATE	REVISIONS
8	--	--
7	--	--
6	--	--
5	--	--
4	04-11-2022	IRC COMMENTS
3	03-28-2022	SJRWMD COMMENTS
2	01-06-2022	IRC COMMENTS
1	--	--

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOJA, BOWLES, VILAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA: #3728
1835 - 20TH STREET
VERO BEACH, FL 32960
PH: (772) 563-3370
FX: (772) 778-3417
MELBOURNE FL - PH (321) 253-1510
FT. PIERCE FL - PH (772) 468-9055

LANDSCAPE DETAILS

NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY

FLORIDA

INDIAN RIVER COUNTY

AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
AARON G. STANTON
FL. P.E. #72460

SHEET
C13

21-0082

LANDSCAPE MATERIAL STANDARDS + NOTES

1. QUALITY
   PLANT MATERIALS USED SHALL CONFORM TO THE STANDARDS FOR FLORIDA NO. 1 OR BETTER, AS GIVEN IN THE MOST CURRENT EDITION OF "GRADES AND STANDARDS FOR NURSERY PLANTS" PART I AND PART II, STATE OF FLORIDA.
2. DROUGHT TOLERANCE REQUIREMENTS.
   A MINIMUM OF 76% TO 100% OF TOTAL CUMULATIVE LANDSCAPE PLANT MATERIAL USED TO MEET THE PROVISIONS OF THE I.R.C. L.D.R., CHAPTER 926, SHALL BE "HIGH DROUGHT TOLERANT," AS CLASSIFIED AND LISTED IN THE MOST RECENT EDITION OF THE "WATERWISE - FLORIDA LANDSCAPES - LANDSCAPING TO PROMOTE WATER CONSERVATION USING PRINCIPLES OF XERISCAPE" - FROM FLORIDA'S WATER MANAGEMENT DISTRICTS.
3. TREES:
   a. CANOPY TREES SHALL BE SPECIES HAVING AN AVERAGE MATURE SPREAD OF CROWN GREATER THAN FIFTEEN (15) FEET IN DIAMETER, AND HAVING A TRUNK WITH OVER FIVE (5) FEET OF CLEAR WOOD.
   b. CANOPY TREES SHALL HAVE A 2" DIAMETER AT 0.5' ABOVE GRADE AND BE A MIN. 12' IN HEIGHT WITH A MINIMUM CROWN SPREAD OF 4.5' AT TIME OF PLANTING.
   c. PALMS SHALL BE CONSIDERED 1/3 OF A TREE AND, IF USED, THEY SHALL CONSIST OF NO MORE THAN ONE-THIRD OF THE TOTAL NEW TREE REQUIREMENT. ADDITIONALLY, 3 PALMS = 1 CANOPY TREE.SINGLE DATE PALMS (NOT PYGMY DATE PALMS) MAY BE SUBSTITUTED FOR A CANOPY TREE.
   d. AT LEAST 50% OF ALL NEW REQUIRED TREES SHALL BE OF A NATIVE SPECIES, AND AT LEAST 76% - 100% OF ALL TREES SHALL BE RATED "DROUGHT TOLERANT."
   e. REQUIRED UNDERSTORY TREES SHALL BE A MINIMUM OF SIX (6) FEET OVERALL IN HEIGHT AND ONE- AND ONE-HALF (1.5) INCHES DIAMETER AT ONE-HALF (0.5) FEET ABOVE GRADE AT THE TIME OF PLANTING. MULTI-TRUNK TREES SHALL HAVE A COMBINED ONE- AND ONE-HALF-INCH CALIPER FOR ALL TRUNKS AT SIX (6) INCHES ABOVE GRADE. PALM TREES USED AS UNDERSTORY TREES SHALL HAVE A MINIMUM OVERALL HEIGHT OF SIX (6) FEET AND SHALL NOT COMPRISE MORE THAN ONE-THIRD (1/3) OF THE TOTAL UNDERSTORY TREE REQUIREMENT.
   f. WHEN A TREE IS LOCATED IN PROXIMITY TO PAVING, BUILDING, OR UNDERGROUND UTILITY A ROOT BARRIER IS TO BE USED. REFER TO SHEET C13 FOR DETAIL
4. SHRUBS/ HEDGES:
   a. SHRUBS SHALL BE A MINIMUM OF EIGHTEEN (18) INCHES IN HEIGHT WHEN MEASURED IMMEDIATELY AFTER PLANTING, EXCEPT THAT SHRUBS OF NON-NATIVE VIBURNUM AND LIGUSTRUM SPECIES SHALL BE A MINIMUM OF TWENTY-FOUR (24) INCHES IN HEIGHT IMMEDIATELY AFTER PLANTING.
   b. SHRUBS, WHERE REQUIRED, SHALL BE PLANTED IN AN OFFSET DOUBLE ROW AND MAINTAINED SO AS TO FORM A CONTINUOUS, UNBROKEN,SOLID SCREEN. WHERE REQUIRED TO FORM A CONTINUOUS SCREEN TO SATISFY A BUFFER OR OPAQUE FEATURE REQUIREMENT, SHRUBS SHALL BE PLANTED ON TWENTY-FOUR (24)-TO-THIRTY (30) INCH CENTERS, UNLESS A GREATER SPACING IS NECESSARY TO ACCOMMODATE LARGER SHRUBS AND IS APPROVED BY PLANNING DIVISION STAFF.
   c. EXCLUDING SHRUBS USED IN OPAQUE FEATURES, AT LEAST 50% OF THE REQUIRED NUMBER OF SHRUBS SHALL BE OF NATIVE SPECIES.
5. MULCH AND GROUND COVERS.
   THE USE OF CYPRESS MULCH IS PROHIBITED. MULCH THAT IS NOT CYPRESS MAY BE USED, GROUND COVERS (NOT INCLUDING SOD GRASS) SHALL BE PLANTED IN SUCH A MANNER AS TO PRESENT A FINISHED APPEARANCE AND REASONABLY COMPLETE COVERAGE WITHIN ONE YEAR AFTER PLANTING. AT LEAST 50% OF THE AREA COVERED BY LIVING MATERIAL SHALL BE OF NATIVE SPECIES. REFER TO IRC LDC FOR A LIST OF NATIVE GROUND COVERS AND FLOWERS. THE COMPLETE COVERAGE OF AN AREA BY GROUND COVERS PRECLUDES THE USE OF MULCH THEREAFTER.
6. TURF GRASS.
   TURF GRASS AREAS SHALL BE IDENTIFIED ON THE LANDSCAPE PLAN AND SHALL BE LIMITED TO A MAXIMUM OF 50% OF THE TOTAL IRRIGATED, LANDSCAPED AND VEGETATED PROJECT AREA, EXCLUDING RIGHTS-OF-WAY, ACTIVE RECREATION AREAS (E.G. PLAYFIELDS), AND SLOPES WITHIN DRY RETENTION AREAS. TURF GRASS SHALL BE PLACED SO THAT IT CAN BE IRRIGATED IN A SEPARATE ZONE. PREFERRED TURF GRASSES ARE THOSE QUALIFYING AS NATIVE.
7. IRRIGATION USAGE ZONES SHALL BE AS FOLLOWS:
   a. GRASS AREA SHALL BE IN HIGH USAGE ZONES.
   b. TREES & SHRUBS SHALL BE IN LOW USAGE ZONES.
8. THERE SHALL BE 6 DIFFERENT SPECIES OF TREES USED, AND 9 DIFFERENT SPECIES OF SHRUBS WITH 6 BEING NATIVE PER I.R.C. ORDINANCE, CHAPT.926.
9. THE CONTRACTOR SHALL ATTEMPT TO PRESERVE AS MANY EXISTING TREES AS POSSIBLE AND FEASIBLE. TREES THAT ARE PRESERVED MAY BE CREDITED TOWARDS THE SITE TREE REQUIREMENT IF THEY MEET THE SPECIFICATIONS.
10. THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF TREES, SIGNS AND LIGHTS SUCH THAT ALL SIGNAGE IS EASILY SEEN AND LIGHTING WORKS FOR ITS INTENDED PURPOSE. TREE PLACEMENT MAY VARY FROM THIS PLAN TO ACHIEVE THIS REQUIREMENT.
11. LANDSCAPE ISLANDS SHALL BE BACKFILLED AT LEAST TO TOP OF CURB, AND MAY BE BERMED TO A MAXIMUM HEIGHT OF 24" ABOVE ADJACENT PARKING LOT GRADE.
12. ALL LANDSCAPE MATERIAL IN SHOCK WILL BE REPLACED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
13. THE IRRIGATION SYSTEM SHALL COMPLY WITH SECTION 926.11 OF THE IRC CODE AND ABIDE BY THE RESTRICTIONS FOR IRRIGATION USE AS SPECIFIED BY THE SJRWMD.
14. ROOT BARRIERS SHALL BE PROVIDED FOR CANOPY TREES WITHIN 6' OF SIDEWALK, PARKING LOT, OR DRIVEWAY

IRRIGATION NOTES

1. ALL LANDSCAPE AREAS ARE TO RECEIVE IRRIGATION FROM AN AUTOMATIC SOURCE THAT PROVIDE 100% COVERAGE.
2. A WIRELESS RAINSWITCH MUST BE INCLUDED WITH THE IRRIGATION SYSTEM, PROPERLY INSTALL (AT BUILDING EAVE, WITH NO OVERHEAD OBSTRUCTIONS).
3. THE IRRIGATION CONTRACTOR SHALL PROVIDE A PLAN INDICATING IRRIGATION SYSTEM LAYOUT AND WATER USAGE ZONES (HIGH USE = SOD, LOW USE = TREES, SHRUBS, AND GROUND COVER).
4. THE IRRIGATION CONTRACTOR MUST VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO PREFORMING ANY WORK ON THE SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES AND TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
5. THE IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL PERMITS REQUIRED FOR THE WORK PRIOR TO COMMENCEMENT OF WORK.COPIES OF PERMITS SHALL BE SENT TO THE OWNER/ GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND OR STATE JURISDICTION.
6. THE IRRIGATION SYSTEM SHALL COMPLY WITH INDIAN RIVER COUNTY LAND DEVELOPMENT REGULATION 926.11.

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GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK
1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.
2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES
ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED WHERE HEAT WILL DAMAGE ANY PLANT. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/ OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

D. MATERIALS
1. GENERAL
   MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON THE SITE OR AS OTHERWISE DETERMINED BY THE OWNER. UPON SAMPLES' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS
   a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.

   b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

   c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)
1. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW.
2. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER: REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER: FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
3. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY THE OWNER.
4. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT ENGINEER TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
5. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

F. WATER
WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.
***WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY**.

G. FERTILIZER
CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED. APPLICATION IS TO BE IN ACCORDANCE WITH FLORIDA GREEN INDUSTRIES BEST MANAGEMENT PRACTICES.
***FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.**

H. MULCH
MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF 3 INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). SEE PLANT LIST FOR TYPE OF MATERIAL ("FLORIMULCH," EUCALYPTUS MULCH, OR PINE STRAW) AND GRADE.

I. DIGGING AND HANDLING
1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTI-TRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.
3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS, CURRENT EDITION. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

J. CONTAINER GROWN STOCK
1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

K. COLLECTED STOCK
WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK
PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST
QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE ENGINEER OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE

N. FINE GRADING
1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES.

O. PLANTING PROCEDURES
1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL - 811 - TO LOCATE UTILITIES.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE , PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACKFILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE ENGINEER IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE ENGINEER IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. MULCHING: PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS CONTRACT.
17. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY).

P. LAWN SODDING
1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
4. SODDING
   a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
   b. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETY TYPE, AND FREE FROM WEEDS, FUNGI, INSECTS AND DISEASES OF ANY KIND.
   c. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED - REFER TO DETAILS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE:
   a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING RE-GRADING IF NECESSARY).
   b. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP
UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE
ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF 90 CALENDAR DAYS COMMENCING AFTER ACCEPTANCE.

S. MAINTENANCE (ALTERNATE BID ITEM)
CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING THE INITIAL 90-DAY MAINTENANCE PERIOD ON A COST-PER-MONTH BASIS.

T. FINAL INSPECTION AND ACCEPTANCE OF WORK
FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE ENGINEER OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

U. WARRANTY
1. THE LIFE AND SATISFACTORY CONDITION OF ALL 7 GALLON AND LARGER PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
2. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
3. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER. WARRANTY IS TO EXCLUDE DAMAGE CAUSED BY FLOODS, LIGHTING STRIKES, FREEZING, WINDS OVER 45 MPH, FIRE, VANDALISM, HERBIVORE ANIMALS, DISEASE, INSECTS, WATER RESTRICTIONS, GOVERNMENT ACTIONS OR ACTS OF NEGLIGENCE BY THE OWNER OR OTHERS.
4. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

V. SUBMITTALS
1. FOR ALL LANDSCAPE INSTALLATIONS, THE CONTRACTOR SHALL SUBMIT PRODUCT DATA IN THE FORM OF MANUFACTURERS' CUT SHEETS AND CATALOG DATA FOR ALL PRODUCTS, MATERIAL AND EQUIPMENT CLEARLY INDICATING THE SPECIFIC PART OR PRODUCT CATALOG NUMBER(S) FOR APPROVAL AND SUBMIT A MATERIALS LIST INDICATING ALL PLANT SPECIES, QUALITY AND SIZE.
2. SUBMIT 6 COPIES OF REQUESTED INFORMATION, NEATLY BOUND AND INDEXED PER CATEGORY.
3. THE CONTRACTOR SHALL SUBMIT A LANDSCAPE COORDINATION DRAWING, INDICATING CONTRACTOR'S PROPOSED LOCATION OF TREES, SHRUBS, GROUNDCOVERS AND MULCH.THIS DRAWING SHOULD BE PREPARED ON A COPY OF THE LANDSCAPE PLAN PROVIDED IN THESE DRAWINGS AND SHALL CLEARLY DEPICT ADJUSTMENTS OR CHANGES THE CONTRACTOR PROPOSES TO THE PLANT SPECIES, SIZE OR LOCATION. THE DRAWINGS SHALL INDICATE ALL PROPOSED SUBSTITUTIONS OF SIZE, AND/OR MATERIAL.
4. ALLOW TWO WEEKS FOR THE ENGINEER TO COMPLETE REVIEW AND APPROVAL OF PRODUCT DATA, AND COORDINATION DRAWINGS. ENGINEER WILL NOT BE RESPONSIBLE FOR PROJECT DELAYS RELATED TO DELIVERY AND TRANSMISSION OF THE INFORMATION AND DOCUMENTATION ONCE INFORMATION HAS LEFT ENGINEER'S OFFICE. ITEMS REQUIRING A LONG LEAD TIME SHOULD BE SUBMITTED AS SOON AS POSSIBLE.
5. WARRANTY: CONTRACTOR SHALL SUBMIT A WARRANTY LETTER TO OWNER, INDICATING THE WARRANTY PERIOD, WARRANTY REQUIREMENTS (AS SPECIFIED IN THESE DRAWING AND SPECIFICATIONS), AND DATES OF WARRANTY PERIOD, WHICH SHALL BEGIN AT THE DATE OF ISSUANCE OF PROJECT CERTIFICATE OF OCCUPANCY, AND END TWELVE (12) MONTHS AFTER.
6. CERTIFICATION: CONTRACTOR SHALL SUBMIT CERTIFICATION STATING THAT: PLANT SPECIES AND SIZE CONFORM TO THOSE INDICATED ON THE DRAWINGS; ALL NURSERY STOCK IS IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES; ALL PLANTS ARE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY; ALL PLANTS ARE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND HAVE ADEQUATE ROOT SYSTEMS; TREES FOR PLANTING IN ROWS ARE UNIFORM IN SIZE AND SHAPE. THIS CERTIFICATION IS NECESSARY PRIOR TO ACCEPTANCE OF WORK BY THE OWNER.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

REVISIONS	DATE
8 —	
7 —	
6 —	
5 —	
4 —	
3 IRC COMMENTS	04-11-2022
2 SJRWMD COMMENTS	03-28-2022
1 IRC COMMENTS	01-06-2022

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
1835 - 20TH STREET
VERO BEACH, FL 32960
PH. (772) 569-0035
FX. (772) 778-3617
MELBOURNE, FL - PH (321) 253-1510
FT. PIERCE, FL - PH (772) 468-9055

LANDSCAPE SPECIFICATIONS

NEW TRAFFIC OPERATIONS FACILITY FOR INDIAN RIVER COUNTY

INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C14

21-0082

EXISTING NORTH LANDSCAPE BUFFER

EXISTING WEST LANDSCAPE BUFFER

72 HOURS BEFORE DIGGING
CALL TOLL FREE
811
Know what's below.
Call before you dig.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

JOB NO.	21-0082	8	_
DESIGNED	TH	7	_
DRAWN	SS	6	_
DATE	NOVEMBER 2021	5	_
CHECKED	AS	4	_
DATE ISSUED	6/30/2023	3	IRC COMMENTS 04-11-2022
		2	SJRWMD COMMENTS 03-28-2022
		1	IRC COMMENTS 01-06-2022
		△	REVISIONS DATE

MBV ENGINEERING, INC.
MOA BOWLES VILAMZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
1835 - 28TH STREET
VERO BEACH, FL 32960
TEL. (772) 778-5551
FX. (772) 778-5617
MELBOURNE FL. PH (321) 253-1510
FT. PIERCE FL. PH (772) 468-9005

EXISTING LANDSCAPE BUFFER
PHOTO DOCUMENTATION

NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY

FLORIDA

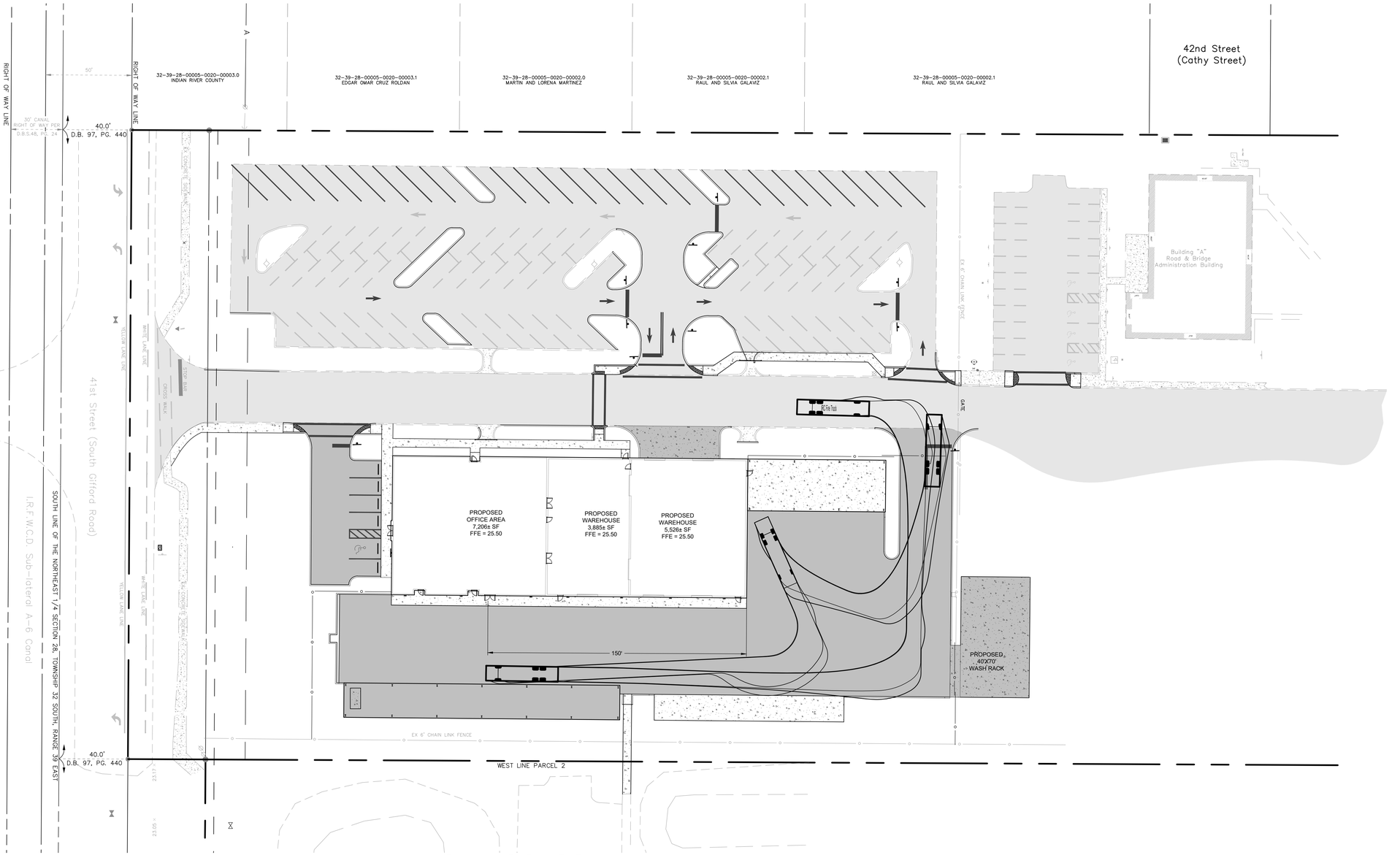
INDIAN RIVER COUNTY

AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C15

21-0082



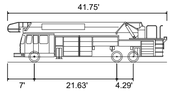
FIRE TRUCK ACCESS PLAN

SCALE: 1" = 30'

GRAPHIC SCALE
0 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED CONCRETE SIDEWALKS
- PROPOSED HEAVY DUTY CONCRETE



Fire Truck	
Overall Length	41.75 ft
Overall Width	8.63 ft
Overall Body Height	10.46 ft
Min Body Ground Clearance	0.89 ft
Track Width	8.17 ft
Lock-to-lock time	6.00 s
Curb to Curb Turning Radius	35.00 ft

SCALE: N.T.S.

BID SET 06/30/2023

NOTE: ALL ELEVATIONS IN N.A.V.D. 1988

72 HOURS BEFORE DIGGING
CALL TOLL FREE
811
Know what's below.
Call before you dig.

D:\DRAWINGS\2021\21-0082 IRC New Traffic Operations Building\Drawings\21-0082 C16 TRUCK TURNING PLAN.dwg 6/30/2023
Plotted: 6/30/2023 10:54 AM

	DATE	REVISIONS
1	01-06-2022	IRC COMMENTS
2	03-28-2022	SJRWMD COMMENTS
3	04-11-2022	IRC COMMENTS
4	_	_
5	_	_
6	_	_
7	_	_
8	_	_

JOB NO.	21-0082
DESIGNED	TH
DRAWN	SS
DATE	NOVEMBER 2021
CHECKED	AS
DATE ISSUED	6/30/2023

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
1833 - 28TH STREET
VERO BEACH, FL 32960
PH. (772) 778-7490
FX. (772) 778-7417
MELBOURNE FL. PH (321) 253-1510
FT. PIERCE FL. PH (772) 468-9051

FIRE TRUCK ACCESS PLAN

NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUNTY
INDIAN RIVER COUNTY FLORIDA

AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C16

21-0082

NEW
TRAFFIC OPERATIONS
FACILITY

FOR

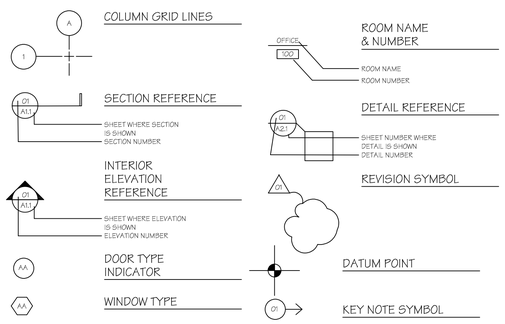
INDIAN RIVER COUNTY

4548 41st ST
VERO BEACH, FLORIDA

JUNE 30, 2023

BID SET

ARCHITECTURAL SYMBOLS



CIVIL ENGINEER

MBV ENGINEERING, INC.

2455 14th Ave..
Vero Beach, Florida 32960
Tel.: 772-569-0035
Fax.: 772-778-3617

DONADIO
& Associates, Architects P.A.

2001 9th Ave, Suite 308
Vero Beach, FL 32960
Tel.772.794.2929
Fax.772.562.8600
www.donadio-arch.com
License No. AA0002238

STRUCTURAL ENGINEER

M L ENGINEERING INC.

2030 37th Avenue
Vero Beach, Florida 32960
Tel.: 772/569-1257
Fax.: 772/569-4041

MECHANICAL & ELECTRICAL ENGINEER

KAMM CONSULTING, INC.

1408 Orange Ave
Ft. Pierce, FL 34950
Tel.: 772/595-1744
Fax.: 772/595-1745

Project No.: 2021-20
NEW TRAFFIC OPERATIONS FACALITY FOR
INDIAN RIVER COUNTY
4548 41ST ST, VERO BEACH, FLORIDA

INDEX OF DRAWINGS

I/O	Dwg. No	Drawing Name
☒	A0.10	Cover Sheet
☒	A0.20	Index of Drawings/ General Notes

CIVIL & LANDSCAPE DRAWINGS

I/O	Dwg. No	Drawing Name	Issue Date	Re-issue Date
☒	C1	Geometric Site Plan	03/21/22 03/21/22	

ARCHITECTURAL DRAWINGS

I/O	Dwg. No	Drawing Name	Issue Date	Re-issue Date 1	Re-issue Date 2	Re-issue Date 3
☒	A1.10	Life Safety Plan/ UL Design Details	03/21/22	06/04/22		07/18/22
☒	A1.11	Code Review	03/21/22	06/04/22		07/18/22
☒	A2.10	Floor Plan - Building	03/21/22	06/04/22	06/30/22	07/18/22
☒	A2.11	Floor Plans- Covered Parking	03/21/22			
☒	A2.20	Roof Plan - Building	03/21/22		06/30/22	07/18/22
☒	A2.21	Roof Plans- Covered Parking	03/21/22			
☒	A2.22	Roof Details	03/21/22		06/30/22	07/18/22
☒	A2.30	Enlarged Floor Plan	03/21/22		06/30/22	07/18/22
☒	A2.40	Reflected Ceiling Plan	03/21/22			07/18/22
☒	A3.10	Building Elevations	03/21/22		06/30/22	07/18/22
☒	A3.11	Covered Parking Elevations - A	03/21/22	06/04/22		
☒	A3.12	Covered Parking Elevations - B	03/21/22	06/04/22		
☒	A4.10	Building Sections	03/21/22		06/30/22	07/18/22
☒	A4.20	Wall Sections	03/21/22		06/30/22	07/18/22
☒	A5.10	Interior Elevations/ ADA Details	03/21/22			07/18/22
☒	A6.10	Schedules/ Door & Window Types	03/21/22		06/30/22	07/18/22
☒	A6.11	Schedule/ Room Finishes	03/21/22		06/30/22	07/18/22
☒	A6.20	Door Details	03/21/22			07/18/22
☒	A6.21	Window Details	03/21/22			07/18/22
☒	A6.22	Door Details	03/21/22			07/18/22

STRUCTURAL DRAWINGS

I/O	Dwg. No	Drawing Name	Issue Date	Re-issue Date	Re-issue Date
☒	S-1	Building 1 Foundation Plan	03/21/22	07/18/22	07/05/22
☒	S-2	Roof Framing Plan	03/21/22		07/05/22
☒	S-3	Building Sections & Details	03/21/22		
☒	S-4	Building Sections & Details	03/21/22		07/05/22
☒	S-5	Schedules & General Notes	03/21/22		
☒	S-6	Covered Parking Foundation Plans	03/21/22		

MECHANICAL DRAWINGS

I/O	Dwg. No	Drawing Name	Issue Date	Re- issue Date	Re-issue Date
☒	M0.1	Mechanical Notes	03/21/22		06/22/22
☒	M2.1	Floor Plan	03/21/22		06/22/22
☒	M6.1	Mechanical Schedules	03/21/22		06/22/22

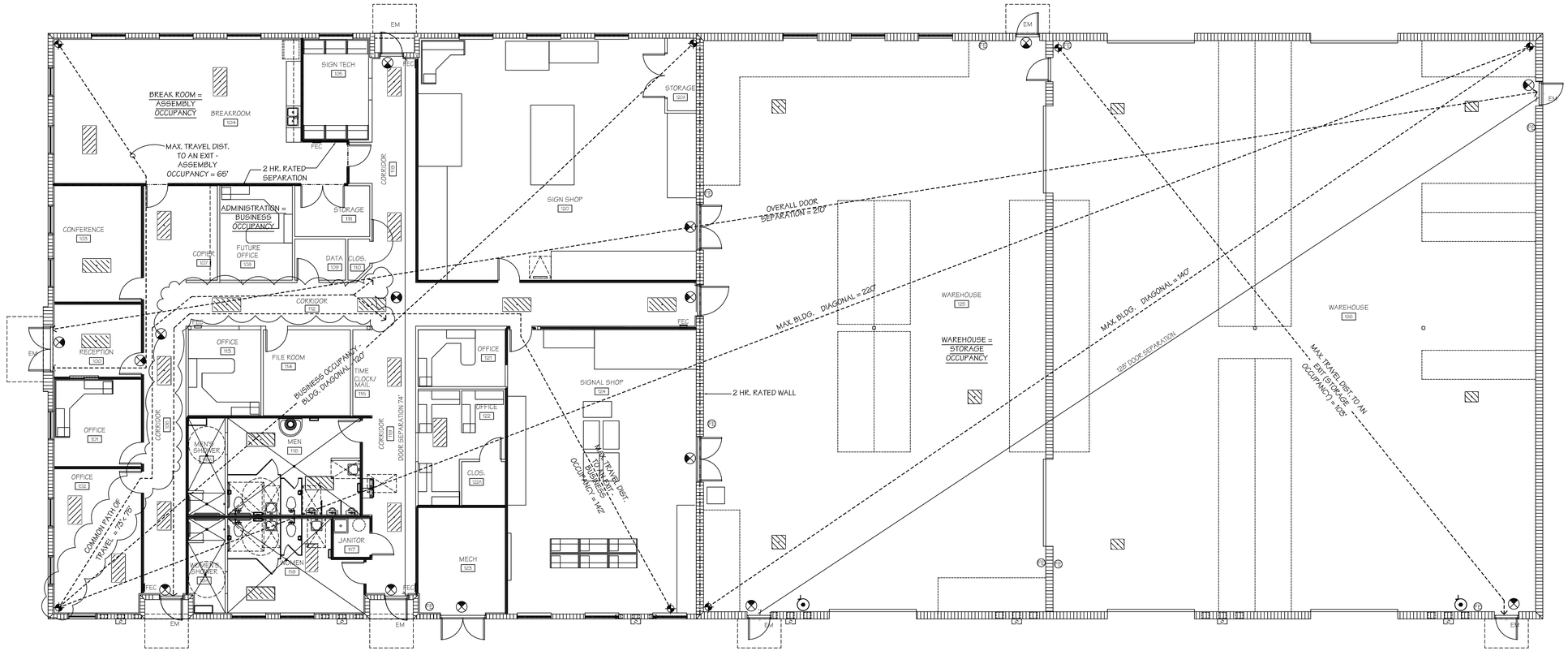
ELECTRICAL DRAWINGS

I/O	Dwg. No	Drawing Name	Issue Date	Re- issue Date	Re-issue Date
☒	E0.1	Electrical Notes, Legend	03/21/22		06/22/22
☒	E1.1	Site Lighting Plan	03/21/22		06/22/22
☒	E1.2	Site Power Plan	03/21/22		06/22/22
☒	E2.1	Lighting Floor Plan	03/21/22		06/22/22
☒	E2.2	Lighting Control Plan	03/21/22		06/22/22
☒	E3.1	Power Plan	03/21/22		06/22/22
☒	E5.1	Electrical Panel & Riser Diagrams	03/21/22		06/22/22

PLUMBING DRAWINGS

I/O	Dwg. No	Drawing Name	Issue Date	Re- issue Date	Re-issue Date
☒	P0.1	Plumbing Notes & Schedule	03/21/22		06/22//22
☒	P2.1	Sanitary Plan	03/21/22		06/22/22
☒	P3.1	Domestic Water Plan	03/21/22		06/22/22
☒	P5.1	Sanitary Stack and Risers	03/21/22 03/21/22		06/22/22

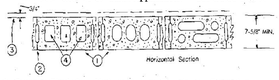
Project No: 2021-20
NEW TRAFFIC OPERATIONS FACALITY FOR
INDIAN RIVER COUNTY
4548 41ST ST, VERO BEACH, FLORIDA



01 LIFE SAFETY PLAN

Scale: 1/8"=1'-0"

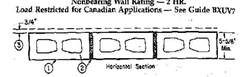
Design No. U905
Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR
Load Restricted for Canadian Applications — See Guide BXUV7



1. **Concrete Blocks*** — Various designs. Classification D-2 (2 hr). See **Concrete Blocks** category for list of eligible manufacturers.
2. **Mortar** — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Portland Cement Stucco or Gypsum Plaster** — Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).
4. **Loose Masonry Fill** — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellent vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.
5. **Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
   THE DOW CHEMICAL CO—Type Thermax

*Bearing the UL Classification Mark

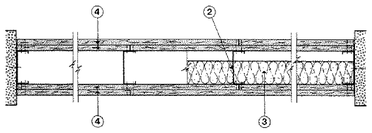
Design No. U906
Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR.
Load Restricted for Canadian Applications — See Guide BXUV7



1. **Concrete Blocks*** — Nominal 6 by 8 by 16 in, hollow or solid. Classification D-2 (2 hr).
   ANCHOR CONCRETE PRODUCTS INC
   GAGNE & SON CONCRETE BLOCK INC
   Allowable compressive stress of 57% of max allowable compressive stress in accordance with the empirical design method.
   OLDCASTLE APG NE DBA ARTHUR WHITCOMB
   WESTBROOK CONCRETE BLOCK CO INC
   Allowable compressive stress of 75.6% of max allowable compressive stress in accordance with the empirical design method.
2. **Mortar** — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Portland Cement Stucco or Gypsum Plaster** — Add 1/2 hr to classification if used. Attached to concrete blocks (Item 1).
4. **Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
   THE DOW CHEMICAL CO—Type Thermax

*Bearing the UL Classification Mark

Design No. U411 November 08, 2004 Nonbearing Wall Rating — 2 HR.



1. Floor and Ceiling Runner — (Not Shown) — Min. 25 MSG galv steel 1 in. high, return legs 2-1/2 in. wide (min), attached to floor and ceiling with fasteners 24 in. OC.

2. Steel Studs — Min 2-1/2 in. wide, 1-1/4 in. legs, 3/8 in. return, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

3. Batts and Blankets* — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Fasten each batt to wallboard base layer with a min 9/16 in. long staple. Use five staples for each 4 ft piece. Drive one staple in the center of each piece and a staple at each corner, approx 3 in. from edges.
See Batts and Blankets (BZJZ) category for names of manufacturers.

3A. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose insulation material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3.

U S GREENFIBER L L C — Cocoon stabilized cellulose insulation.

3B. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 3) and Item 3A — Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

4. Gypsum Board* — 5/8 in. thick, outer layer paper or vinyl surfaced. (Laminated System) Wallboard applied vertically in two layers. Inner layer attached to studs with 1 in. long Type S steel screws spaced 8 in. OC along vertical edges, and 12 in. OC in the field and outer layer laminated to inner layer with joint compound, applied with a notched spreader producing continuous beads of compound about 3/8 in. in diameter, spaced not greater than 2 in. OC. Joints of laminated outer layer offset 12 in. from inner layer joints Outer layer wallboard attached to floor and ceiling runner track with 1-5/8 in. long Type S steel screws spaced 12 in. OC.
Optional, (Direct Attached System), Inner layer attached to studs with 1 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges and 12 in. OC to the floor and ceiling runners. Joints of screw-attached outer layer offset from inner layer joints. Joints of outer layer may be taped or untaped.

Nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

AMERICAN GYPSUM CO — Types AG-C, AGX-1, AGX-11.
BEIJING NEW BUILDING MATERIALS CO LTD — Type DBX-1.
BPB AMERICA INC — Types 1, FRPC, EGRG, ProRoc Type X or ProRoc Type C.
BPB CANADA INC — ProRoc Type C, ProRoc Type X or ProRoc Type Abuse-Resistant.
CANADIAN GYPSUM COMPANY — Type AR, C, FCV, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
G-P GYPSUM CORP, SUB OF
GEORGIA-PACIFIC CORP — Types 5, 9, C, DAP, DD, DA, DGG, DS, GPFS6.
LAFARGE NORTH AMERICA INC — Types LGFC2, LGFC2A, LGFC3, LGFC6, LGFC6A, LGFC-C, LGFC-C/A.
NATIONAL GYPSUM CO — Types FSK-C, FSW, FSW-3, FSW-5 , FSW-C, FSW-G.
PABCO GYPSUM, DIV OF
PACIFIC COAST BUILDING PRODUCTS INC — Type C, PG-3, PG-5, PG-9 or PG-C.
PANEL REY S A — Type PRX.
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1
STANDARD GYPSUM L L C — Type SGC, SG-C or SGC-G.
TEMPLE-INLAND FOREST PRODUCTS CORP — Types T, TG-C, VPB-Type T.
UNITED STATES GYPSUM CO — Type AR, C, FCV, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
USG MEXICO S A DE C V — Type AR, C, FCV, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4A. Gypsum Board* — (As an alternate to Item 4) — Nom 3/4 in. thick, installed as described in Item 4 with 1-1/4 in. long Type S screws for inner layer and 2-1/4 in. long Type S screws for outer layer.
CANADIAN GYPSUM COMPANY — Types AR, IP-AR.

UNITED STATES GYPSUM CO — Types AR, IP-AR.
USG MEXICO S A DE C V — Types AR, IP-AR.

4B. Gypsum Board* — (As an alternate to Item 4, 4A and 4B)-5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 4 for the direct attached system.

CANADIAN GYPSUM COMPANY — Type SHX.
UNITED STATES GYPSUM CO — Type SHX.
USG MEXICO S A DE C V — Type SHX.

*Bearing the UL Classification Mark

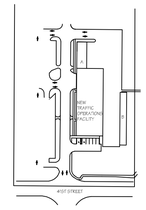
LIFE SAFETY LEGEND

- 2x4 LED LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED WITH EMERGENCY BATTERY PACK . SEE ELECTRICAL LIGHTING PLAN
- SUSPENDED COMPACT LED LIGHT FIXTURE - WITH EMERGENCY BATTERY PACK . SEE ELECTRICAL LIGHTING PLAN
- EXIT LIGHT W/ BATTERY BACKUP
- EM — EMERGENCY EXTERIOR LIGHT W/ BATTERY BACKUP
- FEC — FIRE EXTINGUISHER CABINET(TYPE 2-A-10B:C) W/ MIN. 6.8 Kg / 15 lb. AGENT CAPACITY,
- FE — FIRE EXTINGUISHER (TYPE 2-A-10B:C) - WALL MOUNTED
- LIFE SAFETY TRAVEL DISTANCES
- 2 HOUR RATED CMU WALL - D2 BLOCK. UL 905/ 906 RATED ASSEMBLY
- 2 HOUR RATED PARTITION WALL - UL 411 RATED ASSEMBLY
- INDICATES FULL HEIGHT WALLS
- EMERGENCY EYE WASH STATION- INSTALLED PER O.S.H.A.

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	10-01-21	REVIEW
B.	12-06-21	PROGRESS SET
C.	02-22-22	BID /PERMIT SET
D.	03-21-22	PERMIT SET
E.	06-04-22	FIRE DEPT- COMMENT RESPONSE
F.	07-18-2022	BLDG DEPT COMMENT RESPONSE
G.	06-30-23	BID SET

Architect:
DONADIO
& Associates, Architects P.A.
2001 19th Avenue, Suite 308
Vero Beach, FL 32960
Tel.772.794.2929
Fax.772.562.86000
License No. AA0002256
www.donadio-arch.com

Consultant:

Drawing Title:
LIFE SAFETY PLAN

Cert. No. AR-0016496

Date Signed:

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:

Dwg. File:
XREF File:
Plot File:

A1.10

CODE REVIEW FOR NEW TRAFFIC OPERATIONS FACILITY
FOR INDIAN RIVER COUTY
LOCATED AT 4548 41ST STREET
VERO BEACH, FLORIDA 32967
ARCHITECTS PROJECT #2021-20 / 2.0

SCOPE OF WORK

The Proposed Building is a Single Story Structure with a total area of 16, 617 sq. ft. The building will be divided into an office/shop component with an area of 7,206 sq.ft. The balance of the floor area, 9,411 sq.ft. will be devoted to Warehouse Space.

The Office / shop area will consist of a Reception Area, Offices, Conference Room, Break Room, Storage, Data Closet, File Room, Signal Shop, Sign Shop and Male / Female Toilet Rooms.

The balance of the building will be devoted to Two (2) Warehouses; one being 3,782 sq.ft. in area and the other 5,315 sq.ft.

The Proposed Building Construction is 8" concrete masonry unit walls (CMU), concrete floor slab and a modified Bitumen Roofing system on nailable substrate on 3" (min.) rigid insulation (R-20), mechanically attached to 1 ½" galvanized metal deck on steel bar joists. All interior partitions will be galvanized metal studs, gypsum board both sides and acoustical batts sound insulation.

Basic Lighting, Power, HVAC and Plumbing will be provided.

New Handicapped parking for the Facility will be located adjacent to the main entrance on the South side of the building. Overflow parking currently exists on the West side of the proposed building.

REFERENCE CODES:
Florida Building Code – Building 2020- 7th Edition
Florida Building Code – Plumbing – 2020 – 7th Edition
Florida Building Code – Accessibility – 2020 – 7th Edition
Florida Fire Prevention Code - 7th Edition

CODE REVIEW

1) BUILDING USE AND OCCUPANCY CLASSIFICATION
FBC CH. 3; FBC CH. 304; Business Group B;
FBC 311; FBC 311.3; Low- Hazard Storage S-2;
NFPA 101; Ch. 38; New Business Occupancy ;
NFPA 101; Ch. 42; Storage Occupancy.

This Building is a Mixed Use Facility.

2) SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE
FBC Ch. 4

N/A

3) GENERAL BUILDING HEIGHTS AND AREAS
FBC Ch. 5

i) Building Height and number of Stories:
FBC 504; FBC Table 504.3a
Construction Type; Type II-B; Non-Sprinklered
a) Business Occupancy
Maximum Building Height Permitted = 55'
Actual Building Height = 18'
b) Storage Occupancy
Maximum Building Height Permitted = 55'
Actual Building Height = 22'

ii) Allowable Number of Stories Above Grade Plane
FBC Table 504.4

a) Business Occupancy
Maximum Number of Stories Permitted = 3
Actual Number of Stories = 1.

b) Storage Occupancy
Maximum Number of Stories Permitted = 3
Actual Number of Stories = 1.

iii) Building Area
FBC 506; FBC Table 506.2

a) Business Occupancy
Allowable Building Area = 23,000 sq.ft.
Actual Building Area = 7,206 sq.ft.

b) Storage Occupancy
Allowable Building Area = 26,000 sq.ft.
Actual Building Area = 9,411 sq.ft.

4) TYPE OF CONSTRUCTION
FBC CH.6; FBC 602.2; NFPA 101; 38.1.6; 42.1.6

Construction Type: Type II-B; Non- Sprinklered

i) Fire Resistance Rating Requirements for Building Elements (hours)

a) Primary Structural Frame = 0
b) Bearing Walls, Exterior/ Interior = 0
c) Non-Bearing Interior Walls = 0
d) Floor Construction / Roof Construction = 0

ii) Fire Resistance Rating for Exterior Walls Based on Fire Separation Distance
FBC Table 602

North, South, East & West > 30' = 0 Rating

5) FIRE AND SMOKE PROTECTION FEATURES
FBC Ch. 7.

i) Exterior Walls
FBC 705; 705.2.
There are no Eave Projections at the Exterior Walls.

ii) Maximum Area of Exterior Wall Openings Based on Fire Separation Distance and Degree of Opening Protection
FBC 705.8
North, South, East & West = No Limit

iii) Fire Partitions
FBC 708
The 2 Hr. Rated Separation Between the Business Occupancy and the Storage Occupancy will be Achieved using Type D-2 CMU Constructed Full Height from Floor to Underside of the Metal Deck and Fire Caulked.

The 2 Hr. Rated Separation Between the Business Occupancy and the Assembly Occupancy (Break Room- 104) will be Achieved Using U.L. Design No. 411 Partition Type Constructed Full Height from Floor to Underside of Metal Deck and Fire Caulked.

iv) **Opening Protectives**
FBC 716; FBC Table 716.5.
All Opening Protectives (Doors) Located in the Two Hour (2 Hr.) Occupancy Separation CMU Wall will be 1 ½ Hr. Rated with a Maximum Vision Panel of 100 Sq. Inches.

v) **Concealed Spaces**
FBC 718; FBC 718.2
Fire Blocking in Concealed Spaces is not Required as All Construction will be Non-Combustible.

FBC Ch. 8; FBC Table 803.11; NFPA 101; 38.3.3; 42.3.3

All Interior Wall and Ceiling Finishes will Conform to the FollowingTable:

Group B - BUSINESS OCCUPANCY – Non-Sprinklered		
Interior Exit Stairways and Ramps & Exit Passageways	Corridors & Enclosures for Exit Access Stairways and Ramps	Rooms & Enclosed Spaces
	B	C

Group S - STORAGE OCCUPANCY – Non-Sprinklered		
Interior Exit Stairways and Ramps & Exit Passageways	Corridors & Enclosures for Exit Access Stairways and Ramps	Rooms & Enclosed Spaces
	B	C

Class B Interior Finish: Flame Spread Index 26-75
Smoke Developed Index 0-450
Class C Interior Finish: Flame Spread Index 76-200
Smoke Developed Index 0-450

i) Interior Floor Finish
FBC 804, FBC 804.4.2; NFPA 101; 38.3.3.3; 42.3.3.3

The Minimum Critical Flux for All Interior Floor Finishes will be Class II.

7) FIRE PROTECTION SYSTEM
FBC CH. 9

i) Automatic Sprinkler Systems
FBC Ch. 9; FBC 903.2; FBC 903.2.1.2; FBC 903.2.1.0

An Automatic Fire Sprinkler System is not Required per the Above.

ii) **Portable Fire Extinguishers**
FBC 906; FBC 906.1; NFPA 101; 38.3.5; 42.3.5.
Provide Type 2-A-10BC (Min. 6.8 kg/ 15 lb.) Agent Capacity. Portable Fire Extinguishers, Spaced Not to Exceed 75' Apart. See Life Safety Plan for Locations.

iii) Fire Alarm & Detection Systems
FBC 907; FBC 907.2.1; FBC 907.2.2; NFPA 101; 9.6; NFPA 101; 38.3.4.1; NFPA 101; 42.3.4.1.2
A Fire Alarm System is not required per the Above.

8) MEANS OF EGRESS REQUIREMENTS
FBC Ch 10; NFPA 101; 38.2; NFPA 101 42.2.2.

i) General Means of Egress
FBC Ch. 10

a) Ceiling Height:
FBC 1003.2

Means of Egress Ceiling Height: 9'-0" > 7'-6" = OK.

b) Occupant Load:
FBC 1004; FBC Table 1004.5; NFPA 101; 38.1.7; 42.1.7.

Office / Shop: 7,206 sq.ft.÷ 150 = **48 Persons**
Warehouse: 9,411 sq.ft. ÷ 500 = **19 Persons**
Total Occupant Load = 67 Persons

ii) Means of Egress Sizing
FBC 1005; FBC 1005.3.2; NFPA 101; 38.2.3; 42.2.3.

a) Office / Shop 48 x 0.2" = 9.6"
b) Egress Capacity Provided: 5 x 36" = 180"
c) Warehouse / Storage 19 x 0.2" = 3.8"
d) Egress Capacity Provided 4 x 36" = 144"

iii) Number of Exits And Exit Access Doorways
FBC 1006
a) Min. number of Exits or Access to Exits per Story
FBC 1006.3.2; NFPA 101; 38.2.3; 42.2.3.
Occupant Load – 1-500 Require a Minimum = **2 Exits**
Number of Exits Proposed = **7 Exits**

iv) Exit and Exit Access Doorway Configuration
FBC. 1007; FBC 1007.1.1.
a) Complete Building
Building Diagonal = **220'**
Door Separation = **210'**
210' > 110' = OK.
b) Office / Shop:
Building Diagonal = **120'**
Door Separation = **80'**
80' > 60' = OK.
c) Storage Area
Building Diagonal = **140'**
Door Separation = **136'**
136' > 70' = OK.

v) Means of Egress Illumination
FBC 1008; NFPA 101; 7.8
a) Illumination Required
FBC 1008.2; 42.2.8; 42.2.10
The Means of Egress, including Exit Discharge, will be illuminated at all times during Building Occupancy.
c) Illumination Level Under Normal Power
FBC 1008.2.1
The Means of Egress Illumination Level shall not be less than 1 Footcandle (11 LUX) at the walking surface.
d) Emergency Power for Illumination
FBC 1008.3; NFPA 101; 42.2.9
An Emergency Power Supply will be provided to illuminate all Means of Egress components. The Emergency supply will provide power for a minimum of 90 minutes and will consist of storage batteries, Unit equipment or an on-site Generator.

vi) Accessible Means of Egress
FBC 1009; FBC 2020 – Accessibility

a) Accessible Routes
FBC 206; FBC 206.2.1; FBC Ch. 4.

An Accessible Route will Exist From the Accessible Parking to the Accessible Building Entrance.

b) Accessible Means of Egress
FBC 207
Various Accessible Means of Egress are Provided from the Building.

c) Parking Spaces
FBC 208; FBC Table 208.2
An Accessible Parking Space is Provided Adjacent to the Main Entrance to the Building.

d) Drinking Fountains
FBC 211; FBC 602.1 through 602.6
One (1) "Hi-Low" Drinking Fountain Provided, Located Adjacent to the Male / Female Toilet Rooms.

e) Kitchens, Kitchenettes and Sinks
FBC 212; FBC 804
The Sink Surface to be Mounted No Higher than 34" Above the Finished Floor.

f) Toilet Facilities and Bathing Facilities
FBC 213; FBC 804; FBC 603
The Male & Female Toilet Rooms Contain an Accessible Toilet Stall Which Meets all of the Fixture Floor Space Requirements and Turning Circles. Both Toilet Stall Doors Open Outwards.

vii) Doors, Gates and Turnstiles
FBC 1010; FBC 1010.1; FBC 1010.1.2; 1010.1.3.
All Interior Doors are as Follows:
a) Size: 36" w x 80" h (min.)
a) All Egress Doors Swing in the Direction of travel
b) Opening Force:
Door Release – 15 lb. (67N) Force
Door in Motion – 30 lb. (133N) Force
Fully Open Position – 15 lb. (67N) Force

viii) Stairways
FBC 1011.
N/A

ix) Exit Signs
FBC 1013; FBC 1013.3
All Required Exit Access Doors to be Marked with an Approved Exit Sign which is Illuminated and has Raised and Braille Characters that are Not Less Than 6" High.

x) Exit Access
FBC 1016
All Required Exit Access Points Lead Directly to the Building Exterior Without Having to go Through Any Intervening Spaces.

xi) Exit Access Travel Distance
FBC 1017. FBC Table 1017.2; NFPA 101; 38.2.6.2; 42.2.6; Table 42.2.6

Maximum Travel Distance to an Exit (Assembly/ Business) = 200'
Actual Maximum Travel Distance to an Exit:
Assembly 65' < 200' = OK.
Business 142' < 200' = OK.
Storage 103' < 300' = OK.

xii) Corridor
FBC 1020; FBC Table 1020.1; NFPA 101; 38.3.6; 42.8.3.6.
Per Table 1020: 30+ Occupants requires 1 Hr. Rated Corridor
Total Occupants: Business = 48.
3 Exit Corridors; 48 ÷ 3 = 16. 16< 30 – no rated corridors required.

xiii) Exits
FBC 1022; NFPA 101; 7.2.4; 42.2.2.5.
All Required Exits Lead Directly to the Public way.

xiv) Exit Discharge
FBC 1028; NFPA 101; 7.7; 38.2.7; 42.2.7.
All Required Exits Discharge Directly to the Building Exterior.

9) Minimum Plumbing Fixture Count.
FBC 2020 – Plumbing; FBC Table 403.1
Business Occupancy
Total Building Occupancy = 67 Occupants
50/50 Split; 34 Male / 34 Female

I) Waterclosets/ Urinals; 1 Per 25 / First 50 / 1 per 50
II) Lavatories; 1 Per 40 / First 80
III) Drinking Fountains; 1 Per 100
IV) Service Sinks; 1

MINIMUM PLUMBING FIXTURE COUNT

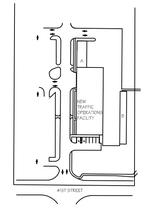
	WATERCLOSET		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINKS	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
MALE	2	2/ 3 urinals	1	2				
FEMALE	2	2	1	2	1	1	1	1

01 CODE REVIEW

NTS

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY
4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	12-23-21	REVIEW
B.	02-22-22	BID/PERMIT SET
C.	03-21-22	PERMIT SET
D.	06-04-22	FIRE DEPT- COMMENT RESPONSE
E.	07-18-2022	BLDG DEPT COMMENT RESPONSE
F.	06-30-2023	BID SET

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Consultant:

Drawing Title:
CODE REVIEW

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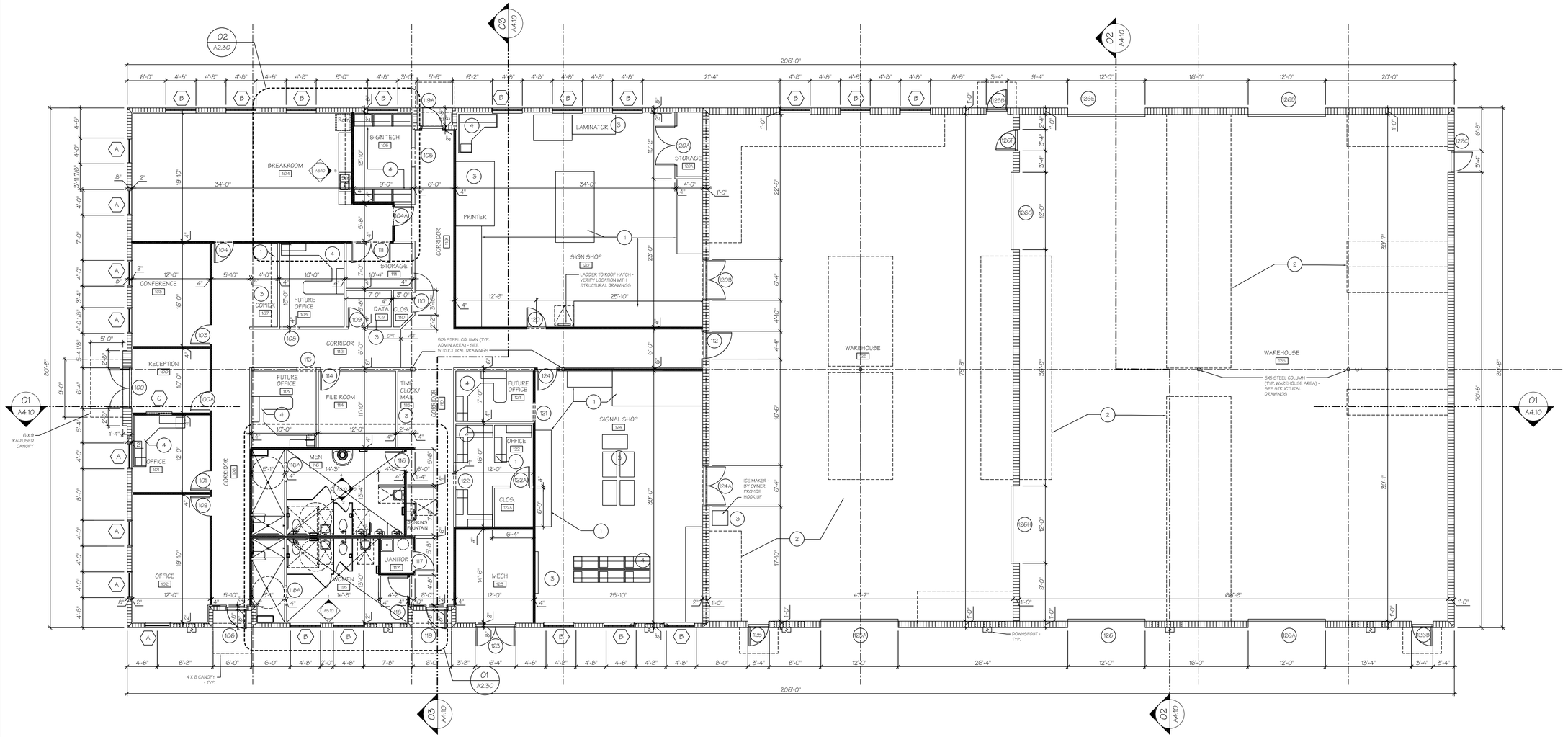
Cert. No. AR-12,456

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:
Dwg. File:
XREF File:
Plot File:

Date Signed:

A1.11



01 FLOOR PLAN

Scale: 1/8"=1'-0"

FLOOR AREA

OFFICE / SHOP	7,206 S.F.
WAREHOUSE	9,411 S.F.
GROSS TOTAL	16,617 S.F.

CONSTRUCTION LEGEND

EXTERIOR 8" CMU WALL W/ 5/8" DRYWALL ON 1-½" METAL FURRING CHANNELS.

NON-RATED 2 HR. RATED

12" CMU WALL W/ TOOLED JOINTS - 2 HR. RATED TYPE D-2 - WHERE SHOWN. FULL HEIGHT AND FIRE STOPPED. SEE PLANS FOR LOCATION.

TWO (2) HOUR RATED ASSEMBLY: U 411- 25/8" GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH 2 LAYERS 5/8" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION; CONSTRUCT FULL HEIGHT W/ FIRESTOPPING AS REQUIRED

ONE HOUR RATED ASSEMBLY : U 465 - 25/8" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH 5/8" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION; CONSTRUCT FULL HEIGHT W/ FIRESTOPPPING.

25/8" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH 5/8" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION CONSTRUCT FULL HEIGHT

GENERAL NOTES

1. BUILT-IN CABINETRY BY OWNER WHERE NOTED
2. PALLET RACK STORAGE SYSTEM BY OWNER; COORDINATE LOCATION WITH OWNER.
3. EQUIPMENT BY OWNER
4. ALL MODULAR FURNITURE PROVIDED BY OWNER - INSTALLED BY G.C.

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

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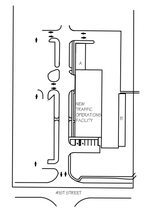

Issues:

No.:	Date:	Description:
A.	07-19-2021	SCHEMATIC DESIGN
B.	07-27-2021	CONSULTANT REVIEW
C.	10-21-2021	SCHEMATIC DESIGN PKG
D.	11-10-2021	SITE PLAN SUBMITTAL
E.	12-06-2021	PROGRESS SET
F.	01-04-2022	BLDG SECTION REV
G.	02-22-2022	BID / PERMIT SET
H.	03-07-2022	SITE PLAN RE-SUBMISSION
I.	03-21-2022	PERMIT SET
J.	06-04-22	FIRE DEPT- COMMENT RESPONSE
K.	06-30-2022	DRAWING UPDATES
L.	07-18-2022	BLDG DEPT COMMENT RESPONSE
M.	06-30-2023	BID SET

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Drawing Title:
FLOOR PLAN

N

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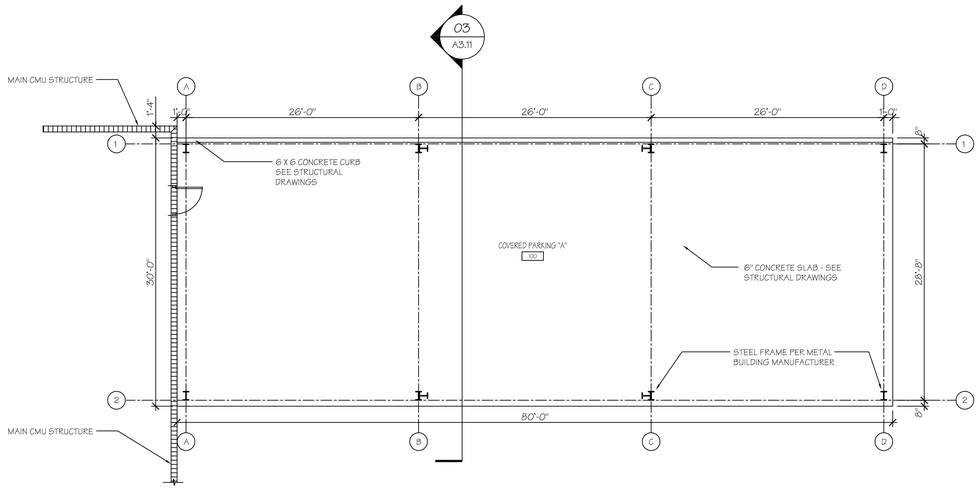
Chd: TD
Project No.: 2021-20
Sheet No.:

Dwg. File:
XREF File:
Plot File:

Cert. No. 0012456

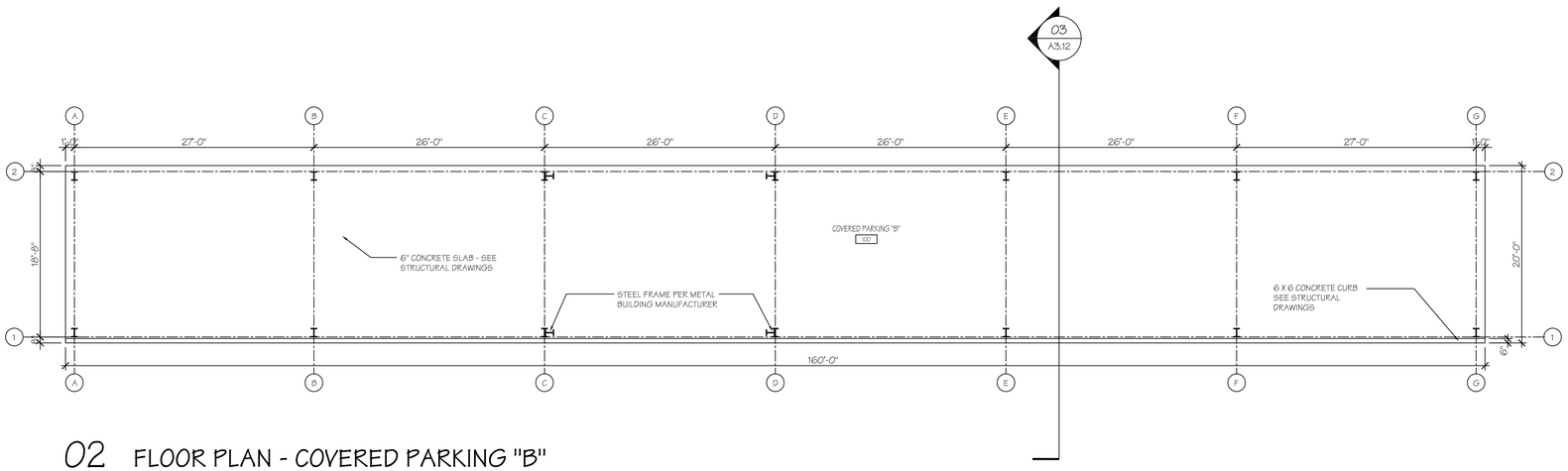
Date Signed:

A2.10



01 FLOOR PLAN - COVERED PARKING "A"

Total Area: 2,400 sq.ft. Scale: 1/8"=1'-0"



02 FLOOR PLAN - COVERED PARKING "B"

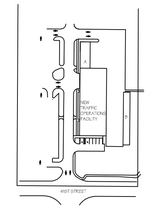
Total Area: 3,200 sq.ft. Scale: 1/8"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	10-01-21	SCHEMATIC DESIGN
B.	10-21-21	SCHEMATIC DESIGN PKG
C.	11-10-2021	SITE PLAN SUBMITTAL
D.	12-06-2021	PROGRESS SET
E.	02-22-2022	BID/PERMIT SET
F.	03-21-2022	PERMIT SET
G.	06-30-2023	BID SET

Architect:

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Consultant:

Drawing Title:

FLOOR PLANS -
COVERED PARKING STRUCTIURES

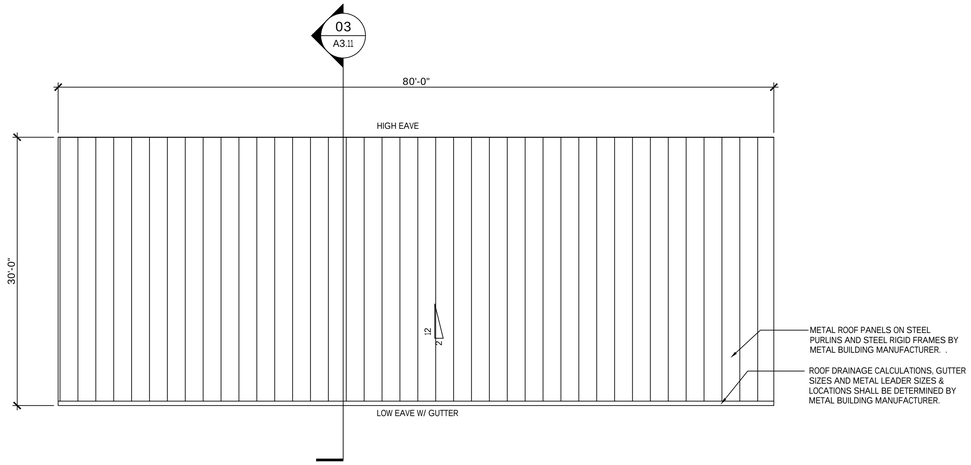
Cert. No. AR-0016456

Date Signed:

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:

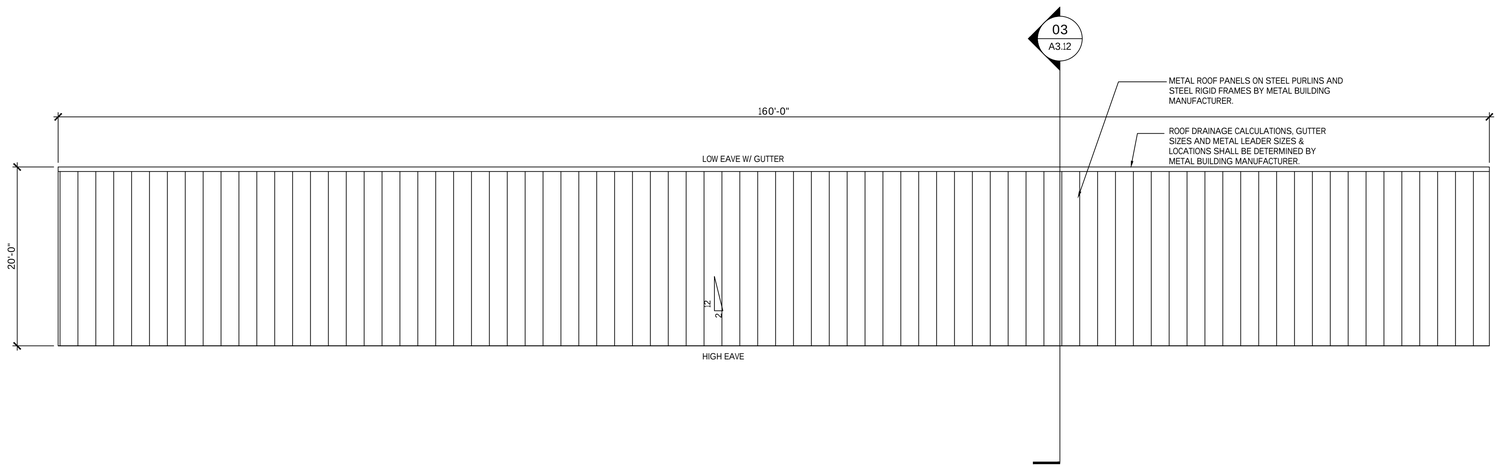
Dwg. File:
XREF File:
Plot File: .

A2.11



01 ROOF PLAN - COVERED PARKING "A"

Scale: 1/8"=1'-0"



02 ROOF PLAN - COVERED PARKING "B"

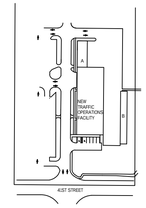
Scale: 1/8"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

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ROOF PLANS-
COVERED PARKING STRUCTIURES

Drn: JLH
Chd: TD
Project No.: 2021-20
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Plot File:

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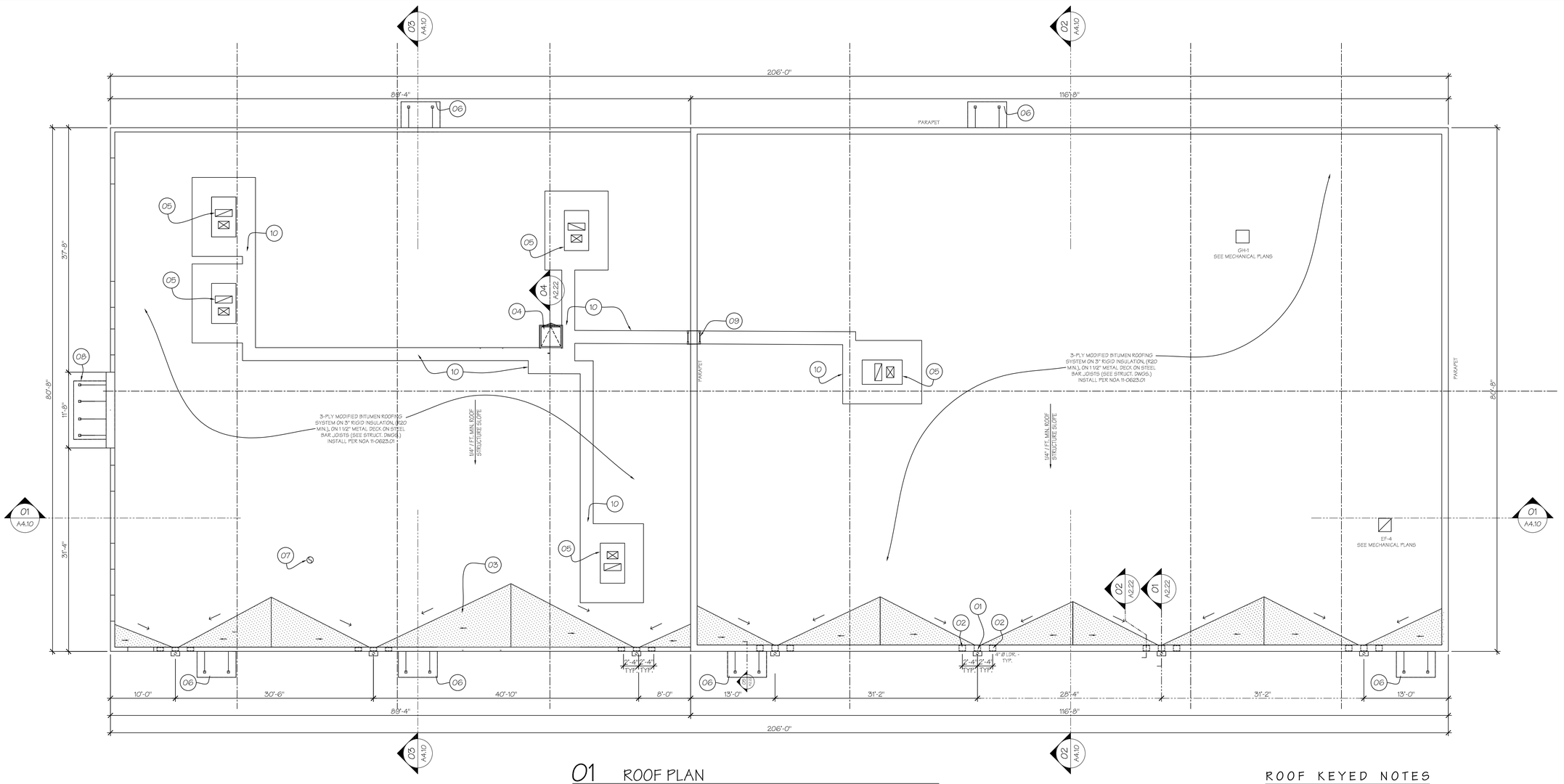


01 ROOF PLAN

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

R O O F DRAIN CALCULATIONS

ROOF DRAINAGE CALCUALTIONS

Scupper sizes are based on a 100 yr. storm, 5" per hour rainfall intensity.
FBC 2020 – Plumbing, FBC Section 1106.

I. Scupper Size Calculations – Upper Roof

1) Area of roof to be drained.

116'-8" x 80'-8" = 9411 SF s.f..

2) Number of Scuppers

Four (4) scuppers for upper roof section:
Each scupper will drain: 9411 sq. ft. ÷ 4 = 2353 sq. ft.

3) Size of Scupper:

One (1) 12" weir length x 4" head will drain 5384 sq.ft.
Use 12" x 8" scuppers throughout.

II. Leader Size Calculations – Upper Roof

1) Number of Leaders

Four (4) leaders for upper roof section:
Each leader will drain; 9411 sq. ft. ÷ 4 = 2353 sq. ft.

2) Size of Leader:

FBC Table 1106.2(1).
One (1) 4" diameter leader will drain 3,680 sq.ft.
Use 4" diameter leaders throughout.

III. Scupper Size Calculations – Lower Roof

1) Area of roof to be drained.

89'-4" x 80'-8" = 7206 SF s.f..

2) Number of Scuppers

Three (3) scuppers for lower roof section:
Each scupper will drain: 7206 sq. ft. ÷ 3 = 2402 sq. ft.

3) Size of Scupper:

One (1) 12" weir length x 4" head will drain 5384 sq.ft.
Use 12" x 8" scuppers throughout.

IV. Leader Size Calculations – Lower Roof

1) Number of Leaders

Three (3) leaders for lower roof section:
Each leader will drain; 7206 sq. ft. ÷ 3 = 2402 sq. ft.

2) Size of Leader:

FBC Table 1106.2(1).
One (1) 4" diameter leader will drain 3,680 sq.ft.
Use 4" diameter leaders throughout.

ROOF KEYED NOTES

01 12" WIDE X 4" HIGH SCUPPER AND 12" X 8" X 12" DP. CONDUCTOR HEAD. SET SCUPPER BOTTOM FLUSH WITH ROOF SURFACE AT PARAPET WALL. SEE DETAIL 01/A2.21.

02 8" WIDE X 4" HIGH OVERFLOW SCUPPER. SET BOTTOM AT 2" MIN. TO 4" MAX. ABOVE ROOF SURFACE AT PARAPET WALL. SEE DETAIL 02/A2.21.

03 SHADED AREAS DENOTE TAPERED INSULATION TO DIRECT WATER TO SCUPPERS, TYPICAL.

04 3'-0" X 3'-0" ROOF HATCH W/ ALUM. GUARDRAIL & SAFETY POST, SEE DET. 04/A2.21.
VERTICAL STEEL LADDER:
- 3/8" X 2" FLAT SIDE BARS @ MIN. 16" APART (CLEAR).
- 13/16" DIAM. ROUND RUNGS @ MAX. 12" APART (CENTER TO CENTER).
- 3/8" X 2" FLAT BAR ANGLE STAND OFF BRACKETS @ TOP, BOTTOM AND TWO EQUIDISTANT INTERMEDIATE LOCATIONS, CLEARANCE FROM CENTERLINE OF RUNG TO WALL SURFACE SHALL BE 7" MINIMUM.

PROVIDE BILCO BL-S-4 MILD STEEL VERTICAL LADDER OR APPROVED EQUAL. CONTRACTOR SHALL PROVIDE FULL SHOP DRAWINGS.

05 ROOF TOP A/C UNIT, SEE MECHANICAL DRAWINGS. VERIFY LOCATION WITH STRUCTURAL DRAWINGS.

06 6'-0" X 4'-0" SUSPENDED ALUMINUM CANOPY OVER DOOR/ DOOR OPENING, SEE DETAIL 05/A2.21.

07 EXHAUST FAN ROOF JACK.

08 CUSTOM SUSPENDED RADIUSED ALUM. CANOPY. SEE MANUFACTURER'S SHOP DRAWINGS.

09 ALUM.FIXED LADDER OVER PARAPET, COMPLIANT WITH ANSI/ALI A14.3-2008, AMERICAN NATIONAL STANDARD (ASC) FOR LADDERS. LADDER TO HAVE A GRATING PLATFORM ABOVE PARAPET AND SHALL BE BRACKETED TO BOTH SIDES OF PARAPET. LADDER SHALL NOT BE ATTACHED TO ROOF. SUBMIT SHOP DRAWINGS FOR APPROVAL.

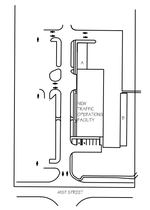
10 COORDINATE LOCATION OF WALKWAYS WITH MECHANICAL PLANS. WALKWAYS SHALL BE DESIGNED IN ACCORDANCE W FBC REQUIREMENTS.

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	12-16-21	ROOF PLAN
B.	02-22-22	SITE PLAN APPROVAL
C.	03-21-22	PERMIT SET
D.	06-30-22	DRAWING UPDATES
I.	06-30-2022	DRAWING UPDATES
J.	07-18-2022	BLDG DEPT COMMENT RESPONSE
K.	06-30-23	BID SET

Architect:

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Consultant:

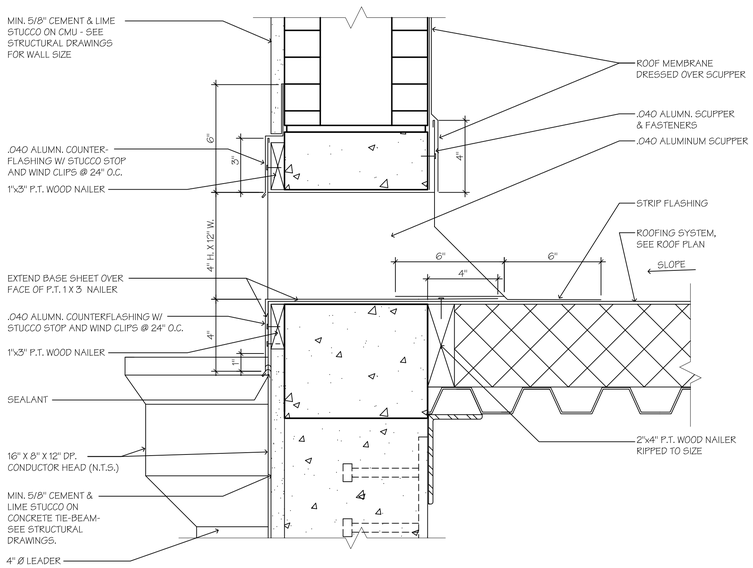
Drawing Title:

ROOF PLAN

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.: A2.20

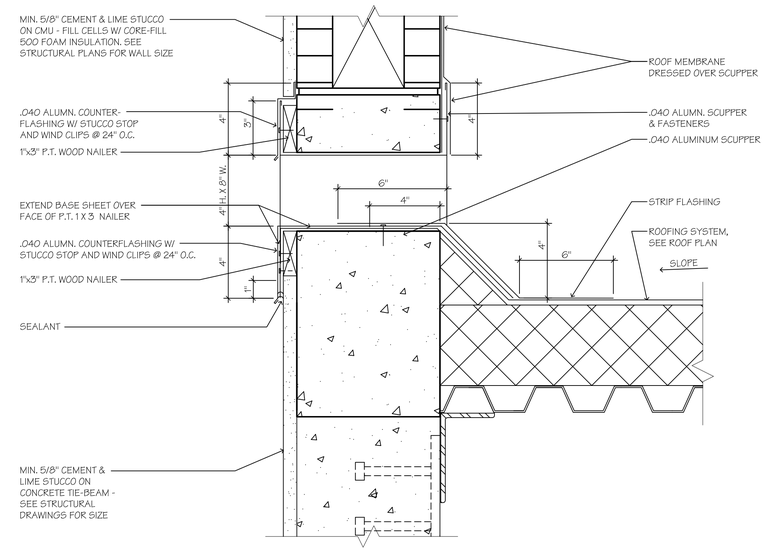
Dwg. File: .
XREF File: .
Plot File: .

Date Signed:



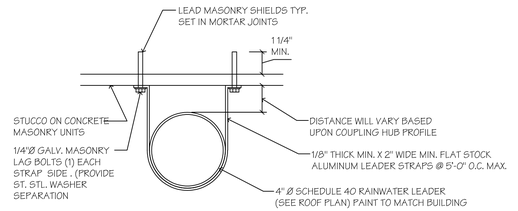
01 SCUPPER DETAIL

SCALE: 3" = 1'-0"



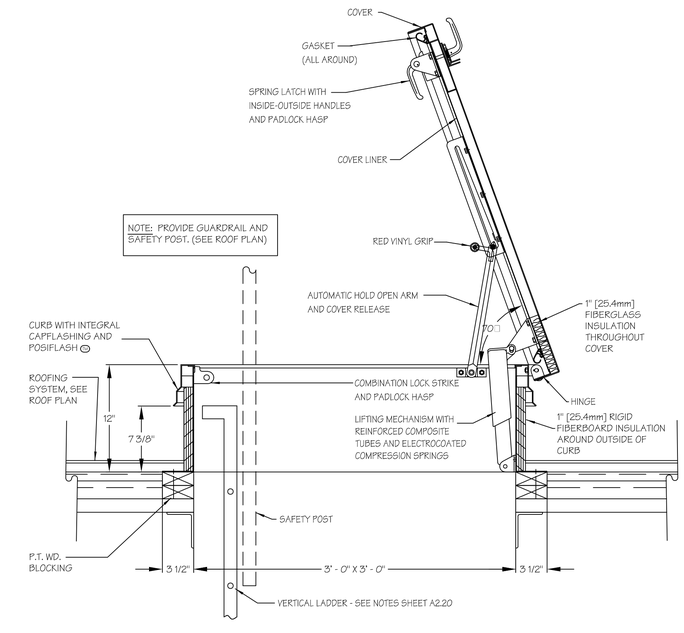
02 OVERFLOW SCUPPER DETAIL

SCALE: 3" = 1'-0"



03 RAIN LEADER DETAIL

SCALE: 3" = 1'-0"

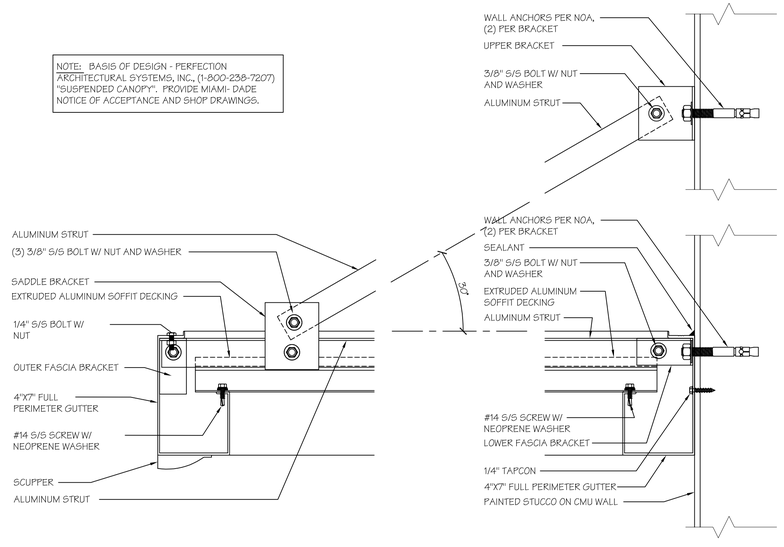


04 ROOF HATCH DETAIL

BILCO S/HZ NOA 20-1104.24 OR EQUAL

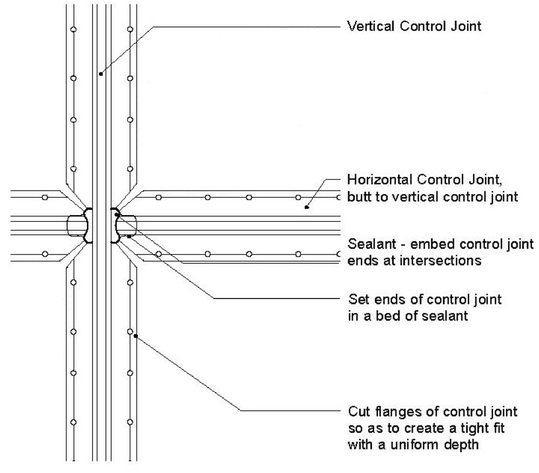
SCALE: 1-1/2" = 1'-0"

NOTE: BASIS OF DESIGN - PERFECTION ARCHITECTURAL SYSTEMS, INC., (1-800-238-7207) "SUSPENDED CANOPY". PROVIDE MIAMI- DADE NOTICE OF ACCEPTANCE AND SHOP DRAWINGS.

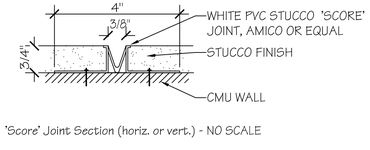


05 CANOPY DETAIL

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



Control Joint Intersection Sealant Detail



'Score' Joint Section (horiz. or vert.) - NO SCALE

01 TYPICAL STUCCO 'SCORE' JOINT DETAILS

Scale: 3"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

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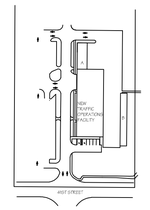
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	12-16-21	ORIGIN
B.	02-22-22	BID/PERMIT SET
C.	03-21-22	PERMIT SET
D.	06-30-22	DRAWING UPDATES
I.	06-30-2022	DRAWING UPDATES
J.	07-18-2022	BLDG DEPT COMMENT RESPONSE
K.	06-30-23	BID SET

Architect:

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Consultant:

Drawing Title:

ROOF & MISC. DETAILS

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRANDON RAYMOND DONADIO ON THE DATE ADJACENT TO THE SEAL USING THE SHA AUTHENTICATION CODE.

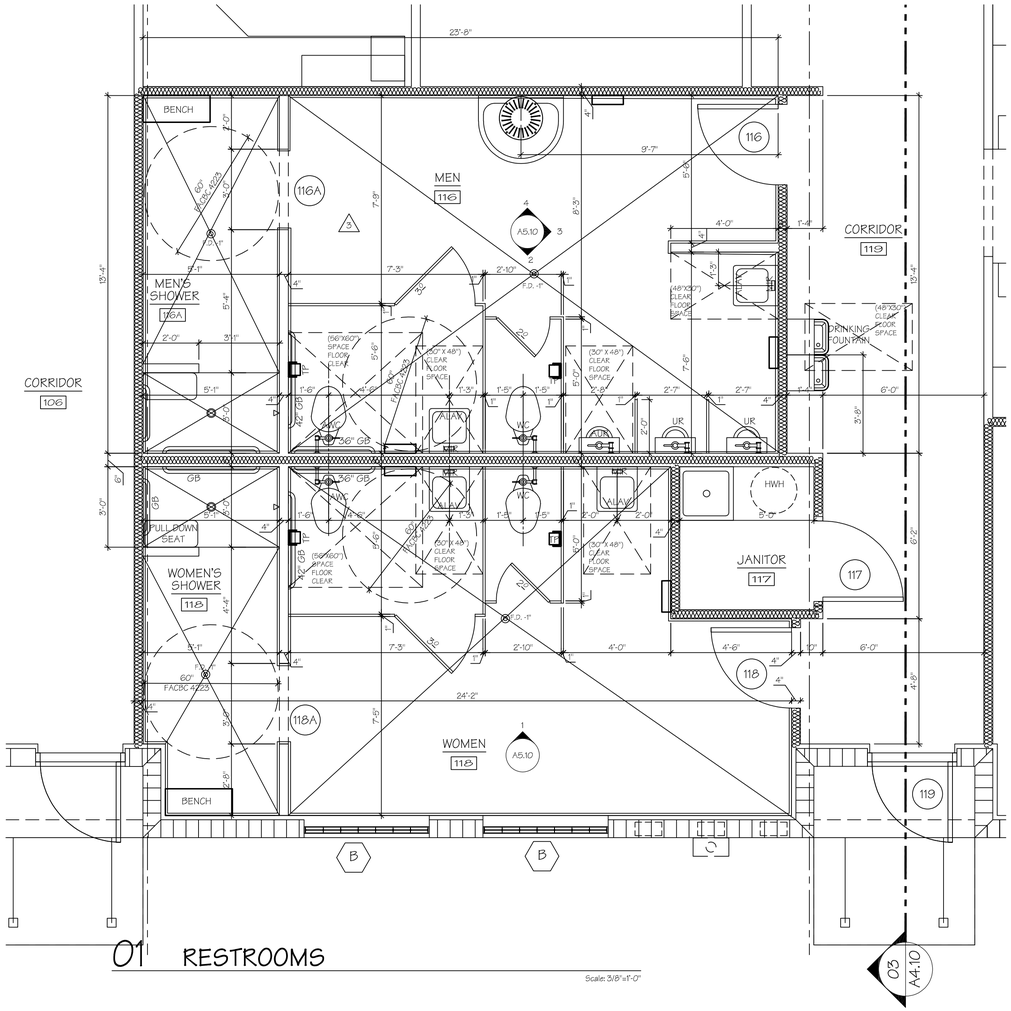
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

Cert. No. [illegible]456

Date Signed:

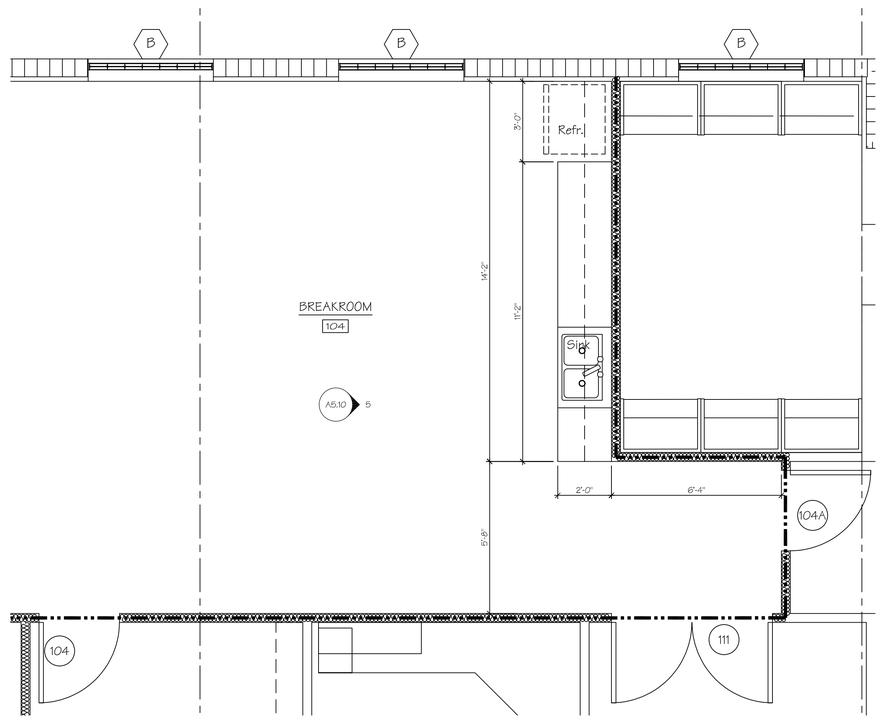
Drn:	Dwg. File:
JLH	
Chd:	XREF File:
TD	.
Project No.:	Plot File:
2021-20	.
Sheet No.:	

A2.22



01 RESTROOMS

Scale: 3/8"=1'-0"



02 BREAKROOM

Scale: 3/8"=1'-0"

CONSTRUCTION LEGEND

EXTERIOR 8" CMU WALL W/ 5/8" DRYWALL ON 1-½" METAL FURRING CHANNELS.

ONE HOUR RATED ASSEMBLY : U 465 - 3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION; CONSTRUCT FULL HEIGHT W/ FIRESTOPPPING.

TWO (2) HOUR RATED ASSEMBLY: U 411- 3⅝" GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH 2 LAYERS ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION CONSTRUCT FULL HEIGHT

3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION CONSTRUCT FULL HEIGHT

3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION CONSTRUCT 6" ABOVE CEILING HEIGHT

3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES CONSTRUCT 6" ABOVE CEILING HEIGHT

Project:
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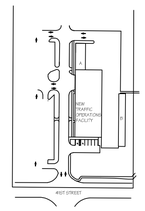
Key Plan:



Issues:

No.:	Date:	Description:
A.	07-19-2021	SCHEMATIC DESIGN
B.	07-27-2021	CONSULTANT REVIEW
C.	10-21-2021	SCHEMATIC DESIGN PKG
D.	12-06-2021	PROGRESS SET
E.	03-21-2022	PERMIT SET
F.	06-30-2022	DRAWING UPDATES
G.	07-18-2022	BLDG DEPT COMMENT RESPONSE
H.	06-30-2023	BID SET

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Consultant:

Drawing Title:
ENLARGED PLANS

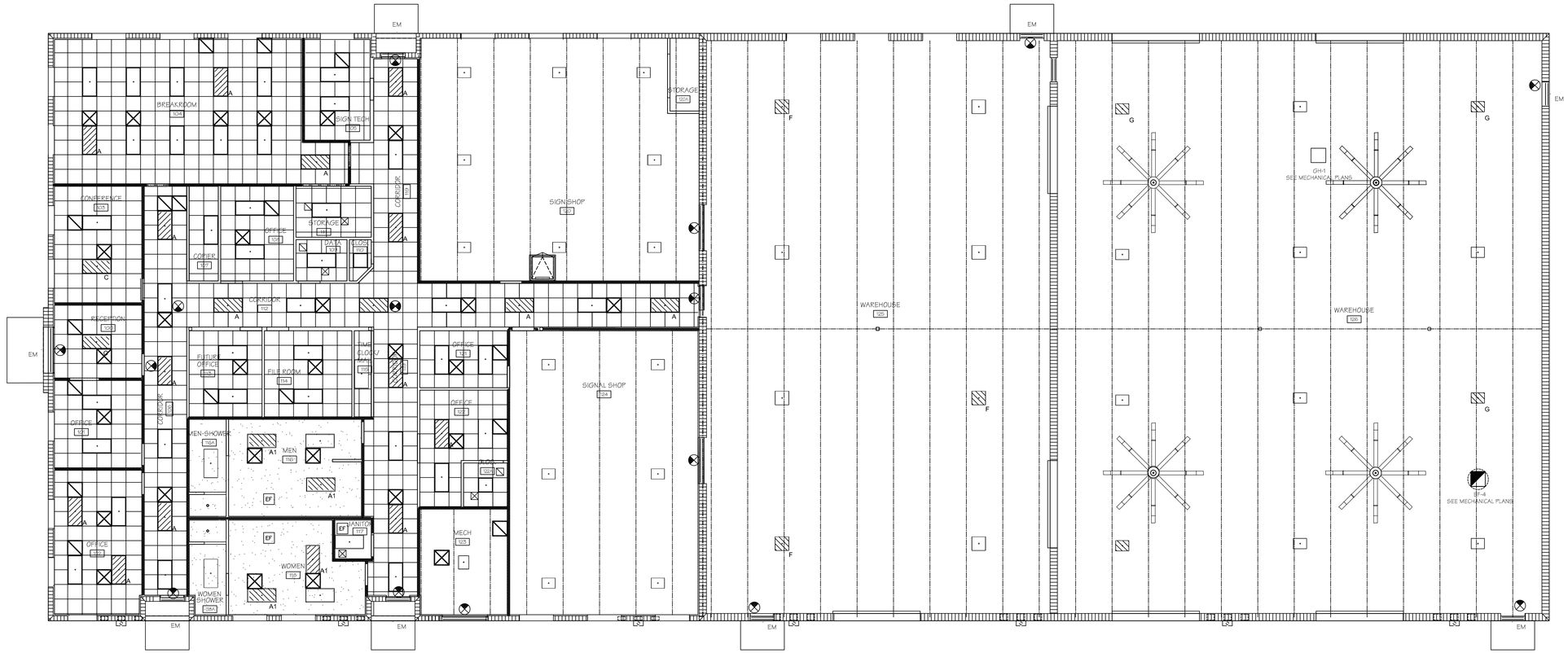
Cert. No. AR0012456

Date Signed:

Drn: JLH
Chd: TP
Project No.: 2021-20
Sheet No.:

Dwg. File:
XREF File:
Plot File:

A2.30



01 REFLECTED CEILING PLAN

Scale: 1/8"=1'-0"

CONSTRUCTION LEGEND

EXTERIOR 8" CMU WALL W/ 5/8" DRYWALL ON 1-½" METAL FURRING CHANNELS.

NON-RATED 2 HR. RATED

12" CMU WALL W/ TOOLED JOINTS - 2 HR. RATED TYPE D-2 - WHERE SHOWN. FULL HEIGHT AND FIRE STOPPED. SEE PLANS FOR LOCATIONS.

TWO (2) HOUR RATED ASSEMBLY: U 411- 3⅝" GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH 2 LAYERS ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION; CONSTRUCT FULL HEIGHT W/ FIRESTOPPING AS REQUIRED

ONE HOUR RATED ASSEMBLY : U 465 - 3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION; CONSTRUCT FULL HEIGHT W/ FIRESTOPPPING.

3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION CONSTRUCT FULL HEIGHT

3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES AND SOUND BATTS INSULATION CONSTRUCT 6" ABOVE CEILING HEIGHT

3⅝" (6" WHERE NOTED) GALV. METAL STUDS 20 GAUGE @ 24" O.C. WITH ⅝" DRYWALL BOTH SIDES CONSTRUCT 6" ABOVE CEILING HEIGHT

REFLECTED CEILING LEGEND

- 2' X 2' SUSPENDED ACOUSTICAL CEILING AND GRID
- GYPSUM WALLBOARD CEILING
- OPEN - EXPOSED TO ROOF STRUCTURE
- 2x4 RECESSED LED LIGHT FIXTURE
- 2x4 RECESSED LED LIGHT FIXTURE W/ EMERGENCY BATTERY PACK
- 2x2 RECESSED LED LIGHT FIXTURE
- 2x2 RECESSED LED LIGHT FIXTURE W/ EMERGENCY BATTERY PACK
- COMPACT HIGH BAY LED LIGHT FIXTURE
- COMPACT HIGH BAY LED LIGHT FIXTURE W/ EMERGENCY BATTERY PACK
- LED STRIP LIGHT FIXTURE
- EF - EXHAUST FAN
- EXIT LIGHT W/ BATTERY BACKUP
- EM - EMERGENCY EXTERIOR LIGHT
- SUPPLY AIR CEILING DIFFUSER
- RETURN AIR CEILING GRILLE
- CEILING FAN

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

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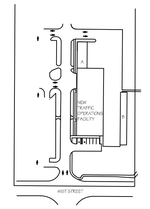
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	07-19-2021	SCHEMATIC DESIGN
B.	10-21-2021	SCHEMATIC DESIGN PKG
C.	12-06-2021	PROGRESS SET
D.	03-21-22	PERMIT SET
E.	06-04-22	FIRE DEPT- COMMENT RESPONSE
F.	07-18-2022	BLDG DEPT COMMENT RESPONSE
G.	06-30-23	BID SET

Architect:

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Consultant:

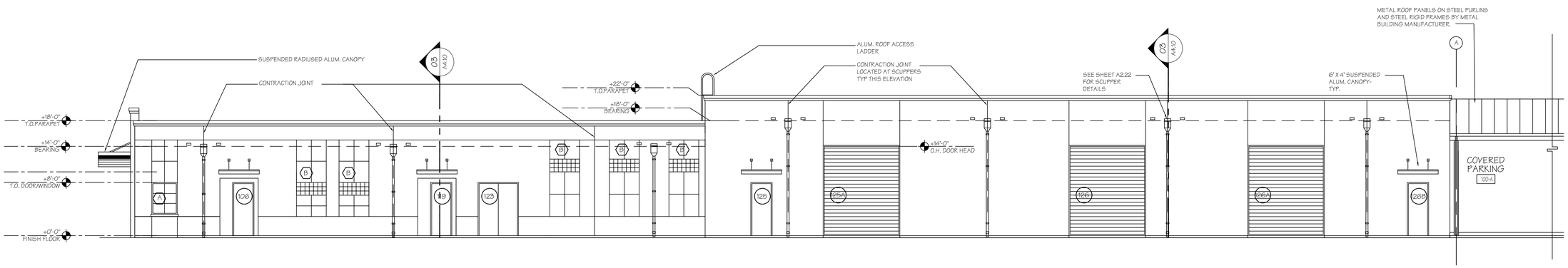
Drawing Title:

REFLECTED CEILING PLAN

Cert. No. AR-12456

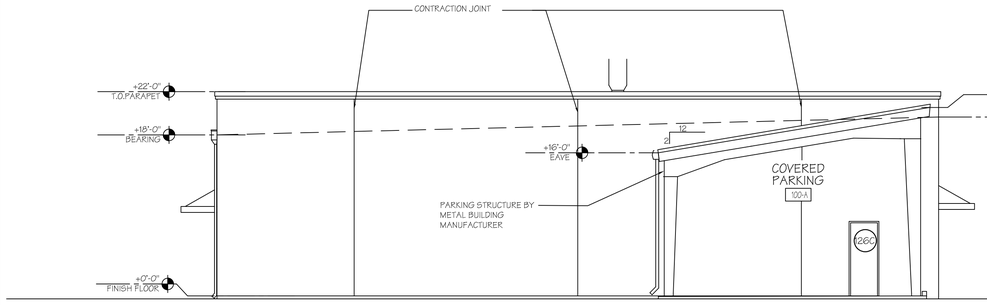
Date Signed:

Drn:	Dwg. File:
JLH	
Chd:	XREF File:
TD	.
Project No.:	Plot File:
2021-20	.
Sheet No.:	
A2.40	



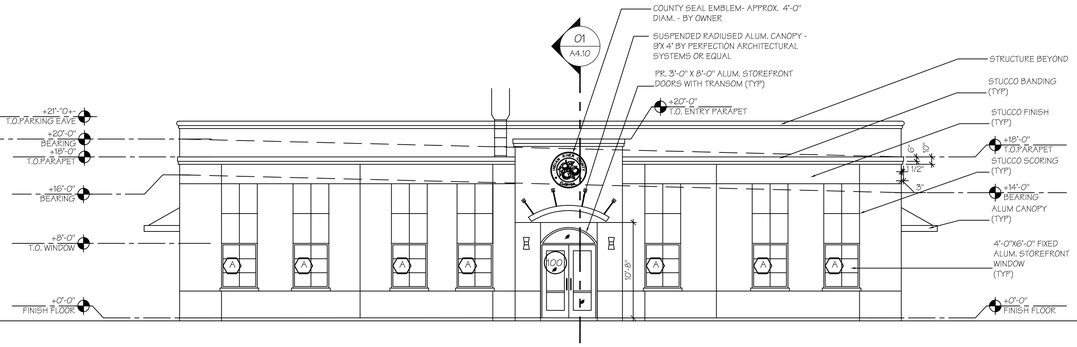
01 EAST ELEVATION

Scale: 1/8"=1'-0"



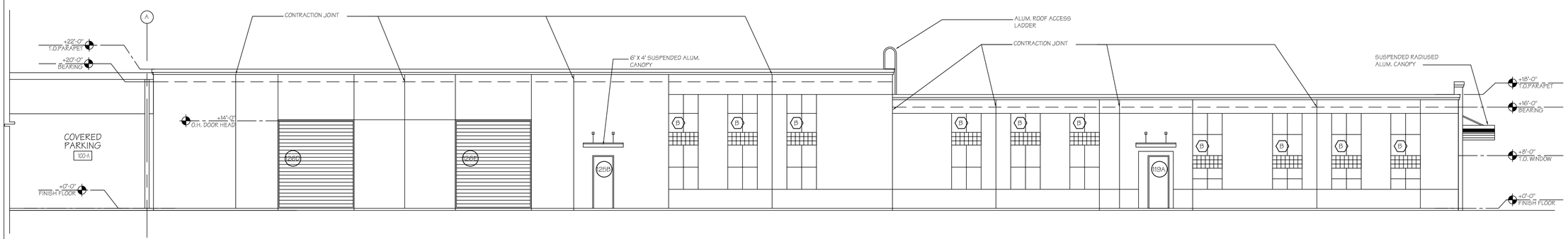
02 NORTH ELEVATION

Scale: 1/8"=1'-0"



03 SOUTH ELEVATION

Scale: 1/8"=1'-0"



04 WEST ELEVATION

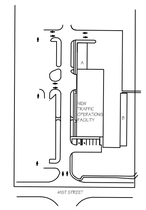
Scale: 1/8"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	07-19-2021	SCHEMATIC DESIGN
B.	10-21-2021	SCHEMATIC DESIGN PKG
C.	11-10-2021	SITE PLAN SUBMITTAL
D.	12-06-2021	PROGRESS SET
E.	02-16-2022	ENTRY REVISION
F.	02-22-2022	PERMIT / BID SET
G.	03-07-2022	SITE PLAN RE-SUBMISSION
H.	03-21-2022	PERMIT SET
I.	06-30-2022	DRAWING UPDATES
J.	07-18-2022	BLDG DEPT COMMENT RESPONSE
K.	06-30-2023	BID SET

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Consultant:

Drawing Title:

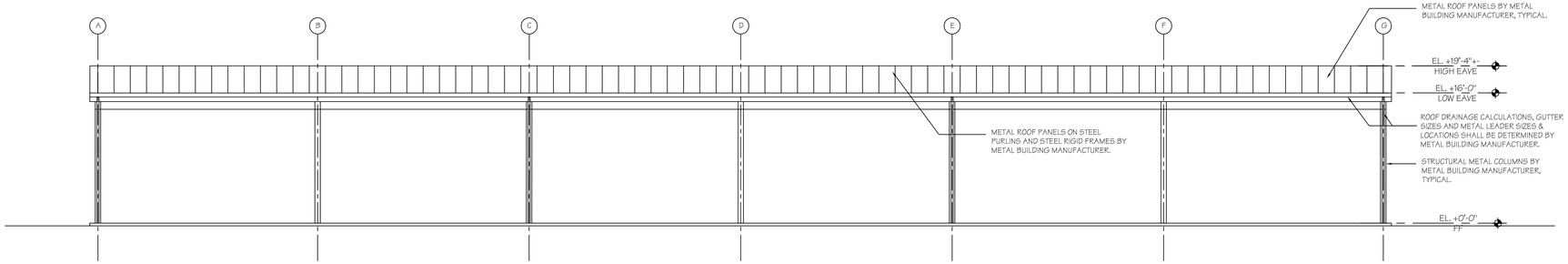
BUILDING ELEVATIONS

Cert. No. PE 62456

Date Signed:

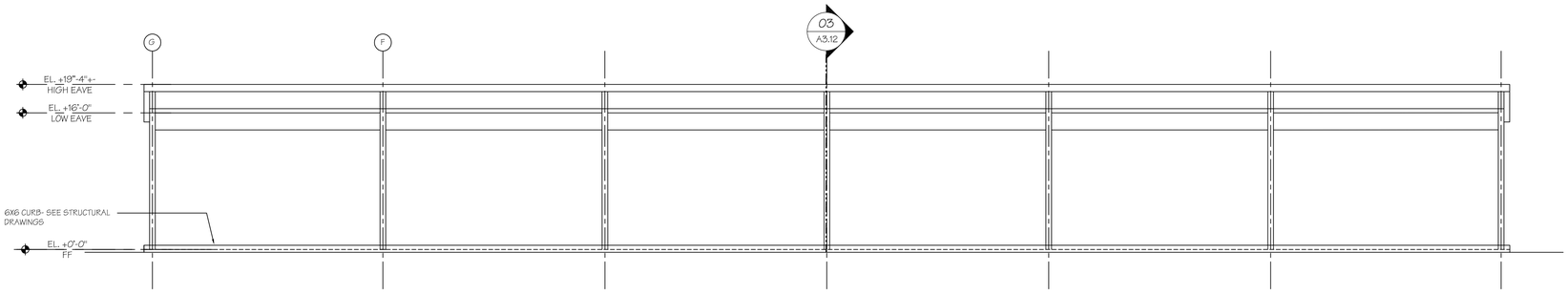
Drn:	Dwg. File:
JLH	
Chk:	XREF File:
TD	.
Project No.:	Plot File:
2021-20	.
Sheet No.:	

A3.10



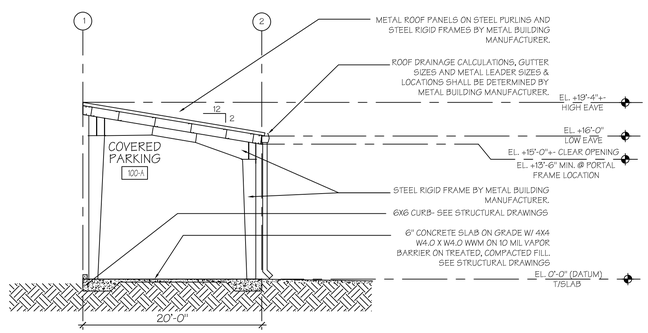
01 WEST ELEVATION - COVERED PARKING "B"

Scale: 1/8"=1'-0"



02 EAST ELEVATION - COVERED PARKING "B"

Scale: 1/8"=1'-0"



03 NORTH ELEVATION - COVERED PARKING "B"
SOUTH ELEVATION - OPP.

Scale: 1/8"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
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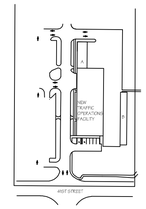
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	10-01-21	SCHEMATIC DESIGN
B.	10-21-21	SCHEMATIC DESIGN PKG
C.	12-06-2021	PROGRESS SET
D.	03-21-2022	PERMIT SET
F.	06-16-2022	FIRE DEPARTMENT COMMENT RESPONSE
G.	06-30-2023	BID SET

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Consultant:

Drawing Title:

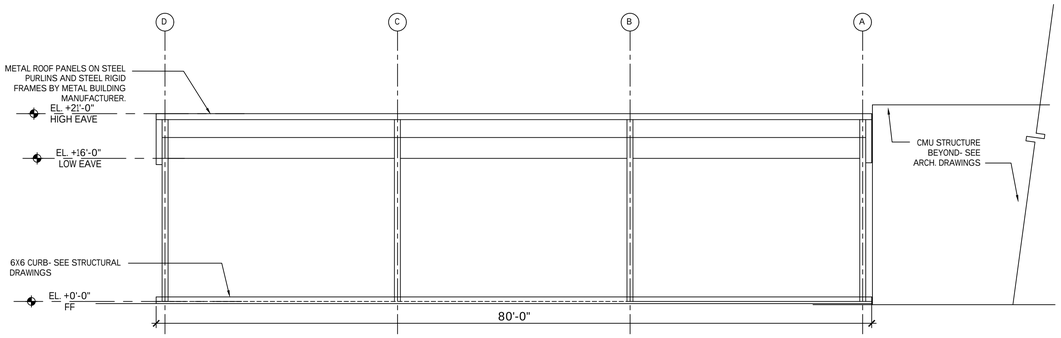
ELEVATIONS - COVERED PARKING STRUCTURE "B"

Cert. No. AR-12,456

Date Signed:

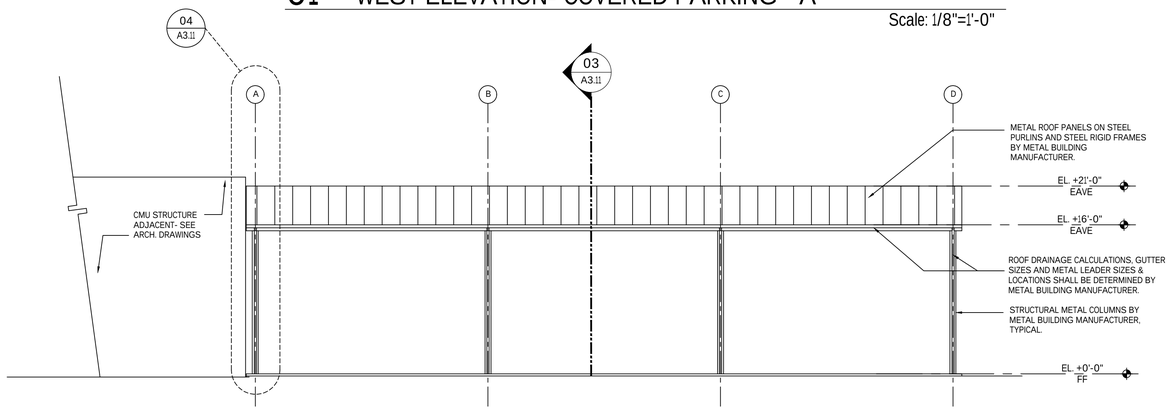
Drn:	Dwg. File:
JLH	
Chk'd:	XREF File:
TD	
Project No.:	Plot File:
2021-20	.
Sheet No.:	

A3.12



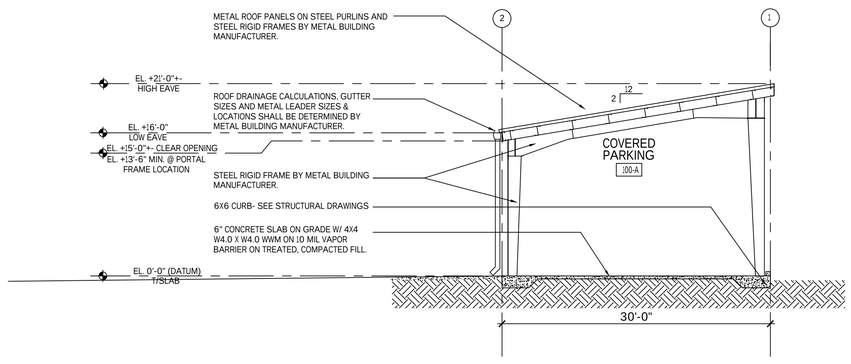
01 WEST ELEVATION- COVERED PARKING "A"

Scale: 1/8"=1'-0"



02 EAST ELEVATION- COVERED PARKING "A"

Scale: 1/8"=1'-0"



03 SOUTH ELEVATION- COVERED PARKING "A"

NORTH ELEVATION - OPP HAND.

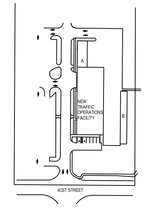
Scale: 1/8"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	10-01-21	SCHEMATIC DESIGN
B.	10-21-21	SCHEMATIC DESIGN PKG
C.	11-10-2021	SITE PLAN SUBMITTAL
D.	12-06-2021	PROGRESS SET
E.	03-21-2022	PERMIT SET
F.	06-16-2022	FIRE DEPARTMENT COMMENT RESPONSE

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Consultant:

Drawing Title:

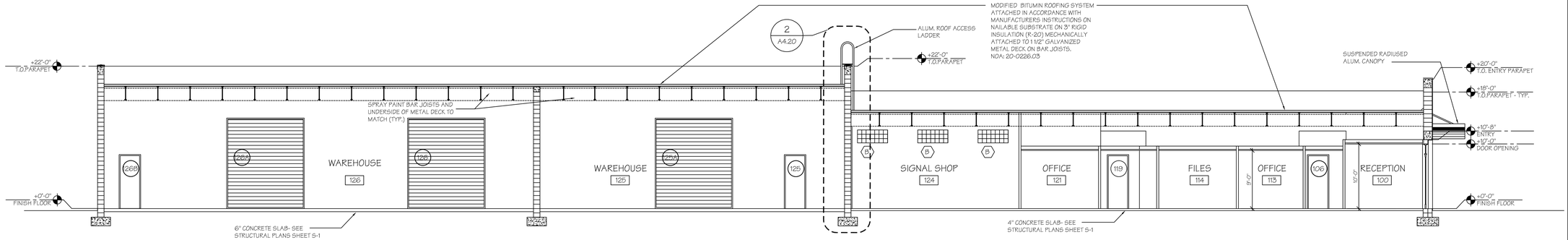
ELEVATIONS - COVERED PARKING STRUCTURE "A"

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.: A3.11

Dwg. File:
XREF File:
Plot File: .

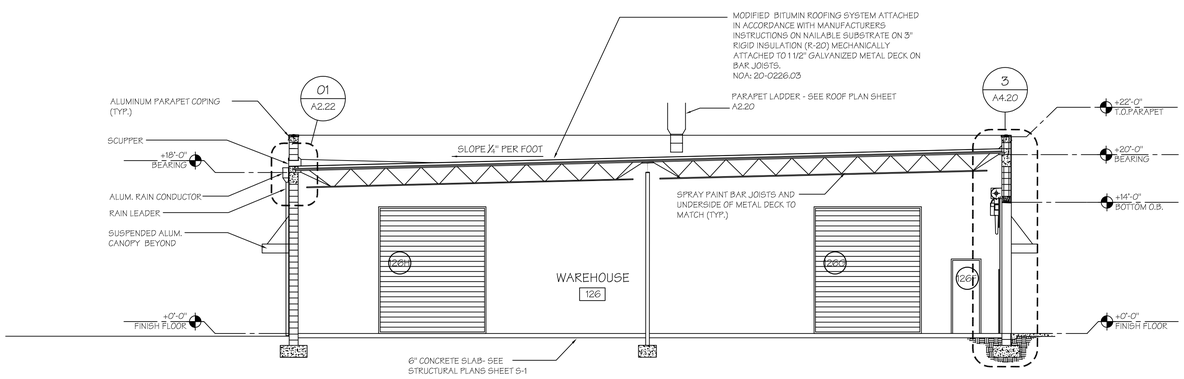
Cert. No. AR-12456

Date Signed:



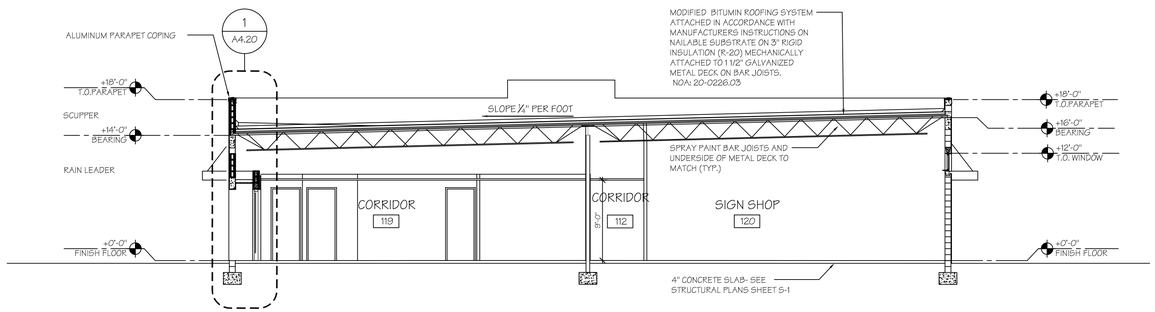
01 BUILDING SECTION

Scale: 1/8"=1'-0"



02 BUILDING SECTION

Scale: 1/8"=1'-0"



03 BUILDING SECTION

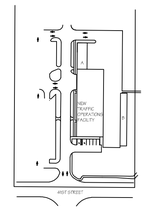
Scale: 1/8"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	12-21-2021	PROGRESS
B.	01-04-22	UPDATED
C.	02-22-22	BID/PERMIT SET
D.	03-21-22	PERMIT SET
E.	06-30-2022	DRAWING UPDATES
F.	07-18-2022	BLDG DEPT COMMENT RESPONSE
H.	06-30-23	BID SET

Architect:

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www.donadio-arch.com

Consultant:

Drawing Title:

BUILDING SECTIONS

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY ANTHONY DONADIO ON THE DATE ADJACENT TO THE SEAL USING THE SHA AUTHENTICATION CODE.

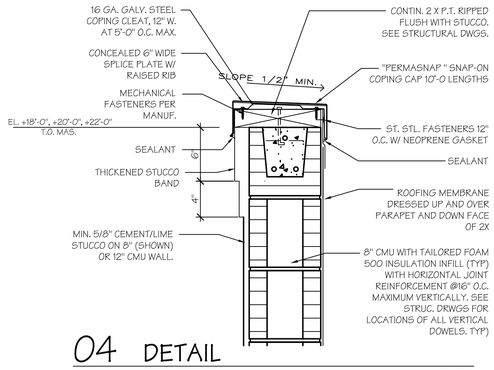
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Cert. No. AR-12456

Date Signed:

Drn:	Dwg. File:
JLH	
Chd:	XREF File:
TD	.
Project No.:	Plot File:
2021-20	.
Sheet No.:	

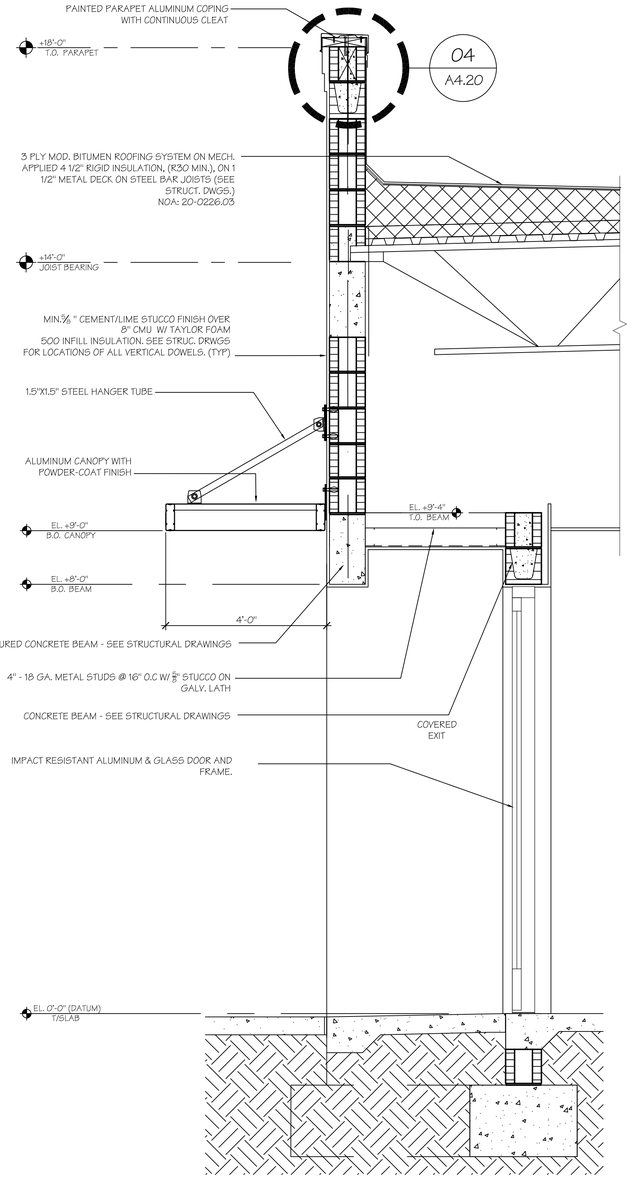
A4.10



04 DETAIL

TYPICAL PARAPET WALL

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



01 WALL SECTION

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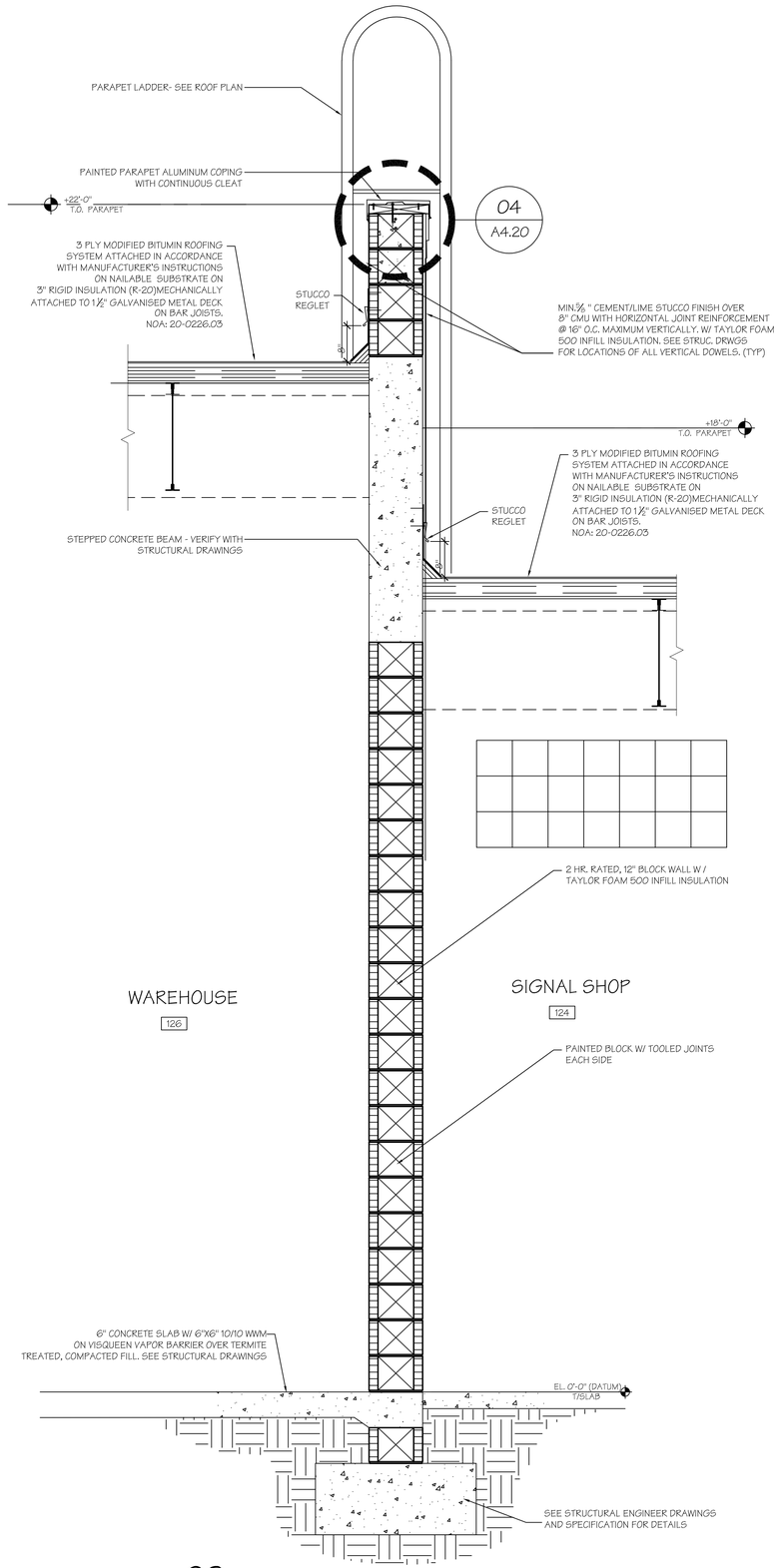
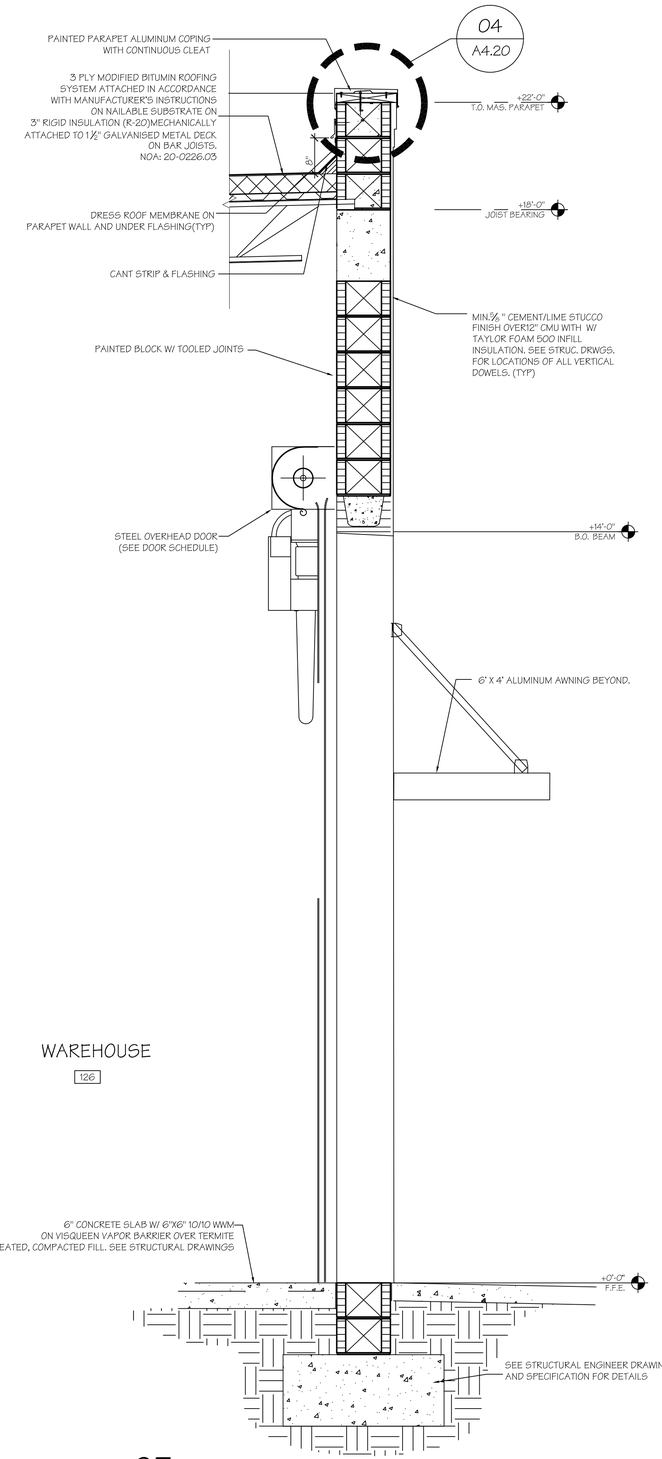


02 WALL SECTION

Scale: 3/4"=1'-0"



03 WALL SECTION

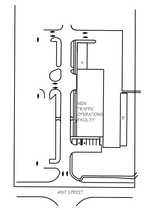
Scale: 3/4"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	12-21-2021	PROGRESS
B.	01-04-22	UPDATED
C.	02-22-22	PERMIT SET
D.	03-07-2022	SITE PLAN RE-SUBMISSION
E.	03-21-22	PERMIT SET
F.	06-30-2022	DRAWING UPDATES
G.	07-18-2022	BLDG DEPT COMMENT RESPONSE
H.	06-30-23	BID SET

Architect:

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Consultant:

Drawing Title:

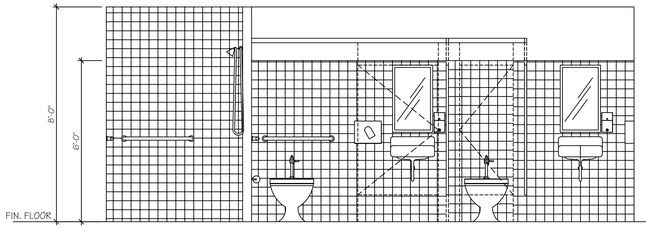
WALL SECTIONS

Dm: JLH
Chk: TD
Project No.: 2021-20
Sheet No.: A4.20

Dwg. File:
XREF File:
Plot File:

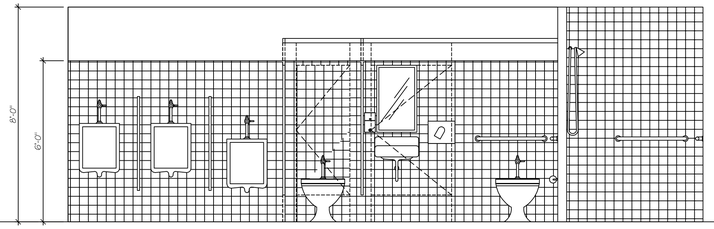
Cert. No. 62456

Date Signed:



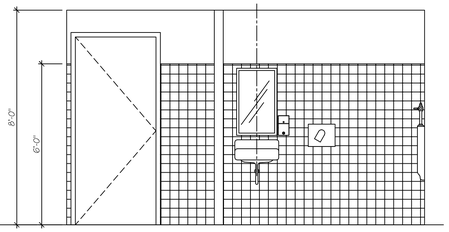
01 WOMENS RESTROOM - 118

Scale: 3/8"=1'-0"



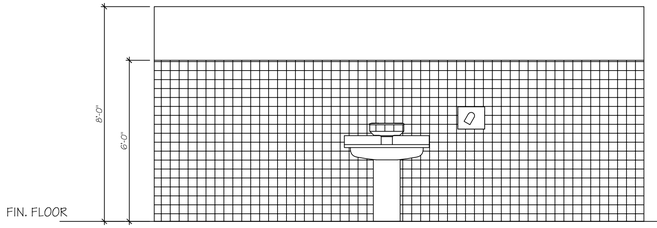
02 MENS RESTROOM - 116

Scale: 3/8"=1'-0"



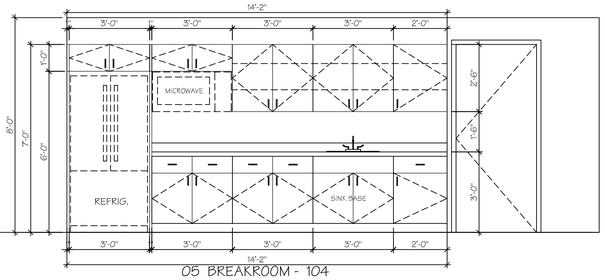
03 MENS RESTROOM - 116

Scale: 3/8"=1'-0"



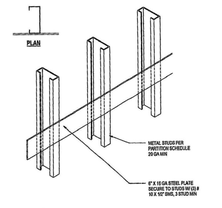
04 MENS RESTROOM - 116

Scale: 3/8"=1'-0"

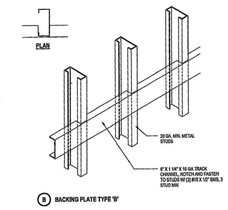


05 BREAKROOM - 104

Scale: 3/8"=1'-0"



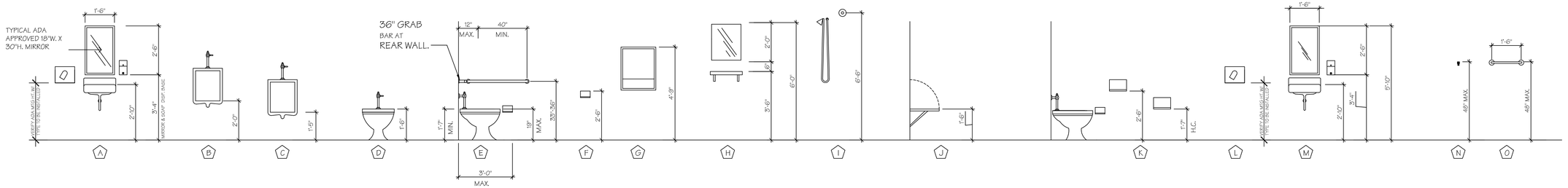
A BACKING PLATE TYPE 'A'



B BACKING PLATE TYPE 'B'

NOTES: LEGS:
1. FLANGES OF STUDS SHALL NOT BE CUT.
2. HEIGHT OF BACKING PL TO BE AS SHOWN FOR PROPER MOUNTING OF EQUIPMENT.

BACKING PLATE TYPE	EQUIPMENT	MOUNTING SCREWS
TYPE 'A'	TOILET ACCESSORIES	#10 SELF-TAPPING SCREWS
TYPE 'B'	BASE CABINETS	#12 SELF-TAPPING SCREWS
TYPE 'B'	WALL HUNG CABINETS	#14 SELF-TAPPING SCREWS
TYPE 'B'	WALL HUNG EQUIPMENT	#14 SELF-TAPPING SCREWS
TYPE 'B'	ACCESS LADDERS	#14 SELF-TAPPING SCREWS
TYPE 'B'	TOILET PARTITION BRACING	#14 SELF-TAPPING SCREWS
TYPE 'A'	GRAB BARS	PER MANUFACTURER
TYPE 'A'	HANDRAILS	PER MANUFACTURER



A ADA APPROVED ACCESSIBLE BATHROOM ACCESSORIES: FRAMED MIRROR, LAV., SOAP DISP., ELECTRIC HAND DRYER - AS INDICATED IN DRAWINGS & SPECIFICATIONS

B URINAL

C ACCESSIBLE URINAL

D WATER CLOSET

E ACCESSIBLE WATER CLOSET WITH GRAB BARS AND TOILET TISSUE DISPENSER

F SURFACE MOUNTED TOILET TISSUE DISPENSER, REFER TO SPECIFICATIONS

G SANITARY NAPKIN VENDING MACHINE

H FRAMELESS STAINLESS STEEL MIRROR AND BOOK UTILITY SHELF (NOT USED)

I SHOWER CURTAIN ROD @ 6'-6" A.F.F. HANDICAPPED SHOWER HEAD SEE SPECIFICATIONS.

J ADA FOLDING SHOWER SEAT

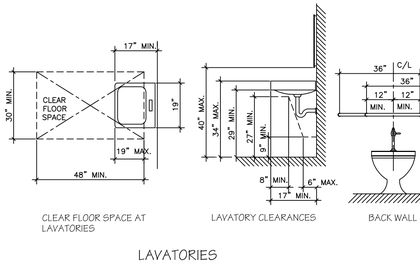
K SANITARY NAPKIN DISPOSAL UNIT AT ALL FEMALE TOILET STALLS & RESTROOMS

L SURFACE MOUNTED ELECTRIC HAND DRYER

M WALL MOUNTED LAVATORY, FRAMED MIRROR AND SOAP DISPENSER

N ADA CLOTHES HOOK

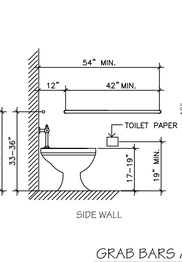
O ADA TOWEL BAR



CLEAR FLOOR SPACE AT LAVATORIES

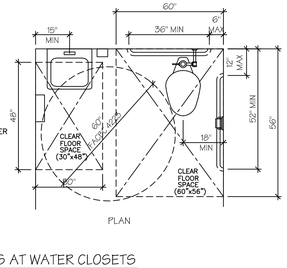
LAVATORY CLEARANCES

BACK WALL



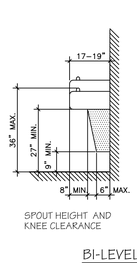
SIDE WALL

LAVATORIES

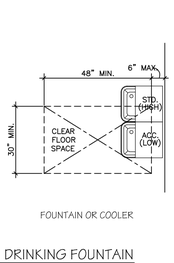


PLAN

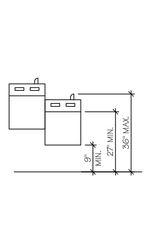
GRAB BARS AT WATER CLOSETS



SPOUT HEIGHT AND KNEE CLEARANCE



FOUNTAIN OR COOLER



BI-LEVEL DRINKING FOUNTAIN

GENERAL NOTES:

1. REFER TO FIXTURE AND ACCESSORY LEGEND FOR MOUNTING HEIGHTS (THIS SHEET)
2. GROUT AROUND ALL WALL PENETRATIONS AFTER INSTALLATION OF RESTROOM FIXTURES AND EQUIPMENT, AND PROVIDE CAULKING AS NECESSARY.
3. PROVIDE SOAP DISPENSER AT ALL LAVATORIES.
4. PROVIDE SANITARY NAPKIN DISPOSALS IN ALL FEMALE TOILET STALLS.
5. LOCATE SHUT-OFF VALVES ACCESS PANELS UNDERNEATH LAVATORY COUNTERS. PAINT TO MATCH WALL TILE FINISH AND CAULK PERIMETER OF PANEL (COLOR TO MATCH GROUT.)
9. CONTRACTOR SHALL CAULK PERIMETER OF TOILET ACCESSORIES.
10. HOT WATER AND DRAIN PIPES UNDER LAVATORIES OR SINKS SHALL BE INSULATED OR OTHERWISE PROTECTED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES OR SINKS.
11. THE STRUCTURAL STRENGTH OF GRAB BARS AND SHOWER SEATS SHALL BE DESIGNED AND SUPPORTED AS TO WITHSTAND A LOAD OF NOT LESS THAN 250 POUNDS APPLIED AT ANY POINT, DOWNWARD OR HORIZONTALLY.
12. ALL TOILET PARTITIONS ARE TO BE 6'-10" A.F.F. TO TOP OF HEADRAIL, 5'-10" A.F.F. TO THE TOP OF PANEL AND 1'-0" A.F.F. TO THE BOTTOM OF PANEL.
13. PRIVACY PANELS BETWEEN URINALS TO BE 4'-8" A.F.F. TO THE TOP OF PANEL AND 1'-2" A.F.F. TO THE BOTTOM.

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

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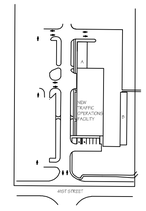
Key Plan:



Issues:

No.:	Date:	Description:
A.	07-19-2021	SCHEMATIC DESIGN
B.	07-27-2021	CONSULTANT REVIEW
C.	10-21-2021	SCHEMATIC DESIGN PKG
D.	12-06-2021	PROGRESS SET
E.	02-22-2022	BID/PERMIT SET
F.	03-21-2022	PERMIT SET
G.	07-18-2022	BLDG DEPT COMMENT RESPONSE
H.	06-30-2023	BID SET

Architect:

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Consultant:

Drawing Title:

INTERIOR ELEVATIONS
TOILET FIXTURE NOTES/ DIMENSIONS
ADA DIMENSION DETAILS

Cert. No. PA 12456

Date Signed:

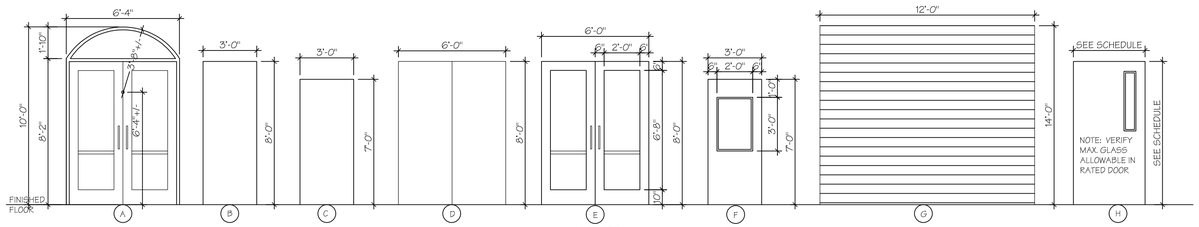
Drn:	Dwg. File:
JLH	
Chk:	XREF File:
TD	.
Project No.:	Plot File:
2021-20	.
Sheet No.:	

A5.10

DOOR SCHEDULE - BUILDING#1

DOOR NUMBER	DOOR SIZE		DOOR				FRAME							THRESHOLD	FIRE RATING (IN MINUTES)	HARDWARE GROUP	REMARKS	DOOR NUMBER
									DETAILS									
	WIDTH X HEIGHT	THICKNESS	DOOR TYPE	MATERIAL	GLASS	FINISH	FRAME TYPE	MATERIAL	SILL	STRIKE JAMB	HINGE JAMB	TRANSOM	HEAD					
100	(2) 3'-0" X 8'-0"	1 3/4"	A	SF	IRG	AN	2A	AL	S2/A6.20		J2/A6.20		H2/A6.20	ADA		03		100
100A	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		14		100A
101	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		16		101
102	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		16		102
103	3'-0" X 7'-0"	1 3/4"	F	SCW	TP	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20			17		103
104	3'-0" X 7'-0"	1 3/4"	H	SCW	RG	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-	90	19	RATED	104
104A	3'-0" X 7'-0"	1 3/4"	H	SCW	RG	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-	90	19	RATED	104A
105	3'-0" X 7'-0"				-											02	GYP. OPENING	105
106	3'-0" X 8'-0"	1 3/4"	B	HM	-	F	1	HM	S4/A6.20		J4/A6.20		H4/A6.20	-		06		106
107	NOT USED													-		02		107
108	3'-0" X 7'-0"				-											02	GYP. OPENING	108
109	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		12		109
110	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		14	180° HINGE	110
111	(2) 3'-0" X 7'-0"	1 3/4"	D	SCW	-	F	4	HM	S1/A6.20		J1/A6.20		H1/A6.20	-	90	07	RATED	111
112	4'-0" X 8'-0"	1 3/4"	H	HM	RG	F	5	HM	S6/A6.21		J6/A6.21		H6/A6.21	-	90	11	RATED	112
113	3'-0" X 7'-0"				-									-		02	GYP. OPENING	113
114	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		17		114
115	NOT USED													-		02		115
116	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		15		116
116A	3'-0" X 7'-0"		C.O.					GYP.								02	GYP. OPENING W/ 6" CT WAINSCOT - WRAP JAMBS	116A
117	3'-0" X 7'-0"	1 3/4"	C	SCW		F	4	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		13		117
118	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	4	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		15		118
118A	3'-0" X 7'-0"		C.O.					GYP.								02	GYP. OPENING W/ 6" CT WAINSCOT - WRAP JAMBS	118A
119	3'-0" X 8'-0"	1 3/4"	H	SF	IRG	AN	1	AL	S5/A6.21		J5/A6.21		H5/A6.21	-		04		119
119A	3'-0" X 8'-0"	1 3/4"	H	SF	IRG	AN	1	AL	S5/A6.21		J5/A6.21		H5/A6.21	-		04		119A
120	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		11		120
120A	(2) 3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	4	HM	S1/A6.20		J1/A6.20		H1/A6.20			10		120A
120B	(2) 3'-0" X 8'-0"	1 3/4"	C	SCW	-	F	4	HM	S6/A6.21		J6/A6.21		H6/A6.21		90	09	RATED	120B
121	3'-0" X 7'-0"				-									-		02	GYP. OPENING	121
122	3'-0" X 7'-0"				-									-		02	GYP. OPENING	122
122A	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		18		122A
123	(2) 3'-0" X 8'-0"	1 3/4"	D	HM	-	F	2	HM	S3/A6.20		J3/A6.20		H3/A6.20	-		05		123
124	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S1/A6.20		J1/A6.20		H1/A6.20	-		11		124
124A	(2) 3'-0" X 7'-0"	1 3/4"	C	SCW		F	4	HM	S6/A6.21		J6/A6.21		H6/A6.21	-	90	08	RATED	124A
125	3'-0" X 8'-0"	1 3/4"	B	HM	--	F	1		S3/A6.20		J3/A6.20		H3/A6.20			06		125
125A	12'-0" X 14'-0"	-	G			F			S8/A6.21		J8/A6.21		H8/A6.21			01	OVERHEAD DOOR	125A
125B	3'-0" X 8'-0"	1 3/4"	B	HM	--	F	1	HM	S3/A6.20		J3/A6.20		H3/A6.20			06		125B
126	12'-0" X 14'-0"	-	G		-	F			S8/A6.21		J8/A6.21		H8/A6.21	-		01	OVERHEAD DOOR	126
126A	12'-0" X 14'-0"	-	G		-	F			S8/A6.21		J8/A6.21		H8/A6.21	-		01	OVERHEAD DOOR	126A
126B	3'-0" X 8'-0"	1 3/4"	B	HM	-	F	1	HM	S3/A6.20		J3/A6.20		H3/A6.20	-		06		126B
126C	3'-0" X 8'-0"	1 3/4"	B	HM	-	F	1	HM	S3/A6.20		J3/A6.20		H3/A6.20	-		06		126C
126D	12'-0" X 14'-0"	-	G		-	F			S8/A6.21		J8/A6.21		H8/A6.21	-		01	OVERHEAD DOOR	126D
126E	12'-0" X 14'-0"	-	G		-	F			S8/A6.21		J8/A6.21		H8/A6.21	-		01	OVERHEAD DOOR	126E
126F	3'-0" X 7'-0"	1 3/4"	C	SCW	-	F	3	HM	S3/A6.20*		J3/A6.20*		H3/A6.20*			14		126F
126G	12'-0" X 14'-0"	-	G	-	-	F	-	-	S8/A6.21		J8/A6.21		H8/A6.21			01	OVERHEAD DOOR	126G
126H	12'-0" X 14'-0"	-	G	-	-	F	-	-	S8/A6.21		J8/A6.21		H8/A6.21			01	OVERHEAD DOOR	126H

AL = ALUMINUM
ALG = ALUMINUM & GLASS
LVR = FULL LOUVER
HCW = HOLLOW CORE WOOD
SCW = SOLID CORE WOOD
WD = WOOD
CL = CHAIN LINK
HM = HOLLOW METAL
STL = STEEL
TP = TEMPERED
GYP = GYPSUM BOARD
SFG = SAFETY GLASS
FRE = FRENCH SINGLE LITE
WR = WIRE GLASS
AN = ANODIZED
PL = PLASTIC LAMINATE
SF = STOREFRONT
BV = BIRCH VENEER
IRG = IMPACT RATED GLASS
RG = RATED GLASS (FIRE LIGHT PLUS)
F = FACTORY FINISH
P = PAINT
K = KYNAR

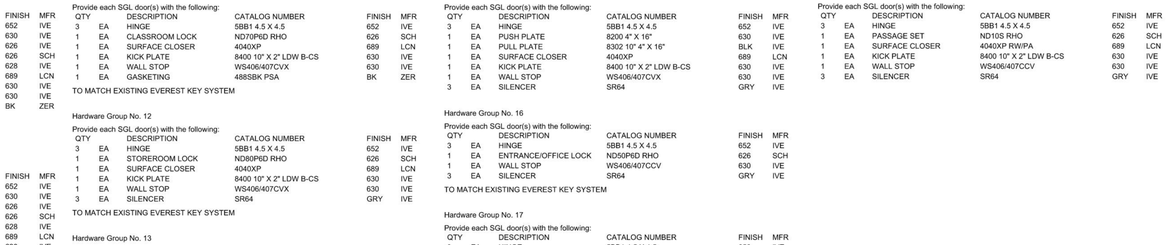


BASIS OF DESIGN:
KAWNEER IR 500
INSULATED; IMPACT RESISTANT STOREFRONT DOORS
FL PRODUCT APPROVAL: FL8787.R12.

NOT USED

01 DOOR TYPES

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



02 FRAME TYPES

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

BASIS OF DESIGN:
SEVES GLASS BLOCK;
HIGH PERFORMANCE HURRICANE RESISTANT
NOA: 20-1110.06

BASIS OF DESIGN:
KAWNEER FG625-LMI INSULATED; IMPACT RESISTANT.
FL PRODUCT APROVAL: FL10845-R6

03 WINDOW TYPES

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

GENERAL NOTES:

1- ALL FIRE RATED DOORS AND FRAMES TO BE UL TESTED AND APPROVED.

2- ALL PARTITIONS UNLESS CONSTRUCTED FULL HEIGHT TO BE TERMINATED 1'-0" ABOVE HIGHEST ADJACENT CEILING.

3- ALL EXTERIOR WINDOWS TO BE FIXED STOREFRONT WITH MUNTINS WHERE INDICATED.
ALL EXTERIOR GLASS TO BE TINTED GRAY.

Hardware Group No. 01
Provide each RU door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR

ALL HARDWARE BY DOOR MANUFACTURER

Hardware Group No. 02
Provide each CO door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR

CASED OPEN FRAME

Hardware Group No. 03
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CYLINDER	AS REQUIRED	626	SCH

STOREFRONT OPENING TO MEET FBC NOA
SUPPLIER SHALL COORDINATE WITH STOREFRONT SUPPLIER TO VERIFY CYLINDER

Hardware Group No. 04
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CYLINDER	AS REQUIRED	626	SCH

STOREFRONT OPENING TO MEET FBC NOA
SUPPLIER SHALL COORDINATE WITH STOREFRONT SUPPLIER TO VERIFY CYLINDER

Hardware Group No. 05
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	SURFACE BOLT	SB360 12" T	US2C	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO	626	SCH
1	EA	LOCK GUARD	LG12	630	IVE
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	MOUNTING BRACKET	MB AS REQ	689	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	RAIN DRIP	11A	A	ZER
1	EA	GASKETING	8144SBK PSA	BK	ZER
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	566A	A	ZER

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 06
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	CD-HH-99-L-NL-06-299F-SNB	626	VON
1	EA	RIM CYLINDER	20-057 ICX	626	SCH
1	EA	MORTISE CYLINDER	20-061 ICX	626	SCH
2	EA	CORE	AS REQUIRED	626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	RAIN DRIP	11A	A	ZER
1	EA	GASKETING	8144SBK PSA	BK	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	566A	A	ZER

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 07
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	CONST LATCHING BOLT	FB61P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
2	EA	WALL STOP	WS406/407CVX	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

FLAT ASTRAGAL BY DOOR SUPPLIER
TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 08
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	CONST LATCHING BOLT	FB61P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	SCH
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	SURFACE CLOSER	4040XP RW/62A	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
2	EA	WALL STOP	WS406/407CVX	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

FLAT ASTRAGAL BY DOOR SUPPLIER
TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 09
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	CONST LATCHING BOLT	FB61P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	SCH
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	SURFACE CLOSER	4040XP RW/62A	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
2	EA	WALL STOP	WS406/407CVX	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

FLAT ASTRAGAL BY DOOR SUPPLIER
TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 10
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
2	EA	OH STOP	450S	652	GLY
2	EA	SILENCER	SR64	GRY	IVE

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 11
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CVX	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 12
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO	626	SCH
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CVX	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 13
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO	626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 14
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CVX	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 15
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PUSH PLATE	8200 4" X 16"	630	IVE
1	EA	PULL PLATE	8302 10" 4" X 16"	BLK	IVE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CVX	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 16
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	ENTRANCE/OFFICE LOCK	ND50P6D RHO	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 17
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE SET	ND10S RHO	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 18
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

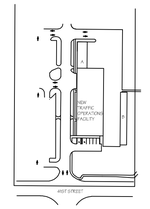
TO MATCH EXISTING EVEREST KEY SYSTEM

Hardware Group No. 19
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE SET	ND10S RHO	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY
4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	08-10-21	CLIENT REVIEW
B.	10-07-21	SCHEDULE UPDATES
C.	10-21-21	SCHEMATIC DESIGN PKG
D.	12-06-21	PROGRESS SET
E.	02-22-22	BID/PERMIT SET
F.	03-21-22	PERMIT SET
G.	06-30-2022	DRAWING UPDATES
H.	07-05-2022	BLDG DEPT COMMENT RESPONSE
I.	06-30-23	BID SET

Architect:

DONADIO & Associates, Architects P.A.
2001 9th Avenue, Suite 308
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Tel.772.794.2829
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www.donadio-arch.com

Consultant:

Drawing Title:
DOOR SCHEDULE

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ANTHONY J. DONADIO STATE OF FLORIDA REGISTERED ARCHITECT

Cert. No. AR0012456

Date Signed:

Drn: JLH
Chk: TD
Project No.: 2021-20
Sheet No.: A6.10
Dwg. File:
XREF File:
Plot File:

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME / LOCATION	FLOOR MATERIAL	BASE MATERIAL	WALL NORTH MATERIAL	WALL NORTH FINISH	WALL SOUTH MATERIAL	WALL SOUTH FINISH	WALL EAST MATERIAL	WALL EAST FINISH	WALL WEST MATERIAL	WALL WEST FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	REMARKS	ROOM NUMBER
100	RECEPTION	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		100
101	OFFICE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		101
102	OFFICE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		102
103	CONFERENCE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		103
104	BREAK ROOM	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		104
105	SIGN TECH	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		105
106	SOUTH CORRIDOR	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		106
107	COPIER	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		107
108	FUTURE OFFICE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		108
109	DATA	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		109
110	CLOSET	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		110
111	STORAGE	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		111
112	CENTRAL CORRIDOR	CPT/VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		112
113	FUTURE OFFICE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		113
114	FILE ROOM	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		114
115	TIME CLOCK / MAIL	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		115
116	MENS RESTROOM	CT	CTB	MRB	CT	MRB	CT	MRB	CT	MRB	CT	GYP	PNT	8'-0"	6"-0" WAINSCOT. CERAMIC TILE FLOORS NON-SLIP AND SEALED.	116
116A	MENS SHOWER	CT	CTB	CBB	CT	CBB	CT	CBB	CT	CBB	CT	GYP	PNT	8'-0"	CERAMIC TILE FLOORS NON-SLIP, FULL HT. CERAMIC TILE SHOWER W/ CBB.	116A
117	JANITOR	VCT	RB	GYP	PNT	MRB	PNT	GYP	PNT	MRB	PNT	GYP	PNT	9'-0"		117
118	WOMENS RESTROOM	CT	CTB	MRB	CT	MRB	CT	MRB	CT	MRB	CT	GYP	PNT	8'-0"	6"-0" WAINSCOT. CERAMIC TILE FLOORS NON-SLIP AND SEALED.	118
118A	WOMENS SHOWER	CT	CTB	CBB	CT	CBB	CT	CBB	CT	CBB	CT	GYP	PNT	8'-0"	CERAMIC TILE FLOORS NON-SLIP, FULL HT. CERAMIC TILE SHOWER W/ CBB.	118A
119	NORTH CORRIDOR	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		119
120	SIGN SHOP	SLC	RB	CMU	PNT	GYP	PNT	GYP	PNT	CMU	PNT	EXP	PNT	VARIES	TOOLED JOINTS	120
120A	STORAGE	SLC	RB	CMU	PNT	GYP	PNT	GYP	PNT	CMU	PNT	EXP	PNT	VARIES		120A
121	FUTURE OFFICE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		121
122	OFFICE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		122
122A	CLOSET	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	F	9'-0"		122A
123	MECHANICAL	SLC	—	GYP	PNT	GYP	PNT	CMU	PNT	GYP	PNT	EXP	PNT	VARIES		123
124	SIGNAL SHOP	SLC	RB	CMU	PNT	GYP	PNT	CMU	PNT	GYP	PNT	EXP	PNT	VARIES	TOOLED JOINTS	124
125	WAREHOUSE (A/C)	SLC	—	CMU	PNT	CMU	PNT	CMU	PNT	CMU	PNT	EXP	PNT	VARIES	TOOLED JOINTS	125
126	WAREHOUSE	SLC	—	CMU	PNT	CMU	PNT	CMU	PNT	CMU	PNT	EXP	PNT	VARIES	TOOLED JOINTS	126
	COVERED PARKING STRUCTURES															
100-A	COVERED PARKING "A"	C	—	—	—	—	—	—	—	—	—	EXP	F	VARIES	CONC FLOOR/ EXPOSED STRUCTURE. PROVIDE ELEC. FOR FUTURE	100-A
100-B	COVERED PARKING "B"	C	—	—	—	—	—	—	—	—	—	EXP	F	VARIES	CONCRETE FLOOR/ EXPOSED STRUCTURE	100-B

FLOOR
- LIN -LINOLEUM
- CT -CERAMIC TILE
- C -CONCRETE
- CMT -CERAMIC MOSAIC TILE
- CPT -CARPET
- STL -STEEL
- SLC -SEALED CONCRETE W/ COLORED SEALER
- WDF -WOOD FLOOR
- VCT -VINYL COMPOSITION TILE

BASE
- RB -RUBBER BASE
- WB -WOOD BASE
- CTB -CERAMIC TILE BASE

WALL
- GYP -GYPSUM BOARD
- MRB -MOISTURE RESISTANT BOARD
- CBB -CEMENTITIOUS BACKER BOARD
- CT -CERAMIC TILE
- ST -STUCCO
- CMU -CONC. M.A.S. UNIT
- WDP -WOOD PANELING

CEILING
- GYP -GYPSUM BOARD
- ACT -ACCOUSTICAL TILE
- VNP -VENEER PLASTER
- EXP -EXPOSED STRUCTURE
- WDC -WOOD CEILING
- C -CONCRETE

FINISH
- P -PAINT
- F -FACTORY
- STN -STAIN
- S -SEALED

TRAFFIC OPERATIONS BUILDING INTERIOR SIGN CHART

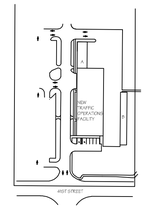
ROOM#	ROOM NAME / LOCATION
100	RECEPTION
101	OFFICE
102	OFFICE
103	CONFERENCE
104	BREAK ROOM
105	SIGN TECH
106	SOUTH CORRIDOR
107	COPIER
108	FUTURE OFFICE
109	DATA
110	CLOSET
111	STORAGE
112	CENTRAL CORRIDOR
113	FUTURE OFFICE
114	FILE ROOM
115	TIME CLOCK / MAIL
116	MENS RESTROOM
117	JANITOR
118	WOMENS RESTROOM
119	NORTH CORRIDOR
120	SIGN SHOP
120A	STORAGE
121	FUTURE OFFICE
122	OFFICE
122A	CLOSET
123	MECHANICAL
124	SIGNAL SHOP
125	WAREHOUSE (A/C)
126	WAREHOUSE
100-A	COVERED PARKING "A"
100-B	COVERED PARKING "B"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



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C.	12-06-2021	PROGRESS SET
D.	02-22-22	BID/ PERMIT SET
E.	03-21-22	PERMIT SET
F.	06-30-2022	DRAWING UPDATES
G.	07-18-2022	BLDG DEPT COMMENT RESPONSE
I.	06-30-23	BID SET

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Consultant:

Drawing Title:

ROOM FINISH SCHEDULE

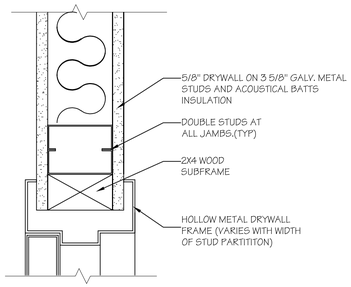
Cert. No. [illegible]2,456

Date Signed:

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:

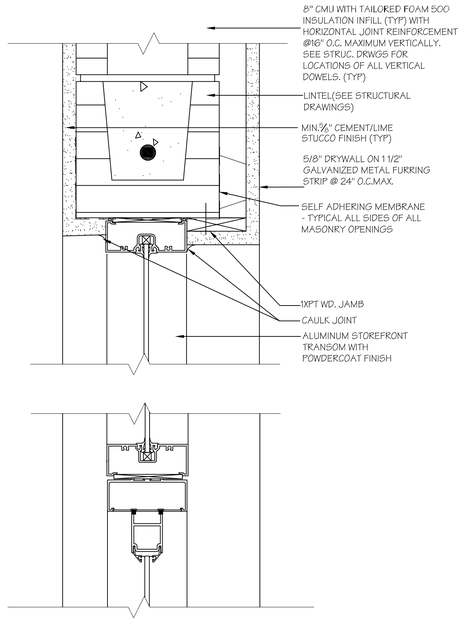
Dwg. File: .
XREF File: .
Plot File: .

A6.11



H1 HEAD DETAIL

SCALE: 3"=1'-0"



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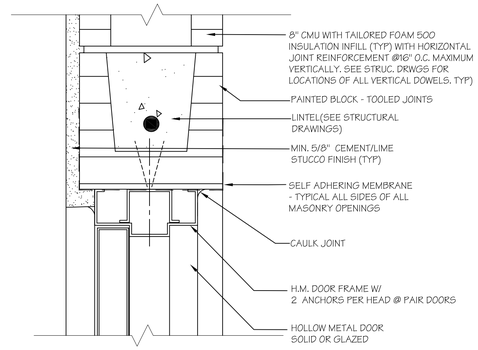


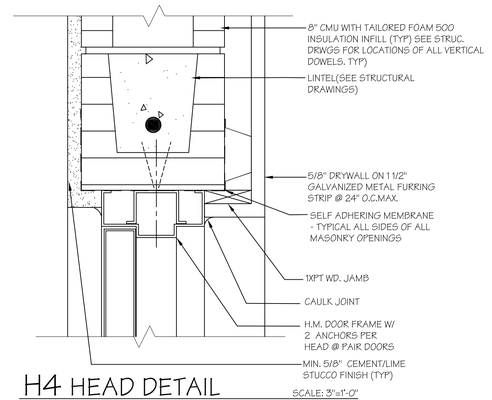
H3 HEAD DETAIL

SCALE: 3"=1'-0"

* DOOR 127F HAS NO STUCCO - PAINT BLOCK TOOLED JOINTS EA. SIDE

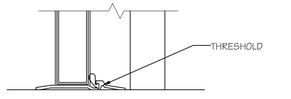
GENERAL NOTES:

- INSTALL LIQUID APPLIED OR PEEL AND STICK FLASHING AT ALL EXTERIOR MASONRY OPENINGS PER FBC 1405.4.
- INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



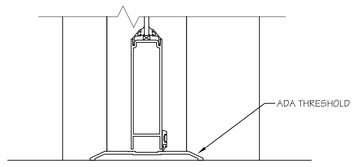
H4 HEAD DETAIL

SCALE: 3"=1'-0"



S1 SILL DETAIL

SCALE: 3"=1'-0"



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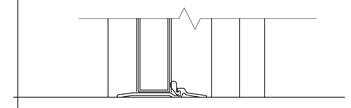

S3 SILL DETAIL

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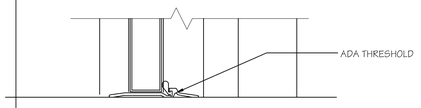
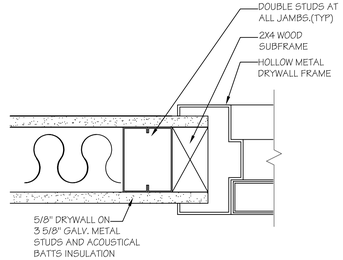


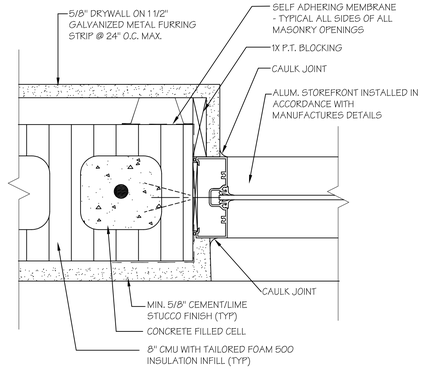
S4 SILL DETAIL

SCALE: 3"=1'-0"



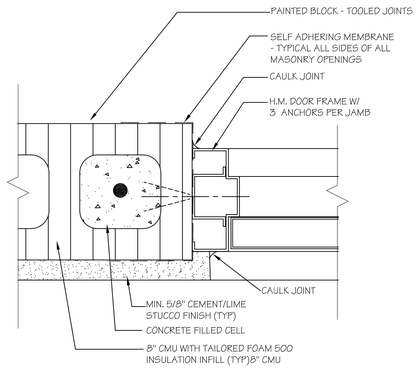
J1 JAMB DETAIL

SCALE: 3"=1'-0"



J2 JAMB DETAIL

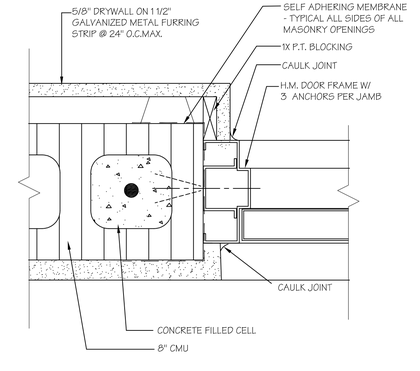
SCALE: 3"=1'-0"



J3 JAMB DETAIL

SCALE: 3"=1'-0"

* DOOR 127F HAS NO STUCCO - PAINT BLOCK TOOLED JOINTS EA. SIDE



J4 JAMB DETAIL

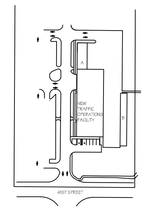
SCALE: 3"=1'-0"

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
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Consultant:

Drawing Title:

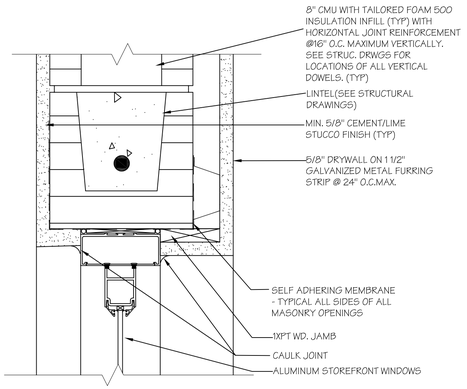
DOOR DETAILS

Dm: JLH
Chd: TD
Project No.: 2021-20
Sheet No.: A6.20

Dwg. File:
XREF File:
Plot File:

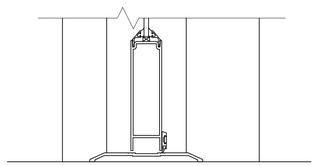
Cert. No. AR 16,456

Date Signed:



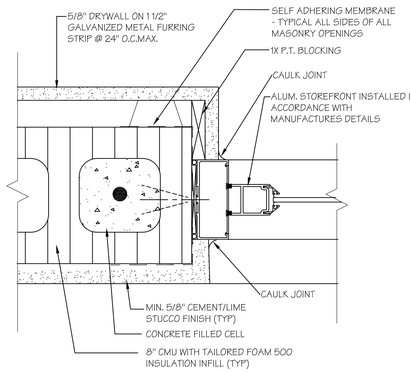
H5 HEAD DETAIL

SCALE: 3"=1'-0"



S5 SILL DETAIL

SCALE: 3"=1'-0"



J5 JAMB DETAIL

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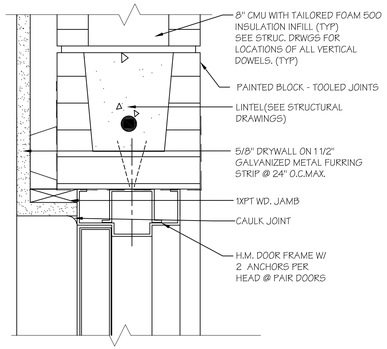
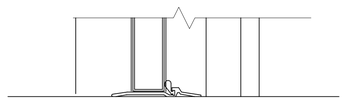


H6 HEAD DETAIL

SCALE: 3"=1'-0"

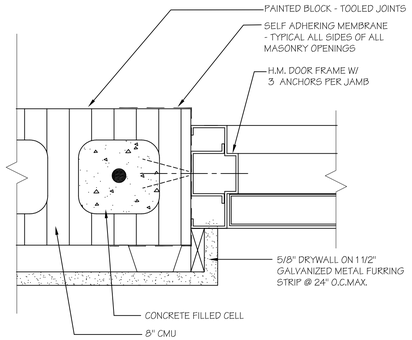
SEE SCHED. FOR RATED ASSEMBLIES



S6 SILL DETAIL

SCALE: 3"=1'-0"

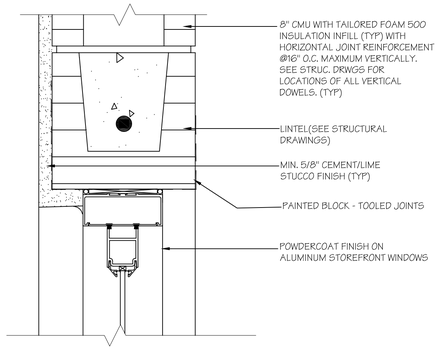
SEE SCHED. FOR RATED ASSEMBLIES



J6 JAMB DETAIL

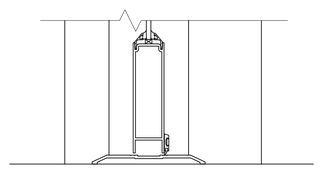
SCALE: 3"=1'-0"

SEE SCHED. FOR RATED ASSEMBLIES



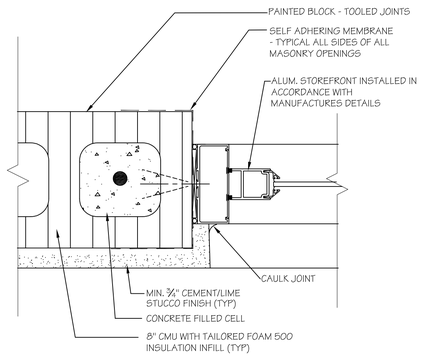
H7 HEAD DETAIL

SCALE: 3"=1'-0"



S7 SILL DETAIL

SCALE: 3"=1'-0"

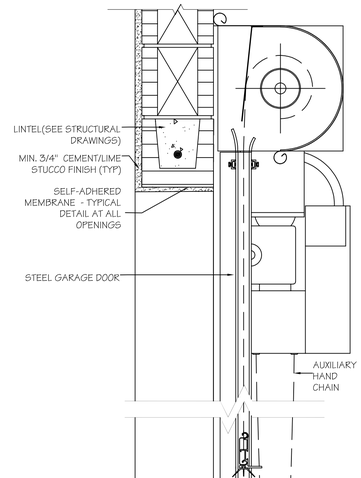


J7 JAMB DETAIL

SCALE: 3"=1'-0"

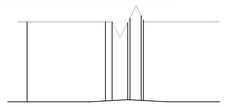
GENERAL NOTES:

- INSTALL LIQUID APPLIED OR PEEL AND STICK FLASHING AT ALL EXTERIOR MASONRY OPENINGS PER FBC 1405.4.
- INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



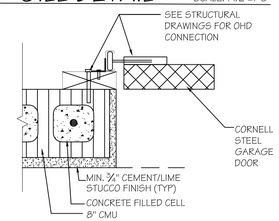
H8 HEAD DETAIL

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



S8 SILL DETAIL

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



J8 JAMB DETAIL

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

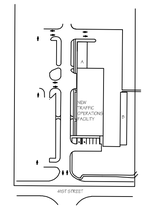
Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

INDIAN RIVER COUNTY FLORIDA

4548 41st Street
Vero Beach FL
32967

Key Plan:



Issues:

No.:	Date:	Description:
A.	08.10.21	CLIENT REVIEW
B.	12-06-2021	PROGRESS SET
C.	03-21-22	PERMIT SET
D.	07-05-2022	BLDG DEPT COMMENT RESPONSE
E.	06-30-23	BID SET

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Consultant:

Drawing Title:

DOOR DETAILS

THE ORIGINAL SEALED AND SIGNED PLAN SHEET AND SEALED BY ANTHONY DONADIO ON THE DATE ADJACENT TO THE SEAL USING THE SHA AUTHENTICATION CODE.

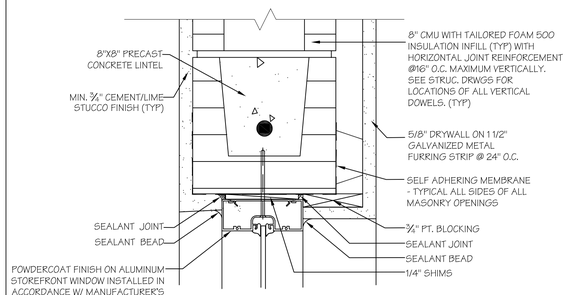
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Dm: JLH
Chk: TD
Project No.: 2021-20
Sheet No.: A6.21

Dwg. File:
XREF File:
Plot File: .

Cert. No. [illegible]6,456

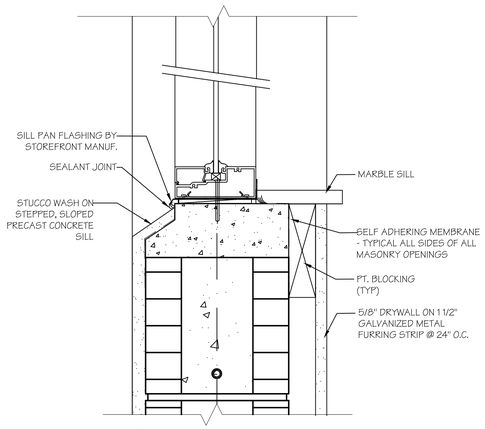
Date Signed:



1 DETAIL HEAD

SCALE: 3"=1'-0"

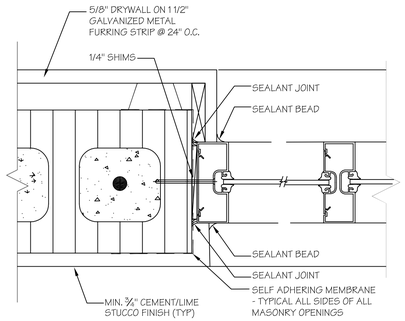
1 / A6.22



2 DETAIL SILL

SCALE: 3"=1'-0"

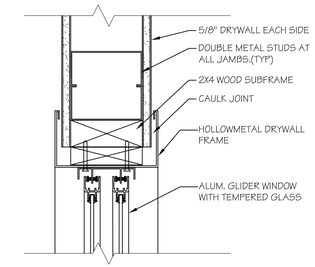
2 / A6.22



3 DETAIL JAMB

SCALE: 3"=1'-0"

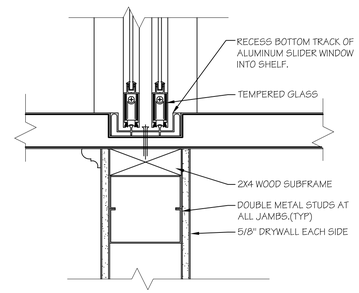
3 / A6.22



3 DETAIL HEAD

SCALE: 3"=1'-0"

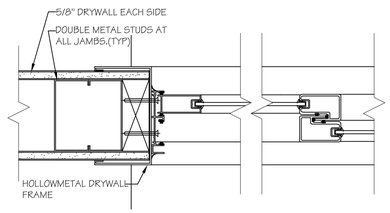
3 / A6.22



4 DETAIL SILL

SCALE: 3"=1'-0"

4 / A6.22



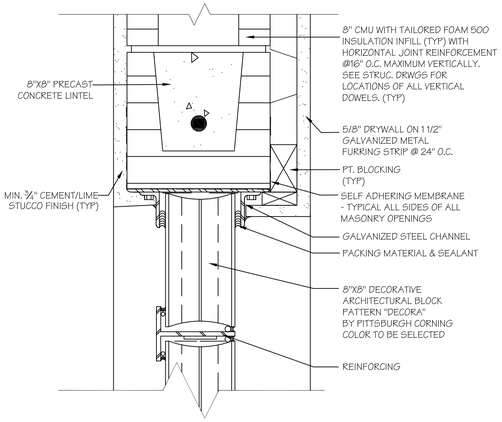
5 DETAIL JAMB

SCALE: 3"=1'-0"

5 / A6.22

GENERAL NOTES:

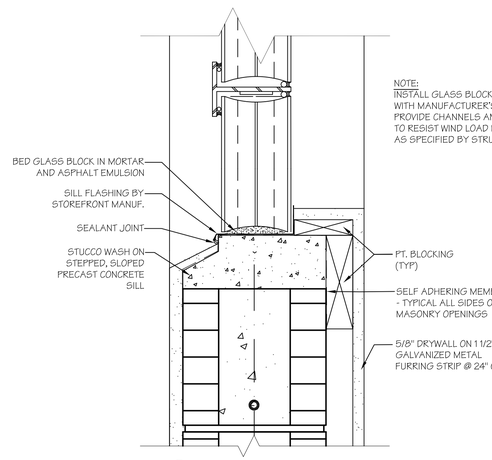
- INSTALL LIQUID APPLIED OR PEEL AND STICK FLASHING AT ALL EXTERIOR MASONRY OPENINGS PER FBC 1405.4.
- INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



7 DETAIL HEAD

SCALE: 3"=1'-0"

7 / A6.22

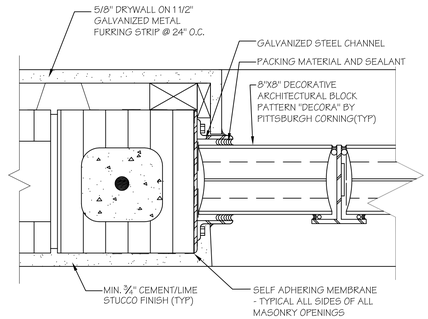


NOTE:
INSTALL GLASS BLOCK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE CHANNELS AND ATTACHMENTS TO RESIST WIND LOAD REQUIREMENTS AS SPECIFIED BY STRUCTURAL ENGINEER

8 DETAIL SILL

SCALE: 3"=1'-0"

8 / A6.22



9 DETAIL JAMB

SCALE: 3"=1'-0"

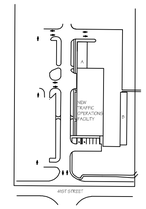
9 / A6.22

Project:

NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:



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Architect:

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Consultant:

Drawing Title:

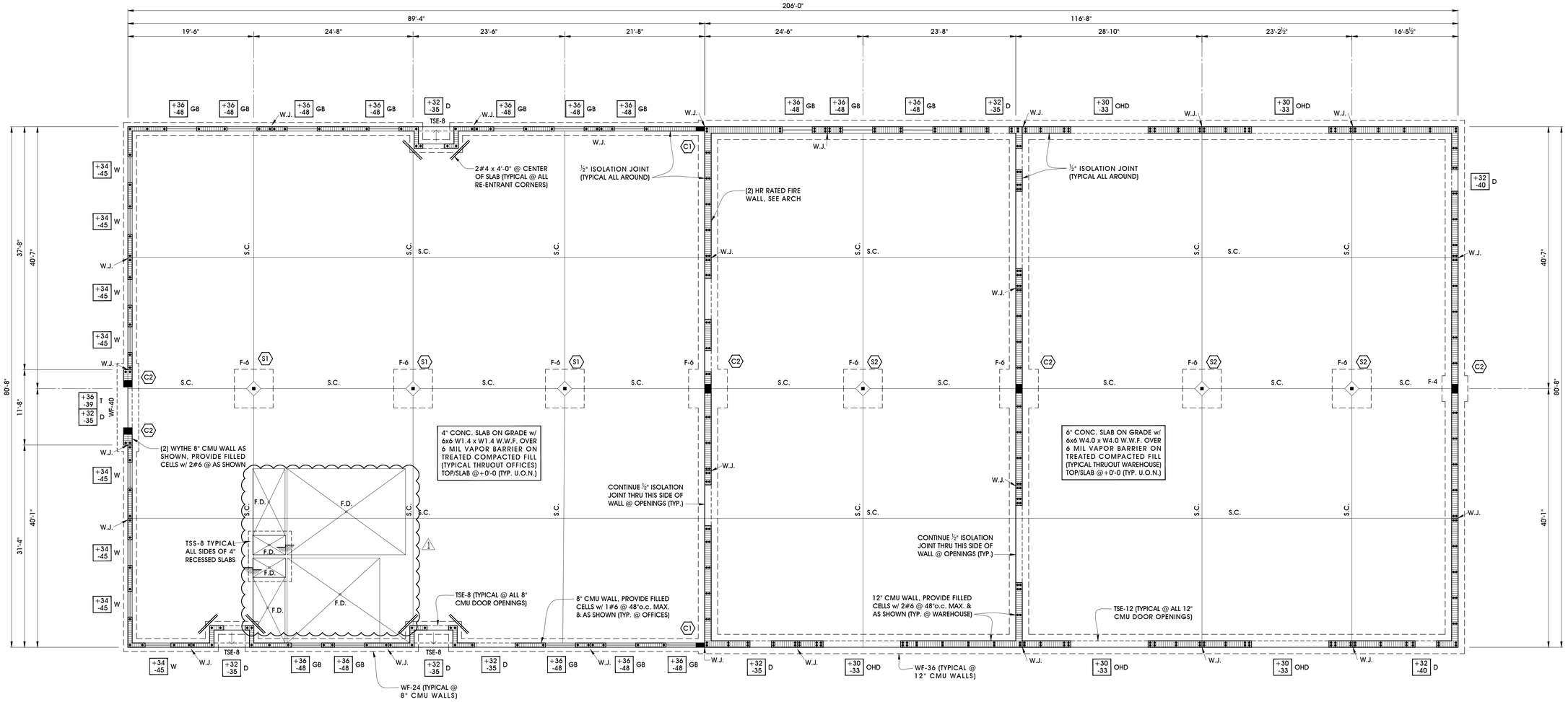
WINDOW DETAILS

Dm: JLH
Chk: TD
Project No.: 2021-20
Sheet No.: A6.22

Dwg. File: .
XREF File: .
Plot File: .

Cert. No. PE 62,456

Date Signed:



FOUNDATION PLAN

1/8" = 1'-0"

NOTES:

1. ALL ELEVATIONS REFER TO TOP OF FLOOR SLAB @ +0'-0" (SEE SITE PLAN FOR ACTUAL ELEVATION). TOP OF FOUNDATIONS @ -1'-4" (U.N.O.)
2. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS & DIMENSIONS OF ALL PROJECT REQUIREMENTS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
3. ALL DIMENSIONS ARE TO ROUGH OPENING OR CENTERLINE OF STRUCTURE (TYPICAL, UNLESS OTHERWISE NOTED).
4. SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN.
5. S.C.: DENOTES 1/8" WIDE x 1" DEEP SAW CUTS IN SLAB AS SHOWN IN PLAN, TO BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM BEING DISLODGED BY THE SAW BLADE.
6. I.J.: DENOTES ISOLATION JOINT. FILL WITH PREFORMED JOINT FILLER.
7. F.D.: DENOTES FLOOR DRAIN. SLOPE SLAB TO DRAIN (TYPICAL).

LEGEND

+PSF -PSF WINDOW & DOOR DESIGN PRESSURES (ALLOWABLE STRESS)
D - DOOR
W - WINDOW
OHD - OVERHEAD DOOR
GB - GLASS BLOCK
T - TRANSOM

F.D. - FLOOR DRAIN
S.C. - SAW CUT
I.J. - ISOLATION JOINT

Project: NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan

Issues:

No.:	Date:	Description:
A	03/21/22	Permit
B	07/05/22	Bldg Dept Com 1
C	06/30/23	Bid Set

Architect:

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ML ENGINEERING, INC.
Consulting Structural Engineer
2030 37th Avenue
Vero Beach, Florida 32960
Phone: 772.569.1257 Fax: 772.569.4041

Drawing Title:

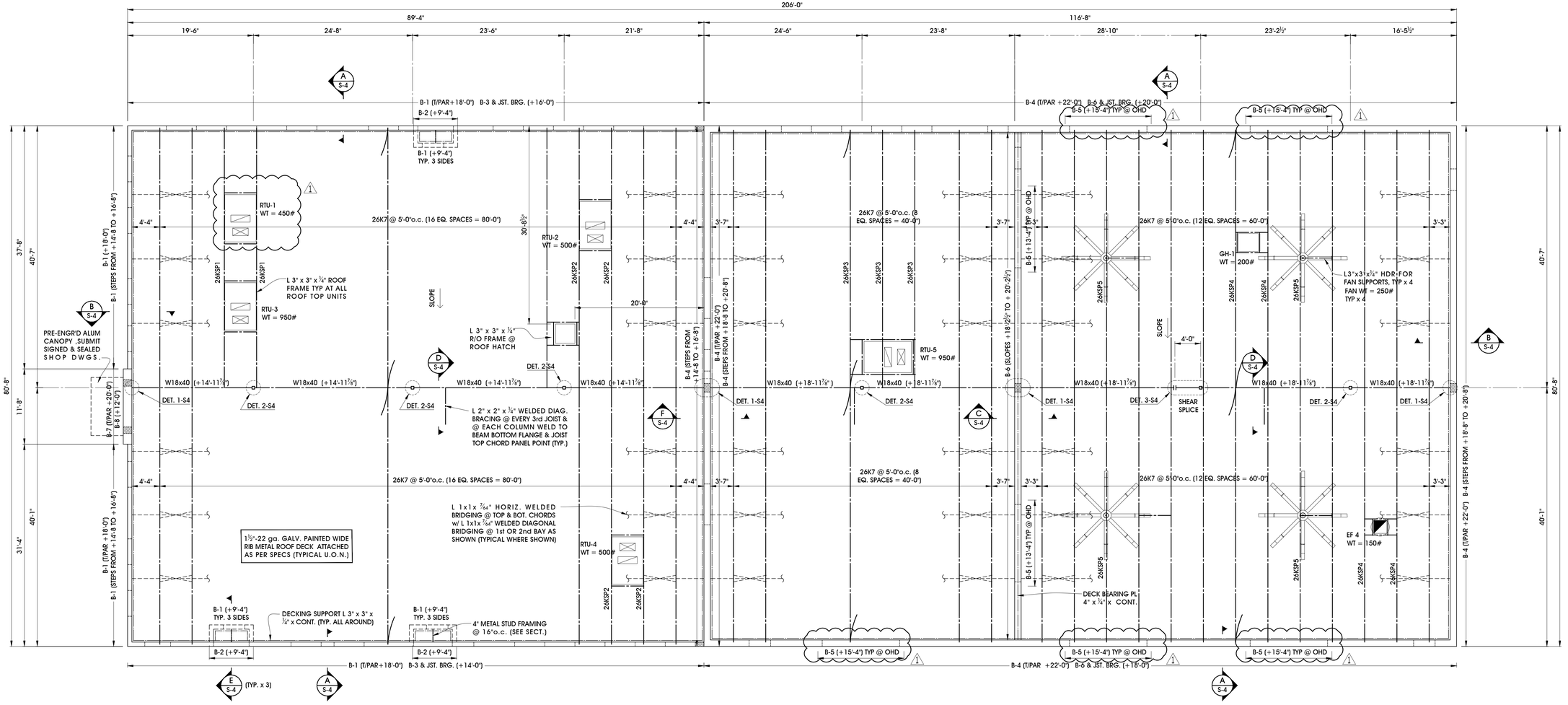
FOUNDATION PLAN

Reference North:

Drn: S.C. Baker
Chd: Mike Lue
Project No.: 21-224
Sheet No.: S-1
Drawing File:
XREF File:
Plot File:

C.A. License No.: 8662
FL P.E. No.: 47520

Date Signed:

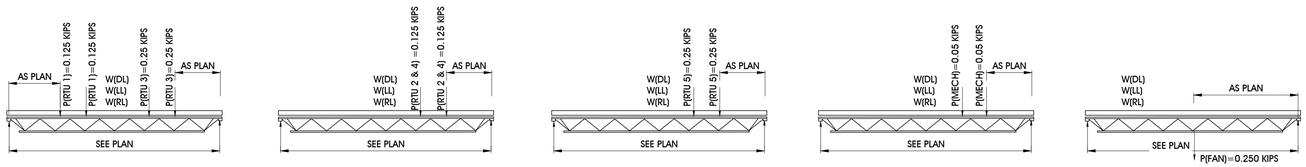


ROOF FRAMING PLAN

⅛" = 1'-0"

NOTES:

1. ALL ELEVATIONS REFER TO TOP OF FLOOR SLAB @ +0'-0" (REFER TO SITE PLAN FOR ACTUAL ELEVATION) TOP OF BEAM AS PLAN
2. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS & DIMENSIONS OF ALL PROJECT REQUIREMENTS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
3. ALL DIMENSIONS ARE TO ROUGH OPENING OR CENTERLINE OF STRUCTURE (TYPICAL, UNLESS OTHERWISE NOTED).
4. SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN.



(RTU 1 & 3) 26KSP1 | (RTU 2 & 4) 26KSP2 | (RTU 5) 26KSP3 | (GH-1 & EF-4) 24KSP4 | (FAN) 24KSP5

SP ROOF JOIST LOAD DIAGRAM

DEAD LOAD W(DL) = 150 PLF
LIVE LOAD W(LL) = 100 PLF
RAIN LOAD W(RL) = 125 PLF (NON CONCURRENT WITH LIVE LOAD)

NOTE:
WEIGHTS AND SIZES OF EF 1-3 ARE NEGLIGBLE

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Consultant:

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Consulting Structural Engineer
2030 37th Avenue
Vero Beach, Florida 32960
Phone: 772.569.1257 Fax: 772.569.4041

Drawing Title:

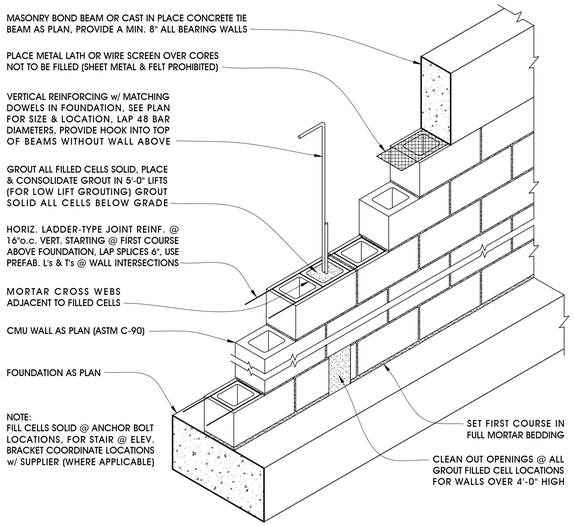
ROOF FRAMING PLAN

Reference North:

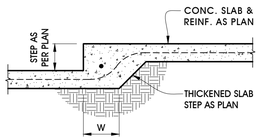
Drn: S.C. Baker
Chd: Mike Lue
Project No.: 21-224
Sheet No.: S-2
Drawing File:
XREF File:
Plot File:

C.A. License No.: 8662
FL P.E. No.: 47520

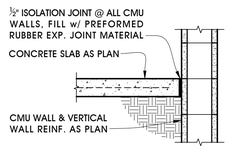
Date Signed:



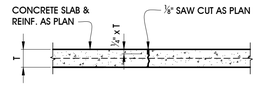
TYPICAL CMU WALL CONSTRUCTION DETAIL
3/4" = 1'-0"



TYPICAL SLAB STEP
3/4" = 1'-0"

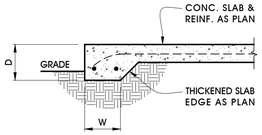


TYP. ISOLATION JOINT (I.J.)
3/4" = 1'-0"

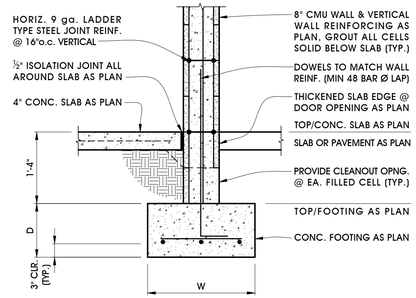


TYPICAL SAW CUT JOINT (S.C.)
3/4" = 1'-0"

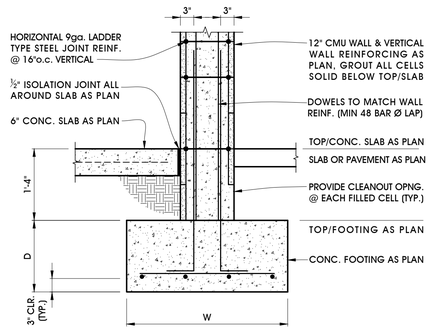
NOTES:
1. SAW CUTS SHALL BE @ 20'-0"o.c. EACH WAY, @ ALL RE-ENTRANT CORNERS & AS PLAN (TYPICAL).
2. W.W.F. OR REINFORCING TO CONTINUE THRU JOINT.



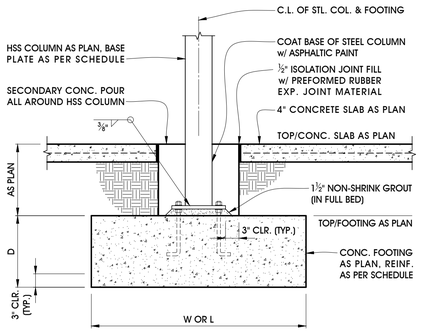
TYPICAL TSE
THICKENED SLAB EDGE
3/4" = 1'-0"



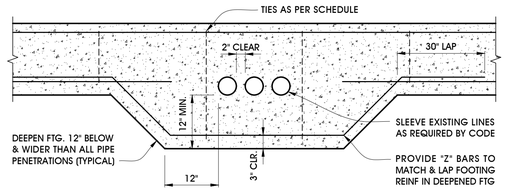
TYPICAL 8" CMU STEM WALL
3/4" = 1'-0"



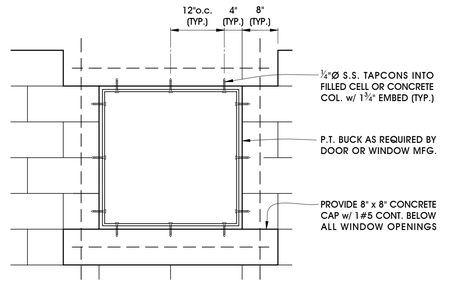
TYPICAL 12" CMU STEM WALL
3/4" = 1'-0"



TYPICAL STEEL COLUMN DETAIL
3/4" = 1'-0"

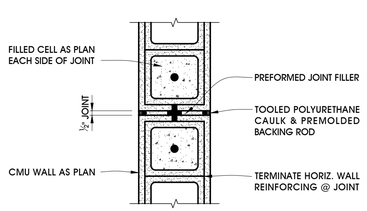


TYPICAL FOOTING DETAIL @ PLUMBING LINES
NO SCALE



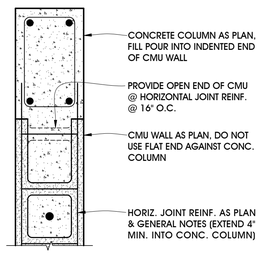
TYPICAL WINDOW & DOOR BUCK ATTACHMENT DETAIL
3/4" = 1'-0"

NOTES:
1. WINDOW & DOOR PERIMETERS SHALL BE WATERTIGHT. PROVIDE AN APPLICABLE APPROVED WATER PROOF SEALANT IN COMPLIANCE w/ AAMA 714. (1) COAT BEFORE INSTALLING BUCKS & (1) COAT AFTER BUCK INSTALLATION.
2. USING STRUCTURAL WOOD BUCK:
   THE MINIMUM STRUCTURAL WOOD BUCK SHALL BE 1½" THICK ATTACHED TO GROUTED MASONRY OR CONCRETE w/ ¼"Ø CORROSION RESISTANT TAPCONS AS SHOWN. FASTEN DOOR & WINDOWS TO BUCK w/ MIN.#12 SCREWS OR MIN.¼"Ø STAINLESS STEEL WOOD SCREWS AS PER NOA.
3. NO STRUCTURAL BUCK:
   THE WINDOW & DOORS SHALL BE FASTENED DIRECTLY TO THE GROUTED MASONRY OR CONCRETE w/ ¼"Ø CORROSION RESISTANT TAPCONS AS SHOWN OR AS PER NOA.

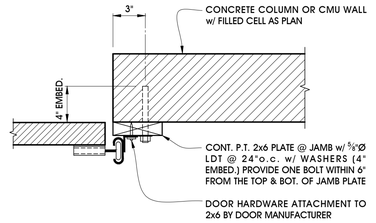


TYPICAL CMU WALL JOINT DETAIL
1½" = 1'-0"

NOTES:
1. ½" CMU WALL JOINT AS PLAN & NOTED AS THUS: W.J.
2. DISCONTINUE HORIZONTAL JOINT REINFORCING EACH SIDE OF JOINT.
3. CONTINUE ALL HORIZONTAL BEAM REINFORCING THROUGH THE JOINT.
4. ALIGN MASONRY HEAD JOINTS IN BOND BEAM WITH WALL JOINT.
5. ALIGN STUCCO JOINTS WITH WALL JOINTS.



TYP. CONC. COL. TO CMU CONN. DETAIL
1½" = 1'-0"



TYPICAL OVERHEAD DOOR JAMB ATTACHMENT TO CMU
1½" = 1'-0"

1. OVERHEAD DOORS SHALL BE DESIGNED, MANUFACTURED, INSTALLED & CERTIFIED TO WITHSTAND A DESIGN WIND PRESSURE AS SHOWN IN PLAN.
2. REFER TO MANUF. CONNECTION REQUIREMENTS IF MORE STRINGENT.

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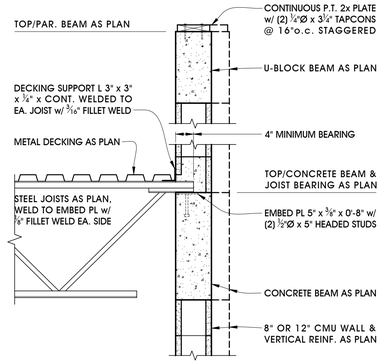
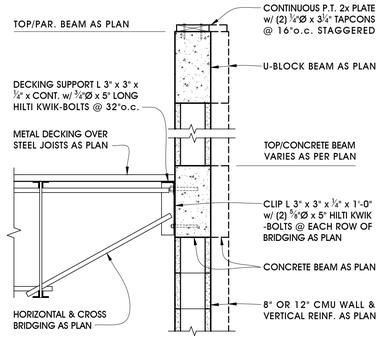


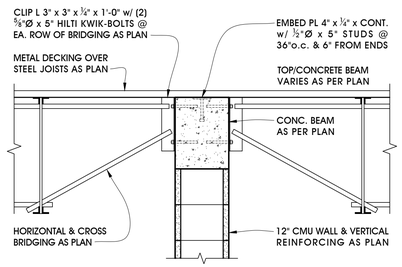
SECTION A-S4

¾" = 1'-0"



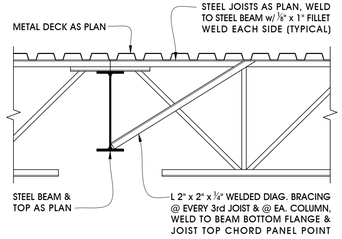
SECTION B-S4

¾" = 1'-0"



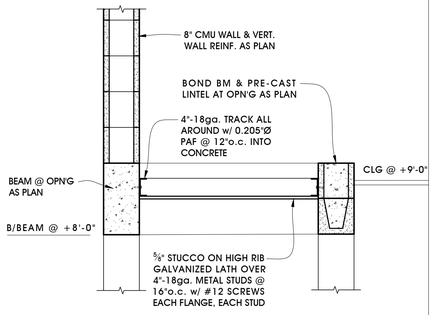
SECTION C-S4

¾" = 1'-0"



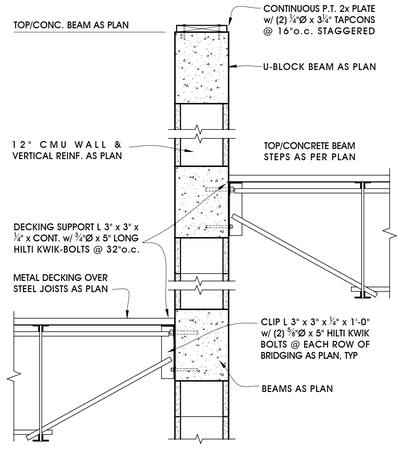
SECTION D-S4

¾" = 1'-0"



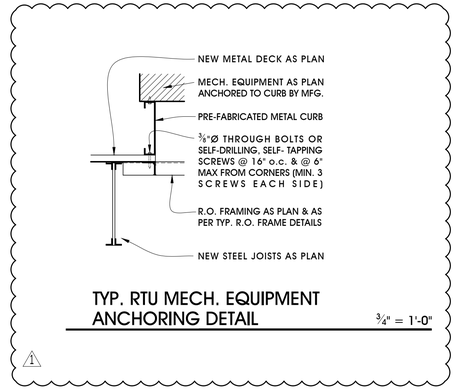
SECTION E-S4

¾" = 1'-0"



SECTION F-S4

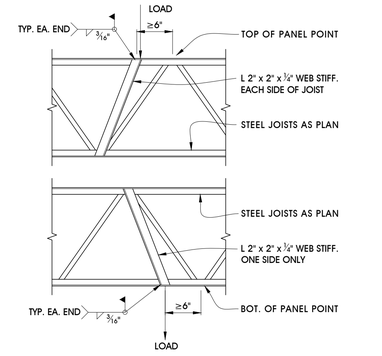
¾" = 1'-0"



TYP. RTU MECH. EQUIPMENT ANCHORING DETAIL

¾" = 1'-0"

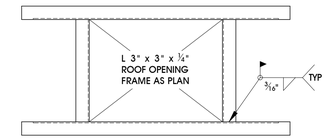
1

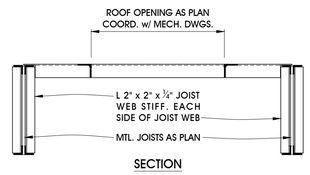


TYPICAL WEB STIFFENER DETAILS

¾" = 1'-0"

REQUIRED AT ALL RTU'S

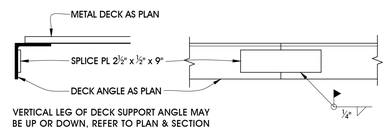




SECTION

TYPICAL ROOF OPENING FRAME DETAILS

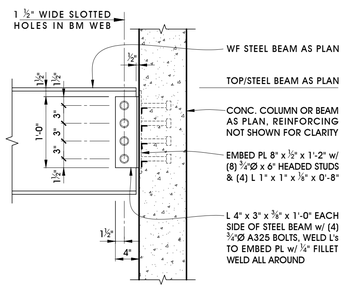
¾" = 1'-0"



VERTICAL LEG OF DECK SUPPORT ANGLE MAY BE UP OR DOWN, REFER TO PLAN & SECTION

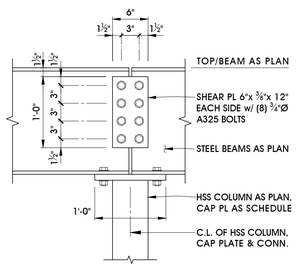
DIAPHRAGM CHORD SPLICE DETAIL

¾" = 1'-0"



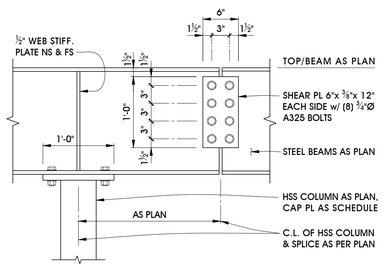
DETAIL 1-S4

1" = 1'-0"



DETAIL 2-S4

1" = 1'-0"



DETAIL 3-S4

1" = 1'-0"

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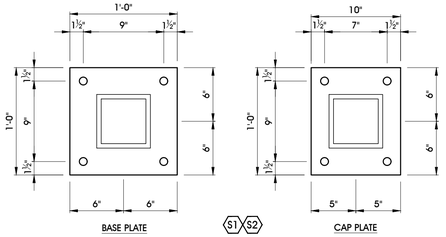


STEEL COLUMN CAP & BASE PLATE DETAILS 1½" = 1'-0"

ALL COLUMN TO CAP AND BASE PLATE WELDS SHALL BE A MINIMUM OF ¼" FILLET WELDS ALL AROUND
SEE SCHEDULE FOR ALL BOLT SIZES

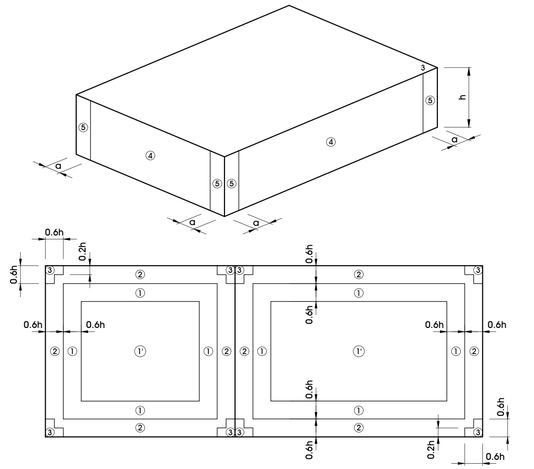
ZONES	NET UPLIFT ON ROOF BAR JOISTS (PSF) (ASD)
1'	-34 PSF
1	-23 PSF
2	-49 PSF
3	-60 PSF

COMPONENT AND CLADDING PRESSURES (ascd)

ZONE		EFFECTIVE AREA (SQUARE FEET) 0 < 10		11 < 20		21 < 50		51 < 100	
ROOF	1'	+15	-33	+14	-33	+13	-33	+12	-33
	1	+15	-57	+14	-53	+13	-48	+12	-44
	2	+15	-75	+14	-70	+13	-64	+12	-59
	3	+15	-102	+14	-93	+13	-80	+12	-70
WALL	4	+36	-39	+34	-37	+32	-35	+30	-33
	5	+36	-48	+34	-45	+32	-40	+30	-37
SOFFIT	1/1'		-51		-51		-49		-48
	2		-70		-63		-55		-48
	3		-97		-85		-71		-59

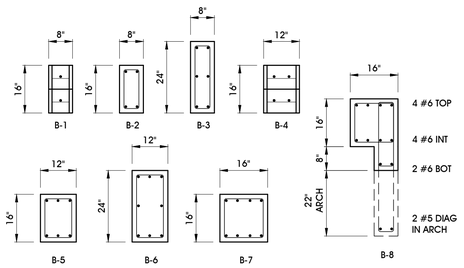
ROOF PITCH - <1.5 : 12

NOTES:
1. END ZONE 5 IS WITHIN A DISTANCE OF (a)=8 FT. FROM CORNERS
2. ROOF ZONES: 0.6h = 12 FT.
   0.2h = 4 FT.

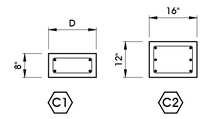


COMPONENT AND CLADDING PRESSURE ZONES NO SCALE

NOTES:
1. PRESSURES ARE IN ALLOWABLE STRESS DESIGN (ascd) FOR WINDOWS, DOORS, ROOFING, DECKING, WOOD TRUSSES AND ALL OTHER BUILDING COMPONENTS AND CLADDING.
2. POSITIVE PRESSURES INDICATE PRESSURES ACTING TOWARD A PROJECTED SURFACE. NEGATIVE PRESSURES INDICATE PRESSURES ACTING AWAY FROM A PROJECTED SURFACE.
3. END ZONE "a" = 8 FEET.



BEAM DETAILS ½" = 1'-0"



COLUMN DETAILS ½" = 1'-0"

DESIGN LOAD CRITERIA

THE FLORIDA BUILDING CODE, 7th EDITION (2020)

ROOF LOADS
- DEAD ..... 30 PSF
- LIVE ..... 20 PSF
- RAIN..... 25 PSF (NON-CONCURRENT)

WIND LOADS PER ASCE 7
- WIND SPEED REGION V(ult) ..... 160 MPH
- V(ascd) ..... 124 MPH
- WIND BORNE DEBRIS REGION
- ENCLOSED STRUCTURE
- BUILDING RISK CATEGORY II
- BUILDING DESIGN HEIGHT ..... <20 FT.
- ROOF PITCH ..... <1.5:12
- INTERNAL PRESSURE COEFF ..... ±0.18
- EXPOSURE C
- HEIGHT & EXPOSURE COEFF 1.29

FOUNDATION SCHEDULE

MARK	SIZE D x W x L	BOT. REINF. L.W.	BOT. REINF. S.W.	TOP REINF. L.W.	TOP REINF. S.W.	REMARKS
TSS-8	8" x 8" x CONT.	1#5				THICKENED SLAB STEP
TSE-8	8" x 8" x CONT.	1#5				THICKENED SLAB EDGE
TSE-12	16" x 12" x CONT.	2#5				THICKENED SLAB EDGE
WF-24	12" x 24" x CONT.	3#5	#5 @ 32"			STEM WALL FOOTING
WF-36	16" x 36" x CONT.	4#5	#5 @ 32"			STEM WALL FOOTING
WF-40	16" x 40" x CONT.	5#5	#5 @ 32"			STEM WALL FOOTING
F-4	16" x 48" x 48"	5#5	5#5			COLUMN FOOTING
F-6	16" x 72" x 72"	7#5	6#5			COLUMN FOOTING

CONCRETE COLUMN SCHEDULE

MARK	SIZE W x D	REINF.	#3 TIES	#3 HAIRPINS	REMARKS
C1	8" x 16"	4#6	@ 12"o.c.	@ 8"o.c.	POURED CONCRETE
C2	12" x 16"	6#6	@ 12"o.c.	@ 12"o.c.	POURED CONCRETE

CONCRETE BEAM SCHEDULE

MARK	ELEV. @ TOP	SIZE W" x D"	REINFORCING TOP	REINFORCING MID	REINFORCING BOT	TIES SIZE & SPACING	REMARKS
B-1	AS PLAN	8 x 16	1#6		1#6		(2) COURSE 8" BOND BLOCK
B-2	AS PLAN	8 x 16	2#6		2#6	#3 @ 12"o.c.	POURED CONCRETE BEAM
B-3	AS PLAN	8 x 24	2#6	2#5	2#6	#3 @ 24" o.c.	POURED CONCRETE BEAM
B-4	AS PLAN	12 x 16	2#6		2#6		(2) COURSE 12" BOND BLOCK
B-5	AS PLAN	12 x 16	3#6		3#6	#3 @ 12"o.c.	POURED CONCRETE BEAM
B-6	AS PLAN	12 x 24	3#6	2#5	3#6	#3 @ 24"o.c.	POURED CONCRETE BEAM
B-7	AS PLAN	16 x 16	4#6		4#6	#3 @ 24"o.c.	POURED CONCRETE BEAM
B-8	AS PLAN	SEE DETAIL	4#6	4#6 2#6	2#5	2#3 @ 12"o.c.	POURED CONCRETE ARCH BM

NOTES
1. PROVIDE STANDARD HOOK ON TOP BARS AT DISCONTINUOUS BEAM ENDS. PROVIDE CORNER BARS AT BEAM CORNERS & INTERSECTIONS TO MATCH BEAM REINFORCING.
2. DEEPEN CONCRETE BEAMS @ OPENINGS & ADD 2#5 BOTTOM OR PROVIDE 8" OR 12" PRECAST CONCRETE LINTELS w/ 1 #5 OR 2 #5 HORIZ GROUTED INTEGRALLY WITH MASONRY BOND BEAMS AT OPENINGS U.N.O. IN PLAN.

ACI STANDARD HOOK LENGTHS

BAR SIZE (#)	3	4	5	6	7	8	9
LENGTH (INCH)	6	8	10	12	14	16	19

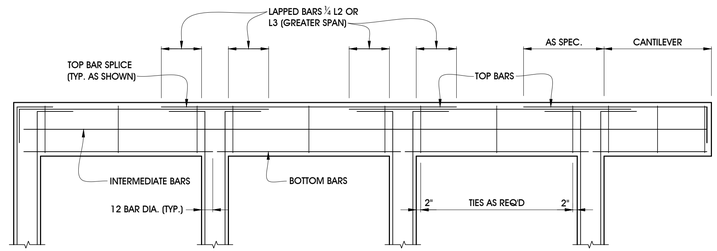
LAP SPLICE LENGTHS (3000 PSI)

BAR SIZE (#)	3	4	5	6	7	8	9
TOP BARS	28"	37"	47"	56"	81"	93"	105"
ALL OTHER BARS	18"	24"	30"	36"	42"	48"	54"

STEEL COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	ANCHORS	CAP PLATE	ANCHORS	REMARKS
S1	HSS 5" x 5" x ¼"	12" x ¾" x 12"	*4 - ¾"Ø A307 BOLTS (13+4)	10" x ¾" x 12"	4 - ¾"Ø A325 BOLTS	* DBL NUTS & WASHERS
S2	HSS 6" x 6" x ¼"	12" x ¾" x 12"	*4 - ¾"Ø A307 BOLTS (13+4)	10" x ¾" x 12"	4 - ¾"Ø A325 BOLTS	* DBL NUTS & WASHERS

NOTES:
1. TOP/FOOTING AS PLAN



TYPICAL BEAM REINFORCING DIAGRAM NO SCALE

STRUCTURAL NOTES
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
2. ALL CONSTRUCTION SHALL BE BRACED AND SHORED BY THE CONTRACTOR AS REQUIRED TO SAFELY PERFORM THE WORK.
3. ALL DOORS, WINDOWS AND HARDWARE MUST BE DESIGNED AND CERTIFIED TO WITHSTAND THE DESIGN WIND PRESSURES NOTED IN THIS DOCUMENT AND SHALL BE IMPACT RESISTANT AS REQUIRED BY THE FLORIDA BUILDING CODE.
4. THE MINIMUM STRUCTURAL SUBMITTALS SHALL BE AS PER SPECS AND AS FOLLOWS:
   a. CONCRETE MIX DESIGNS
   b. MASONRY & ACCESSORIES
   c. REINFORCEMENT
   d. STRUCTURAL STEEL
   e. STEEL JOISTS SIGNED & SEALED
   f. METAL DECK
   g. LIGHT GAGE METAL FRAMING SIGNED & SEALED

FOUNDATION
1. FOUNDATIONS ARE DESIGNED BASED ON AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF.
2. CONTRACTOR SHALL VERIFY THAT THE MINIMUM COMPACTION OF 95% OF ITS MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 IS OBTAINED PRIOR TO FOOTING PLACEMENT.
3. FOOTINGS SHALL BE PLACED ON COMPACTED SOIL FREE OF ORGANIC DEBRIS.
4. REFER TO SOILS INVESTIGATIVE REPORT BY ARDAMAN & ASSOC. IN REPORT No. 21-23-5281 FOR ALL SITE PREPARATION REQUIREMENTS.

CONCRETE
1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF A.C.I. 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND A.C.I. 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTHS SHALL BE AS FOLLOWS:
   FOUNDATIONS.....3000 PSI SLUMP 5"±1" W/C = 0.5 ¾" AGGR.
   SLAB ON GRADE.....3000 PSI SLUMP 5"±1" W/C =0.45 ¾" AGGR.
   COLUMNS & BEAMS.....3000 PSI SLUMP 5"±1" W/C = 0.5 ⅜" OR ¾" AGGR
   MASONRY GROUT.....3000 PSI SLUMP 10"±1" W/C N/A N/A
3. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60.
4. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 AND SHALL BE ADEQUATELY SUPPORTED AT 36" o.c. E.W.
5. THE MINIMUM CONCRETE COVERAGES SHALL BE AS FOLLOWS:
   CAST AGAINST EARTH....3" EXPOSED TO WEATHER.... 1-1/2" FORMED SURFACES....1"
6. PROVIDE 90° CORNER LAP SPLICES AT ALL INTERSECTIONS.
7. THE MINIMUM LAP SPLICE SHALL BE 30 BAR DIAMETERS OR AS NOTED IN SCHEDULE.
8. CONCRETE SHALL BE TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH ASTM C39. A MINIMUM OF (5) TEST CYLINDERS SHALL BE TAKEN FOR EACH POUR, AND ADDITIONAL SETS FOR EVERY 50 CUBIC YARDS OF POUR. CYLINDERS SHALL BE TESTED AS FOLLOWS:
   1 AT 3 DAYS, 1 AT 7 DAYS, 1 AT 14 DAYS, 1 AT 28 DAYS & 1 AT 56 DAYS (IF THE MINIMUM STRENGTH IS NOT MET IN 28 DAYS)
9. CONTRACTOR SHALL PROVIDE SAW CUTS IN SLABS ON GRADE AND SECOND FLOOR PRECAST TOPPING SLABS AS PLAN OR AT A MAXIMUM SPACING OF 20'-0" o.c. EACH WAY OR 400 S.F. U.O.N. AND AT ALL RE-ENTRANT CORNERS. SAW CUTS 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 BEING DISLODGED 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.

CONCRETE MASONRY
1. CONCRETE MASONRY WORK SHALL BE IN ACCORDANCE WITH ACI 530.1/ASCE 6/TMS 602, SPECIFICATION FOR CONCRETE MASONRY STRUCTURES AND ACI 530/ASCE 5/TMS 402, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. CONCRETE MASONRY UNITS SHALL BE IN CONFORMANCE WITH ASTM C90, GRADE N, TYPE II. MASONRY UNITS SHALL BE TESTED IN ACCORDANCE WITH ASTM C140 AND SHALL HAVE A MINIMUM NET AREA STRENGTH OF 1900 PSI (F'm = 1500 PSI).
3. GROUT SHALL BE IN CONFORMANCE WITH ASTM C476, COARSE TYPE WITH A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI AND A SLUMP OF 9" TO 11".
4. MORTAR SHALL BE IN ACCORDANCE WITH ASTM C270, TYPE S.
5. PROVIDE CLEANOUTS FOR ALL GROUTED CONSTRUCTION AND LIMIT MORTAR PROTRUSIONS TO 1/2" MAX. IN GROUTED CELLS.
6. ALL MASONRY WALLS SHALL BE CONSTRUCTED IN RUNNING BOND WITH 9 GA. LADDER TYPE JOINT REINFORCING SPACED 16"o.c. VERTICALLY. LAP 8" MINIMUM AT ALL CORNERS & SPLICES.
7. PROVIDE PRECAST CONCRETE LINTEL WITH 1#5 HORIZ BAR IN 8" & 2#5 IN 12" WIDE, GROUTED SOLID WITH 8" MINIMUM BEARING AT ALL MASONRY OPENINGS (TYP. UNLESS OTHERWISE NOTED).
8. PROVIDE HOOKED DOWELS IN FOOTINGS AND BEAMS WITH A MINIMUM LAP SPLICE OF 48 BAR DIAMETERS.
9. ALL VERTICAL AND HORIZONTAL JOINTS IN EXPOSED MASONRY WALLS SHALL BE OF UNIFORM WIDTHS AND CONCAVED TOOLED.

STRUCTURAL STEEL
1. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.I.S.C. "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
2. THE MINIMUM STRUCTURAL STEEL GRADES SHALL BE AS FOLLOWS:
   PLATES & ANGLES ..... ASTM A36 Fy = 36 KSI
   STRUCTURAL TUBE ..... ASTM A500 Fy = 46 KSI
   WF SHAPES..... ASTM A992 Fy = 50 KSI
3. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE A.I.S.C. "CODE OF STANDARD PRACTICE", LATEST EDITION.
4. WELDING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.W.S. D1.1 WITH E70XX ELECTRODES. FILLET WELDS SHALL BE A MINIMUM OF 3/16" UNLESS NOTED OTHERWISE.
5. HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH ASTM A325 & SHALL BE DESIGNED AS BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE SHEAR PLANE.
6. ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH ASTM A307.
7. ALL MEMBERS SHALL BE POWER TOOL CLEANED AND PAINTED WITH A RUST INHIBITIVE SHOP PRIMER WITH A MIN. THICKNESS OF 1.5 MILS.
8. ALL FIELD WELDS SHALL BE WIRE BRUSH CLEANED AND PRIMED WITH A RUST INHIBITIVE PRIMER.

STEEL JOISTS
1. STEEL JOISTS SHALL BE DESIGNED FABRICATED AND ERECTED IN ACCORDANCE WITH S.J.I. (STEEL JOIST INSTITUTE) "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K-SERIES", LATEST EDITION.
2. STEEL JOISTS SHALL BE DESIGNED BY A FLORIDA REGISTERED ENGINEER ACTING AS A SPECIALTY ENGINEER, AND SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENG. OF RECORD FOR APPROVAL.
3. STEEL JOISTS & BRIDGING SHALL BE IN ACCORDANCE WITH THE S.J.I. "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS", LATEST EDITION.
4. WELDING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.W.S. D1.1 WITH E70XX ELECTRODES. FILLET WELDS SHALL BE AS REQUIRED BY SJI.
5. STEEL JOISTS SHALL BE CLEANED AND PAINTED WITH A STANDARD COAT OF GRAY RUST INHIBITIVE PRIMER.
6. SHOP DRAWINGS & CALCULATIONS SHALL BE SUBMITTED SIGNED AND SEALED FOR REVIEW PRIOR TO FABRICATION.

METAL DECK
1. METAL ROOF DECK SHALL BE 1½" - 22 ga. WIDE RIB GALVANIZED NON-VENTED DECK AS PER PLAN WITH A MINIMUM (3) SPAN CONDITION.
2. WELDING OF METAL DECKS SHALL BE IN ACCORDANCE WITH A.W.S. D1.3 WITH E60XX ELECTRODES USING A MINIMUM OF 5/8"Ø PUDDLE WELDS AND WITH THE USE OF WELD WASHERS FOR FORM DECKS.
3. METAL DECKS SHALL BE ATTACHED TO THE SUPPORTING STRUCTURE AS FOLLOWS:
   ROOF DECK
   (5) 5/8"Ø PUDDLE WELDS PER SHEET PER SUPPORT & WITH (2)#12 SIDE LAP SCREWS @ 3rd POINTS.
   PROVIDE 5/8"Ø PUDDLE WELDS @ 12"o.c. (TYPICAL @ PERIMETERS).
4. METAL DECKS SHALL BE IN ACCORDANCE WITH S.D.I. (STEEL DECK INSTITUTE) SPECIFICATIONS AND COMMENTARY FOR STEEL ROOF AND FLOOR DECK AS CONTAINED IN THE S.D.I. DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS, S.D.I. PUBLICATION NO. 25, LATEST EDITION. ATTACHMENT AND DIAPHRAGM DESIGN SHALL BE IN ACCORDANCE WITH S.D.I. DIAPHRAGM DESIGN, LATEST EDITION.

LIGHT GAGE METAL FRAMING
1. ALL MEMBERS SHALL BE DESIGNED, MFG'D AND INSTALLED IN ACCORDANCE WITH (A.I.S.I.) LATEST EDITION " SPECIFICATION FOR THE DESIGN OF COLD FORMED STRUCTURAL MEMBERS".
2. ALL MATERIAL SHALL BE THE MINIMUM TYPE, SIZE, GAUGE AND SPACING AS SPECIFIED ON PLANS.
3. THE LIGHT GAGE STEEL FRAMING SHALL BE DESIGNED BY A SPECIALTY ENGINEER AND SIGNED AND SEALED SHOP DRAWINGS SIGNED AND SEALED SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
4. STRUCTURAL PROPERTIES OF METAL STUDS SHALL BE IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) "SPECIFICATION FOR DESIGN OF COLD FORMED STRUCTURAL MEMBERS".
5. METAL FRAMING COMPONENTS TO BE OF STRUCTURAL QUALITY STEEL SHEET WITH A MINIMUM YIELD OF 33,000 PSI OR 40,000 PSI; ASTM A 446, A 570, OR A611, WITH A GALVANIZED FINISH COMPLYING WITH ASTM A525 FOR MINIMUM G60 COATING.
6. CONCRETE THREADED FASTENERS SHALL BE CORROSION RESISTANT AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
7. SCREWS FOR METAL FRAMING CONNECTORS SHALL BE A MINIMUM OF #10 x 3/4" CORROSION RESISTANT HEX HEAD SELF DRILLING, SELF TAPPING DRILLING, CADMIUM PLATED TYPICAL U.N.O. OR OF OTHER SIZE AND TYPE INDICATED ON DRAWINGS. PROVIDE A MINIMUM OF (3) SCREWS EACH CONNECTION.
8. ALL FRAMING SHALL BE PLUMBED & SECURELY FASTENED TO FLANGES OF ALL UPPER AND LOWER TRACKS WHERE APPLICABLE.
9. VERTICAL HANGERS, DIAGONAL AND HORIZONTAL BRACING SHALL BE PROVIDED AS REQUIRED TO KEEP ALL MEMBERS PLUMB AND STRAIGHT.

TIMBER
1. ALL TIMBER ELEMENTS SHALL BE IN ACCORDANCE WITH FLORIDA BUILDING CODE.

Project: NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan

Issues:

No.:	Date:	Description:
A	03/21/22	Permit
B	06/30/23	Bid Set

Architect:

DONADIO
& Associates, Architects P.A.
2001 9th Avenue, Suite 308
Vero Beach, FL 32960
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License No. AA0002238
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Consultant:

ML ENGINEERING, INC.
Consulting Structural Engineer
2030 37th Avenue
Vero Beach, Florida 32960
Phone: 772.569.1257 Fax: 772.569.4041

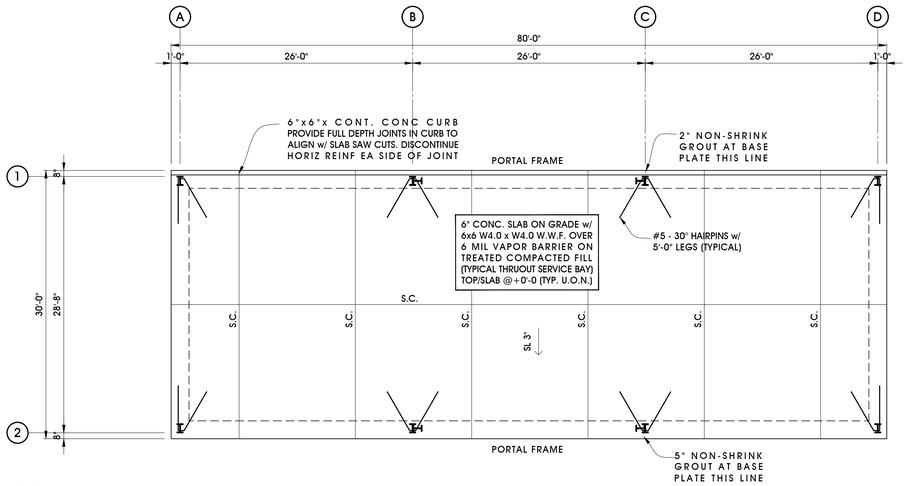
Drawing Title:
SCHEDULES & GENERAL NOTES

Reference North:

Drn: S.C. Baker
Chd: Mike Lue
Project No.: 21-224
Sheet No.: S-5
Drawing File:
XREF File:
Plot File:

C.A. License No.: 8662
FL P.E. No.: 47520

Date Signed:



FOUNDATION PLAN - COVERED PARKING "A"

1/8" = 1'-0"

NOTES:

1. ALL ELEVATIONS REFER TO BOTTOM OF COLUMN BASE PLATE @ +0'-0" (SEE SITE PLAN FOR SLAB ACTUAL ELEVATION).
2. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS & DIMENSIONS OF ALL PROJECT REQUIREMENTS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
3. ALL DIMENSIONS ARE TO ROUGH OPENING OR CENTERLINE OF STRUCTURE (TYPICAL, UNLESS OTHERWISE NOTED).
4. SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN.
5. S.C.: DENOTES 3/8" WIDE x 1 1/4" DEEP SAW CUTS IN SLAB AS SHOWN IN PLAN, TO BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM BEING DISLODGED BY THE SAW BLADE.

DESIGN LOAD CRITERIA

THE FLORIDA BUILDING CODE, 7th EDITION (2020)

ROOF LOADS
- DEAD ..... 3 PSF (AS PER M.B.M.)
- LIVE ..... 20 PSF
- COLLATERAL ..... 2 PSF

WIND LOADS PER ASCE 7
- WIND SPEED REGION V(ult) ..... 160 MPH
- V(asd) ..... 124 MPH
- WIND BORNE DEBRIS REGION
- OPEN STRUCTURE
- BUILDING RISK CATEGORY II
- BUILDING DESIGN HEIGHT ..... 20 FT.
- ROOF PITCH ..... < 1.5:12
- INTERNAL PRESSURE COEFF ..... N/A
- EXPOSURE C
- HEIGHT & EXPOSURE COEFF 1.29

STRUCTURAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
2. ALL CONSTRUCTION SHALL BE BRACED AND SHORED BY THE CONTRACTOR AS REQUIRED TO SAFELY PERFORM THE WORK.
3. THE MINIMUM STRUCTURAL SUBMITTALS SHALL BE AS PER SPECS AND AS FOLLOWS:
   - a. CONCRETE MIX DESIGNS
   - c. REINFORCEMENT
   - h. PRE-ENGINEERED METAL BUILDING SIGNED & SEALED

FOUNDATION

1. FOUNDATIONS ARE DESIGNED BASED ON AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF.
2. CONTRACTOR SHALL VERIFY THAT THE MINIMUM COMPACTION OF 95% OF ITS MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 IS OBTAINED PRIOR TO FOOTING PLACEMENT.
3. FOOTINGS SHALL BE PLACED ON COMPACTED SOIL FREE OF ORGANIC DEBRIS.
4. REFER TO SOILS INVESTIGATIVE REPORT BY ARDAMAN & ASSOC. IN REPORT No. 21-23-5281 FOR ALL SITE PREPARATION REQUIREMENTS.

CONCRETE

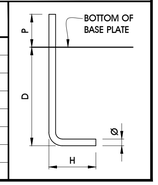
1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF A.C.I. 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND A.C.I. 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTHS SHALL BE AS FOLLOWS:
   FOUNDATIONS/SLAB ON GRADE ..... 3000 PSI SLUMP 5"± 1" W/C = 0.5
3. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60.
4. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 AND SHALL BE ADEQUATELY SUPPORTED AT 36" o.c. E.W.
5. THE MINIMUM CONCRETE COVERAGES SHALL BE AS FOLLOWS:
   CAST AGAINST EARTH....3" EXPOSED TO WEATHER.... 1-1/2" FORMED SURFACES....1"
6. PROVIDE 90° CORNER LAP SPLICES AT ALL INTERSECTIONS.
7. THE MINIMUM LAP SPLICE SHALL BE 30 BAR DIAMETERS OR AS NOTED IN SCHEDULE.
8. CONCRETE SHALL BE TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH ASTM C39. A MINIMUM OF (5) TEST CYLINDERS SHALL BE TAKEN FOR EACH POUR, AND ADDITIONAL SETS FOR EVERY 50 CUBIC YARDS OF POUR. CYLINDERS SHALL BE TESTED AS FOLLOWS:
   1 AT 3 DAYS, 1 AT 7 DAYS, 1 AT 14 DAYS, 1 AT 28 DAYS & 1 AT 56 DAYS (IF THE MINIMUM STRENGTH IS NOT MET IN 28 DAYS)
9. CONTRACTOR SHALL PROVIDE SAW CUTS IN SLABS ON GRADE AND SECOND FLOOR PRECAST TOPPING SLABS AS PLAN OR AT A MAXIMUM SPACING OF 20'-0" o.c. EACH WAY OR 400 S.F. U.O.N. AND AT ALL RE-ENTRANT CORNERS. SAW CUTS 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 BEING DISLODGED 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.

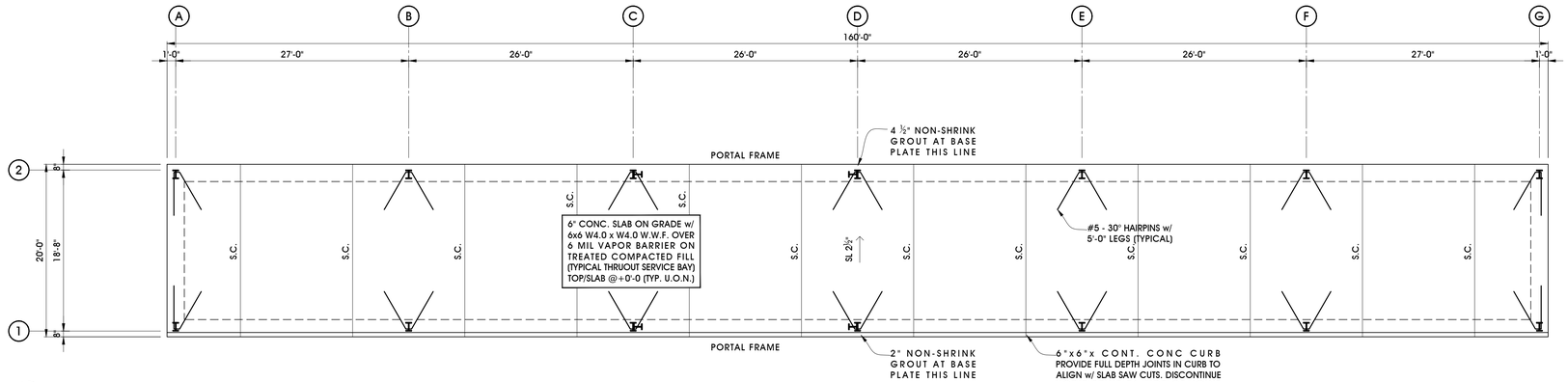
PRE-ENGINEERED METAL BUILDING - REFERS TO METAL BUILDING MANUFACTURER (M.B.M.)

1. PRE-ENGINEERED METAL BUILDING STRUCTURE SHALL BE DESIGNED AND MANUFACTURED FOR ALL LOADS PRESCRIBED HEREIN.
2. SUBMIT METAL BUILDING SHOP DRAWINGS AND REACTIONS SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO FABRICATION.
3. ALL METAL BUILDING COMPONENTS SHALL BE COLD FORMED WITH A MINIMUM GRADE OF FY = 50KSI AND SHALL BE IN ACCORDANCE WITH AISI AND AISC LATEST EDITION.
4. ROOF PANELS SHALL BE A MINIMUM OF 24 GA STANDING SEAM PANELS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AS REQUIRED TO RESIST THE SPECIFIED WIND UPLIFT LOADS. COLOR SHALL BE AS SELECTED BY ARCHITECT AND OWNER.
5. WALL PANELS SHALL BE A MINIMUM OF 26 GA GALVALUME AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AS REQUIRED TO RESIST THE SPECIFIED WIND LOADS. COLOR SHALL BE AS SELECTED
6. ALL MEMBERS SHALL BE POWER TOOL CLEANED AND PAINTED WITH A RUST INHIBITIVE SHOP PRIMER WITH A MIN. THICKNESS OF 1.5 MILS. U.N.O
7. DIAGONAL WALL AND ROOF BRACING SHALL BE PLACED IN BAYS WITHOUT OPENINGS.
8. METAL BUILDING MANUFACTURER SHALL PROVIDE ALL THE NECESSARY TRIM, FLASHING AND COVER PLATES AS NEEDED TO PROVIDE A COMPLETE WEATHER PROOFED BUILDING ENVELOPE AND STRUCTURE.
9. METAL BUILDING MANUFACTURER SHALL DESIGN THE FRAMING TO SUPPORT ALL LOADS SPECIFIED IN PLAN.
10. ALL SECONDARY FRAMING MEMBERS AND CONNECTORS NOT LIMITED TO PURLINS AND GIRTS AT EXTERIOR ROOFS WITH OPEN SIDES SHALL BE HOT-DIPPED GALVANIZED.

MINIMUM ANCHOR BOLT EMBEDMENT DEPTH

BOLT DIAMETER	MAX. UPLIFT LOAD ON BOLT	MAX. HORIZ. LOAD ON BOLT	MIN. EMBED DEPTH (D)	PROJECTION (P)	HOOK DIM. (H)
1/2"	2,840 LBS.	1,960 LBS	8"	2"	2 1/2"
5/8"	4,520 LBS.	3,070 LBS	10"	2 1/2"	3"
3/4"	6,690 LBS.	4,420 LBS	12"	2 1/2"	4"
7/8"	9,230 LBS.	6,010 LBS	14"	3"	4 1/2"
1"	12,110 LBS.	7,850 LBS	16"	3"	5"



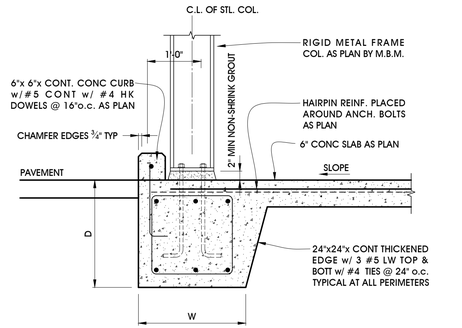


FOUNDATION PLAN - COVERED PARKING "B"

1/8" = 1'-0"

NOTES:

1. ALL ELEVATIONS REFER TO BOTTOM OF COLUMN BASE PLATE @ +0'-0" (SEE SITE PLAN FOR ACTUAL SLAB ELEVATION).
2. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS & DIMENSIONS OF ALL PROJECT REQUIREMENTS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
3. ALL DIMENSIONS ARE TO ROUGH OPENING OR CENTERLINE OF STRUCTURE (TYPICAL, UNLESS OTHERWISE NOTED).
4. SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN.
5. S.C.: DENOTES 3/8" WIDE x 1 1/4" DEEP SAW CUTS IN SLAB AS SHOWN IN PLAN, TO BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM BEING DISLODGED BY THE SAW BLADE.



TYPICAL SECTION @ METAL BUILDING COL

3/4" = 1'-0"

Project: NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan

Issues:

No.:	Date:	Description:
A	03/21/22	Permit
B	06/30/23	Bid Set

Architect:

DONADIO
& Associates, Architects P.A.
2001 9th Avenue, Suite 308
Vero Beach, FL 32960
Tel.772.794.2929
Fax.772.562.8600
License No. AA0002238
www.donadio-arch.com

Consultant:

ML ENGINEERING, INC.
Consulting Structural Engineer
2030 37th Avenue
Vero Beach, Florida 32960
Phone: 772.569.1257 Fax: 772.569.4041

Drawing Title:

COVERED PARKING FOUNDATION PLANS

Reference North:

Drn: S.C. Baker	Drawing File:
Chd: Mike Lue	XREF File:
Project No.: 21-224	Plot File:
Sheet No.:	

C.A. License No.: 8662
FL P.E. No.: 47520

Date Signed:

S-6

MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2020 AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS; SMACNA–85, 92, 95; ASHRAE 15–01, 34–01, 62–04; NFPA 70–02, 72–02, 90A–02, 90B–02, 91–99, 96–01; ANSI Z10.1–98, Z10.3–98, Z21.8–94, Z21.83–98.

2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.

3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.

4. THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH "AS–BUILT" DRAWINGS.

5. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE [5] COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.

6. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS.
   ALL EQUIPMENT SHALL BE UL OR ETL LISTED.
   ALL INSTALLATIONS SHALL COMPLY WITH FMC 2020, CH. 3, GENERAL REGULATIONS. BUILDINGS LOCATED WITHIN 3,000 FT FROM THE OCEAN SHALL UTILIZE NON–FERROUS MATERIALS FOR ALL OUTDOOR EXPOSED SUPPORTS, STANDS, FASTENERS, ETC.

7. DUCTWORK:
   A. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1–1/2" (R–6) HEAVY DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER
   B. ALL FLEX DUCT SHALL BE RATED CLASS I, UL–181 LISTED WITH METALLIZED INNER AND OUTER FOIL LINERS, MIN. R–6 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT.
   FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX".
   C. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS. ALL OUTSIDE AIR DUCT SHALL BE INSULATED WITH EXTERNAL BLANKET INSULATION R–6 MIN.
   ALL METAL EXHAUST, MAKE–UP OR OTHERWISE DUCTS INSTALLED IN LOCATIONS WHERE DEWPOINT CONDITIONS CAN OCCUR INSIDE THE DUCT SHALL BE EXTERNALLY INSULATED WITH R–6 MIN.
   THE CONTRACTOR SHALL PROVIDE ALL SHEETMETAL DUCTWORK, HANGERS, AUX. SUPPORT STEEL, ETC.
   ALL METAL DUCTS SHALL BE FABRICATED IN ACCORDANCE WITH LATEST EDITION OF S.M.A.C.N.A.
   SPECIAL NOTE:
   SMACNA DUCT PRESSURE CLASSES BASED ON OPERATING PRESSURE ARE: 1/2", 1", 2", 3", 4", 6", AND 10". EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC DUCT PRESSURE CLASS SHOWN ON PLANS.
   WHERE NO PRESSURE CLASS IS SPECIFIED FOR CONSTANT VOLUME SYSTEMS, 1" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS REGARDLESS OF VELOCITY.
   WHERE NO PRESSURE CLASS IS SPECIFIED FOR VARIABLE VOLUME SYSTEMS, 2" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS FOR DUCTWORK UPSTREAM OF VAV BOXES.
   ALL DUCTWORK SHALL BE SEALED TO SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR ITS PRESSURE CLASS SEALING METHODS.

9. OUTSIDE AIR INTAKES SHALL BE SCREENED WITH A CORROSION RESISTANT MATERIAL NOT LARGER THAN 1/2" MESH. O/A INTAKES SHALL NOT BE TAKEN FROM A LOCATION CLOSER THAN 10 FT. FROM ANY CHIMNEY, VENT OUTLET OR SANITARY SEWER VENT OUTLET, UNLESS SUCH VENT IS NOT LESS THAN 24 INCHES ABOVE THE OUTSIDE AIR VENT.
   OUTSIDE AIR INTAKE VENTS LOCATED ON ROOFS WILL BE PROPERLY MARKED WITH A UNIVERSAL MARKING "INTAKE", PERMANENTLY ATTACHED PER FMC 2020, SEC. 401.5

10. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.

11. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE AS SPECIFIED OR EQUAL TO TITUS OR METALAIRE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS AS INDICATED ON PLANS. PROVIDE BALANCING DAMPERS FOR ALL SUPPLY AND RETURN DIFFUSERS AND REGISTERS TO ENSURE COMPLIANCE WITH FMC 2020, PAR. 601.5 AND PAR. 603.18 FOR BALANCED AIR FLOW.

12. TEMPERATURE CONTROLS/THERMOSTAT:
   A. SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL–AUTO–HEAT–OFF" AND FAN "ON–AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE AS RECOMMENDED BY MANUFACTURER, HONEYWELL OR EQUAL. PROVIDE TAMPER PROOF COVERS.

13. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. INSTALL THERMOSTAT 48" TO 54" A.F.F. PER A.D.A REQUIREMENTS WHERE APPLICABLE.
   MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL REQUIREMENTS FOR JUNCTION BOXES, CONDUITS, CONTROL WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES AND SCOPE OF WORK FOR EACH TRADE PRIOR TO ANY PURCHASING OR INSTALLATION.
   WHENEVER THERE ARE MORE THAN ONE SENSOR OR THERMOSTAT, SIDE BY SIDE, THEY SHALL BE GANGED TOGETHER WITHIN THE SAME COVER PLATE WHEREVER POSSIBLE.
   CONTRACTOR SHALL COORDINATE THIS ISSUE WITH ARCHITECT/OWNER PRIOR TO INSTALLATION AND SHALL BRING ANY DISCREPANCY TO THE ENGINEER'S ATTENTION.

14. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER BRAZING–JOINT TYPE FITTINGS, USE BRAZING MATERIALS FOR HIGH PRESSURE PIPING PER AWS A5.8: BCuP SERIES COPPER–PHOSPHORUS ALLOY OR BAg1 SILVER ALLOY.
   REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS.
   SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JOINTS. COORDINATE WITH ENGINEER FOR PRIOR APPROVAL.
   ALL EXPOSED INSULATION SHALL BE PROTECTED WITH UV RESISTANT PAINT OR ALUMIN. SHIELD.

15. ARMAFLEX INSULATION SHALL BE USED FOR SUCTION LINES (1/2" FOR ABOVE 40° F AND 1" FOR BELOW 40° F) PER FLORIDA ENERGY CODE TABLE 4–11 FOR PIPING INSULATION.
   FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.

16. ALL BRANCH TAKE–OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. PROVIDE RADIUS ELBOWS WHERE FEASIBLE, SQUARE ELBOWS AND TEE'S SHALL BE FURNISHED W/SINGLE FOIL TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE–OFFS.
   PROVIDE REMOTE, CABLE OPERATED VOLUME DAMPERS IN INACCESIBLE AND HARD CEILING AREAS, "YOUNG REGULATOR" OR EQUAL.

17. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START–UP, REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.

18. PROVIDE SMOKE DETECTORS WITH SERVICE ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE.
   FOR SMOKE DETECTORS NOT VISIBLE, IN CONCEALED SPACES, PROVIDE REMOTE ANNUNCIATION/TEST STATION AS REQUIRED BY AUTHORITY HAVING JURISDICTION, COORDINATE PRIOR TO INSTALLATION.
   DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.

19. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS WITH SERVICE ACCESS DOORS IN ALL DUCTS AND OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, TENANT SEPARATION, PARTITIONS, FLOOR OR ROOF SLABS AND AT OUTSIDE AIR INTAKES AS REQUIRED. PROVIDE RADIATION DAMPERS IN RATED CEILINGS FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY.
   PROVIDE LOW–LEAKAGE CLASS DAMPERS FOR ALL SITUATIONS WHERE THE AIRFLOW CFM HAS TO BE CONTROLLED. VERIFY AND REPLACE AS REQUIRED FOR EXISTING SYSTEMS.

20. HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PER F.B.C. 2020, CH. C408.2.2 (THE T & B REPORT SHALL BE INDEPENDENT FOR SYSTEMS OVER 15 TONS)
   FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS.
   THE TEST AND BALANCE REPORT SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES AND EXHAUST GRILLES AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLES AND EVAPORATORS.
   FOR (EXISTING) SMOKE EVACUATION SYSTEMS HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PRIOR TO ANY NEW WORK, PROVING THAT THE SMOKE EVACUATION SYSTEM PERFORMS PER ORIGINAL DESIGN DOCUMENTS AND IS COMPLIANT WITH LOCAL CODE REQUIREMENTS.

21. RUN INSULATED FIRE RATED CONDENSATE DRAINS AS REQUIRED.

22. ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.

23. MECHANICAL EQUIPMENT ON ROOF OR ELEVATED STRUCTURES SHALL COMPLY WITH FBC 2020 PAR. 306.5 IF INSTALLED HIGHER THAN 16 FEET A.F.F.
   MECHANICAL EQUIPMENT INSTALLED IN ATTICS SHALL MEET THE REQUIREMENTS OF FBC–ENERGY 2020 PAR. C403.2.7.6 IF THE EQUIPMENT CAN NOT BE SERVICED/REMOVED THROUGH REQUIRED OPENING.
   MECHANICAL EQUIPMENT SHALL BE PROTECTED WITH MECHANICAL BARRIERS IF EXPOSED TO MECH. DAMAGE. ALL EQUIPMENT SHALL BE INSTALLED ON 6" CONCRETE PAD AT GRADE LEVEL .
   NOTE: AIR HANDLING UNITS ARE NOT ALLOWED IN COMMERCIAL ATTICS.
   SPECIAL NOTE:
   ALL WIND LOAD AND OTHER COMPLIANCE CALCULATIONS AND/OR INSTALLATION DETAILS FOR ROOF MOUNTED EQUIPMENT AS REQUIRED BY FBC 2020, SEC. 1509, 1522 AND CHAPTER 16, SHALL BE PROVIDED BY STRUCTURAL ENGINEER/ARCHITECT.

24. PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120–208 VOLT PANELS AND MIN. 42" CLEARANCE IN FRONT OF ANY 240–480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC.

25. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL, FIRE SPRINKLER, AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS.
   DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER AND ARCHITECTURAL BUILDING FEATURES. DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IF DUCT AREA WILL NOT FIT.

26. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT, IN ORDER TO PROVIDE A FULLY INTEGRATED MECHANICAL AND CONTROLS SYSTEMS WITH THE EXISTING ONES.
   ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND PLANS, OR ADDITIONAL CLARIFICATION REQ'D SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO FINAL BIDDING AND WORK.

27. NO COMBUSTIBLE MATERIALS ARE ALLOWED IN RETURN AIR PLENUMS OR ABOVE CEILINGS USED AS RETURN AIR PLENUM. IF SPACE WITH RETURN AIR PLENUM HAS ANY DECK TO DECK PARTITIONS, AIR TRANSFER DUCTS MUST BE INSTALLED.
   WHEN CPVC PIPING IS USED FOR FIRE SPRINKLER SYSTEMS, THE R/A GRILLES LAYOUT SHALL BE (FIELD) COORDINATED WITH SUCH PIPING SO THAT NO PORTION OF THE GRILLES WILL BE DIRECTLY BELOW THE CPVC PIPING.

28. CONDENSATE DRAIN PIPING TO BE AS SPECIFIED PER PLUMBING PLANS, IF NOT SPECIFIED TO BE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH 1/2" ARMAFLEX INSULATION. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR COND. UNIT, AS A SECONDARY DRAIN SYSTEM TO COMPLY WITH FMC 2020, SEC. 307
   SUPPLY CONDENSATE PUMP WHERE NECESSARY AS IMPOSED BY FIELD CONDITIONS OR INSTALLATION CHANGES AND PIPE TO CONDENSATE DRAIN PER PLUMBING PLANS.

29. MANUFACTURER'S WARRANTY: CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER BUILDING C.O. FOR ALL MECHANICAL SYSTEMS, DUCTWORK, CONTROLS ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE WARRANTY FOR COMPRESSORS FOR (5) FIVE YEARS. ANY REPAIRS REQUIRING SYSTEM SHUTDOWN WILL BE DONE DURING NON–OPERATIONAL PERIODS OR AS AGREED WITH OWNER.

30. ON PROJECT SPECIFIED WITH EQUIPMENT UTILIZING HOT GAS REHEAT AND/OR DEHUMIDIFICATION; CONTRACTOR SHALL PROVIDE FACTORY STARTUP OF EQUIPMENT WITHIN THEIR BID. STARTUP REPORT DOCUMENT TO BE PROVIDED TO ENGINEER FOR REVIEW.

FAN SCHEDULE

SELECTION DATA					FAN DATA			MOTOR DATA				GENERAL DATA			
TAG	SERVICE AREA	MANUF.(*)	MODEL	CONFIG.	CFM	ESP ("WG)	SONES	HP	RPM	DRIVE	VOLTAGE	WEIGHT (LBS)	DIMENSIONS L"xW"xH"	OPENING L"xW"	CONTROL	ACCESSORIES
EF–1	RR	GREENHECK	SP–A410	CEILING	400	.125	3.5	121 WATT	1000	DIRECT	120/1/60	31	18X15X15	*	LIGHT INTERLOCK	*
EF–2	RR	GREENHECK	SP–B200	CEILING	190	.2	3.5	172 WATT	1100	DIRECT	120/1/60	10	14X12X7	*	LIGHT INTERLOCK	*
EF–3	JAN	GREENHECK	SP–B90	CEILING	50	.2	1.5	21.1 WATT	700	DIRECT	120/1/60	10	14X12X7	*	LIGHT INTERLOCK	*
EF–4	WAREHOUSE	COOK	ACRU–B	CEILING	5000	.2	1.5	1	800	DIRECT	208/3/60	147	25X25X36	*	SWITCH	*

(*) APPROVED EQUAL MANUFACTURER: COOK, TWIN–CITY, ACME, PENN

ACCESSORIES NOTES:

1. PROVIDE GRILL COLOR PER ARCHITECTURE SPECIFICATIONS.
2. PROVIDE BACK DRAFT DAMPER. LOCATE BACK DRAFT DAMPER AT DISCHARGE.
3. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH AND INTEGRAL THERMAL OVERLOAD PROTECTION. COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASE.
4. PROVIDE BIRD SCREEN.
5. PROVIDE BALANCING DAMPER.
6. SUPPORT FROM STRUCTURE COMPLETE WITH VIBRATION ISOLATORS.
7. PROVIDE WEATHERHOOD DRAIN AND CORROSION PROTECTION.

GENERAL FAN NOTES:

a. MOTOR STARTERS, DISCONNECTS (IF NOT FACTORY PROVIDED), ALL NORMAL EQUIPMENT POWER, AND EMERGENCY POWER WIRING BY ELECTRICAL CONTRACTOR.
b. ALL CONTINUOUS–DUTY MOTORS SHALL BE PROVIDED WITH OVERLOAD PROTECTION ACCORDING TO NATIONAL ELECTRICAL CODE PAR. 430–32.
c. FIELD ADJUST OPENINGS WITH STRUCTURE.
d. ALL OUTDOOR EQUIPMENT SHALL COMPLY WITH LOCAL ZONING NOISE ORDINANCE OR NOT EXCEED A NOISE LEVEL OF 65 dB AS MEASURED RADIALLY 30 FT. FROM THE EQUIPMENT IN ALL DIRECTIONS.
e. COORDINATE WITH ELECTRICAL CONTRACTOR AND MANUFACTURER BEFORE BIDDING OR ORDERING ANY EQUIPMENT. CONTRACTOR TO PROVIDE NECESSARY STEPDOWN AND/OR MULTI–VOLTAGE TRANSFORMERS.
f. SEE PROJECT PLANS AND SPECIFICATIONS FOR OTHER FIELD SUPPLIED ITEMS AND ADDITIONAL INFORMATION.
g. ALL FANS ON ROOF SHALL BE PAINTED AS PER ARCHITECTURAL SPECIFICATIONS.
h. ALL EQUIPMENT SHALL COMPLY WITH WIND LOAD REQUIREMENTS SET BY LOCAL CODES, ORDINANCES, OR AUTHORITIES. WIND LOAD RATING MAY BE REQUIRED; CONTRACTOR TO PROVIDE NOA RATING IF REQUIRED.

MECHANICAL SHEET INDEX

MECHANICAL LEGEND

- SUPPLY AIR CEILING DIFFUSER
- RETURN AIR CEILING GRILLE
- WALL LOUVER / WALL DIFFUSER.
- LINEAR DIFFUSER
- MANUAL VOLUME CONTROL DAMPER
- MD — MOTORIZED DAMPER
- FD — FIRE DAMPER
- REDUCER OR INCREASER
- FLEX DUCT
- EXISTING FLEX DUCT
- EXISTING DUCTWORK
- UP — SUPPLY & OUTSIDE AIR SECTION (UP)
- DN — SUPPLY & OUTSIDE AIR SECTION (DN)
- UP — RETURN OR EXHAUST DUCT SECTION (UP)
- DN — RETURN OR EXHAUST DUCT SECTION (DN)
- ROUND UP
- SHOE TAP DAMPER
- ROOFTOP UNIT
- SOLENOID VALVE.
- RE — RELOCATE
- EF — CEILING OR INLINE EXHAUST FAN
- STANDARD SINGLE DUCT VVT BOX (3'0" SERVICE CLEARANCE)
- T — THERMOSTAT
- H — HUMIDISTAT
- R — REFRIGERANT SENSOR
- SP — STATIC PRESSURE SENSOR
- DD — DUCT SMOKE DETECTOR
- AP — ACCESS PANEL
- AD — ACCESS DOOR
- VCD — VOLUME CONTROL DAMPER
- MOD — MANUALLY OPERATED DAMPER
- TAG CFM — SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION
- TAG CFM — RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION
- VARIABLE FREQ. DRIVE CONTROL PANEL
- SUPPLY AIR
- RETURN AIR
- U/C — DOOR UNDER CUT
- TAG - # — EQUIPMENT TAG
  - OARTU– OUTSIDE AIR ROOF TOP UNIT
  - RTU– ROOF TOP UNIT
  - VAV– VARIABLE VOLUME BOX
  - EF – EXHAUST FAN

NOT ALL SYMBOLS MAY APPLY TO THESE PLANS

HVAC ABBREVIATION LEGEND

AC	AIR CONDITIONING
AFF	ABOVE FINISH FLOOR
BDD	BACK DRAFT DAMPER
CD	CONDENSATE DRAIN
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DIA.	DIAMETER
E	EXISTING TO REMAIN
EER	ENERGY EFFICIENCY RATIO
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
F	FILTER
FD	FIRE DAMPER
FLA	FULL LOAD AMPS.
FMS	FLOW MEASURING STATION
IPLV	INTEGRATED PART–LOAD VALUE.
MCA	MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)
MOD	MANUALLY OPERATED DAMPER
MOCP	MAXIMUM OVERCURRENT PROTECTION DEVICE AMPS
NC	NOISE CRITERIA
O/A	OUTSIDE AIR
OBD	OPOSITE BLADE DAMPER
PD	PRESSURE DROP.
R	EXISTING TO BE RELOCATED
R/A	RETURN AIR
RLA	RATED LOAD AMPS.
SEER	STANDARD ENERGY EFFICIENCY RATIO
TSP	TOTAL STATIC PRESSURE
VD	VOLUME CONTROL DAMPER
VFD	VARIABLE FRECUENCY DRIVE
WB	WET BULB

NOTE: NOT ALL SYMBOLS MAY APPLY TO THESE PLAN.

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY
4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE

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Consultant:

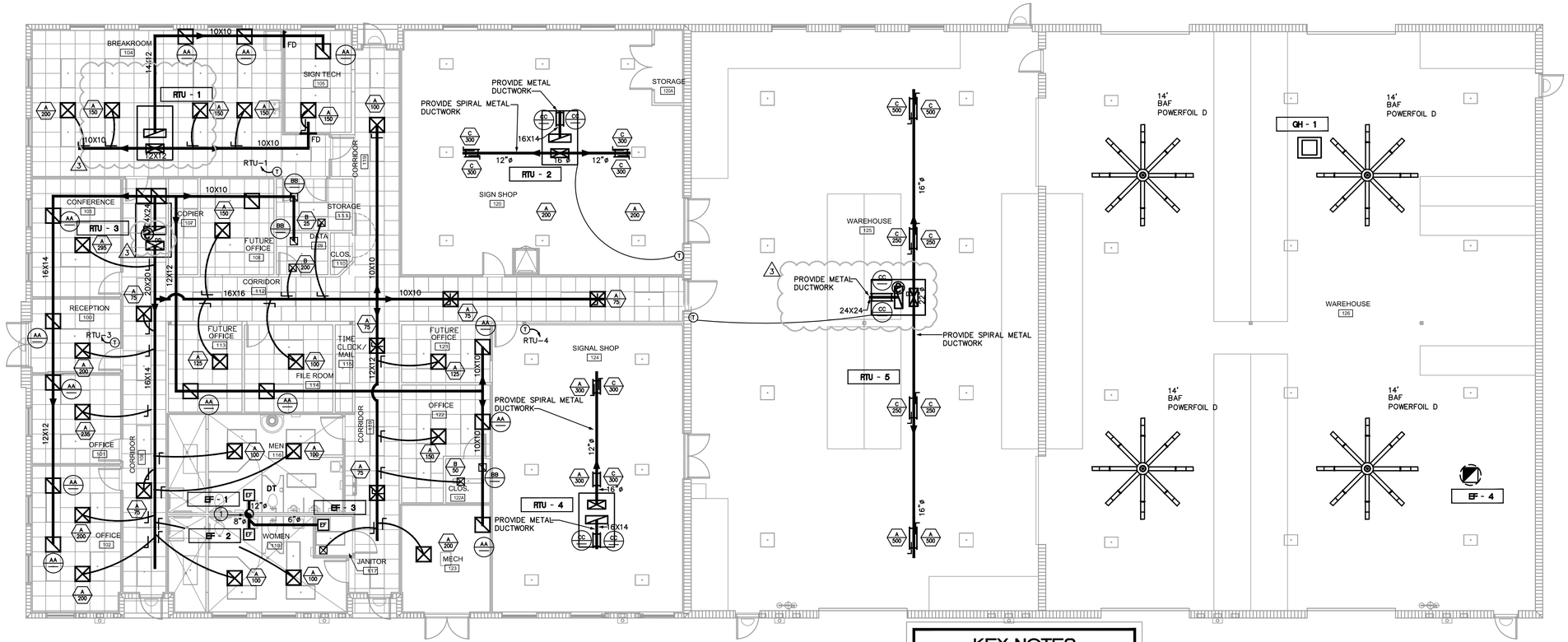
Drawing Title:

MECHANICAL NOTES

Drn: JLH | Dwg. File: .
Chd: TD | XREF File: .
Project No.: 2021-20 | Plot File: .
Sheet No.:

Cert. No.: 12,456
Date Signed:

M0.1



KEY NOTES

1. PROVIDE 14"ø UP THROUGH ROOF. DUCT TO TERMINATE AT LOW PROFILE ROOF CAP.

FLOOR PLAN
MECHANICAL PLAN

1/8"=1'-0" NORTH

ISSUED FOR PERMIT	06-29-23
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A.	03-21-22	PERMIT SET
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C.	06-22-22	BDC RESPONSE

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MECHANICAL PLAN
FLOOR PLAN

Drn:	Dwg. File:
JLH	-
Chd:	XREF File:
TD	-
Project No.:	Plot File:
2021-20	.
Sheet No.:	

Cert. No.: 12,456

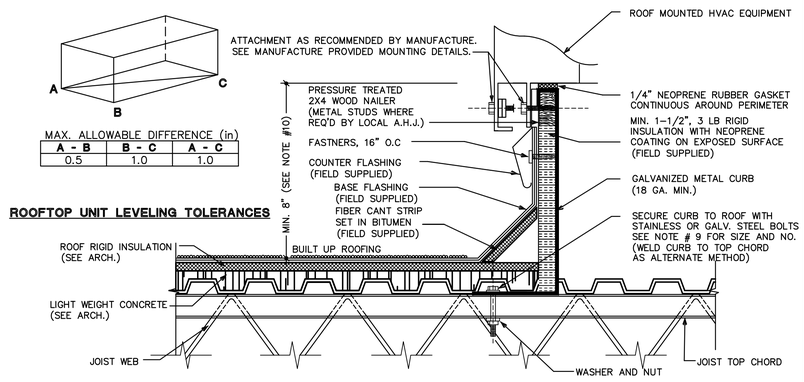
Date Signed: .

M2.1

ROOFTOP A/C EQUIPMENT SCHEDULE

SYSTEM	A/C UNIT TAG	RTU-1	RTU-2	RTU-3	RTU-4	RTU-5
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE
	MODEL	4WCZ6024A1000A	THC036E	THC092F	THC036E	THC074F
	TOTAL SENSIBLE CAP. MBH.	24.0	36.2	87.0	36.2	69.7
	TOTAL COOLING CAP. MBH.	18.0	27.0	65.1	27.0	55.5
	ENT. AIR TEMP D.B./W.B. °F	78/65	78/65	78/65	78/65	78/65
	LEAV. AIR TEMP D.B./W.B. °F	56.36/54.49	56.36/54.49	57.12/54.95	56.36/54.49	55.82/54.93
	SUPPLY AIR CFM	800	1200	3000	1200	2400
	OUTSIDE AIR CFM	80	150	375	150	300
	VOLTAGE	208/1ø/60	208/3ø/60	208/3ø/60	208/3ø/60	208/3ø/60
	MCA/MOCP	19.5/30.0	23/30	81.0/90.0	23/30	57.5/60.0
	SEER/EER	16/-	15.0/12.7	14.5/12.6	15.0/12.7	15.5/13.1
	OPERATING WEIGHT LBS.	442	481	928	481	918
	DIMENSIONS L x W x H (IN.)	50X43X38	69X44X36	53X88X46	69X44X36	53X88X46
	NOTES	1-14,16,19-21	1-17	1-17	1-17	1-17
COND. SECTION	REF./LBS.	R-410A/-	R-410A/6,2	R-410A/-	R-410A/6,2	R-410A/-
	NOMINAL TONNAGE/STAGES	2/2	3/2	7.5/2	3/2	6/2
	NO. OF COMPRESSORS	-	1	2	1	1
	COMP. R.L.A. EACH	11.7	10.4	15.9/10.0	10.4	14.6/7.1
	NO. OF OUTDOOR FANS	1	1	1	1	1
	FAN FLA. EACH	0.5	1.5	4.0	1.5	3.5
EVAP. SECTION	INDOOR FAN TYPE	FC	FC	FC	FC	FC
	FAN E.S.P. (IN. W.G.)	0.5"	0.5"	1"	0.5"	1"
	FAN H.P./B.H.P.	0.5 BHP	0.2 BHP	2.75 BHP	0.2 BHP	2.75 BHP
	FAN F.L.A.	4.3	4.9	7.3	4.9	7.3
	COIL ROWS/FPI	-	3/16	4/16	3/16	4/16
	HEATER TYPE	HEATPUMP	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
	HEATER K.W. @ RATED VOLTAGE	20200 (BTUs)	4.5 @ 208V/3ø	20.3 @ 208V/3ø	4.5 @ 208V/1ø	13.1 @ 208V/3ø
	NO. OF STEPS	1	1	1	1	1
	FILTER TYPE/EFF.					

NOTES:
1. UNITS SHALL BE " ARI" RATED. SUBSTITUTIONS TO BE APPROVED BY ENGINEER.
2. PROVIDE FACTORY BUILT ROOFCURB 14" HIGHT(20" IF NECESSARY). INSTALL UNIT LEVEL WITH PRESCRIBED TOLERANCES (SEE DETAIL).
3. PROVIDE COMPRESSOR WITH 5-YEAR WARRANTY.
4. PROVIDE SLOPED CONDENSATE DRAIN PAN AND INTERNAL TRAP.
5. PROVIDE SERVICE CLEARANCE PER MANUFACTURE'S RECOMMENDATIONS.
6. PROVIDE SINGLE POINT POWER ENTRY.
7. PROVIDE FACTORY MOUNTED FUSED DISCONNECT, COORDINATE PRIOR TO PURCHASE AND INSTALLATION.
8. PROVIDE VIBRATION/SOUND ISOLATION CURB.
9. PROVIDE MOTOR OVERLOAD THERMAL PROTECTION.
10. PROVIDE MATCHING PROGRAMMABLE THERMOSTAT.
11. PROVIDE ELECTRONIC CONDENSATION CONTROL SYSTEM FOR DRAIN PANS(S).
12. PROVIDE ELECTRIC HEATER WITH MIN. 2 STAGES IF OVER 10 KW CAPACITY.
13. ALL EQUIPMENT SHALL COMPLY WITH WIND LOAD REQUIREMENTS SET BY LOCAL CODES, ORDINANCES, OR AUTHORITIES. WIND LOAD RATING MAY BE REQUIRED; CONTRACTOR TO PROVIDE NOA RATING IF REQUIRED.
14. PROVIDE MOTORIZED DAMPER.
15. PROVIDE CO2 SENSOR TO BE INTERLOCKED WITH MOTORIZED DAMPER.
16. PROVIDE MINIMUM DUAL STAGE COMPRESSORS.
17. PROVIDE ION-OA IONIZATION DEVICE.



MAX. ALLOWABLE DIFFERENCE (in)

A - B	B - C	A - C
0.5	1.0	1.0

ROOFTOP UNIT LEVELING TOLERANCES

ROOFTOP UNIT INSTALLATION NOTES

1. DUCT TRANSITION FROM RTU TO DUCT SIZE SHOWN ON MECH. FLOOR PLAN SHALL BE MADE BETWEEN RTU & TOP OF ROOF WITHIN CURB.
2. SIZE OF OPENING IN ROOF DECK TO BE AS SMALL AS POSSIBLE, 6" MAX. LARGER THAN DUCT SIZE SHOWN. COORDINATE W/STRUCTURAL PLANS.
3. INSTALL PER MANUFACTURER'S RECOMMENDATION AND INSTALLATION MANUAL.
4. ALL WIRING BY ELECTRICAL CONTRACTOR.
5. SHIM CURB AS REQUIRED TO PROVIDE HORIZONTAL INSTALLATION OF UNIT WITHIN PRESCRIBED TOLERANCES
6. CONTRACTOR SHALL COORDINATE LOCATION OF ROOF CURB WITH STRUCTURE PRIOR TO INSTALLATION.
7. ROOF CURB BY AIR CONDITIONER MANUFACTURER. PROVIDE ADDITIONAL BRACING AND SUPPORT. AS REQUIRED FOR ROOF CURB INSTALLATION TO WITHSTAND WIND LOAD PER LOCAL CODES.
8. CURB TO BE HEAVY GAUGE GALVANIZED STEEL CONSTRUCTION AS RECOMMENDED BY MANUFACTURER, ALL FASTENERS SHALL BE CORROSION PROTECTED IF EXPOSED TO OUTDOORS
9. FOR A/C UNIT ROOFCURB, PROVIDE 3/8" THRU BOLTS WITH MIN. LENGTH AS DETERMINED BY FIELD CONDITIONS TO INSURE PROPER ATTACHMENT TO STRUCTURE. PROVIDE ANCHORING AS RECOMMENDED BY STRUCTURAL ENGINEER.
10. CLEARANCE OF UNIT TO ABOVE FINISHED ROOF SHALL COMPLY WITH LOCAL CODE REQUIREMENTS: PAR. 1511.7 FOR FLORIDA BUILDING CODE, 2020 ED.

HVAC EQUIPMENT ROOF CURB DETAIL
NOT TO SCALE

OUTSIDE AIR CALCULATION

OCCUPANCY CLASSIFICATION	AREA	OCCUPANT DENSITY #/1000 SQ.FT	PEOPL OUTDOOR AIRFLOW RATE IN BRATH ZONE, Rp	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE,	CODE REQUIRED OCCUPANT DENSITY	REQUIRED OA	PROVIDED OA
OFFICE	4280	5	5	0.06	21	364	475
CORRIDOR	2320	0	5	0.06	0	139	140
CONFERENCE	192	50	5	0.06	10	60	60
RECEPTION	120	30	5	0.06	4	25	50
WAREHOUSE	3782	-	10	0.06	10	327	330
TOTAL	10694					915	1055

SUPPLY AIR GRILLE SCHEDULE

TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
A	TITUS/ TDCA-AA	24X24	SEE SCH.	ALUM.	NOTE #3	-	-	4-WAY	MAX. 30	SEE SCH.	1-6
B	TITUS/ TDCA-AA	12X12	SEE SCH.	ALUM.	NOTE #3	-	-	4-WAY	MAX. 30	SEE SCH.	1-6
C	TITUS/S300FS	20X8	SEE PLAN	ALUM.	DUCT MOUNTED	-	-	-	MAX. 30	SEE PLAN	4

(*) EQUIVALENT MANUFACTURER: METALAIRE, PRICE, CARNES, T & B, NAILOR

GENERAL NOTES:
1. PROVIDE SPIN-IN COLLAR AT TRUNK TO FLEX DUCT CONNECTION.
2. PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLAN
3. REFER TO ARCHITECT PLANS FOR CEILING TYPE.
4. CONTRACTOR TO COORDINATE FINAL SELECTION WITH ARCHITECT AND OWNER
5. FLEX DUCT SIZE TO BE SAME AS DIFFUSER NECK SIZE.
6. PROVIDE INSULATION ON THE BACK OF DIFFUSER IF IN UNCONDITIONED SPACE

CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT/OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BULDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODEL OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.

FLEX SCHEDULE	
6ø"	50-125 CFM
8ø"	130-200 CFM
10ø"	205-330 CFM
12ø"	335-450 CFM
14ø"	455-600 CFM
16ø"	605-700 CFM

RETURN AIR GRILLE SCHEDULE

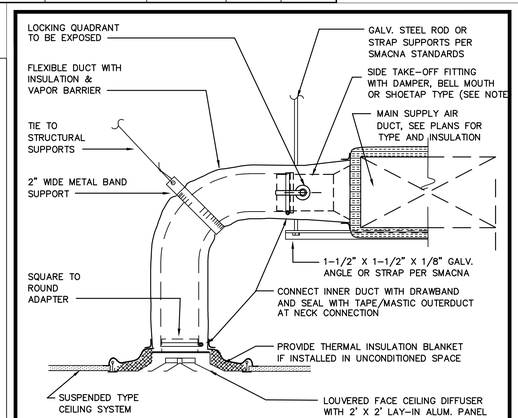
TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
AA	TITUS/PAR-AA	24X24	SEE SCH.	ALUM.	NOTE #1	-	-	-	MAX. 30	SEE SCH.	1-3
BB	TITUS/PAR-AA	12X12	SEE SCH.	ALUM.	NOTE #1	-	-	-	MAX. 30	SEE SCH.	1-3
CC	TITUS/ 3FL	38X20	SEE PLAN	ALUM.	SIDE WALL	-	-	-	MAX. 30	SEE PLAN	1
DD	TITUS/ 3FL	20X16	SEE PLAN	ALUM.	SIDE WALL	-	-	-	MAX. 30	SEE PLAN	1

(*) EQUIVALENT MANUFACTURER: METALAIRE, PRICE, CARNES, T & B, NAILOR

GENERAL NOTES:
1. REFER TO ARCHITECT PLANS FOR CEILING TYPE.
2. CONTRACTOR TO COORDINATE FINAL SELECTION WITH ARCHITECT AND OWNER.
3. PROVIDE INSULATION ON THE BACK OF DIFFUSER IF IN UNCONDITIONED SPACE

CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT OR OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BUILDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODEL OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.

NECK SIZE	CFM RANGE	NECK SIZE	CFM RANGE
6X6	0-150 CFM	15X15	0-900 CFM
8X8	0-250 CFM	18X18	0-1350 CFM
10X10	0-400 CFM	22x22	0-2000 CFM
12X12	0-600 CFM		



NOTE: PROVIDE CABLE CONTROL DAMPER FOR HARD CEILING AREAS.

TYPICAL DIFFUSER DETAIL
NOT TO SCALE

VENTILATOR SCHEDULE

SELECTION DATA					VENTILATOR DATA					
TAG	SERVICE AREA	MANUF.(*)	MODEL	CONFIG.	CFM	ESP ("WG)	WEIGHT (LBS)	DIMENSIONS L"xW"xH"	OPENING L"xW"	ACCESSORIES
GH-1	SERVICE RECEPTION STALL	COOK	GI	ROOFTOP	5000	.021	191	63X62X20	42X42	1-4

(*) APPROVED EQUAL MANUFACTURER: COOK, TWIN-CITY, ACME, PENN

ACCESSORIES NOTES:
1. PROVIDE BACKDRAFT DAMPER.
2. PROVIDE ROOF CURB.
3. PROVIDE CORROSION PROTECTION.
4. PROVIDE VIBRATION ISOLATORS.

GENERAL FAN NOTES:
a. ALL OUTDOOR EQUIPMENT SHALL COMPLY WITH LOCAL ZONING NOISE ORDINANCE OR NOT EXCEED A NOISE LEVEL OF 65 dB AS MEASURED RADIALLY 30 FT. FROM THE EQUIPMENT IN ALL DIRECTIONS.
b. ALL EQUIPMENT SHALL COMPLY WITH WIND LOAD REQUIREMENTS SET BY LOCAL CODES, ORDINANCES, OR AUTHORITIES. WIND LOAD RATING MAY BE REQUIRED; CONTRACTOR TO PROVIDE NOA RATING IF REQUIRED.

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE

Architect:

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Fax.772.562.8600
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Consultant:

Drawing Title:
MECHANICAL SCHEDULES

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR
KAMM Consulting
1408 Orange Avenue
Fort Pierce, Florida 34950
Phone 772.595.1744
bbrown@kammconsulting.com
Certification of Authorization #8189
PRINCIPAL
Brady L. Brown Florida License #58232
date
signed

Drn: JLH | Dwg. File: .
Chd: TD | XREF File: .
Project No.: 2021-20 | Plot File: .
Sheet No.:
Cert. No.: 12,456
Date Signed:

M6.1

Luminaire Schedule

Project: IRC TRANSPORTATION REV1 01-08-2022

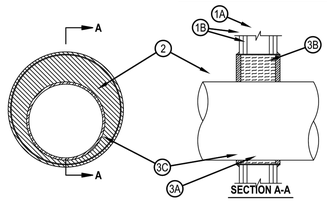
Symbol	Label	[MANUFAC]	Description	Arr. Lum. Lumens	LLF	Lum. Watts	Total Watts
	A	WILLIAMS INDOOR	LT-24-L40-835-AF-xxx-xxx	3972	0.900	32	1248
	A1	WILLIAMS INDOOR	LT-24-L40-835-AF-xxx-xxx WITH SURFACE MOUNT KIT	3972	0.900	32	224
	B	WILLIAMS INDOOR	LT-24-L52-835-AF-xxx-xxx	5202	0.900	37	555
	C	WILLIAMS INDOOR	LT-24-L64-835-AF-xxx-xxx	6395	0.900	49	147
	D	BEGHELLI	BS100LED4HTMOWT35120V-277V-FL	6615	0.900	60	180
	F	WILLIAMS INDOOR	GH-2-L300-840-[L270]-FA-DIM-UNV	31002	0.810	204.924	1639.392
	G	WILLIAMS INDOOR	GH-2-L240-840-FA-DIM-UNV	23468	0.900	176.806	2298.478
	H	WILLIAMS INDOOR	GH-2-L180[L162]-840-FA-DIM-UNV	18010	0.810	113.31	906.48
	J	WILLIAMS INDOOR	GH-2-L180-840-FA-DIM-UNV	18010	0.900	125.9	755.4
	K	BEGHELLI	MEZZO SERIES	18010	-	15	-

WL 1056

System No. W-L-1056

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F - 4 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient - Less Than 1 CFM/sq ft
	L Rating At 400 F - 4 CFM/sq ft



1. Wall Assembly — The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Two layers of nom 5/8 in. (16 mm) thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 18-3/4 in. (476 mm).
2. Through Penetrants — One metallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The annular space shall be min 3/4 in. (19 mm) to max 4-1/2 in. (114 mm). The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   D. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System — The firestop system shall consist of the following:
   A. Metallic Sleeve — Cylindrical sleeve fabricated from min 0.028 in. thick (24 gauge) galv sheet steel and having a min 1 in. (25 mm) lap along the longitudinal seam. Length of steel sleeve to be 1 in. (25 mm) more than the overall thickness of the wall such that, when installed in circular opening, the ends of the sleeves project 1/2 in. (13 mm) from each surface of the wall. The diam of the openings cut in the gypsum wallboard layers on each side of the wall assembly to be 1-1/2 to 6 in. (38 to 152 mm) larger than outside diam of pipe such that, when the sleeve is installed, a 3/4 to 4-1/2 in. (19 to 114 mm) annular space will be present between the steel sleeve and the pipe around the entire circumference of the pipe. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.

HILTI Hilti Firestop Systems

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WL 1056

System No. W-L-1056

B. Packing Material — Min 4 in. thickness of min 4.0 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
C. Fill, Void or Cavity Material* — Sealant — Min 3/4 in. (19 mm) thickness of tightly packed fill material applied within the annulus, flush with the ends of the steel sleeve. Additional fill material to be installed to the outer perimeter of the steel sleeve at its egress from the opening.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Hilti Firestop Systems

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ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL ARCHITECT/ENGINEER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
B. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF.
C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE UTILIZED IN THIS PROJECT.
   1. NATIONAL ELECTRICAL CODE (NFPA–70)
   2. CODE FOR SAFETY TO LIFE (NFPA_101)
   3. STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS (NFPA–72)
   4. UNDERWRITERS' LABORATORIES (UL)
   5. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
   6. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
   7. FEDERAL SPECIFICATION (FED. SPEC.)
   8. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
   9. FLORIDA BUILDING CODE. FBC 2020 EDITION
   10. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
   11. CITY OF BOYNTON BEACH BUILDING CODE. (AMENDMENTS TO FLORIDA BUILDING CODE FBC 2020)
   12. ADDITIONALLY, DESIGNS, WORK PRACTICES AND CONDITIONS MUST CONFORM WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA)
D. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
E. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
F. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
G. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THERE BY.
H. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
   CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL MEAN THAT THE CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT COMPLETE.

PART 2 – PRODUCTS

A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. (EXCEPT AS NOTED OTHERWISE FOR CONTROL WIRING). ALL CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER WITH "THHN–THWN" INSULATION UNLESS OTHERWISE NOTED.
B. ELECTRICAL METALLIC TUBING (EMT) SHALL BE OF BEST QUALITY STEEL, SMOOTH INSIDE AND OUT AND SHALL BE HOT–DIPPED GALVANIZED.
C. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS
I. IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
D. RIGID NONMETALIC CONDUIT SHALL BE SCHEDULE 40 PVC.
E. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
F. PANELBOARDS:
   1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
   2. ALL CIRCUIT BREAKERS SHALL BE BOLT ON. PLUG–IN BREAKERS ARE NOT ACCEPTABLE.
   3. CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL BE LISTED AND MARKED "SWD"
   4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
   5. A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
   6. ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
   7. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE–WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS.
G. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK–MAKE, QUICK–BREAK. ENCLOSURES SHALL BE NEMA–1 FOR INDOOR LOCATIONS, NEMA 3R FOR OUTDOOR LOCATIONSOR AS OTHERWISE NOTED.
H. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC AS INDICATED ON THE ELECTRICAL DRAWINGS, WITH OVERLOAD RELAYS IN EACH PHASE.
   WIRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) COLOR SHALL BE COORDINATED WITH CLIENT.

PART 3 – EXECUTION

A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:
   1. 208/120 VOLTS, 3 PHASE, 4–WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK, 1 RED AND 1 BLUE. GROUNDED (NEUTRAL) CONDUCTOR; WHITE. GROUNDING CONDUCTORS SHALL BE GREEN.
   2. 480/277 VOLT, 3–PHASE, 4–WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BROWN, 1 YELLOW, AND 1 PURPLE. GROUNDED (NEUTRAL) CONDUCTORS; GREY. GROUNDING CONDUCTORS SHALL BE GREEN.
   3. BRANCH CIRCUIT WIRING (#6 AND SMALLER) SHALL BE COLOR CODED BY CONTINUOUS INSULATION COLOR AND FEEDERS AND SERVICES (#4 AND LARGER) SHALL BE CODED AT ALL JUNCTION OR PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLOR MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.
I.
B. WIRING METHODS
   1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED, SPECIFIED OR AS SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE.
   2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE.
   3. TYPE MC CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. AND LOCAL CODES.
D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.
G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED.
H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IECE.
   CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
K. ALL LAY–IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER.
L. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
M. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

N. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.
   ANY CONFLICTS AND DESCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE
O. PROCEEDING WITH ANY WORK.
   PER NEC 210.8(B)(2) ALL 15– AND 20–AMPERE, 125–VOLT RECEPTACLES IN NONDWELLING–TYPE KITCHENS TO BE GFCI PROTECTED.

P. BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% DESIGN LOAD. FBC 2020 FBC ENERGY CONSERVATION SECTION 405.7.3.

Q. FEEDER CONDUCTORS SHALL BE SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP PER 405.7.3.

ELECTRICAL SHEET INDEX

ELECTRICAL LEGEND

▽	TELEPHONE OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
▼	DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
	QUAD TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNTED ABOVE COUNTER, SEE ARCHITECTURAL DRAWING FOR SPECIFIC REQUIREMENTS.
	QUAD TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
	QUAD TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT RUN TO THE NEAREST STUD WALL AND STUBBED OUT FROM WALL 6" ABOVE CEILING. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
	TELEVISION RECESSED OUTLET. LEGRAND "TV1WMTVSSWCC2". MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
	20 AMP SINGLE RECEPTACLE (NEMA 5–20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
	20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
	20 AMP QUADRUPLEX RECEPTACLE (NEMA 5–20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
GFI	20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) WITH GROUND FAULT CIRCUIT INTERRUPTER, MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET. UNLESS NOTED OTHERWISE.
	20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) MOUNTED ABOVE COUNTER SEE ARCHITECTURAL DRAWINGS FOR SPECIFIC REQUIREMENTS.
	20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
	20 AMP QUADRUPLEX RECEPTACLE (NEMA 5–20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
	20 AMP DUPLEX RECEPTACLE (NEMA 5–20R), RECESS FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
	20 AMP DUPLEX RECEPTACLE (NEMA 5–20R), CEILING MOUNTED.
	TELEPHONE/DATA OUTLET, CEILING MOUNTED.
	SPECIAL–PURPOSE RECEPTACLE
	JUNCTION BOX
P	SINGLE GANG JUNCTION BOX FOR POWER CONNECTION TO MODULAR FURNITURE SYSTEM INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER.
T/D	DOUBLE GANG JUNCTION BOX FOR TELEPHONE/DATA CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. EXTEND (2) 3/4" EMPTY CONDUITS FROM JUNCTION BOX TO ABOVE CEILING AND TERMINATE WITH INSULATING BUSHING 6" FROM WALL.
	TELE/POWER POLE FOR TELEPHONE/DATA/POWER CONNECTION TO MODULAR FURNITURE 8 WIRE SYSTEM (SEE DETAIL THIS SHEET). INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER, WIREMOLD CATALOG # 25DTP–4D W/IVORY FINISH.
	SPECIAL PURPOSE RECEPTACLE MOUNTED BELOW RAISE FLOOR.
EF	EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS.
$	SINGLE POLE, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$3	3–WAY, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$D	SINGLE POLE, 20 AMP, SWITCH WITH DIMMER. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$M	MOTOR RATED SWITCH
$VS	VACANCY SENSOR SWITCH, WATTSTOPPER, MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$	TWO POLE, 30 AMP SWITCH. MOUNT ADJACENT EQUIPMENT TO BE CONTROLLED.
	FACTORY MOUNTED DISCONNECT/STARTER (SEE MECHANICAL SCHEDULE)
A B C	FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING
A B C	FUSIBLE MOTOR STARTER DISCONNECT SWITCH A = POLES, B= NEMA SIZE, C= FUSE RATING
	GROUNDING ELECTRODE & CONDUCTOR SYSTEM
	TRANSFORMER
	ELECTRICAL PANELBOARD
	TELEPHONE WOOD BACKBOARD
WP	WEATHERPROOF
T/C	TIME CLOCK
RE	RELOCATED
E	EXISTING TO REMAIN
A.F.F.	ABOVE FINISH FLOOR
	CEILING MOUNTED DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
	LOW VOLTAGE SECURITY CAMERA LOCATION. PROVIDE JUNCTION BOX WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. COORDINATE MOUNTING HEIGHT WITH OWNER.

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT # 2021-0432
PROJECT MANAGER: DUANE MILLAR

KAMM Consulting
1408 Orange Avenue
Fort Pierce, Florida 34950
Phone 772.595.1744
bbrown@kammconsulting.com
Certification of Authorization #8189
PRINCIPAL
Bradly L. Brown Florida License #58232

Project: NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE 3

Architect:

DONADIO & Associates, Architects P.A.
2001 9th Avenue, Suite 308
Vero Beach, FL 32960
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Consultant:

Drawing Title:

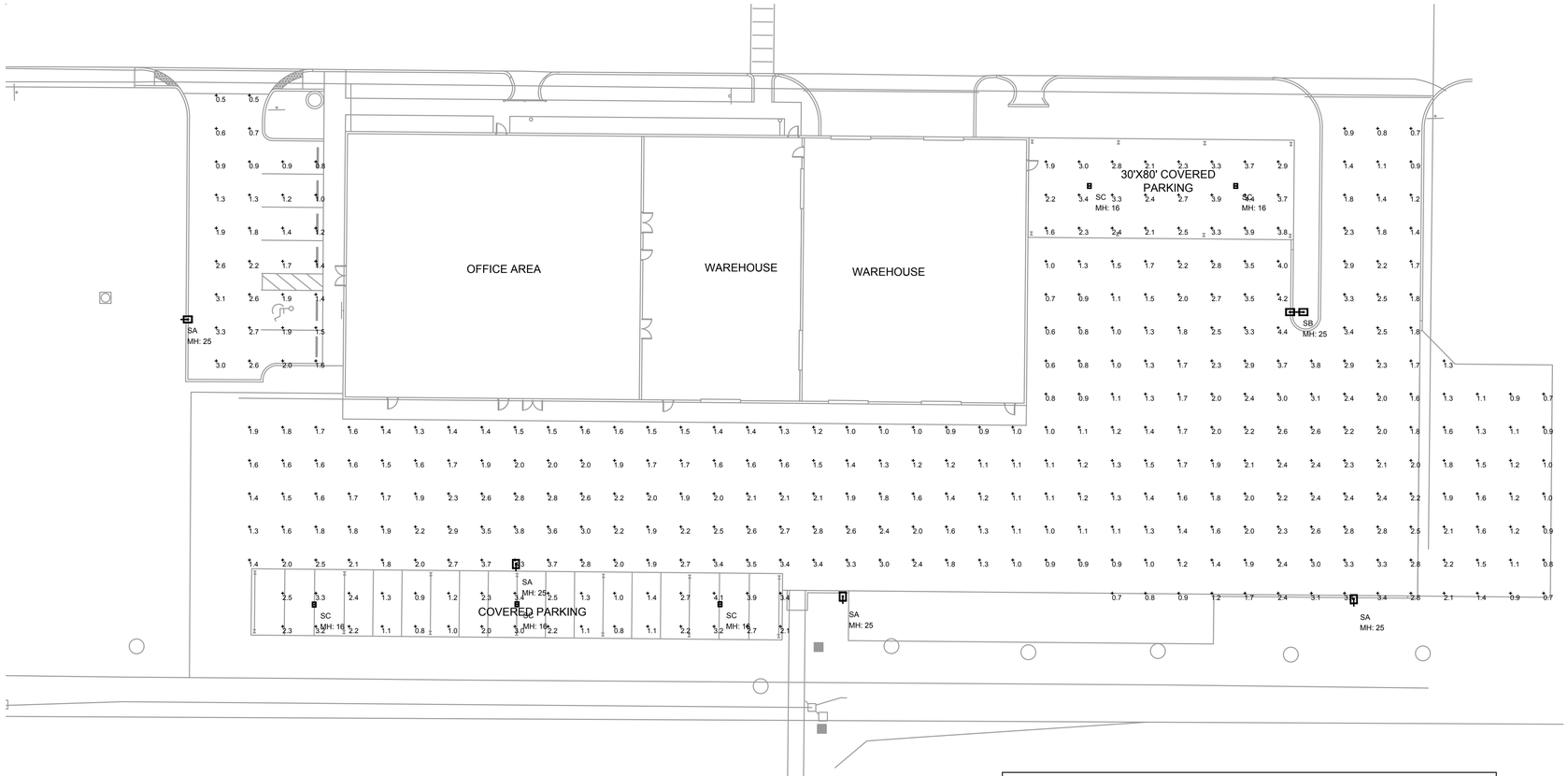
ELECTRICAL NOTES

Drn: JLH | Dwg. File: .
Chd: TD | XREF File: .
Project No.: 2021-20 | Plot File: .
Sheet No.:

Cert. No.: 12,456

Date Signed:

E0.1



Luminaire Schedule

Project: IRC TRANSORTATION SITE 11-30-2021

Symbol	Qty	Label	[MANUFAC]	Description	Arr. Lum. Lumens	LLF	Lum. Watts	Total Watts
	6	SA	Gardco by Signify	ECF-S-48L-1A-NW-G2-3-HS POLE MOUNT 20' AFG	14481	0.900	108.7	434.9
	3	SB	Gardco by Signify	ECF-S-48L-1A-NW-G2-4-HS POLE MOUNT 20' AFG	20826	0.900	108.7	317.4
	6	SC		HDWI-SCT-D2-SM-S-10-BZ- 28W MOUNT UNDER CANOPY	wiw	0.900	27.9520	139.7975

Calculation Summary

Project: IRC TRANSORTATION SITE 11-30-2021

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE & PARKING_Planar	Illuminance	Fc	1.94	4.4	0.3	6.99	8.80

SITE LIGHTING PLAN

1"=20'-1'-0" NORTH

ISSUED FOR PERMIT 06-29-23

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Drawing Title:

SITE LIGHTING PLAN

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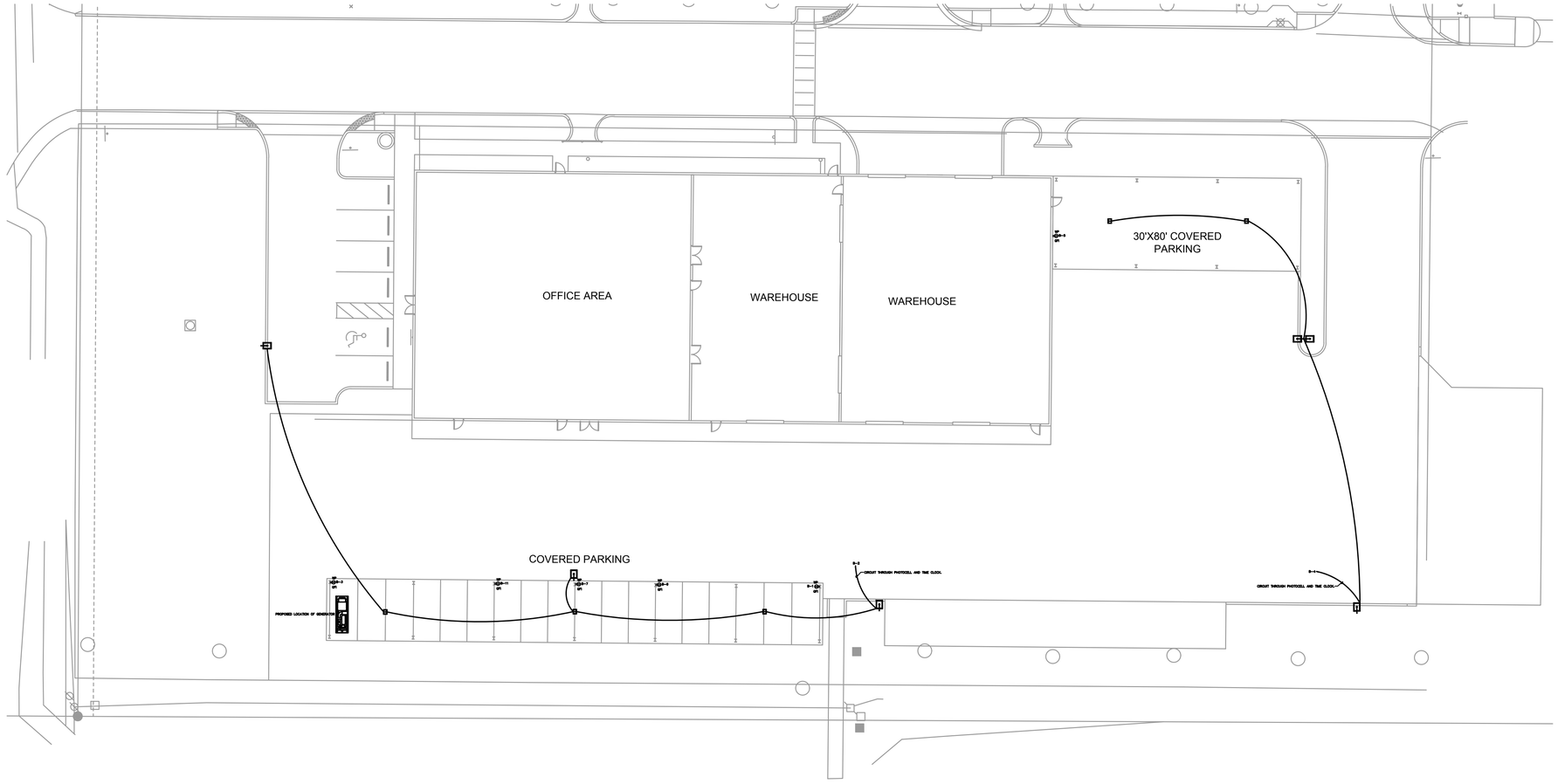
Chd: TD
Project No.: 2021-20
Dwg. File: .
XREF File: .
Plot File: .
Sheet No.:

Cert. No.: 12,456
Date Signed:

E1.1

41st Street (South Gifford Road)



SITE POWER PLAN

1"=20'-1'-0" NORTH

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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date

signed

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
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Consultant:

Drawing Title:

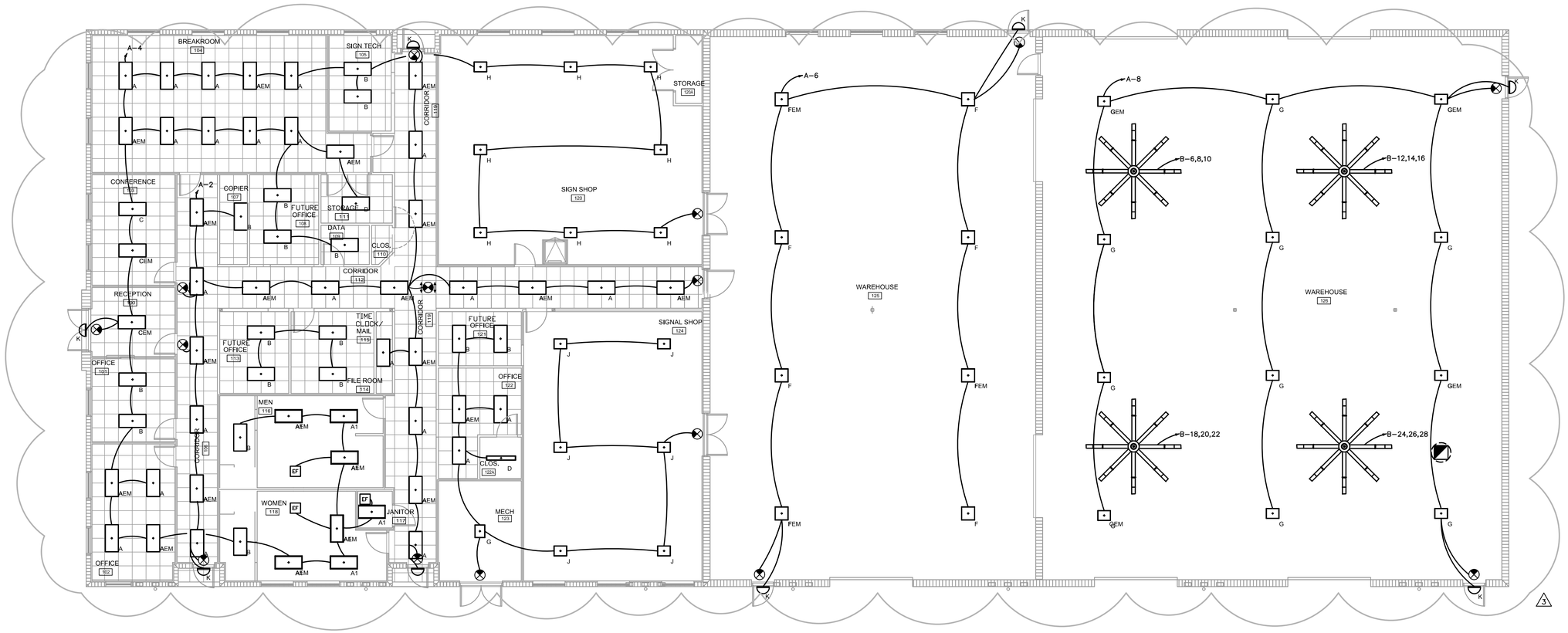
SITE POWER PLAN

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:

Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12,456
Date Signed:

E1.2



LIGHTING PLAN

1/8"=1'-0" NORTH

GENERAL NOTES

1. SEE SHEET E2.2 FOR LIGHTING CONTROLS.

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

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Consultant:

Drawing Title:

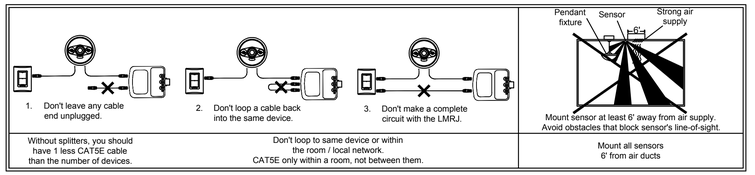
LIGHTING PLAN
FLOOR PLAN

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:

Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12,456
Date Signed:

E2.1



LEGEND

- P — BZ-150
- D_{SW3} — DSW-301
- LMDC-100
- D_{LM101} — LMDM-101
- S_{LMDW2} — LMDW-102
- LMPC-100
- LMRC-101
- LMRC-102
- LMRC-111
- S_{LM101} — LMSW-101
- S_{LM102} — LMSW-102
- H — W-2000H
- Apprentice 4 AP3-04 — Apprentice 3 Relay Panel, Including 4 Relays
- LSG3-XX-2 — LSG3-XX-2, Gen 3 LightSync 2-Zone Switch

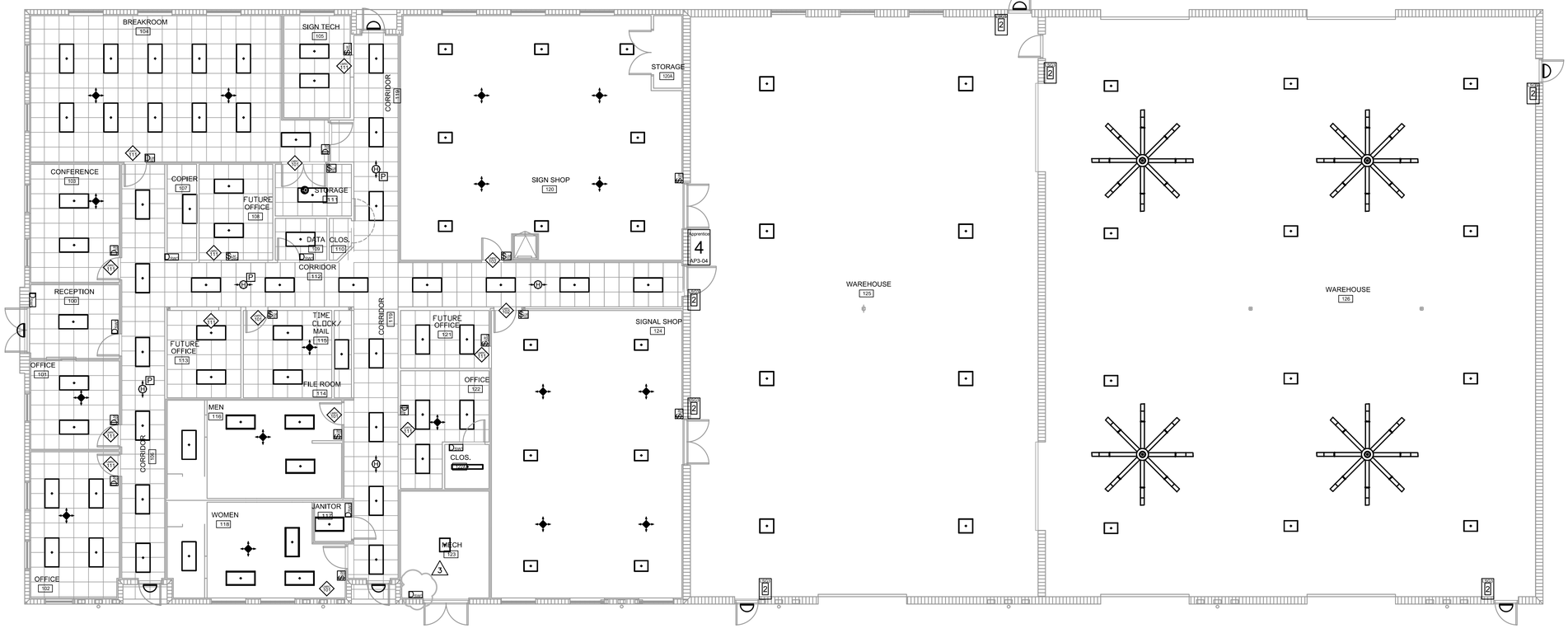
GENERAL NOTES: (from products in current sheet)

a.)Device placement must be field verified for compliance with all product guidelines located in the installation instructions.

b.)Review data sheets and installation instructions for product specifics and limitations.

c.)See contract documents for engineer's notes to ensure compliance.

d.)Sensors shall be mounted no closer than 6' to an air supply or return diffuser.



KEY NOTES

(1) INTERMATIC DIGITAL TIMER SWITCH "EI600".

LIGHTING CONTROL PLAN

1/8"=1'-0" NORTH

ISSUED FOR PERMIT 06-29-23

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date

signed

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

INDIAN RIVER COUNTY FLORIDA

4548 41st Street
Vero Beach FL
32967

Key Plan:

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C.	06-22-22	BDC RESPONSE	3

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Consultant:

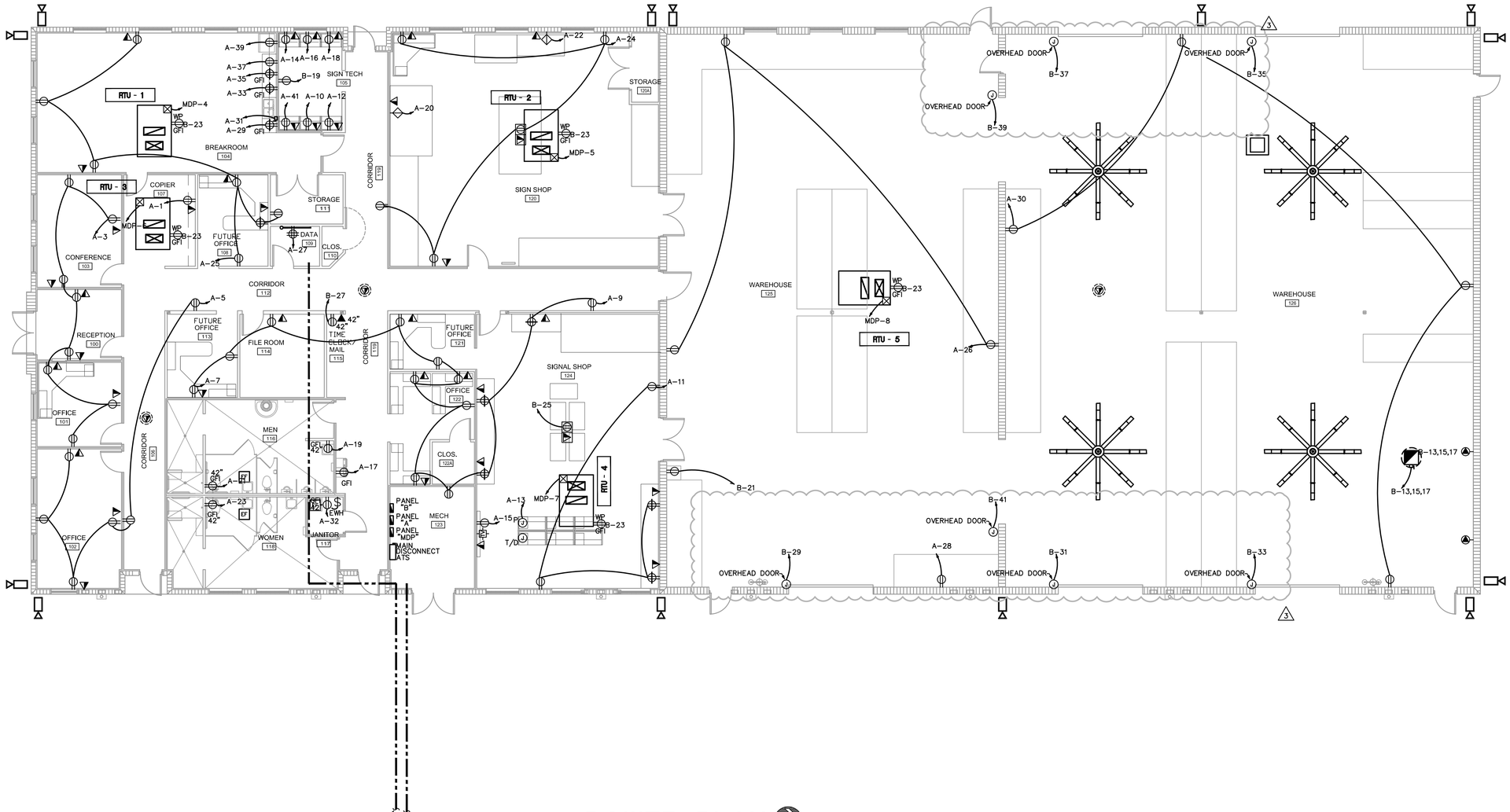
Drawing Title:

LIGHTING CONTROL PLAN
FLOOR PLAN

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12,456
Date Signed:

E2.2



(2) 3" CONDUITS FOR FUTURE POWER AND SECURITY CAMERAS TO COVERED PARKING AREA.

POWER PLAN

1/8"=1'-0" NORTH

ISSUED FOR PERMIT	06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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Consultant:

Drawing Title:

POWER PLAN
FLOOR PLAN

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12,456
Date Signed:

E3.1

SCHEDULE OF DISTRIBUTION PANEL "MDP"

MAIN: 400 AMP / 3 POLE, MLO — VOLTAGE: 208/120V, 3ø, 4 WIRE
SPEC: SQUARE D TYPE I–LINE OR APPROVED EQUIVALENT — AIC SYMM: 65,000

DESIGNATION	DESCRIPTION	CIRCUIT BREAKER FRAME	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER POLES	FEEDER	A PHASE KVA	B PHASE KVA	C PHASE KVA	NOTES
MDP–1	TVSS	–	–	3	–	–	–	–	
MDP–2	PANEL A	–	200	3	4#3/0 & 1#2G – 2–1/2"	12.2	11.0	10.2	
MDP–3	PANEL B	–	200	3	4#3/0 & 1#2G – 2–1/2"	4.0	4.0	3.0	
MDP–4	RTU–1	–	30	2	3#10 & 1#10G – 3/4"	–	4.1	4.1	
MDP–5	RTU–2	–	30	3	4#8 & 1#10G – 1"	4.1	4.1	4.1	
MDP–6	RTU–3	–	90	3	4#3 & 1#6G – 1–1/4"	9.3	9.3	9.3	
MDP–7	RTU–4	–	30	3	4#10 & 1#10G – 3/4"	2.7	2.7	2.7	
MDP–8	RTU–5	–	60	3	4#3 & 1#8G – 1–1/4"	8.3	8.3	8.3	
MDP–9	SPARE	–	100	3	–	–	–	–	
MDP–10	SPARE	–	100	3	–	–	–	–	
						40.6	43.5	41.7	KVA PER PHASE
						338.3	362.5	347.5	AMPS PER PHASE
							125.8		TOTAL KVA

SCHEDULE OF BRANCH CIRCUIT PANEL "A"

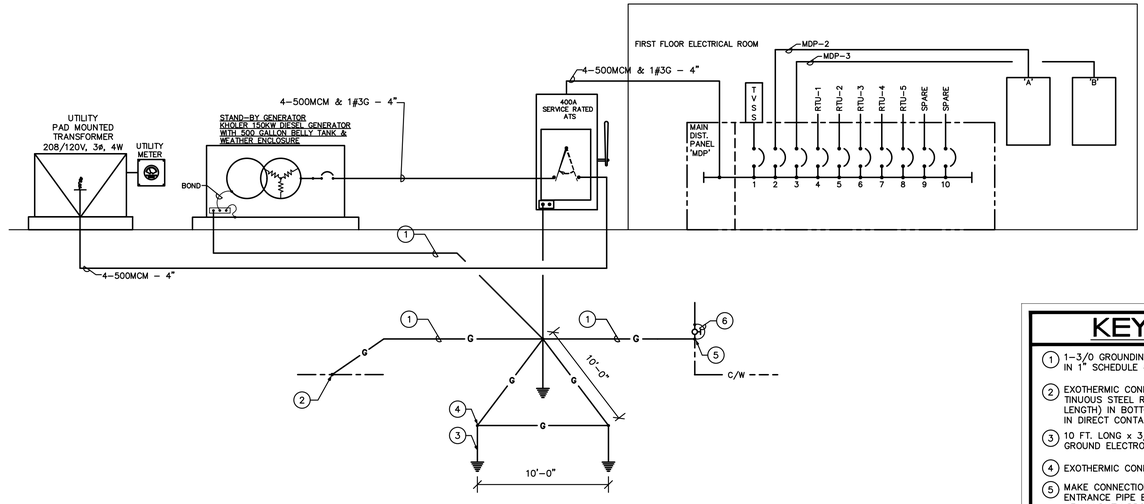
MAIN: 200 AMP / 3 POLE MAIN CIRCUIT BREAKER — VOLTAGE: 208/120V, 3ø, 4 WIRE
SPEC: SQUARE D TYPE "NQOD" OR APPROVED EQUIVALENT
MOUNTING: SURFACE — AIC SYMM: 22,000

DESCRIPTION	WIRE	GND.	COND.	TRIP	CKT.	A PHASE KVA	B PHASE KVA	C PHASE KVA	CKT.	TRIP	COND.	GND.	WIRE	DESCRIPTION
COPIER	#12	#12	1/2"	20	1	0.8 | 1.0			2	20	1/2"	#12	#12	LIGHTS
RECEPT.	#12	#12	1/2"	20	3		1.0 | 1.0		4	20	1/2"	#12	#12	LIGHTS
RECEPT.	#12	#12	1/2"	20	5			1.0 | 1.0	6	20	1/2"	#12	#12	LIGHTS
RECEPT.	#12	#12	1/2"	20	7	1.0 | 1.0			8	20	1/2"	#12	#12	LIGHTS
RECEPT.	#12	#12	1/2"	20	9		1.0 | 0.8		10	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	11			1.0 | 0.8	12	20	1/2"	#12	#12	RECEPT.
WORK STATIONS	#12	#12	1/2"	20	13	1.0 | 0.8			14	20	1/2"	#12	#12	RECEPT.
MONITOR	#12	#12	1/2"	20	15		0.8 | 0.8		16	20	1/2"	#12	#12	RECEPT.
WATER FOUNTIAN	#12	#12	1/2"	20	17			1.0 | 0.8	18	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	19	1.0 | 1.0			20	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	21		1.0 | 1.0		22	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	23			1.0 | 1.0	24	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	25	1.0 | 1.0			26	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	27		1.0 | 1.0		28	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	29			0.8 | 1.0	30	20	1/2"	#12	#12	RECEPT.
RECEPT.	#12	#12	1/2"	20	31	0.8 | 1.0			32	20	1/2"	#12	#12	EWH
RECEPT.	#12	#12	1/2"	20	33		0.8 | –		34	20	–	–	–	SPARE
RECEPT.	#12	#12	1/2"	20	35			0.8 | –	36	20	–	–	–	SPARE
RECEPT.	#12	#12	1/2"	20	37	0.8 | –			38	20	–	–	–	SPARE
RECEPT.	#12	#12	1/2"	20	39		0.8 | –		40	20	–	–	–	SPARE
RECEPT.	#12	#12	1/2"	20	41			0.8 | –	42	20	–	–	–	SPARE
						12.2	11.0	10.2	KVA PER PHASE					
						101.6	91.6	85.0	AMPS PER PHASE					
							33.4		TOTAL KVA					

SCHEDULE OF BRANCH CIRCUIT PANEL "B"

MAIN: 200 AMP / 3 POLE MAIN CIRCUIT BREAKER — VOLTAGE: 208/120V, 3ø, 4 WIRE
SPEC: SQUARE D TYPE "NQOD" OR APPROVED EQUIVALENT
MOUNTING: SURFACE — AIC SYMM: 22,000

DESCRIPTION	WIRE	GND.	COND.	TRIP	CKT.	A PHASE KVA	B PHASE KVA	C PHASE KVA	CKT.	TRIP	COND.	GND.	WIRE	DESCRIPTION
EXTERIOR RECEPTACLES	#12	#12	1/2"	20	1	0.2 | 1.0			2	20	3/4"	#10	#10	SITE LIGHTING
EXTERIOR RECEPTACLES	#12	#12	1/2"	20	3		0.2 | 1.0		4	20	3/4"	#10	#10	SITE LIGHTING
EXTERIOR RECEPTACLES	#12	#12	1/2"	20	5			0.2 | 0.6	6	20	1"	#12	3#12	FAN
EXTERIOR RECEPTACLES	#12	#12	1/2"	20	7	0.2 | 0.6			8					
EXTERIOR RECEPTACLES	#12	#12	1/2"	20	9		0.2 | 0.6		10	3				
EXTERIOR RECEPTACLES	#12	#12	1/2"	20	11			0.2 | 0.6	12	20	1"	#12	3#12	FAN
ROOF EXHAUST FAN	3#12	1#12	1/2"	20	13	0.6 | 0.6			14					
				3	15		0.6 | 0.6		16	3				
					17			0.6 | 0.6	18	20	1"	#12	3#12	FAN
RECEPTACLE	#12	#12	1/2"	20	19	1.0 | 0.6			20					
ICE MACHINE	#12	#12	1/2"	20	21		1.0 | 0.6		22	3				
ROOF RECEPTACLES	#12	#12	1/2"	20	23			0.8 | 0.6	24	20	1"	#12	3#12	FAN
FLOOR RECEPTACLE	#12	#12	1/2"	20	25	0.2 | 0.6			26					
TIME CLOCK	#12	#12	1/2"	20	27		0.1 | 0.6		28	3				
OVERHEAD DOOR	#12	#12	1/2"	20	29			0.6 | –	30	20	–	–	–	SPARE
OVERHEAD DOOR	#12	#12	1/2"	20	31	0.6 | –			32	20	–	–	–	SPARE
OVERHEAD DOOR	#12	#12	1/2"	20	33		0.6 | –		34	20	–	–	–	SPARE
OVERHEAD DOOR	#12	#12	1/2"	20	35			0.6 | –	36	20	–	–	–	SPARE
OVERHEAD DOOR	#12	#12	1/2"	20	37	0.6 | –			38	20	–	–	–	SPARE
OVERHEAD DOOR	#12	#12	1/2"	20	39		0.6 | –		40	20	–	–	–	SPARE
OVERHEAD DOOR	#12	#12	1/2"	20	41			0.6 | –	42	20	–	–	–	SPARE
						4.2	4.2	3.2	KVA PER PHASE					
						35.0	35.0	26.6	AMPS PER PHASE					
							11.6		TOTAL KVA					



KEY NOTES

1. 1–3/0 GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 40 PVC CONDUIT.
2. EXOTHERMIC CONNECTION. ELECTRICALLY CONTINUOUS STEEL REINFORCING BAR (20FT MIN. LENGTH) IN BOTTOM OF BUILDING FOUNDATION IN DIRECT CONTACT WITH EARTH.
3. 10 FT. LONG x 3/4" DIAMETER COPPER DRIVEN GROUND ELECTRODE.
4. EXOTHERMIC CONNECTION. (TYPICAL)
5. MAKE CONNECTION TO METALLIC COLD WATER ENTRANCE PIPE BEFORE FIRST VALVE WITH HEAVY DUTY BRONZE GROUND CLAMP.
6. PROVIDE (1) 3/0 BONDING JUMPER AROUND FIRST VALVE.

ELECTRICAL RISER DIAGRAM

ISSUED FOR PERMIT	06-29-23
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KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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Certification of Authorization #8189
PRINCIPAL: Bradly L Brown — Florida License #58232

. date

signed

Project: NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE 3

Architect:
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Consultant:

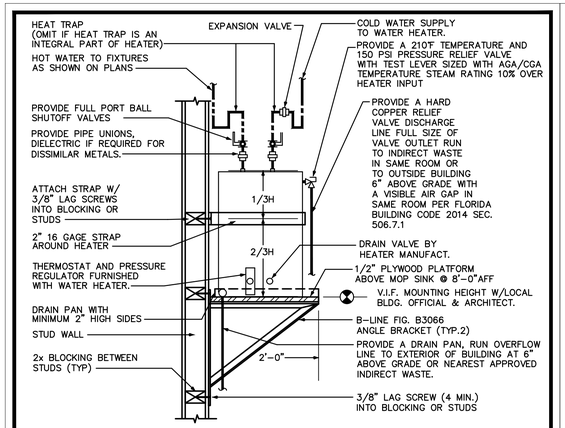
Drawing Title:

RISER DIAGRAM

Drn: JLH — Dwg. File:
Chd: TD — XREF File:
Project No.: 2021-20 — Plot File: .
Sheet No.:

Cert. No.: 12,456
Date Signed:

E5.1



PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. REFER TO ISOMETRIC RISER FOR PIPE SIZES. SET HEATER THERMOSTAT AT 120° F. PROVIDE MIXING VALVES AS REQUIRED AT LAVATORIES TO COMPLY WITH FBC ENERGY 504.3.

PLATFORM MOUNTED WATER HEATER DETAIL

NOT TO SCALE

CONDENSATE DRAIN PIPE SIZING

HVAC EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER
UP TO 20 TONS OF REFRIGERATION	1"
OVER 21 TONS TO 40 TONS OF REFRIGERATION	1-1/4"
OVER 41 TONS TO 60 TONS OF REFRIGERATION	1-1/2"
OVER 61 TONS TO 100 TONS OF REFRIGERATION	2"
OVER 101 TONS TO 250 TONS OF REFRIGERATION	3"
OVER 251 TONS & LARGER OF REFRIGERATION	4"

PLUMBING FIXTURE SCHEDULE

LAV	LAVATORY, AMERICAN STANDARD DECLYN WALL HUNG #0321.075 WHITEWITH T&S BRASS B-2701-VF05 FAUCET. CONTRACTOR TO SUPPLY CONCEALED ARM SUPPORT CARRIER FOR MOUNTING OF LAVATORY. WADE MODEL # 520-M36.
HLAV	HANDICAP LAVATORY, AMERICAN STANDARD, LUCERNE WALL HUNG LAVATORY MODEL #0356.028. WHITE, WITH T&S BRASS FAUCET BS-2701-VF05. CONTRACTOR TO SUPPLY CONCEALED ARM SUPPOR SUPPORT CARRIER FOR MOUNTING OF LAV. WADE MODEL # 520-M36. SUPPLY PLUMBEREX MODEL #4333 INSULATION KIT. MUST MEET A.D.A. CODE.
WC	WATER CLOSET, FLUSH VALVE BOWL: WALL MOUNTED, SIPHON JET ACTION VITREOUS CHINA, ELONGATED RIM AND 1-1/2" TOP SPUD, AMERICAN STANDARD AFWALL 2257.103, 1.28 GPF TOILET WITH A SLOAN ROYAL #111 FLUSH VALVE AND A CENTOCO #1500CC OPEN FRONT SEAT LESS COVER.
HWC	HANDICAPPED WATER CLOSET, FLUSH VALVE BOWL: WALL MOUNTED, SIPHON JET ACTION VITREOUS, CHINA ELONGATED RIM AND 1-1/2" TOP SPUD, AMERICAN STANDARD AFWALL 2257.103, 1.28 GPF TOILET WITH A SLOAN ROYAL #111 FLUSH VALVE AND A CENTOCO #1500CC OPEN FRONT SEAT LESS COVER.
UR	URINAL AMERICAN STANDARD, WASHBROOK #6501.010, FLUSH VALVE SLOAN ROYAL #186-1, WALL MOUNTED, WHITE URINAL. WALL CARRIER, WADE # 400AM11-M36. MUST MEET A.D.A. CODE.
HUR	URINAL AMERICAN STANDARD, ALLBROOK #6541.132. FLUSH VALVE, SLOAN ROYAL #186-1, WALL MOUNTED, WHITE URINAL. WALL CARRIER, WADE # 400AM11-M36. MUST MEET A.D.A. CODE.
HSH	HANDICPPED SHOWER, MIXING VALVE HOT AND COLD WATER, SHOWER MIXING VALVE SHALL BE A SYMMONS ORIGIN MODEL #9603-PLR TEMPTROL PRESSURE BALANCED SHOWER VALVE TO INCLUDE A 2.5 GPM FLOW RESTRICTOR AND INTEGRAL SERVICE STOPS.
FD	FLOOR DRAIN, WADE MODEL # 1103-TY-STD5.
HAND WASHER	HANDWASH STATION. ACORN MODEL #WRB721315 FOOT OPERATED, WALL MOUNTED.
SK	(2) COMPARTMENT SINK DAYTON BY ELKAY #D23322 S/S SINK, T&S BRASS FAUCET MODEL #B-0199-01-N05 WITH RETRACTABLE SPRAY.
MOP SK	FIAT MSB MODEL # 2424 MOLDED TERRAZZO BASIN WITH DRAIN BODY AND STRAINER. FIAT SERVICE SINK FAUCET MODEL #830-AA, WITH FIAT 832-AA HOSE AND HOSE BRACKET DISCHARGE; PAIL HOOK AND TOP BRACE; VACUUM BREAKER, FIAT #889-CC MOP HANGER AND BP SPLASH CATCHER/WALL GUARD.
HDF/DF	HANDICAP/DRINKING FOUNTAIN, ELKAY BI-LEVEL WALL MOUNTED BARRIER FREE MODEL # EZSTL8C.7.8 GPH, WADE 440-AM11-M36 CARRIER AS REQUIRED. 115V, 4.5 A, MUST MEET A.D.A. CODE.
EWH	WATER HEATER SHALL BE 30 GAL. ELECTRIC 208V, 1 PHASE, 4.5 KW. LOCHINVAR TALL MODEL ETT-030-KD.
RECIRC PUMP	TACO RECIRC. PUMP. MODEL 111 BRONZE CASTING , 115V, 1/8 HP, 2.0 AMP WITH "00" TIMER AQUSTAT.
EYE WASH	EYE WASH, ACORN MODEL SO460. NO DRAIN REQUIRED.

GENERAL NOTES:

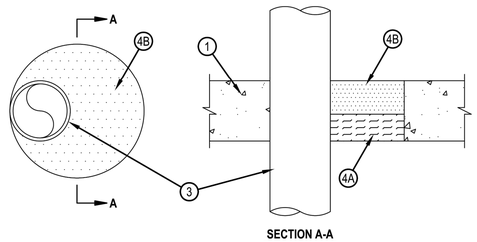
(1) – FIXTURES SHALL BE AS SHOWN OR EQUAL.
(2) – ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 OF FBC 2020
(3) – ALL FIXTURE TRIM PACKAGES INCLUDING BUT NOT LIMITED TO TRAP, ANGLE STOP, FLUSH VALVE, SUPPLY TUBES, AND CLEANOUT COVER PLATES SHALL BE OF THE SAME FINISH AS THE ABOVE SPECIFIED FAUCET AND PER ARCHITECTURAL FINISH SCHEDULE.
(4) – ALL FIXTURES SHALL BE ROUGHED IN PER MANUFACTURER CUT SHEET TO MAINTAIN UNIFORMITY.

CLASSIFIED C UL US

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1382
F Rating -- 3 Hr
T Rating -- 0 Hr
W Rating -- Class I

CAJ 1382



SECTION A-A

1. Floor or Wall Assembly -- Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 10 in.
   See Concrete Blocks (CAZT) in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve -- (Optional) (not shown) Nom 10 in. diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor or wall assembly flush with floor or wall surfaces.
3. Through Penetrant -- One metallic pipe, conduit or tube to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit of tube and periphery of opening shall be min 0 in. (point contact) to max 5-7/8 in. Pipe, conduit of tube to be rigidly supported on both sides of floor or wall assembly.
   A. Steel Pipe -- Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe -- Nom 4 in. diam (or smaller) cast or ductile iron pipe.
   C. Conduit -- Nom 4 in. diam (or smaller) rigid steel conduit.
   D. Conduit -- Nom 4 in. diam (or smaller) steel electrical metallic conduit.
   E. Copper Tubing -- Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
   F. Copper Pipe -- Nom 4 in. diam (or smaller) (or heavier) copper pipe.
4. Firestop System -- The firestop system shall consist of the following:
   A. Packing Material -- Min 2 in. thickness of 4 pcf mineral wool batt insulation tightly packed into the opening as a permanent form. Packing material to be recessed from top surface of floor and both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Materials*- Foam -- Min 2-1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- CP620 Fire Foam

*Bearing the UL Classification Mark

HILTI
Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. October 14, 2004

RATED WALL PENETRATION DETAIL

3

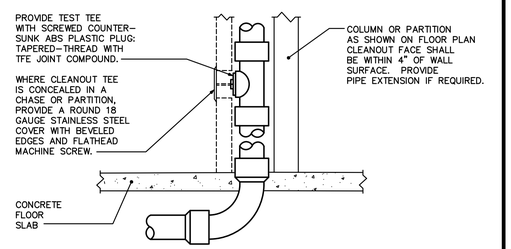
PLUMBING NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SCOPE OF WORK. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE FLORIDA BUILDING CODE 6TH EDITION (2020) – PLUMBING, APPLICABLE LOCAL CODES, RULES, AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
3. ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY.
4. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY-OPERATIONAL. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
5. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
6. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTS. PLUMBING CONTRACTOR SHALL OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
7. CONTRACTOR SHALL SUBMIT TO ARCHITECT/ENGINEER, FOR REVIEW & APPROVAL, FIVE (5) SETS OF MANUFACTURER'S CUT SHEETS FOR EACH FIXTURE, PIPING/FITTING MATERIAL AND EQUIPMENT ITEM WITH ASSOCIATED CONTROLS, THAT ARE INCLUDED IN THE CONTRACT.
8. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
9. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ARCHITECT/ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
10. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
11. WATER DISTRIBUTION PIPING ABOVE AND BELOW GROUND SHALL BE TYPE "L" COPPER. ALTERNATE PIPING & FITTING MATERIALS MAY BE USED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6TH EDITION (2020) – PLUMBING, TABLES 605.3, 605.4 & 605.5, WHEN APPROVED BY ENGINEER OF RECORD AND LOCAL AUTHORITY HAVING JURISDICTION. PROVIDE ALTERNATE FOR CPVC PIPING & FITTINGS EQUAL TO LUBRIZOL CORZAN OR FLOW-GUARD GOLD. PROVIDE ALTERNATE FOR PEX TYPE 'A' PIPING & FITTINGS EQUAL TO UPONOR. ALTERNATES ARE PERTINENT FOR WATER SERVICES KNOWN OR DETERMINED TO HAVE ACIDIC CHARACTERISTICS OR OTHER PARTICULAR CIRCUMSTANCES AS DEEMED APPROPRIATE BY DIRECTIVE FROM THE OWNER. CONTRACTOR SHALL PERFORM A WATER TEST TO DETERMINE WATER CHEMISTRY PRIOR TO ANY WORK OR PIPING INSTALLATION AND SHALL SUBMIT TEST RESULTS TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL. DISINFECTION OF POTABLE WATER SYSTEM SHALL COMPLY WITH FLORIDA BUILDING CODE 6TH EDITION (2020) – PLUMBING, SECTION 610. ALL WATER PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.
12. SOIL, WASTE, VENT, AND RAINWATER (DWV) PIPING & FITTINGS SHALL BE CAST IRON OR PVC, WHERE CODE ALLOWS. PVC MAY NOT BE USED THRU RATED ASSEMBLIES OR IN PLENUMS. PVC PIPING SHALL BE SOLID-CORE ONLY; FOAM-CORE PIPING SHALL NOT BE ACCEPTED. CAST IRON PIPING & FITTINGS SHALL BEAR THE CISPI-301 MARK. ALL DWV PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.
13. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE ANGLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS (WHERE REQUIRED). COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
14. PROVIDE APPROVED WATER HAMMER ARRESTORS FOR ALL (GROUP) PLUMBING FIXTURES, SIZED & LOCATED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS & PDI-WH201.
15. PROVIDE DIELECTRIC COUPLINGS OR FLANGES BETWEEN ALL DISSIMILAR METALS IN PIPING AND EQUIPMENT CONNECTIONS.
16. ISOLATE COPPER PIPING FROM METALLIC HANGERS OR SUPPORTS WITH ISOLATOR PADS OR NON-CONDUCTIVE MATERIAL.
17. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVES WITH INTUMESCENT CAULK, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS, AS PART OF THE PLUMBING CONTRACTOR'S WORK.
18. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
19. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES. ACCESS PANELS IN RATED WALLS SHALL MAINTAIN THE SAME RATING AND SHALL MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.
20. PROVIDE COMBINATION CLEANOUT PLUG AND COVER PLATE OR ACCESS PANEL FOR ALL WALL CLEANOUTS. FINISH TO MATCH NEARBY FIXTURE TRIM.
21. NO COMBUSTIBLE MATERIAL SHALL BE INSTALLED IN MECHANICAL ROOMS NOR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
22. NO WATER, SANITARY OR DRAINAGE PIPING SHALL BE INSTALLED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
23. ALL CONTROL VALVES SHALL BE TAGGED AND MARKED. A REPRODUCIBLE DIAGRAM LOCATING ALL VALVES SHALL BE FURNISHED FOR OWNER/OPERATOR.
24. CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET PER FLORIDA BUILDING CODE 6TH EDITION (2020) – ENERGY CONSERVATION, TABLE C403.2.8. PVC WITHOUT INSULATION IS ACCEPTABLE FOR RISERS AND BELOW GRADE PIPING. WHEN USED IN A RETURN AIR PLENUM, PVC PIPING WITH INSULATION IS ACCEPTABLE IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. CONDENSATE PIPING SHALL NOT DRAIN ONTO THE ROOFING SYSTEM NOR ANY OF ITS COMPONENTS. CONDENSATE PIPING ARRANGEMENT IS EXEMPT FROM MINIMUM EQUIPMENT CLEARANCE REQUIREMENTS PER FLORIDA BUILDING CODE 6TH EDITION (2020), SECTION 1522.3.5. ALL HORIZONTAL RAINWATER PIPING RUN ABOVE FINISHED FLOOR THAT RECEIVES CONDENSATE DISCHARGE SHALL BE INSULATED WITH ARMAFLEX AND A VAPOR-BARRIER JACKET.
25. HOT WATER PIPING INSULATION SHALL BE PROVIDED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6TH EDITION (2020) – PLUMBING, TABLE 607.5 & FLORIDA BUILDING CODE 6TH EDITION (2020) – ENERGY CONSERVATION, TABLE C403.2.8. CONTRACTOR SHALL USE ARMAFLEX OR EQUAL WHERE APPLICABLE. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET, PER FLORIDA BUILDING CODE 6TH EDITION (2020) – ENERGY CONSERVATION, TABLE C403.2.8.
26. AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
27. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
28. STUDOR MINI/MAXI AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTABLE BY THE PLUMBING OFFICIAL AND LOCAL CODES. INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
29. ALL HORIZONTAL RAINWATER PIPING THE RECEIVES CONDENSATE DISCHARGE FROM AIR CONDITIONING EQUIPMENT SHALL BE INSULATED WITH 1" THK. ARMAFLEX.
30. PLUMBING PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, FIRE SPRINKLER, STRUCTURAL AND CIVIL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. PIPING MODIFICATIONS SUCH AS OFFSETS, BENDS, TRANSITIONS, AND SIZES SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN PIPE SIZES AND ROUTING SHALL BE REQUIRED BY THE CONTRACTOR TO AVOID CONFLICTS AND TO ADAPT TO EXISTING FIELD CONDITIONS PROVIDED THAT INSTALLATION MEETS ALL APPLICABLE CODES.
31. SUPPLY TRAP PRIMER FOR ALL FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, ETC. SHOWN ON PLANS.
32. CONTRACTOR TO FIELD VERIFY ALL SUPPLY PRESSURE REQUIREMENTS AND LIMITATIONS. PROVIDE PRESSURE REDUCING VALVE IF REQUIRED.
33. ANY REFERENCE OR APPLICATION OF DENTAL COMPRESSED AIR AS NOTED ON THIS PLAN IS NOT USED OR INTENDED FOR LIFE-SUPPORT PURPOSES SUCH AS RESPIRATORS, IPPB MACHINES, ANALGESIA, ANESTHESIA, ETC. THE ONLY USE IS AS INCIDENTAL AIR DISCHARGE INTO THE ORAL CAVITY AND NOT A PRIMARY OR SECONDARY SOURCE OF AIR TO SUSTAIN LIFE.

PLUMBING SHEET INDEX

PLUMBING LEGEND

CO	CLEAN OUT		SANITARY SEWER PIPING
S.O.V.	SHUT-OFF VALVE		VENT PIPING
COTC	CLEAN OUT TO GRADE		DOMESTIC COLD WATER PIPING
FS	FLOOR SINK		HOT WATER PIPING (110°)
CW	DOMESTIC COLD WATER		HOT WATER PIPING (140°)
HW	DOMESTIC HOT WATER		HOT WATER RECIRCULATING PIPING
HWR	DOMESTIC HOT WATER RECIRCULATING	CD	CONDENSATE PIPING
HB	HOSE BIBB	CA	COMPRESSED AIR PIPING
VTR	VENT THRU ROOF	T&P	TEMPERATURE AND PRESSURE RELIEF
	GATE VALVE	SD	STORM DRAIN PIPING
	GLOBE VALVE	G	GAS PIPING
	BACKFLOW PREVENTOR LEAD FREE, PRE FBC PL 608.1		PIPE RISE UP
	GAS SOLENOID VALVE		PIPE DOWN OR DROP
	GAS COCK		CAPPED END OF PIPE
	WATER HAMMER ARRESTER (PDI No.)		POINT OF CONNECTION
FD	FLOOR DRAIN		P-TRAP



NOTE:

PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT: LOCATE ABOVE FIXTURE FLOOD RIM WITHIN 4' OF FLOOR. CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.

WALL CLEANOUT DETAIL

NOT TO SCALE

SHOCK ARRESTOR SCHEDULE

P.D.I. DESIGNATION	MANUF. & MODEL	FIXTURE UNITS	CONNECTION
A	SIOUX CHIEF 652-A	1-11	1/2"
B	SIOUX CHIEF 653-B	12-32	3/4"
C	SIOUX CHIEF 654-C	33-60	1"

SIOUX CHIEF SHOCK ARRESTORS APPROVED FOR INSTALLATION WITH NO ACCESS DOOR REQUIRED. CONFORMS TO ANSI/ASSE 1010 STANDARDS.

SLOPE OF HORIZ. DRAINAGE PIPE

SIZE (inches)	MINIMUM SLOPE (inch per foot)
2-1/2 or less	1/4
3 to 6	1/8
8 or larger	1/16

TABLE 704.1 OF THE FLORIDA PLUMBING CODE 2020

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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Certification of Authorization #8189

PRINCIPAL
Brady L Brown Florida License #58232

date

signed

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

INDIAN RIVER COUNTY FLORIDA

4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE 3

Architect:

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Consultant:

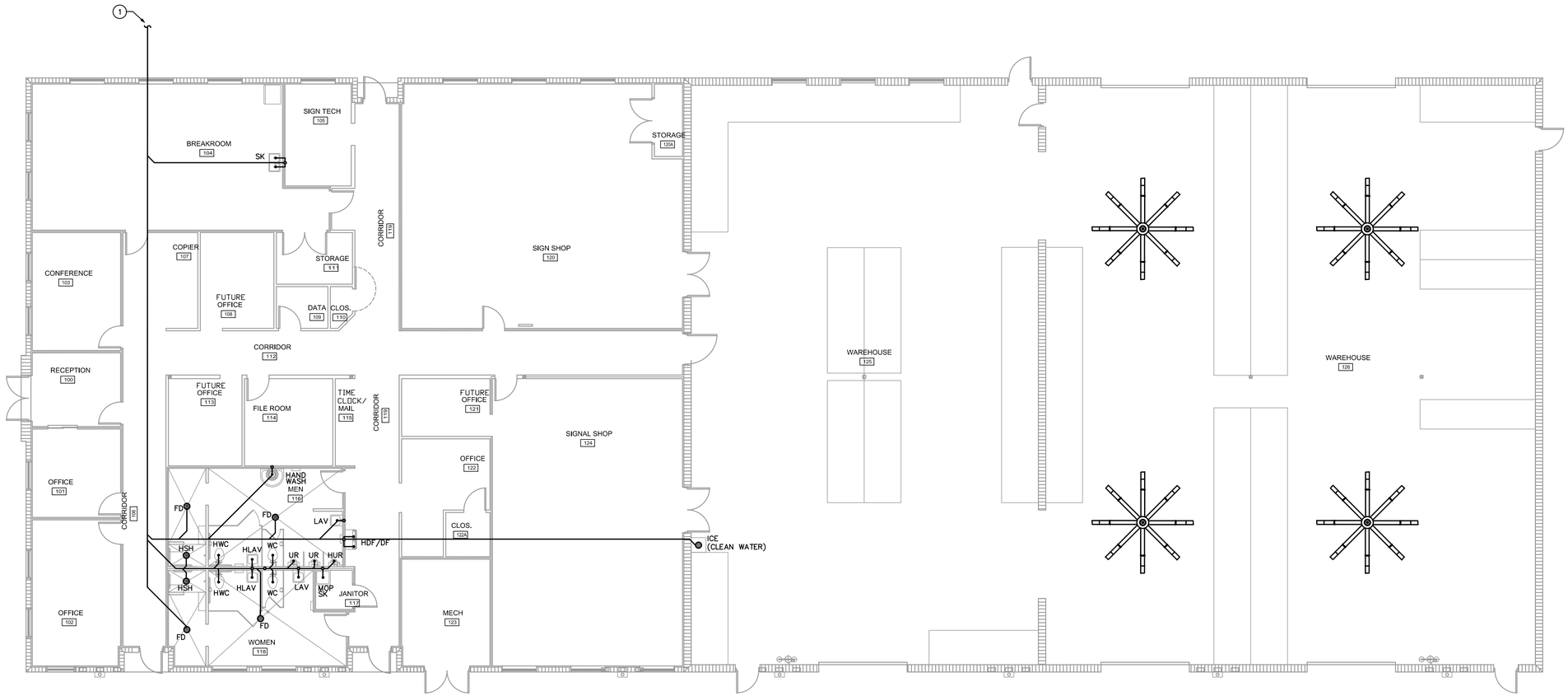
Drawing Title:

PLUMBING NOTES

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12,456
Date Signed:

P0.1



KEY NOTES

1. TIE NEW SANITARY LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.

FLOOR PLAN
SANITARY PLAN

1/8"=1'-0" NORTH

ISSUED FOR PERMIT	06-29-23
-	

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Drawing Title:
SANITARY PLAN
FLOOR PLAN

Drn: JLH
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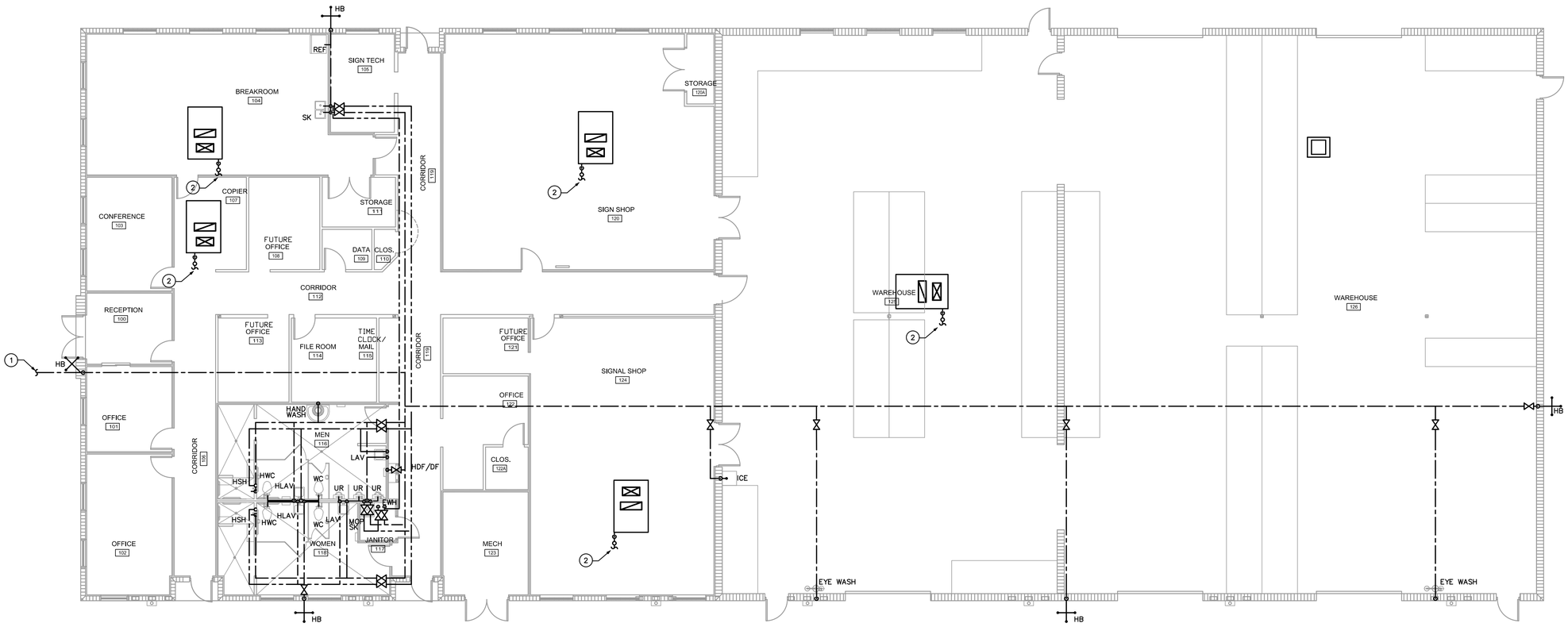
Date Signed:

P2.1



KEY NOTES

1. TIE NEW DOMESTIC LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.
2. TIE CONDENSATE TO ROOF DRAIN IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.

DOMESTIC WATER PLAN — FLOOR PLAN

1/8"=1'-0" NORTH

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

KAMM Consulting
1408 Orange Avenue
Fort Pierce, Florida 34950
Phone 772.595.1744
bbrown@kammconsulting.com
Certification of Authorization #8189

PRINCIPAL
Brady L Brown Florida License #58232

date

signed

Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE

Architect:

DONADIO
& Associates, Architects P.A.
2001 9th Avenue, Suite 308
Vero Beach, FL 32960
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Fax.772.562.8600
License No. AA0002238
www.donadio-arch.com

Consultant:

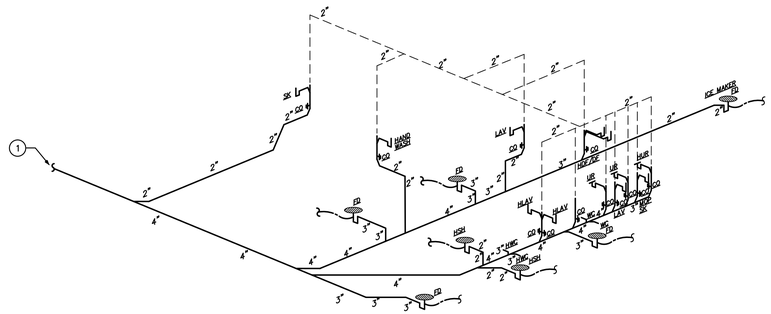
Drawing Title:

DOMESTIC WATER PLAN
FLOOR PLAN

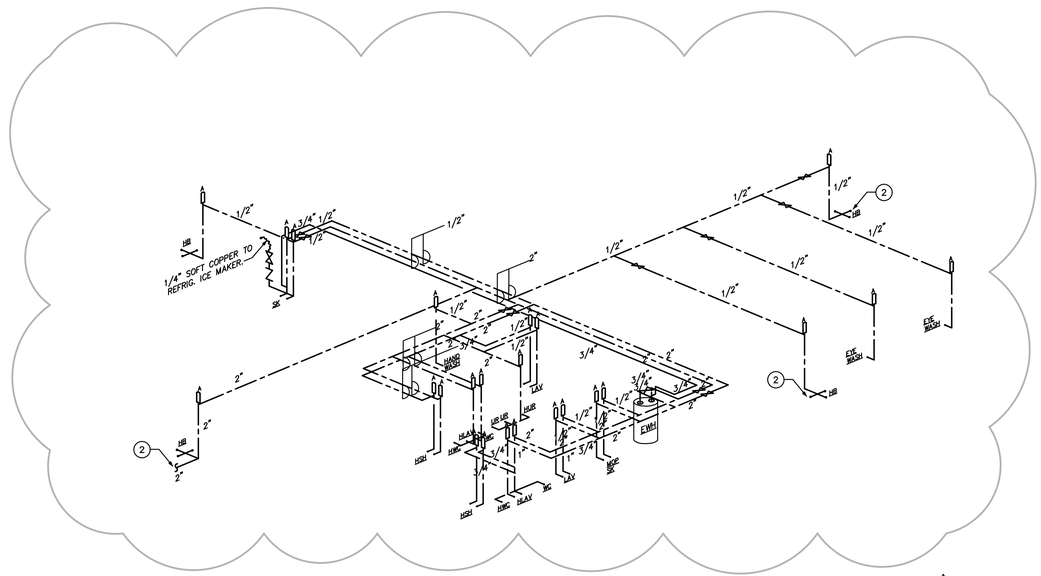
Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12.456
Date Signed: .

P3.1



SANITARY ISOMETRIC PLAN
N.T.S.



3

DOMESTIC WATER ISOMETRIC PLAN
N.T.S.

KEY NOTES

1. TIE NEW SANITARY LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.
2. TIE NEW DOMESTIC LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.

ISSUED FOR PERMIT 06-29-23

KAMM CONSULTING PROJECT #: 2021-0432
PROJECT MANAGER: DUANE MILLAR

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Project:
NEW PROPOSED TRAFFIC OPERATIONS FACILITY

4548 41st Street
Vero Beach FL
32967

Key Plan:

Issues:

No.:	Date:	Description:
A.	03-21-22	PERMIT SET
B.	06-01-22	BDC RESPONSE
C.	06-22-22	BDC RESPONSE 3

Architect:

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Consultant:

Drawing Title:

SANITARY ISOMETRIC

Drn: JLH
Chd: TD
Project No.: 2021-20
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12,456
Date Signed:

P5.1