

CONSTRUCTION PLANS FOR: EXPRESS OIL CHANGE

PROJECT:

EXPRESS OIL CHANGE
PARCEL ID: 04440-0-00000 (12303)
1198 SOUTH WALNUT STREET
STARKE, FL 32091

DESCRIPTION:

A PARCEL OF LAND LYING IN THE NORTHWEST 1/4 OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 22 EAST, IN THE CITY OF STARKE, BRADFORD COUNTY, FLORIDA: SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

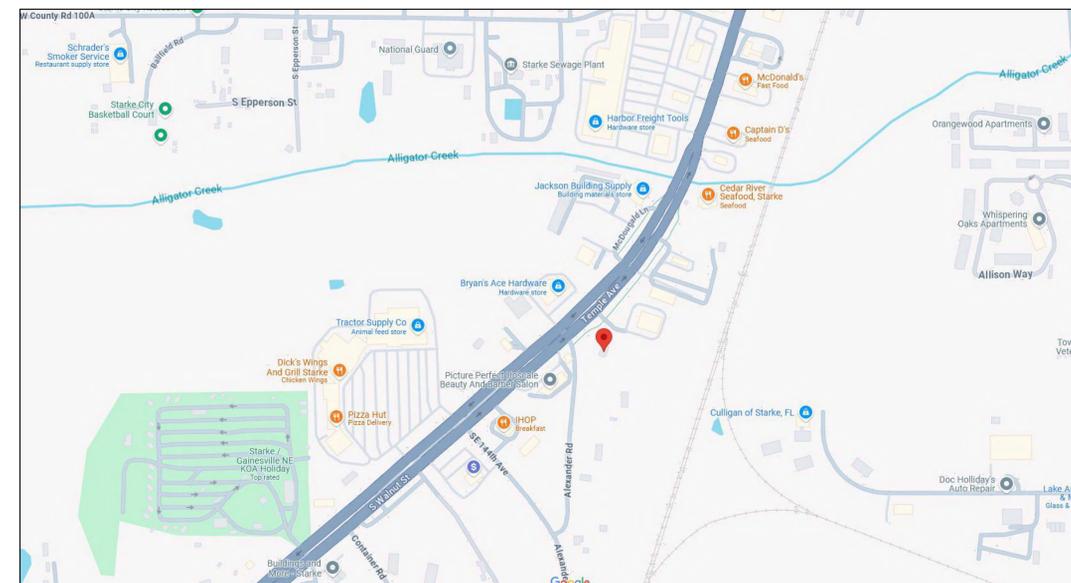
COMMENCE AT A CONCRETE MONUMENT LOCATED AT THE NORTHWEST CORNER OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 33 AND RUN SOUTH 01 DEGREES 16 MINUTES 05 SECONDS EAST, ALONG THE WESTERLY BOUNDARY THEREOF 400.28 FEET TO FOUND NAIL & DISC ON THE RIGHT OF WAY OF STATE ROAD 200, (U.S. 301) FOR THE POINT OF BEGINNING. FROM POINT OF BEGINNING THUS DESCRIBED CONTINUE SOUTH 01 DEGREES 16 MINUTES 05 SECONDS EAST, ALONG SAID WESTERLY BOUNDARY 105.73 FEET TO THE SOUTHWEST CORNER OF DEED BOOK 87, PAGE 13, OF THE PUBLIC RECORDS OF BRADFORD COUNTY, FLORIDA; THENCE SOUTH 82 DEGREES 05 MINUTES 42 SECONDS EAST, ALONG THE SOUTHERLY BOUNDARY THEREOF 620.58 FEET TO A 1/2" IRON ROD (#5098) FOUND ON THE WESTERLY BOUNDARY OF THE RIGHT OF WAY OF THE C.S.X. RR (200' R/W); THENCE NORTH 16 DEGREES 41 MINUTES 35 SECONDS EAST, ALONG SAID WESTERLY BOUNDARY 182.15 FEET TO A FOUND 5/8" IRON ROD (NO ID); THENCE NORTH 78 DEGREES 34 MINUTES 25 SECONDS WEST, 536.58 FEET TO A FOUND 1/2" IRON ROD (FDOT #2648) AT A JOG IN THE EASTERLY BOUNDARY OF THE RIGHT OF WAY OF STATE ROAD 200 (U.S. 301); THENCE CONTINUE NORTH 78 DEGREES 34 MINUTES 25 SECONDS WEST, 46.88 FEET TO A SET 1/2" IRON ROD (LB 4012) ON THE EASTERLY BOUNDARY OF SAID STATE ROAD 200 (U.S. 301) SAID EASTERLY BOUNDARY BEING ON A CURVE CONCAVE TO THE WEST AND HAVING A RADIUS OF 2924.79 FEET; THENCE SOUTHWESTERLY ALONG SAID EASTERLY BOUNDARY AND ALONG THE ARC OF SAID CURVE 138.94 FEET AS MEASURED ALONG A CHORD HAVING A BEARING OF SOUTH 44 DEGREES 32 MINUTES 37 SECONDS WEST, TO THE POINT OF BEGINNING.

LESS AND EXCEPT ANY PORTION THEREOF CONVEYED BY ROBERT J. BLAINE, JR., TO THE CITY OF STARKE, A FLORIDA MUNICIPALITY, BY VIRTUE OF THAT CERTAIN RIGHT OF WAY DEED, RECORDED JUNE 26, 2024 IN OFFICIAL RECORDS BOOK 2099, PAGE 395, OF THE PUBLIC RECORDS OF BRADFORD COUNTY, FLORIDA

OWNER:
GH&G ALEXANDER LLC
101 S BAY BLVD STE B-3
ANNA MARIA, FL 34216

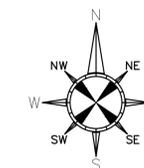
SURVEYOR:
ALTAMAX SURVEYING
ROBERT C. JOHNSON
910 BELLE AVENUE, SUITE 1140
CASSELBERRY, FL 32708
PHONE: 407-677-0200
WWW.ALTAMAXSURVEYING.COM
EMAIL:
R.JOHNSON@ALTAMAXSURVEYING.COM

LANDSCAPE ARCHITECT
A & K LAND PLANNING & DESIGN, INC.
416 TORTOISE TRCE,
ST. JOHNS, FLORIDA 32259
KRIS REED, RLA
PHONE: 904-476-9692
EMAIL: AKLANDPLANNING@COMCAST.NET



LOCATION MAP

N.T.S.

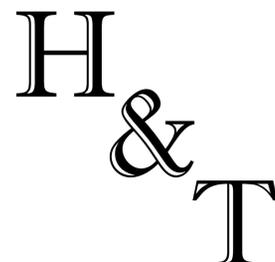


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PREPARED BY:



H & T CONSULTANTS, INC.
PLANNING - ENGINEERING

9 310 OLD KINGS ROAD SOUTH, SUITE 1001
JACKSONVILLE, FLORIDA 32257
TELEPHONE (904) 419 - 1001 FAX (904) 419 - 1004



GENERAL NOTES

- EXISTING FEATURES AND BOUNDARY INFORMATION BASED ON A SURVEY BY: ALTAMAX SURVEYING 910 BELLE AVENUE, SUITE 1100 CASSELBERRY FL, 32708 ROBERT C JOHNSON, PSM PH: (407)-677-0200
- ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CITY OF STARKE STANDARDS AND REQUIREMENTS AND THE LATEST ENGLISH UNIT VERSION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, AND IN ACCORDANCE WITH STATE OF THE ART CIVIL ENGINEERING PRACTICES.
- ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF SIDEWALK UNLESS OTHERWISE SHOWN.
- ALL TRAFFIC SIGNS AND MARKINGS SHALL BE IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
- SEE ARCHITECTURAL DRAWINGS FOR CONSTRUCTION DETAILS AND DIMENSIONS OF BUILDINGS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL CABLES AND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY BREAK IN UNDERGROUND CABLES AND/OR UTILITIES SHALL IMMEDIATELY BE REPAIRED AT THE CONTRACTORS EXPENSE.
- NEW SPOT ELEVATIONS REFER TO PROPOSED TOP OF PAVEMENT UNLESS INDICATED OTHERWISE ON THESE DRAWINGS.
- ALL CONCRETE WORK SHALL CONFORM TO AC1 318-89, "STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE." ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CONCRETE EDGES.
- REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. UNLESS INDICATED OTHERWISE, MINIMUM SPLICE LENGTH SHALL BE 40 BAR DIAMETERS WHERE CONT. (CONTINUOUS) IS INDICATED ON PLANS.
- THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING STRUCTURES, IMPROVEMENTS, UTILITIES, PROPERTY LINES, EASEMENTS AND SETBACKS, AND CONFIRM ALL PROPOSED DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION FOR VERIFICATION AND LOCATION OF ALL UTILITIES (ELECTRIC, GAS, TELEPHONE, ETC.).
- SHOULD THE SURFACE OR SUBSURFACE CONDITIONS BE FOUND TO VARY FROM WHAT IS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IN WRITING.
- AS-BUILT DRAWINGS SHALL BE FURNISHED TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS AND REQUIREMENTS NOTED ON THIS SHEET.
- GRADES SHOWN ON PLANS ARE FINISHED GRADES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING WITHIN 7 DAYS OF COMPLETION OF THE PROJECT, STATING THAT THE DRAINAGE SYSTEM IS COMPLETE AND READY FOR INSPECTION AND CERTIFICATION BY THE ENGINEER.
- DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS ONLY.
- THE CONTRACTOR SHALL USE NECESSARY MEANS AND METHODS TO CONTROL SURFACE AND GROUNDWATER DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO SURFACE GRADING, DEWATERING TRENCHES WITH SUMP PUMP, WELL POINTING, ETC. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL AND LIKELY DEPTHS TO GROUNDWATER AND THE WATER CONTROL NECESSARY TO MEET MOISTURE AND DENSITY REQUIREMENTS FOR THE NATIVE OR IMPORTED SOILS.
- ALL ON SITE EASEMENTS MUST BE APPROVED AND RECORDED PRIOR TO ISSUANCE OF COs OR TCOs
- ALL CONSTRUCTION AND STOCKPILED VEGETATIVE DEBRIS AND FILL WILL BE REMOVED FROM THE SITE DAILY.
- ALL ONSITE IMPROVEMENTS ARE TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNER AND WILL NOT BE DEDICATED TO THE PUBLIC OR MAINTAINED BY THE PUBLIC.
- ALL FIRE PREVENTION MEASURES AND PROVISIONS SHALL BE IN ACCORDANCE WITH THE FLORIDA FIRE PREVENTION CODE, LATEST EDITION.
- THE GEOTECHNICAL REPORT AND ITS RECOMMENDATIONS AS PROVIDED BY THE OWNER ARE PART OF THE SUBJECT DRAWING. SEE GEOTECH PREPARED BY TERRACON.

AS-BUILT REQUIREMENTS

- THE CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT INFORMATION TO THE ENGINEER IN ACCORDANCE WITH THE CITY OF STARKE, THE CITY OF STARKE UTILITIES, AND THE FOLLOWING REQUIREMENTS:
- AS-BUILT DRAWINGS SHALL BE PREPARED IN AUTOCAD FORMAT BY A REGISTERED LAND SURVEYOR, AND SHALL BE IN CONFORMANCE WITH ALL AUTHORITIES HAVING JURISDICTION. FIVE SETS OF SIGNED AND SEALED RECORD AS-BUILTS AND A SET OF AUTOCAD 2014 DRAWING FILES OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
- PROVIDE BUILDING LOCATIONS, FINISHED FLOOR ELEVATIONS, PAVEMENT GRADES, AND ALL UNDERGROUND FACILITIES.
- PROVIDE SPECIAL DETAIL DRAWINGS AT LOCATIONS WHERE INSTALLATIONS WERE NOT AS SHOWN ON CONTRACT DRAWINGS DUE TO FIELD CONDITIONS, OR WHERE REQUIRED FOR CLARITY.
- PROVIDE LOCATION, ELEVATION, AND DESCRIPTION OF BENCHMARK(S).
- LOCATE AND PROVIDE ELEVATIONS OF ALL STRUCTURES. LOCATION OF ALL STRUCTURES SHALL BE FROM (2) DIRECTIONS.
- LOCATE ALL PIPES AND PROVIDE THEIR SIZE, ELEVATION, LENGTH AND TYPE.
- CITY OF STARKE AND/OR CITY OF STRAKE UTILITIES AS-BUILT REQUIREMENTS WILL TAKE PRECEDENCE SHOULD THERE BE A CONFLICT WITH THE AFOREMENTIONED AS-BUILT REQUIREMENTS.

UTILITY NOTES

NOTE: PER CITY OF STARKE, THE CITY UTILIZES JEA DESIGN STANDARDS AND DETAILS IN REGARDS TO UTILITY DESIGN. THEREFORE, ALL BELOW NOTES REFER TO JEA. ANY INSTANCE OF JEA SHALL BE REPLACED WITH THE CITY OF STARKE WHERE REFERRING TO THE UTILITY COMPANY AS AN ENTITY, BUT SHALL BE KEPT WHERE REFERRING TO THE STANDARDS AND REQUIREMENTS OF JEA, AND THE STANDARD SPECIFICATIONS MANUAL.

- ALL MATERIALS AND CONSTRUCTION REQUIREMENTS FOR THIS PROJECT SHALL COMPLY WITH THE JEA DESIGN STANDARDS
- ALL WORK PERFORMED WITHIN PUBLIC RIGHT-OF-WAY REQUIRES A SEPARATE PERMIT ISSUED BY GOVERNING AUTHORITY.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES AND MATERIALS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND CONSTRUCTION.
- ALL WATER MAINS SHALL BE DESINFECTED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. DISINFECTION TESTING SHALL COMPLY WITH A.W.W.A.C-651-92.
- SEWER LINES ARE DESIGNED TO FINISHED GRADE AND SHALL BE PROTECTED FROM DAMAGE UNTIL ALL WORK IS COMPLETED.
- CONTRACTOR SHALL PROVIDE FOR ALL STORAGE OF MATERIALS AND EQUIPMENT. MATERIALS AND SUPPLIES SHALL BE PLACED THAT ENDANGERMENT OR RESTRICTION OF VEHICULAR OR PEDESTRIAN TRAFFIC WILL NOT OCCUR.
- ALL WATER, SEWER AND FIRE LINE CONSTRUCTION, MATERIALS AND APPURTANCES SHALL BE IN ACCORDANCE WITH THE JEA AND CITY OF STARKE WATER AND SEWER UTILITIES STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
- SANITARY SEWER CLEANOUTS TO BE PLACED AS SHOWN ON THE ENGINEERING PLANS.
- ALL CUSTOMERS' WATER AND/OR WASTEWATER SERVICE INSTALLATIONS OR CHANGES SHALL BE INSPECTED UPON COMPLETION BY THE CITY OF STARKE BUILDING DEPARTMENT TO ENSURE THAT THE CUSTOMER'S PIPING, EQUIPMENT, AND DEVICES HAVE BEEN INSTALLED IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE AND ANY CITY OF STARKE ORDINANCE OR STATE REQUIREMENTS AS MAY BE IN EFFECT.
- MINIMUM DEPTH OF BOTH WATER MAINS AND SANITARY SEWER LINES SHALL BE 30 INCHES IF OUTSIDE PAVEMENT, AND 36 INCH DEPTH IF UNDERNEATH PAVEMENT. MAXIMUM DEPTH OF BOTH WATER MAINS AND SANITARY SEWER LINES SHALL BE 84 INCHES UNLESS OTHERWISE APPROVED BY THE CITY OF STARKE AND THE ENGINEER DUE TO A CONFLICT IN THE DESIGNATED LOCATION.
- ALL WATER, SEWER, AND STORM WATER CONSTRUCTION WITHIN CITY OF STARKE ROW SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 409 OF THE FLORIDA STATUTES.
- PIPE FOR POTABLE WATER LINES IN SIZES UP TO 16 INCHES DIRECT BURY SHALL BE DUCTILE IRON, POLYVINYL CHLORIDE (PVC) OR HIGH DENSITY POLYETHYLENE (HDPE). PIPE FOR POTABLE WATER LINES 20" AND LARGER DIRECT BURY SHALL BE DUCTILE IRON. UNDERGROUND PIPE SHALL BE FURNISHED IN NOMINAL 18 OR 20 FOOT LAYING LENGTHS UNLESS INDICATED OTHERWISE ON THE DRAWINGS. PIPE SHALL BE CUT TO LENGTH AS REQUIRED TO FIT INSTALLATION CONDITIONS.
- FITTINGS 3 INCHES AND LARGER ON PUSH-ON JOINT PIPE INSTALLED UNDERGROUND SHALL BE DUCTILE IRON WITH RESTRAINED MECHANICAL JOINT ENDS OR PVC WITH RESTRAINED PUSH-ON BELL TYPE JOINT.
- ALL NONFLANGED FITTINGS AND VALVES SHALL BE RESTRAINED USING A JEA APPROVED METHOD
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM WASTEWATER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62.610, F.A.C
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY WASTEWATER OR 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 WASTEWATERS MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE WASTEWATER (SPECIAL CASE).
- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUMTYPE SANITARY WASTEWATER OR STORM WASTEWATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLE TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY WASTEWATER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS A LEAST TWELVE (12) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- AT THE UTILITY CROSSINGS DESCRIBED 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.
- NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM WASTEWATER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY WASTEWATER; AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY WASTEWATER OR WASTEWATER FORCE MAIN.
- FOR WATER AND WASTEWATER PRESSURE MAINS UP TO 6 INCHES, THERE SHALL BE A 10 FOOT SEPARATION BETWEEN THE UTILITY AND ANY EXISTING, PROPOSED, OR FUTURE STRUCTURES. FOR PRESSURE MAINS OF 8 INCHES, THE SEPARATION SHALL BE 14 FEET, AND FOR PRESSURE MAINS BETWEEN 10 AND 12 INCHES, THE SEPARATION SHALL BE 18 FEET. FOR GRAVITY SEWERS, THE SEPARATION FROM STRUCTURES SHALL BE AT LEAST 3 TIMES THE VERTICAL DEPTH OF THE DEEPEST PORTION OF THE MANHOLE TO MANHOLE WASTEWATER RUN. THIS INCLUDES SEPARATION FROM THE TOP BANK OF PONDS.
- UNLESS APPROVED OTHERWISE BY CITY OF STARKE, TAPPED CONNECTIONS IN THE BARREL OF A PIPE SHALL BE LESS THAN THE DIAMETER OF PIPE BEING TAPPED EXCEPT 4 INCH PIPE WHICH MAY BE TAPPED WITH A 4-INCH TAPPING SLEEVE AND VALVE. NO TAPS (ALL SIZES) SHALL BE MADE WITHIN 5 PIPE DIAMETERS OR 5 FEET (WHICHEVER IS SMALLER) OF A JOINT. WHEN MAKING 2-INCH PVC WATER MAIN CONNECTIONS TO WATER MAINS, A 4" (MINIMUM) GATE VALVE SHALL BE UTILIZED WITH A 4" X 2", REDUCER CONNECTING TO THE 2" MAIN. NO 2" GATE VALVES (ON THE MAIN) WILL BE ALLOWED
- UNLESS APPROVED OTHERWISE BY CITY OF STARKE, TAPPED CONNECTIONS IN THE BARREL OF A PIPE SHALL BE LESS THAN THE DIAMETER OF PIPE BEING TAPPED EXCEPT 4 INCH PIPE WHICH MAY BE TAPPED WITH A 4-INCH TAPPING SLEEVE AND VALVE. NO TAPS (ALL SIZES) SHALL BE MADE WITHIN 5 PIPE DIAMETERS OR 5 FEET (WHICHEVER IS SMALLER) OF A JOINT. WHEN MAKING 2-INCH PVC WATER MAIN CONNECTIONS TO WATER MAINS, A 4" (MINIMUM) GATE VALVE SHALL BE UTILIZED WITH A 4" X 2", REDUCER CONNECTING TO THE 2" MAIN. NO 2" GATE VALVES (ON THE MAIN) WILL BE ALLOWED

UTILITY NOTES (CONT.)

- ALL WATER SERVICE CONNECTIONS (NEW AND TAPS INTO EXISTING MAINS), SHALL HAVE A NO-LEAD BRASS CORPORATION STOP AT THE MAIN AND CONNECTED DIRECTLY INTO THE SERVICE SADDLE. NO TAPS (ALL SIZES) SHALL BE MADE WITHIN 5 PIPE DIAMETERS OR 5 FEET (WHICHEVER IS SMALLER) OF A JOINT.
- SWABBING, DISINFECTION TESTS, PRESSURE TESTS, AND ALL OTHER CITY OF STARKE REQUIRED TESTS AND INSPECTIONS SHALL BE PERFORMED AND PASSED BEFORE WATER SERVICE BEGINS. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL GATE VALVES, CHECK VALVES AND OTHER SPECIAL VALVES AND APPURTENANCES AS SHOWN ON THE DRAWINGS
- ALL WATER METERS SHALL BE INSTALLED BY CITY OF STARKE
- ALL WATER METERS SHALL FOLLOW STANDARDS AS DETAILED BY JEA
- FIRE HYDRANTS SHALL BE HELD TO THE STANDARDS OF JEA AND CITY OF STARKE

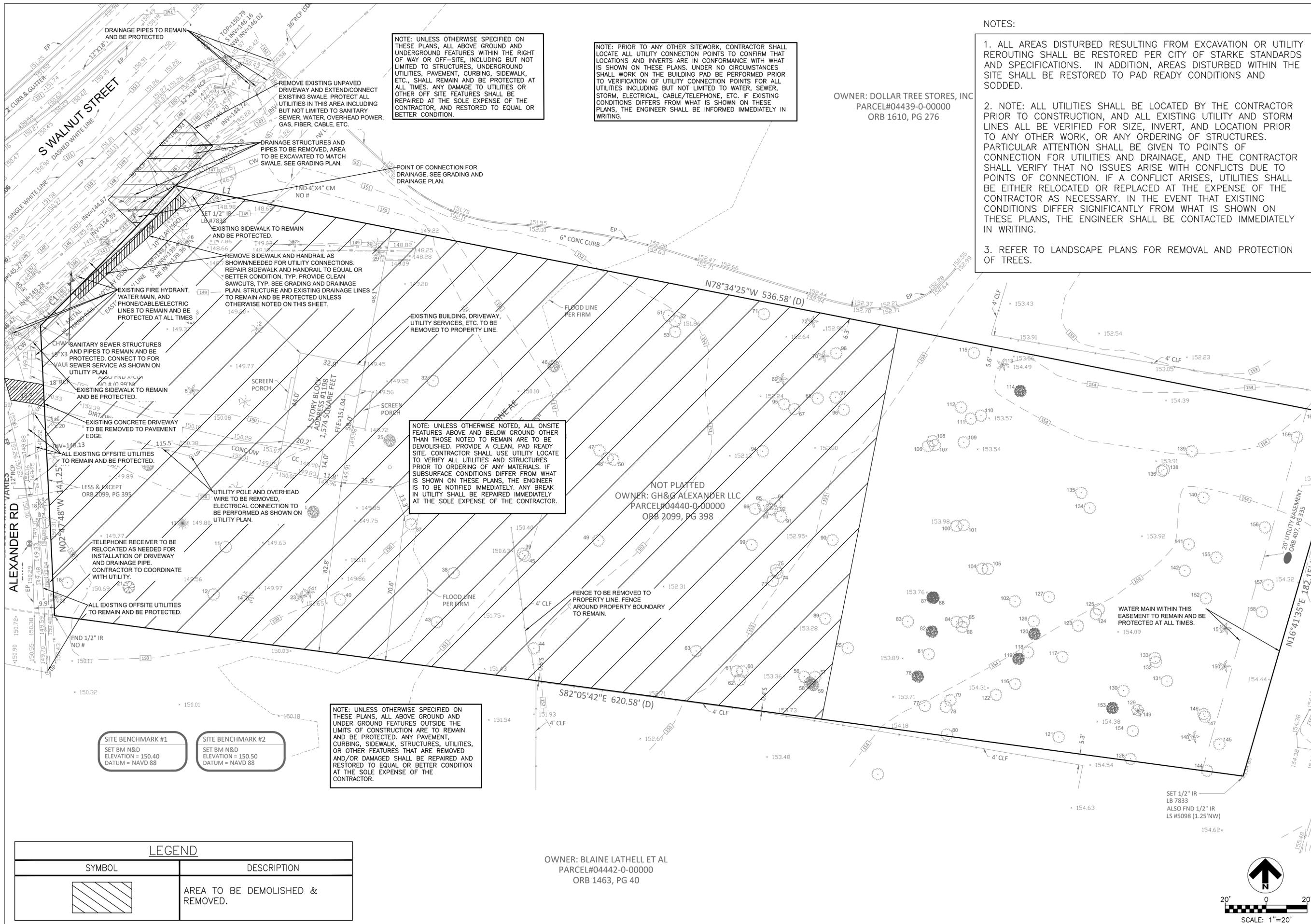
COMMENT REVISIONS	1
COMMENT REVISIONS	2
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REVISIONS	
DATE	

EXPRESS OIL CHANGE
1198 S WALNUT STREET
STARKE, FL 32091

GENERAL NOTES

H & T CONSULTANTS, INC.
PLANNING - ENGINEERING
9310 OLD KINGS ROAD SOUTH, SUITE 1001
JACKSONVILLE, FLORIDA 32257
PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO:	
DRAWN: EO	
CHECK: DT/ALT	
DATE: 1/6/25	
SHEET	
C-1	
SHEET OF	



NOTE: UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL ABOVE GROUND AND UNDERGROUND FEATURES WITHIN THE RIGHT OF WAY OR OFF-SITE, INCLUDING BUT NOT LIMITED TO STRUCTURES, UNDERGROUND UTILITIES, PAVEMENT, CURBING, SIDEWALK, ETC., SHALL REMAIN AND BE PROTECTED AT ALL TIMES. ANY DAMAGE TO UTILITIES OR OTHER OFF SITE FEATURES SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR, AND RESTORED TO EQUAL OR BETTER CONDITION.

NOTE: PRIOR TO ANY OTHER SITEWORK, CONTRACTOR SHALL LOCATE ALL UTILITY CONNECTION POINTS TO CONFIRM THAT LOCATIONS AND INVERTS ARE IN CONFORMANCE WITH WHAT IS SHOWN ON THESE PLANS. UNDER NO CIRCUMSTANCES SHALL WORK ON THE BUILDING PAD BE PERFORMED PRIOR TO VERIFICATION OF UTILITY CONNECTION POINTS FOR ALL UTILITIES INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM, ELECTRICAL, CABLE/TELEPHONE, ETC. IF EXISTING CONDITIONS DIFFERS FROM WHAT IS SHOWN ON THESE PLANS, THE ENGINEER SHALL BE INFORMED IMMEDIATELY IN WRITING.

OWNER: DOLLAR TREE STORES, INC
 PARCEL#04439-0-00000
 ORB 1610, PG 276

NOTES:

1. ALL AREAS DISTURBED RESULTING FROM EXCAVATION OR UTILITY REROUTING SHALL BE RESTORED PER CITY OF STARKE STANDARDS AND SPECIFICATIONS. IN ADDITION, AREAS DISTURBED WITHIN THE SITE SHALL BE RESTORED TO PAD READY CONDITIONS AND SODDED.
2. NOTE: ALL UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION, AND ALL EXISTING UTILITY AND STORM LINES ALL BE VERIFIED FOR SIZE, INVERT, AND LOCATION PRIOR TO ANY OTHER WORK, OR ANY ORDERING OF STRUCTURES. PARTICULAR ATTENTION SHALL BE GIVEN TO POINTS OF CONNECTION FOR UTILITIES AND DRAINAGE, AND THE CONTRACTOR SHALL VERIFY THAT NO ISSUES ARISE WITH CONFLICTS DUE TO POINTS OF CONNECTION. IF A CONFLICT ARISES, UTILITIES SHALL BE EITHER RELOCATED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR AS NECESSARY. IN THE EVENT THAT EXISTING CONDITIONS DIFFER SIGNIFICANTLY FROM WHAT IS SHOWN ON THESE PLANS, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IN WRITING.
3. REFER TO LANDSCAPE PLANS FOR REMOVAL AND PROTECTION OF TREES.

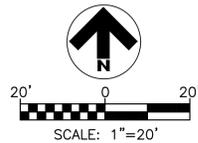
NOTE: UNLESS OTHERWISE NOTED, ALL ONSITE FEATURES ABOVE AND BELOW GROUND OTHER THAN THOSE NOTED TO REMAIN ARE TO BE DEMOLISHED. PROVIDE A CLEAN, PAD READY SITE. CONTRACTOR SHALL USE UTILITY LOCATE TO VERIFY ALL UTILITIES AND STRUCTURES PRIOR TO ORDERING OF ANY MATERIALS. IF SUBSURFACE CONDITIONS DIFFER FROM WHAT IS SHOWN ON THESE PLANS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY. ANY BREAK IN UTILITY SHALL BE REPAIRED IMMEDIATELY AT THE SOLE EXPENSE OF THE CONTRACTOR.

NOTE: UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL ABOVE GROUND AND UNDER GROUND FEATURES OUTSIDE THE LIMITS OF CONSTRUCTION ARE TO REMAIN AND BE PROTECTED. ANY PAVEMENT, CURBING, SIDEWALK, STRUCTURES, UTILITIES, OR OTHER FEATURES THAT ARE REMOVED AND/OR DAMAGED SHALL BE REPAIRED AND RESTORED TO EQUAL OR BETTER CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.

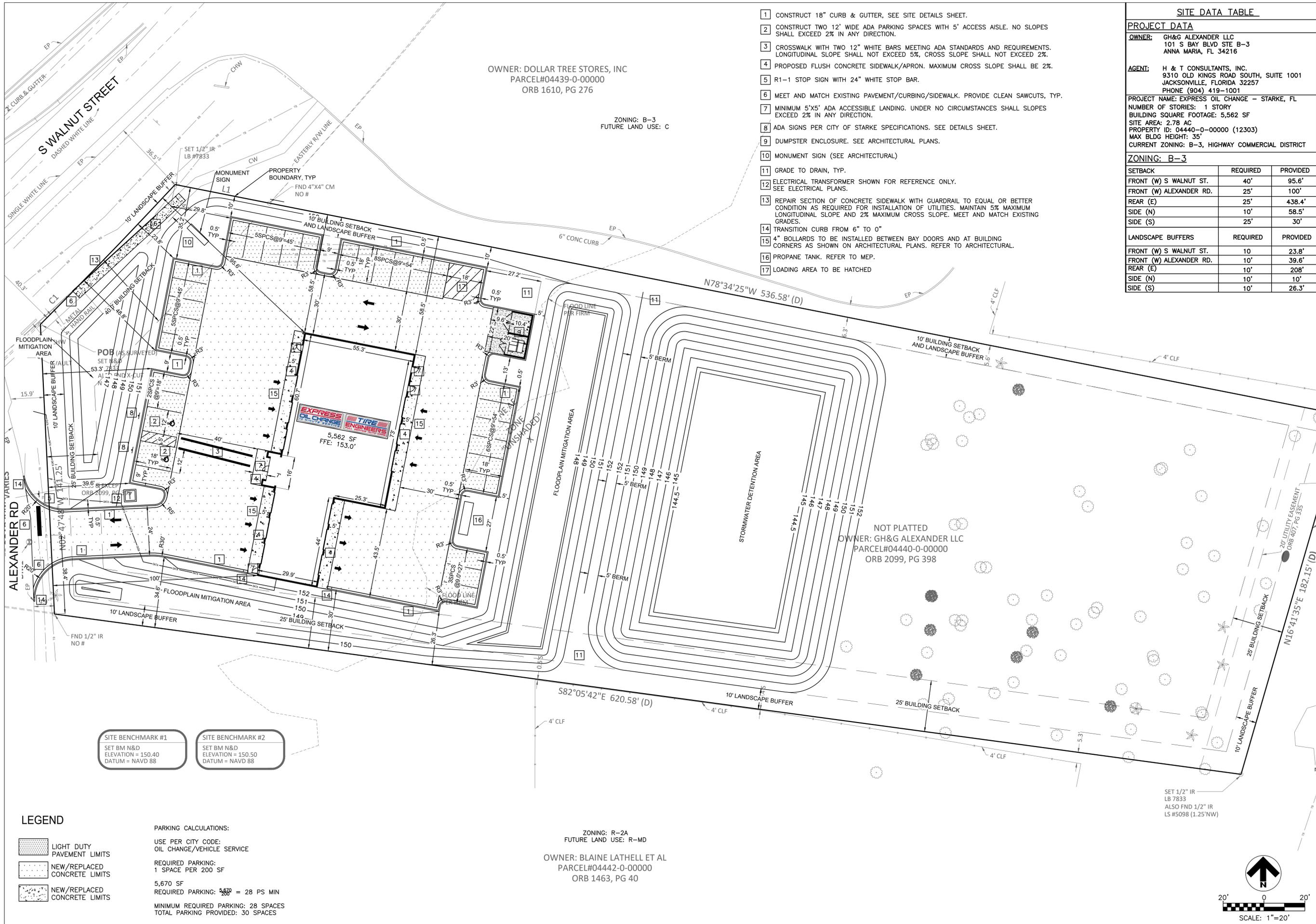
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 SET BM N&D
 ELEVATION = 150.40
 DATUM = NAVD 88
- SITE BENCHMARK #2
 SET BM N&D
 ELEVATION = 150.50
 DATUM = NAVD 88

LEGEND	
SYMBOL	DESCRIPTION
	AREA TO BE DEMOLISHED & REMOVED.

OWNER: BLAINE LATHELL ET AL
 PARCEL#04442-0-00000
 ORB 1463, PG 40



EXPRESS OIL CHANGE 1198 S WALNUT STREET STARKE, FL 32091		DEMO PLAN	
COMMENT REVISIONS	1-6-25	DATE	
COMMENT REVISIONS	12-27-24	DATE	
COMMENT REVISIONS	12-4-24	DATE	
<p>H & T CONSULTANTS, INC. PLANNING - ENGINEERING 9310 OLD KINGS ROAD SOUTH, SUITE 1001 JACKSONVILLE, FLORIDA 32257 PHONE: 904-419-1001 FAX: 904-419-1004</p>			
JOB NO:			
DRAWN: EO			
CHECK: DT/ALT			
DATE: 1/6/25			
SHEET	C-2		
SHEET	OF		



OWNER: DOLLAR TREE STORES, INC
 PARCEL#04439-0-00000
 ORB 1610, PG 276

ZONING: B-3
 FUTURE LAND USE: C

- 1 CONSTRUCT 18" CURB & GUTTER, SEE SITE DETAILS SHEET.
- 2 CONSTRUCT TWO 12' WIDE ADA PARKING SPACES WITH 5' ACCESS AISLE. NO SLOPES SHALL EXCEED 2% IN ANY DIRECTION.
- 3 CROSSWALK WITH TWO 12" WHITE BARS MEETING ADA STANDARDS AND REQUIREMENTS. LONGITUDINAL SLOPE SHALL NOT EXCEED 5%, CROSS SLOPE SHALL NOT EXCEED 2%.
- 4 PROPOSED FLUSH CONCRETE SIDEWALK/APRON. MAXIMUM CROSS SLOPE SHALL BE 2%.
- 5 R1-1 STOP SIGN WITH 24" WHITE STOP BAR.
- 6 MEET AND MATCH EXISTING PAVEMENT/CURBING/SIDEWALK. PROVIDE CLEAN SAWCUTS, TYP.
- 7 MINIMUM 5'X5' ADA ACCESSIBLE LANDING. UNDER NO CIRCUMSTANCES SHALL SLOPES EXCEED 2% IN ANY DIRECTION.
- 8 ADA SIGNS PER CITY OF STARKE SPECIFICATIONS. SEE DETAILS SHEET.
- 9 DUMPSTER ENCLOSURE. SEE ARCHITECTURAL PLANS.
- 10 MONUMENT SIGN (SEE ARCHITECTURAL)
- 11 GRADE TO DRAIN, TYP.
- 12 ELECTRICAL TRANSFORMER SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLANS.
- 13 REPAIR SECTION OF CONCRETE SIDEWALK WITH GUARDRAIL TO EQUAL OR BETTER CONDITION AS REQUIRED FOR INSTALLATION OF UTILITIES. MAINTAIN 5% MAXIMUM LONGITUDINAL SLOPE AND 2% MAXIMUM CROSS SLOPE. MEET AND MATCH EXISTING GRADES.
- 14 TRANSITION CURB FROM 6" TO 0"
- 15 4" BOLLARDS TO BE INSTALLED BETWEEN BAY DOORS AND AT BUILDING CORNERS AS SHOWN ON ARCHITECTURAL PLANS. REFER TO ARCHITECTURAL.
- 16 PROPANE TANK. REFER TO MEP.
- 17 LOADING AREA TO BE HATCHED

SITE DATA TABLE		
PROJECT DATA		
OWNER:	GH&G ALEXANDER LLC 101 S BAY BLVD STE B-3 ANNA MARIA, FL 34216	
AGENT:	H & T CONSULTANTS, INC. 9310 OLD KINGS ROAD SOUTH, SUITE 1001 JACKSONVILLE, FLORIDA 32257 PHONE (904) 419-1001	
PROJECT NAME:	EXPRESS OIL CHANGE - STARKE, FL	
NUMBER OF STORIES:	1 STORY	
BUILDING SQUARE FOOTAGE:	5,562 SF	
SITE AREA:	2.78 AC	
PROPERTY ID:	04440-0-00000 (12303)	
MAX BLDG HEIGHT:	35'	
CURRENT ZONING:	B-3, HIGHWAY COMMERCIAL DISTRICT	
ZONING: B-3		
SETBACK	REQUIRED	PROVIDED
FRONT (W) S WALNUT ST.	40'	95.6'
FRONT (W) ALEXANDER RD.	25'	100'
REAR (E)	25'	438.4'
SIDE (N)	10'	58.5'
SIDE (S)	25'	30'
LANDSCAPE BUFFERS		
FRONT (W) S WALNUT ST.	REQUIRED	PROVIDED
FRONT (W) ALEXANDER RD.	10'	23.8'
FRONT (W) ALEXANDER RD.	10'	39.6'
REAR (E)	10'	208'
SIDE (N)	10'	10'
SIDE (S)	10'	26.3'

EXPRESS OIL CHANGE
 1198 S WALNUT STREET
 STARKE, FL 32091

GEOMETRY PLAN

H & T CONSULTANTS, INC.
 PLANNING - ENGINEERING
 9310 OLD KINGS ROAD SOUTH, SUITE 1001
 JACKSONVILLE, FLORIDA 32257
 PHONE: 904-419-1001 FAX: 904-419-1004

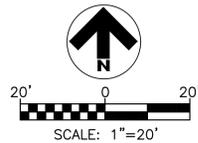
JOB NO:
 DRAWN: EO
 CHECK: DT/ALT
 DATE: 1/6/25
 SHEET
C-3
 SHEET OF

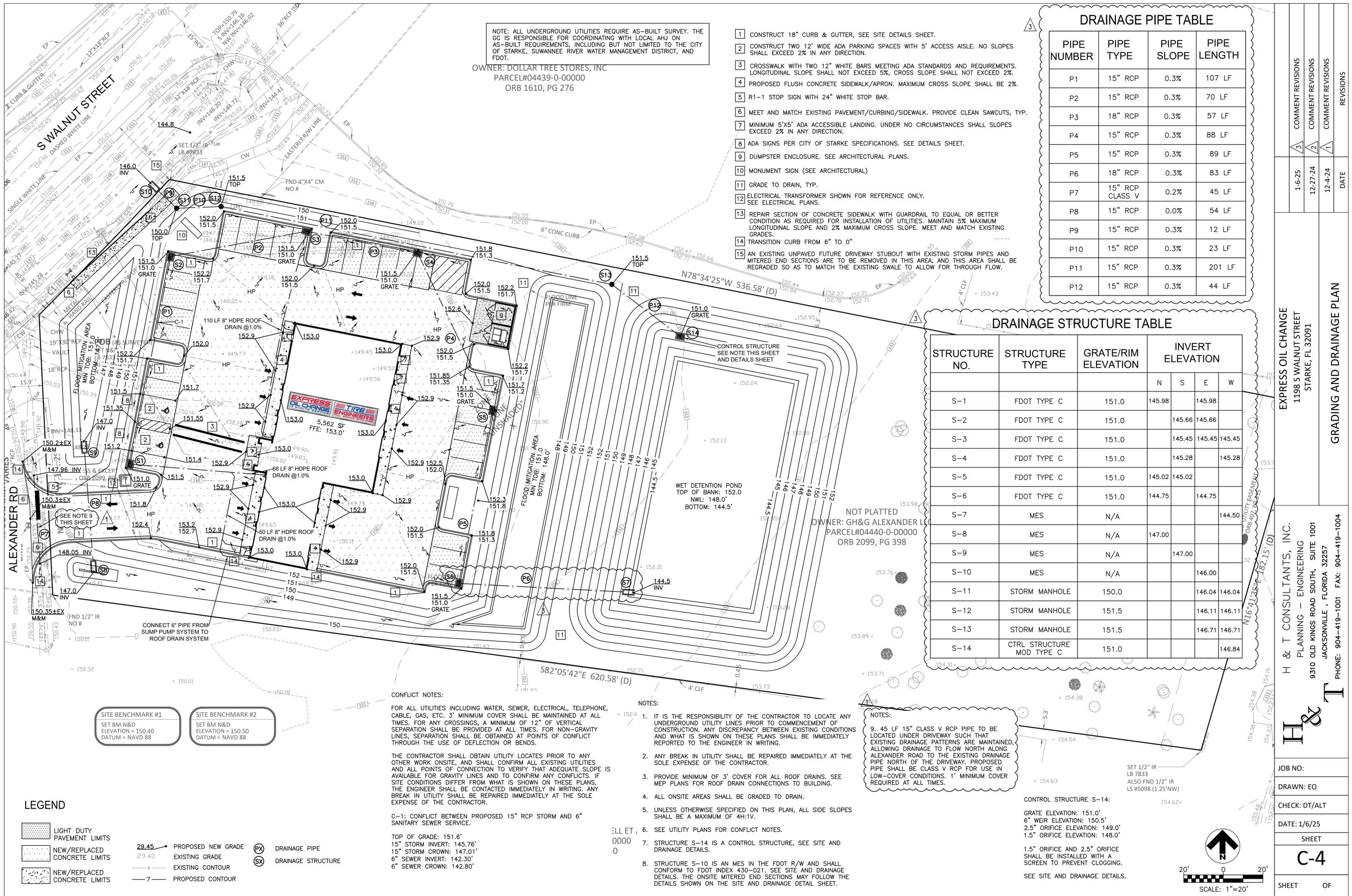
SITE BENCHMARK #1
 SET BM N&D
 ELEVATION = 150.40
 DATUM = NAVD 88

SITE BENCHMARK #2
 SET BM N&D
 ELEVATION = 150.50
 DATUM = NAVD 88

PARKING CALCULATIONS:
 USE PER CITY CODE:
 OIL CHANGE/VEHICLE SERVICE
 REQUIRED PARKING:
 1 SPACE PER 200 SF
 5,670 SF
 REQUIRED PARKING: $\frac{5670}{200} = 28$ PS MIN
 MINIMUM REQUIRED PARKING: 28 SPACES
 TOTAL PARKING PROVIDED: 30 SPACES

ZONING: R-2A
 FUTURE LAND USE: R-MD
 OWNER: BLAINE LATHELL ET AL
 PARCEL#04442-0-00000
 ORB 1463, PG 40





NOTE: ALL UNDERGROUND UTILITIES REQUIRE AS-BUILT SURVEY. THE GC IS RESPONSIBLE FOR COORDINATING WITH LOCAL AHJ ON AS-BUILT REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE CITY OF STARKE, SUWANNEE RIVER WATER MANAGEMENT DISTRICT, AND FOOT.

OWNER: DOLLAR TREE STORES, INC
 PARCEL#04439-0-0000
 ORB 1610, PG 276

- 1 CONSTRUCT 18" CURB & GUTTER, SEE SITE DETAILS SHEET.
- 2 CONSTRUCT TWO 12' WIDE ADA PARKING SPACES WITH 5' ACCESS AISLE. NO SLOPES SHALL EXCEED 2% IN ANY DIRECTION.
- 3 CROSSWALK WITH TWO 12" WHITE BARS MEETING ADA STANDARDS AND REQUIREMENTS. LONGITUDINAL SLOPE SHALL NOT EXCEED 5%, CROSS SLOPE SHALL NOT EXCEED 2%.
- 4 PROPOSED FLUSH CONCRETE SIDEWALK/APRON. MAXIMUM CROSS SLOPE SHALL BE 2%.
- 5 R1-1 STOP SIGN WITH 24" WHITE STOP BAR.
- 6 MEET AND MATCH EXISTING PAVEMENT/CURBING/SIDEWALK. PROVIDE CLEAN SAWCUTS, TYP.
- 7 MINIMUM 5'x5' ADA ACCESSIBLE LANDING. UNDER NO CIRCUMSTANCES SHALL SLOPES EXCEED 2% IN ANY DIRECTION.
- 8 ADA SIGNS PER CITY OF STARKE SPECIFICATIONS. SEE DETAILS SHEET.
- 9 DUMPSTER ENCLOSURE. SEE ARCHITECTURAL PLANS.
- 10 MONUMENT SIGN (SEE ARCHITECTURAL)
- 11 GRADE TO DRAIN, TYP.
- 12 ELECTRICAL TRANSFORMER SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLANS.
- 13 REPAIR SECTION OF CONCRETE SIDEWALK WITH GUARDRAIL TO EQUAL OR BETTER CONDITION AS REQUIRED FOR INSTALLATION OF UTILITIES. MAINTAIN 5% MAXIMUM LONGITUDINAL SLOPE AND 2% MAXIMUM CROSS SLOPE. MEET AND MATCH EXISTING GRADES.
- 14 TRANSITION CURB FROM 6" TO 0"
- 15 AN EXISTING UNPAVED FUTURE DRIVEWAY STUBOUT WITH EXISTING STORM PIPES AND MITERED END SECTIONS ARE TO BE REMOVED IN THIS AREA, AND THIS AREA SHALL BE REGRADED SO AS TO MATCH THE EXISTING SWALE TO ALLOW FOR THROUGH FLOW.

PIPE NUMBER	PIPE TYPE	PIPE SLOPE	PIPE LENGTH
P1	15" RCP	0.3%	107 LF
P2	15" RCP	0.3%	70 LF
P3	18" RCP	0.3%	57 LF
P4	15" RCP	0.3%	88 LF
P5	15" RCP	0.3%	89 LF
P6	18" RCP	0.3%	83 LF
P7	15" RCP CLASS V	0.2%	45 LF
P8	15" RCP	0.0%	54 LF
P9	15" RCP	0.3%	12 LF
P10	15" RCP	0.3%	23 LF
P11	15" RCP	0.3%	201 LF
P12	15" RCP	0.3%	44 LF

STRUCTURE NO.	STRUCTURE TYPE	GRATE/RIM ELEVATION	INVERT ELEVATION			
			N	S	E	W
S-1	FDOT TYPE C	151.0	145.98		145.98	
S-2	FDOT TYPE C	151.0		145.66	145.66	
S-3	FDOT TYPE C	151.0		145.45	145.45	145.45
S-4	FDOT TYPE C	151.0		145.28		145.28
S-5	FDOT TYPE C	151.0	145.02		145.02	
S-6	FDOT TYPE C	151.0	144.75		144.75	
S-7	MES	N/A				144.50
S-8	MES	N/A	147.00			
S-9	MES	N/A		147.00		
S-10	MES	N/A			146.00	
S-11	STORM MANHOLE	150.0			146.04	146.04
S-12	STORM MANHOLE	151.5			146.11	146.11
S-13	STORM MANHOLE	151.5			146.71	146.71
S-14	CTRL STRUCTURE MOD TYPE C	151.0				146.84

SITE BENCHMARK #1
 SET BM N&D
 ELEVATION = 150.40
 DATUM = NAVD 88

SITE BENCHMARK #2
 SET BM N&D
 ELEVATION = 150.50
 DATUM = NAVD 88

CONFLICT NOTES:
 FOR ALL UTILITIES INCLUDING WATER, SEWER, ELECTRICAL, TELEPHONE, CABLE, GAS, ETC. 3' MINIMUM COVER SHALL BE MAINTAINED AT ALL TIMES. FOR ANY CROSSINGS, A MINIMUM OF 12" OF VERTICAL SEPARATION SHALL BE PROVIDED AT ALL TIMES. FOR NON-GRAVITY LINES, SEPARATION SHALL BE OBTAINED AT POINTS OF CONFLICT THROUGH THE USE OF DEFLECTION OR BENDS.

THE CONTRACTOR SHALL OBTAIN UTILITY LOCATES PRIOR TO ANY OTHER WORK ON SITE, AND SHALL CONFIRM ALL EXISTING UTILITIES AND ALL POINTS OF CONNECTION TO VERIFY THAT ADEQUATE SLOPE IS AVAILABLE FOR GRAVITY LINES AND TO CONFIRM ANY CONFLICTS. IF SITE CONDITIONS DIFFER FROM WHAT IS SHOWN ON THESE PLANS, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IN WRITING. ANY BREAK IN UTILITY SHALL BE REPAIRED IMMEDIATELY AT THE SOLE EXPENSE OF THE CONTRACTOR.

C-1: CONFLICT BETWEEN PROPOSED 15" RCP STORM AND 6" SANITARY SEWER SERVICE.

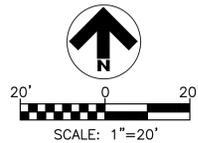
TOP OF GRADE: 151.6'
 15" STORM INVERT: 145.76'
 15" STORM CROWN: 147.01'
 6" SEWER INVERT: 142.30'
 6" SEWER CROWN: 142.80'

- NOTES:**
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY UNDERGROUND UTILITY LINES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND WHAT IS SHOWN ON THESE PLANS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
 2. ANY BREAK IN UTILITY SHALL BE REPAIRED IMMEDIATELY AT THE SOLE EXPENSE OF THE CONTRACTOR.
 3. PROVIDE MINIMUM OF 3' COVER FOR ALL ROOF DRAINS. SEE MEP PLANS FOR ROOF DRAIN CONNECTIONS TO BUILDING.
 4. ALL ONSITE AREAS SHALL BE GRADED TO DRAIN.
 5. UNLESS OTHERWISE SPECIFIED ON THIS PLAN, ALL SIDE SLOPES SHALL BE A MAXIMUM OF 4H:1V.
 6. SEE UTILITY PLANS FOR CONFLICT NOTES.
 7. STRUCTURE S-14 IS A CONTROL STRUCTURE, SEE SITE AND DRAINAGE DETAILS.
 8. STRUCTURE S-10 IS AN MES IN THE FDOT R/W AND SHALL CONFORM TO FDOT INDEX 430-021. SEE SITE AND DRAINAGE DETAILS. THE ONSITE MITERED END SECTIONS MAY FOLLOW THE DETAILS SHOWN ON THE SITE AND DRAINAGE DETAIL SHEET.

NOTES:
 9. 45 LF 15" CLASS V RCP PIPE TO BE LOCATED UNDER DRIVEWAY SUCH THAT EXISTING DRAINAGE PATTERNS ARE MAINTAINED, ALLOWING DRAINAGE TO FLOW NORTH ALONG ALEXANDER ROAD TO THE EXISTING DRAINAGE PIPE NORTH OF THE DRIVEWAY. PROPOSED PIPE SHALL BE CLASS V RCP FOR USE IN LOW-COVER CONDITIONS. 1' MINIMUM COVER REQUIRED AT ALL TIMES.

CONTROL STRUCTURE S-14:
 GRATE ELEVATION: 151.0'
 6" WEIR ELEVATION: 150.5'
 2.5" ORIFICE ELEVATION: 149.0'
 1.5" ORIFICE ELEVATION: 148.0'

1.5" ORIFICE AND 2.5" ORIFICE SHALL BE INSTALLED WITH A SCREEN TO PREVENT CLOGGING.
 SEE SITE AND DRAINAGE DETAILS.



LEGEND

	LIGHT DUTY PAVEMENT LIMITS		PROPOSED NEW GRADE		DRAINAGE PIPE
	NEW/REPLACED CONCRETE LIMITS		EXISTING GRADE		DRAINAGE STRUCTURE
	NEW/REPLACED CONCRETE LIMITS		EXISTING CONTOUR		
			PROPOSED CONTOUR		

EXPRESS OIL CHANGE
 1198 S WALNUT STREET
 STARKE, FL 32091

H & T CONSULTANTS, INC.
 PLANNING - ENGINEERING
 9310 OLD KINGS ROAD SOUTH, SUITE 1001
 JACKSONVILLE, FLORIDA 32257
 PHONE: 904-419-1001 FAX: 904-419-1004

REVISIONS

NO.	DATE	DESCRIPTION
1	12-4-24	COMMENT REVISIONS
2	12-27-24	COMMENT REVISIONS
3	1-6-25	COMMENT REVISIONS

GRADING AND DRAINAGE PLAN

JOB NO:
 DRAWN: EO
 CHECK: DT/ALT
 DATE: 1/6/25
 SHEET
C-4
 SHEET OF

SANITARY NOTE:
NO FLOOR DRAINS IN BUILDING, MOP SINK TIED TO OIL/WATER SEPARATED WITHIN BUILDING. SEE BUILDING PLANS.

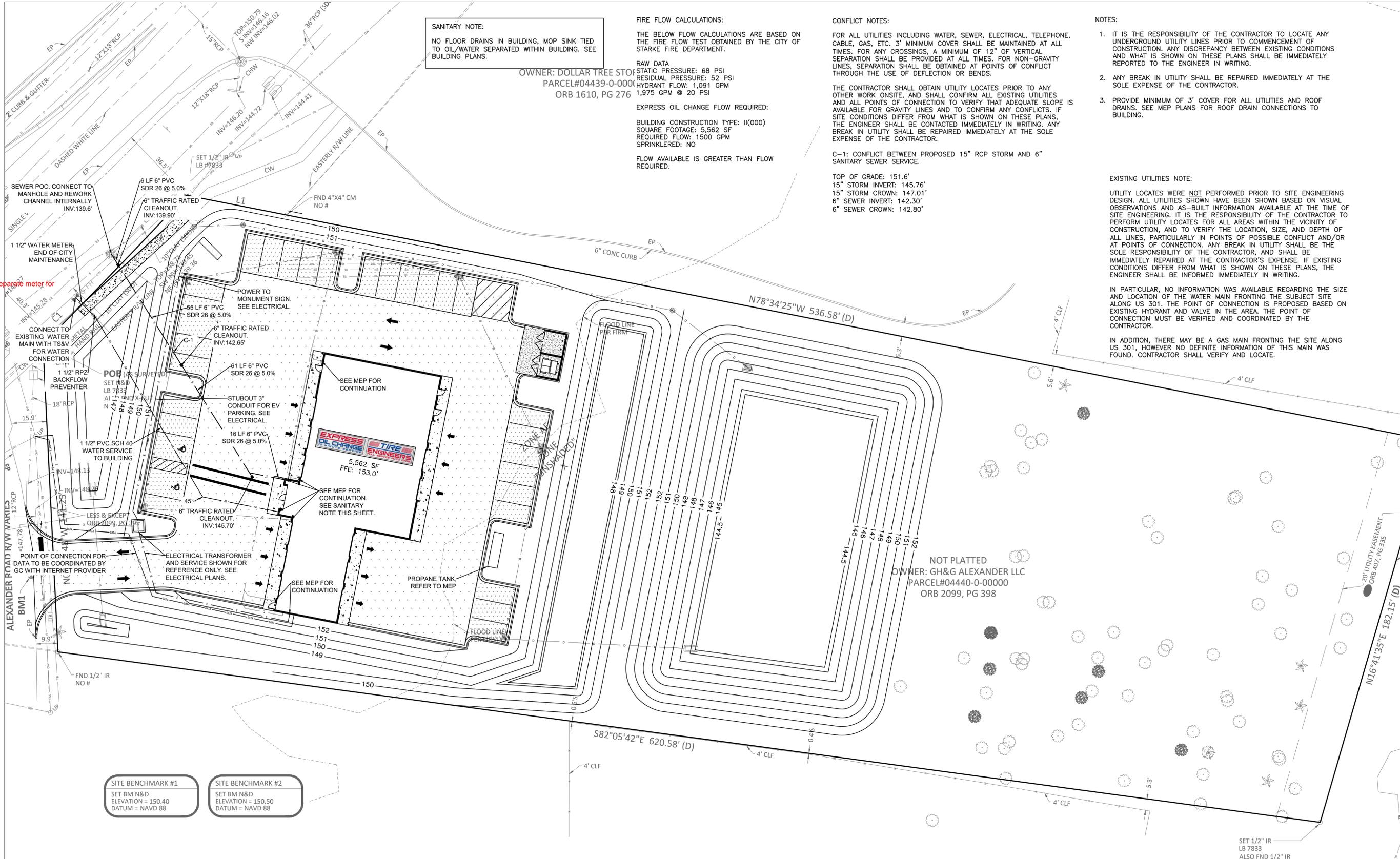
OWNER: DOLLAR TREE STORE
PARCEL#04439-0-0001
ORB 1610, PG 276

FIRE FLOW CALCULATIONS:
THE BELOW FLOW CALCULATIONS ARE BASED ON THE FIRE FLOW TEST OBTAINED BY THE CITY OF STARKE FIRE DEPARTMENT.
RAW DATA
STATIC PRESSURE: 68 PSI
RESIDUAL PRESSURE: 52 PSI
HYDRANT FLOW: 1,091 GPM
1,975 GPM @ 20 PSI
EXPRESS OIL CHANGE FLOW REQUIRED:
BUILDING CONSTRUCTION TYPE: II(000)
SQUARE FOOTAGE: 5,562 SF
REQUIRED FLOW: 1500 GPM
SPRINKLERED: NO
FLOW AVAILABLE IS GREATER THAN FLOW REQUIRED.

CONFLICT NOTES:
FOR ALL UTILITIES INCLUDING WATER, SEWER, ELECTRICAL, TELEPHONE, CABLE, GAS, ETC. 3' MINIMUM COVER SHALL BE MAINTAINED AT ALL TIMES. FOR ANY CROSSINGS, A MINIMUM OF 12" OF VERTICAL SEPARATION SHALL BE PROVIDED AT ALL TIMES. FOR NON-GRAVITY LINES, SEPARATION SHALL BE OBTAINED AT POINTS OF CONFLICT THROUGH THE USE OF DEFLECTION OR BENDS.
THE CONTRACTOR SHALL OBTAIN UTILITY LOCATES PRIOR TO ANY OTHER WORK ONSITE, AND SHALL CONFIRM ALL EXISTING UTILITIES AND ALL POINTS OF CONNECTION TO VERIFY THAT ADEQUATE SLOPE IS AVAILABLE FOR GRAVITY LINES AND TO CONFIRM ANY CONFLICTS. IF SITE CONDITIONS DIFFER FROM WHAT IS SHOWN ON THESE PLANS, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IN WRITING. ANY BREAK IN UTILITY SHALL BE REPAIRED IMMEDIATELY AT THE SOLE EXPENSE OF THE CONTRACTOR.
C-1: CONFLICT BETWEEN PROPOSED 15" RCP STORM AND 6" SANITARY SEWER SERVICE.

- NOTES:**
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY UNDERGROUND UTILITY LINES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND WHAT IS SHOWN ON THESE PLANS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
 - ANY BREAK IN UTILITY SHALL BE REPAIRED IMMEDIATELY AT THE SOLE EXPENSE OF THE CONTRACTOR.
 - PROVIDE MINIMUM OF 3' COVER FOR ALL UTILITIES AND ROOF DRAINS. SEE MEP PLANS FOR ROOF DRAIN CONNECTIONS TO BUILDING.

EXISTING UTILITIES NOTE:
UTILITY LOCATES WERE NOT PERFORMED PRIOR TO SITE ENGINEERING DESIGN. ALL UTILITIES SHOWN HAVE BEEN SHOWN BASED ON VISUAL OBSERVATIONS AND AS-BUILT INFORMATION AVAILABLE AT THE TIME OF SITE ENGINEERING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM UTILITY LOCATES FOR ALL AREAS WITHIN THE VICINITY OF CONSTRUCTION, AND TO VERIFY THE LOCATION, SIZE, AND DEPTH OF ALL LINES, PARTICULARLY IN POINTS OF POSSIBLE CONFLICT AND/OR AT POINTS OF CONNECTION. ANY BREAK IN UTILITY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE. IF EXISTING CONDITIONS DIFFER FROM WHAT IS SHOWN ON THESE PLANS, THE ENGINEER SHALL BE INFORMED IMMEDIATELY IN WRITING.
IN PARTICULAR, NO INFORMATION WAS AVAILABLE REGARDING THE SIZE AND LOCATION OF THE WATER MAIN FRONTING THE SUBJECT SITE ALONG US 301. THE POINT OF CONNECTION IS PROPOSED BASED ON EXISTING HYDRANT AND VALVE IN THE AREA. THE POINT OF CONNECTION MUST BE VERIFIED AND COORDINATED BY THE CONTRACTOR.
IN ADDITION, THERE MAY BE A GAS MAIN FRONTING THE SITE ALONG US 301, HOWEVER NO DEFINITE INFORMATION OF THIS MAIN WAS FOUND. CONTRACTOR SHALL VERIFY AND LOCATE.



REVISIONS	DATE
3	1-6-25
2	12-27-24
1	12-4-24

EXPRESS OIL CHANGE
1198 S WALNUT STREET
STARKE, FL 32091

UTILITY PLAN

H & T CONSULTANTS, INC.
PLANNING - ENGINEERING
9310 OLD KINGS ROAD SOUTH, SUITE 1001
JACKSONVILLE, FLORIDA 32257
PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO:	
DRAWN: EO	
CHECK: DT/ALT	
DATE: 1/6/25	
SHEET	C-5
SHEET	OF

SITE BENCHMARK #1
SET BM N&D
ELEVATION = 150.40
DATUM = NAVD 88

SITE BENCHMARK #2
SET BM N&D
ELEVATION = 150.50
DATUM = NAVD 88

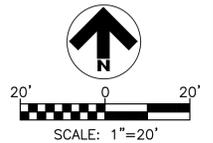
LEGEND

- LIGHT DUTY PAVEMENT LIMITS
- NEW/REPLACED CONCRETE LIMITS
- NEW/REPLACED CONCRETE LIMITS

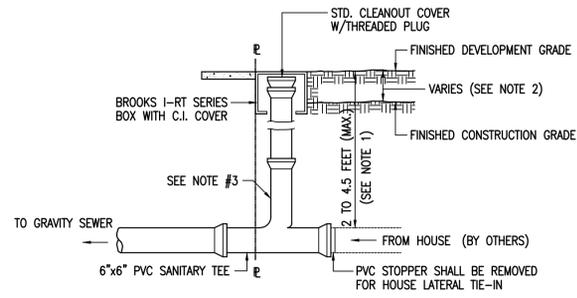
ABBREVIATIONS

TS&V TAPPING SLEEVE AND VALVE

OWNER: BLAINE LATHELL ET AL
PARCEL#04442-0-00000
ORB 1463, PG 40

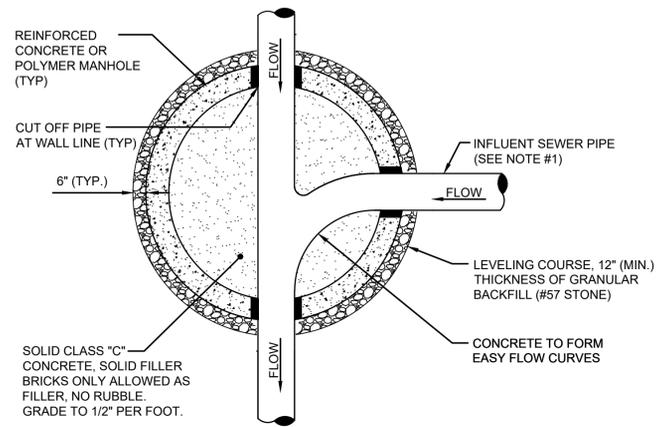


Include separate meter for irrigation



- NOTE:
1. DEPTH OF CLEANOUT SHALL BE SET BY DISTANCE TO HOUSE CONNECTION @ 1/4" PER FOOT, PLUS ONE FOOT.
 2. CONTRACTOR TO COORDINATE DEPTH WITH DEVELOPER. READJUSTMENT OF CLEANOUT HEIGHT AFTER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF THE BUILDER/HOMEOWNER.
 3. IN ACCORDANCE WITH THE STANDARD PLUMBING CODE SECTION 706.3, A SANITARY TEE CAN ONLY BE USED FOR HORIZONTAL TO VERTICAL FLOW. CONNECTIONS TO THE RISER ARE NOT ACCEPTABLE.

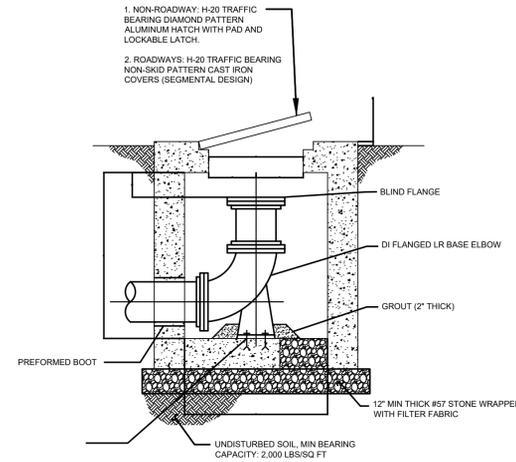
CLEANOUT
N.T.S.



PLAN VIEW (S-3)

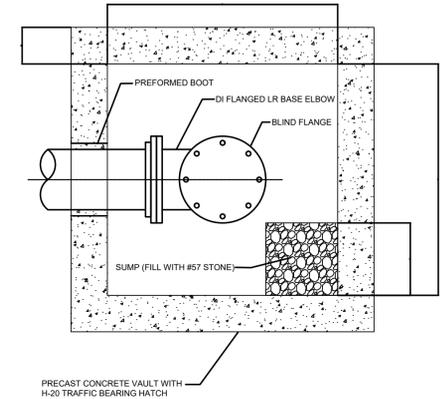
NOTES:

1. THE ANGLE BETWEEN ALL INFLUENT FLOW CHANNELS AND EFFLUENT PIPE SHALL BE BETWEEN 90° - 180° UNLESS OTHERWISE APPROVED BY CITY OF STARKE.



PROVIDE #4 ANCHOR BOLTS CONFORMING TO ASTM A 193 B8 (4 TOTAL) WITH MINIMUM 3/4\"/>

SWABBING PORT AND CLEAN OUT VAULT DETAIL-SECTION



SWABBING PORT AND CLEAN OUT VAULT DETAIL-PLAN

EXPRESS OIL CHANGE
1198 S WALNUT STREET
STARKE, FL 32091

UTILITY DETAILS

H&T
H & T CONSULTANTS, INC.
PLANNING - ENGINEERING
9310 OLD KINGS ROAD SOUTH, SUITE 1001
JACKSONVILLE, FLORIDA 32257
PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO:	
DRAWN: DT	
CHECK: A.L.T./SH	
DATE: 1/6/25	
SHEET	
C-6	
SHEET	OF

1-6-25	1	COMMENT REVISIONS
12-27-24	2	COMMENT REVISIONS
12-4-24	1	COMMENT REVISIONS
		REVISIONS
		DATE

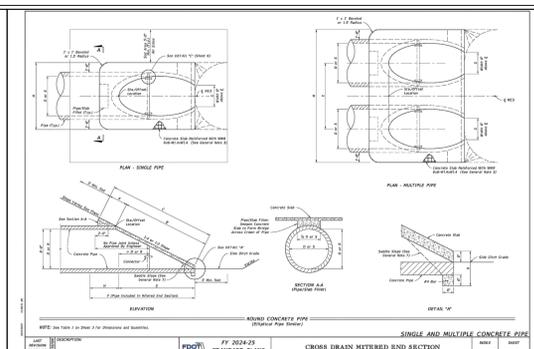
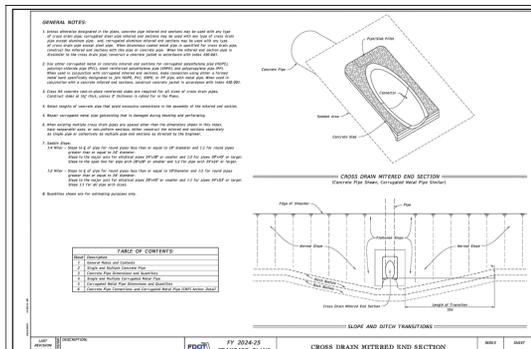


TABLE 1
 SINGLE AND MULTIPLE CONCRETE PIPE DIMENSIONS AND QUANTITIES

RC/P/CMP	A	B	C	D	E	F	G
15" - 18"	2'-7"	2'-1"	6"	6"	6"	1'-6"	1'-7"
24"	2'-11"	2'-8"	6"	5"	4"	1'-11"	2'-0"
30"	3'-6"	3'-2"	6"	6"	5"	2'-5"	2'-6"
36"	4'-1"	3'-10"	6"	7"	5"	2'-9"	3'-0"

TABLE OF DIMENSIONS

STANDARD TABLE OF DIMENSIONS

RC/P/CMP	A	B	C	D	E	F	G
15" - 18"	2'-7"	2'-1"	6"	6"	6"	1'-6"	1'-7"
24"	2'-11"	2'-8"	6"	5"	4"	1'-11"	2'-0"
30"	3'-6"	3'-2"	6"	6"	5"	2'-5"	2'-6"
36"	4'-1"	3'-10"	6"	7"	5"	2'-9"	3'-0"

FOR MITERED END SECTION

RC/P/CMP	H	J	K	L	M	N
15" - 18"	2'-10"	2'-4"	8"	6"	6'-10"	7'-0"
24"	3'-6"	3'-1"	7"	5"	10'-0"	10'-3"
30"	3'-9"	3'-5"	7"	5"	11'-5"	11'-8"
36"	4'-6"	4'-0"	6"	6"	14'-0"	14'-4"

DETAILS FOR ONSITE MITERED END SECTIONS

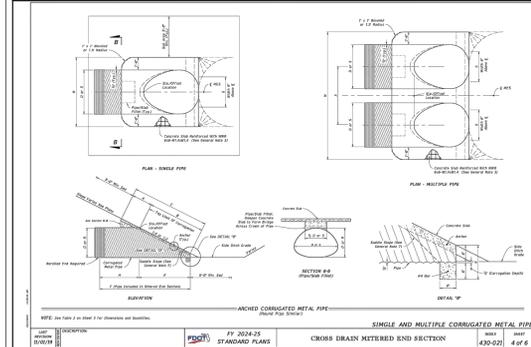
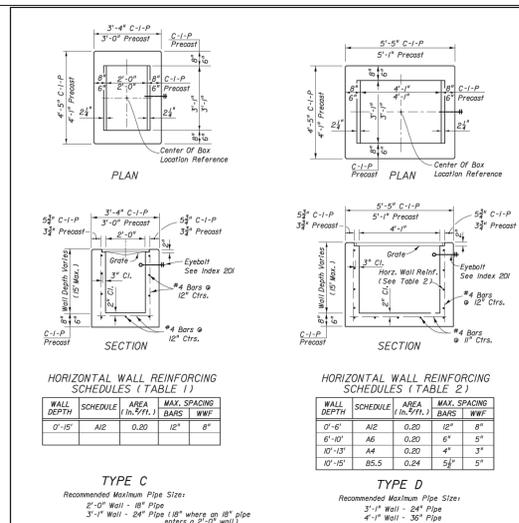
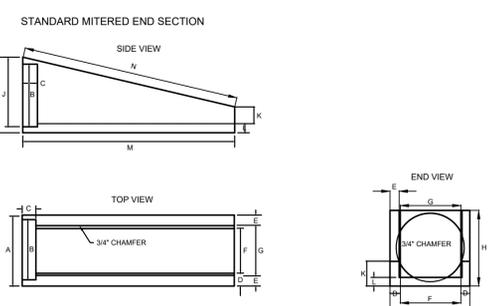
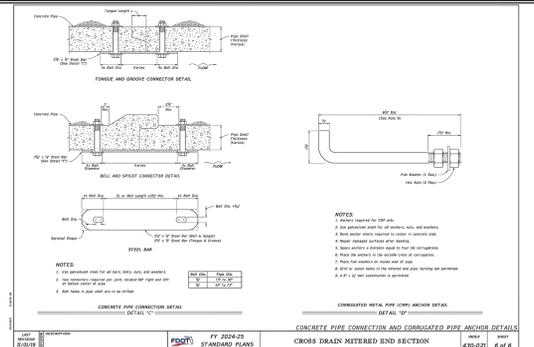
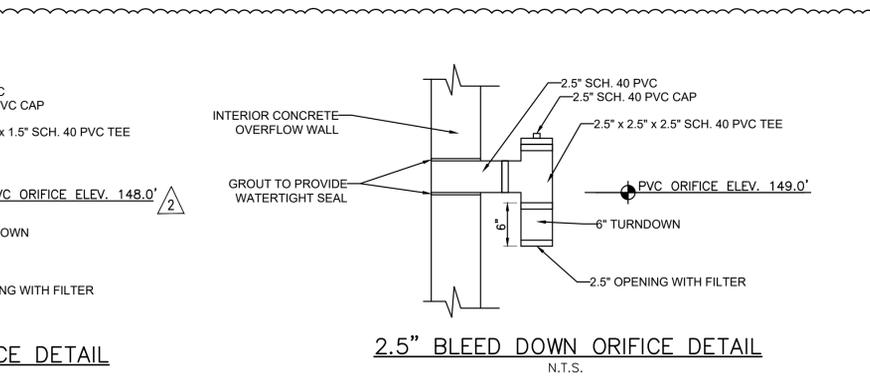
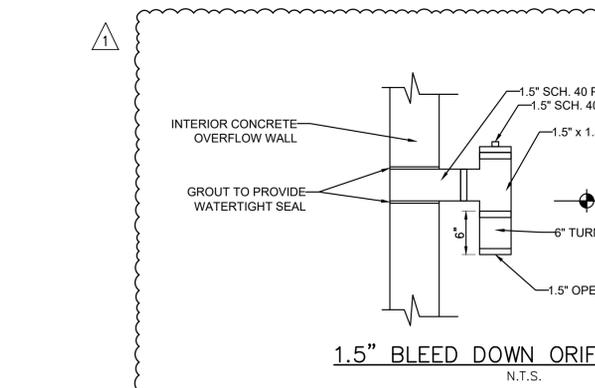
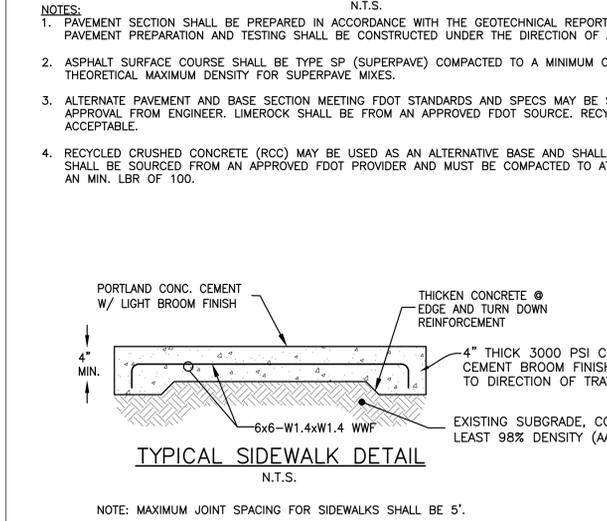
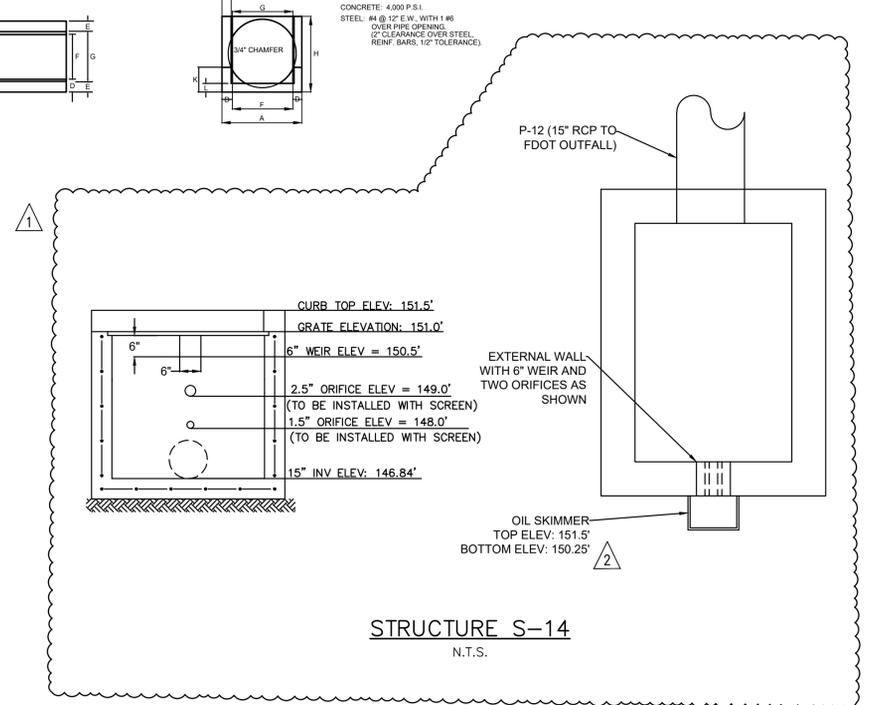
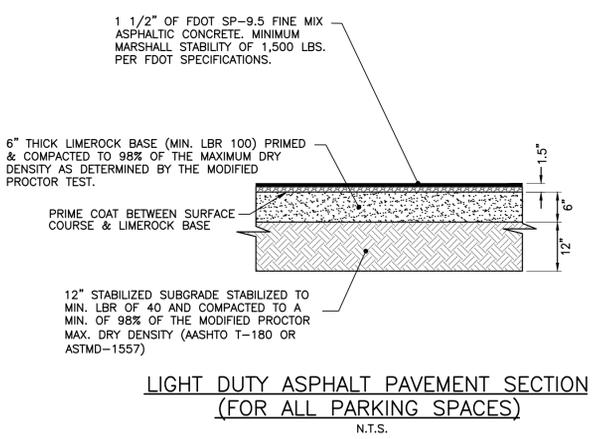
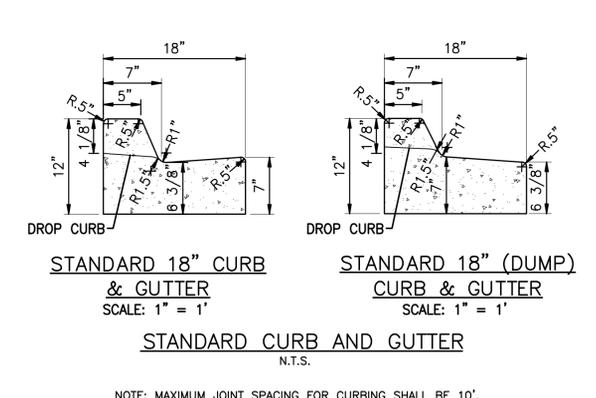
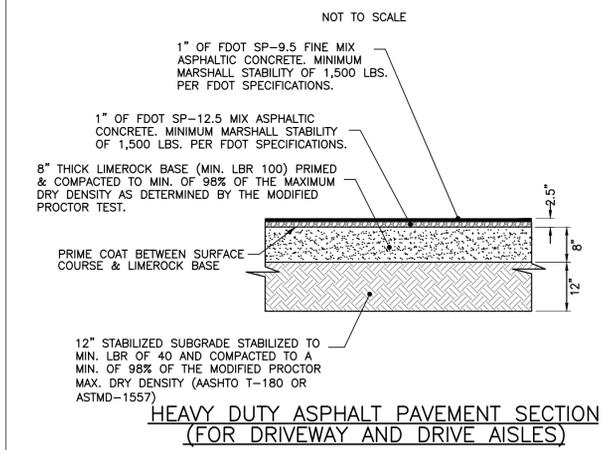


TABLE 2
 SINGLE AND MULTIPLE CORRUGATED METAL PIPE DIMENSIONS AND QUANTITIES

RC/P/CMP	A	B	C	D	E	F	G
15" - 18"	2'-10"	2'-4"	8"	6"	6'-10"	7'-0"	
24"	3'-6"	3'-1"	7"	5"	10'-0"	10'-3"	
30"	3'-9"	3'-5"	7"	5"	11'-5"	11'-8"	
36"	4'-6"	4'-0"	6"	6"	14'-0"	14'-4"	



**MES S-10 WITHIN FDOT R/W
 (TO BE IN ACCORDANCE WITH FDOT STANDARD INDEX 430-021)**



EXPRESS OIL CHANGE
 1198 S WALNUT STREET
 STARKE, FL 32091

SITE AND DRAINAGE DETAILS

REVISIONS

NO.	DATE	REVISIONS
1	12-4-24	COMMENT REVISIONS
2	12-27-24	COMMENT REVISIONS
3	1-6-25	COMMENT REVISIONS

H & T CONSULTANTS, INC.
 PLANNING - ENGINEERING
 9310 OLD KINGS ROAD SOUTH, SUITE 1001
 JACKSONVILLE, FLORIDA 32257
 PHONE: 904-419-1001 FAX: 904-419-1004

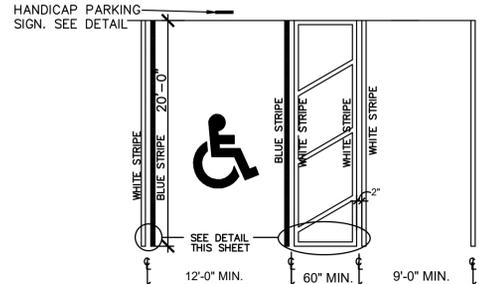
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C-7
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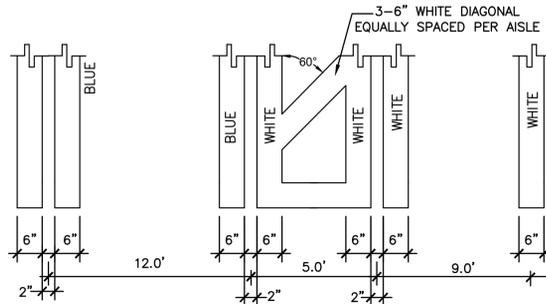
R1-1



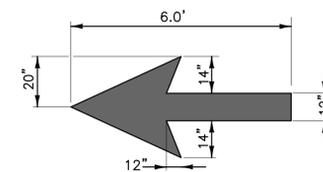
TYPICAL SIGN DETAILS
N.T.S.



NOTES:
1. SLOPE NOT TO EXCEED 2% IN ALL DIRECTIONS FOR ALL REQUIRED MARKING. COORDINATE WITH CIVIL ENGINEER DRAWINGS AND LOCAL MUNICIPALITY.
2. THIS IS A STANDARD H.C. DETAIL, ALL PORTIONS OF THIS DETAIL MAY NOT APPLY.
3. IT IS IMPORTANT THAT THE INSTALLATION FOLLOWS AN APPROVED DETAIL FROM THE LOCAL MUNICIPALITY TO BE COMPLIANT WITH ADA STANDARDS.

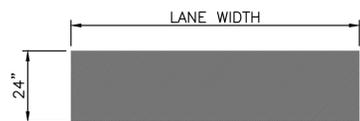


STRIPE DETAIL
N.T.S.

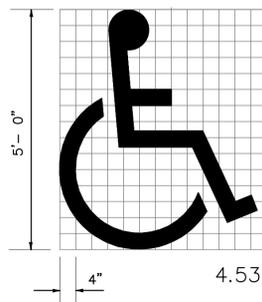


NOTE:
ALL PAVEMENT MARKINGS SHALL BE PAINTED TRAFFIC WHITE, UNLESS OTHERWISE NOTED. ARROWS CENTERED ON TRAVEL LANE.

DIRECTIONAL ARROW PAVEMENT MARKING DETAILS
N.T.S.

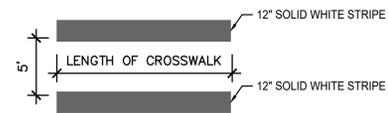


STOP BAR
N.T.S.



PAINTED SIGN FOR APPLICATION WITHIN AN ACCESSIBLE PARKING SPACE. THE SYMBOL SHALL BE 5 FT. HIGH AND WHITE IN COLOR.

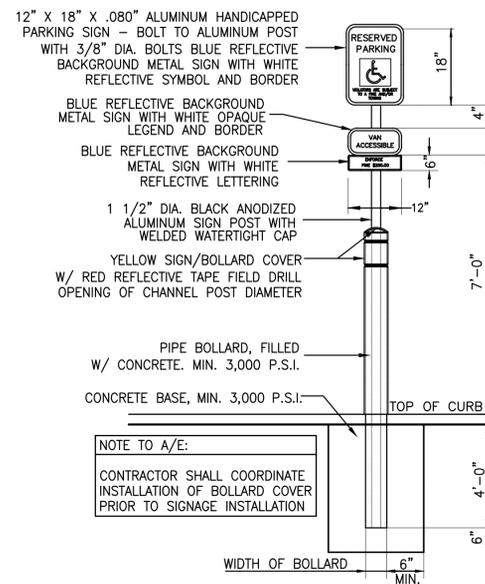
INTERNATIONAL SYMBOL
N.T.S.



ONSITE CROSSWALK DETAIL

PAVEMENT STRIPING AND SIGN NOTES:

1. PAINT COLOR TO BE "WHITE" FOR ARROW AND LETTERS.
2. ALL PAVEMENT MARKINGS EXCEPT PARKING STALLS SHALL BE ALKYD THERMOPLASTIC 90 MILS IN THICKNESS IN ACCORDANCE WITH CITY OF STARKE, AND/OR FDOT STANDARDS.
3. STANDARD PARKING STALLS STRIPES SHALL BE 6" WIDE WHITE TRAFFIC LATEX PAINT IN ACCORDANCE WITH THE PAVEMENT MARKING LATEX PAINT NOTES ON THIS SHEET.
4. ALL PAVEMENT STRIPING SHALL BE IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 711-001.
5. HANDICAP SYMBOL SHALL BE THERMOPLASTIC BLUE TRAFFIC PAINT IN ACCORDANCE WITH CITY OF STARKE STANDARDS. SEE DETAIL ON THIS SHEET.
6. HANDICAP PARKING STRIPES SHALL BE 6" WIDE THERMOPLASTIC TRAFFIC PAINT IN ACCORDANCE WITH FDOT INDEX NO. 17346
7. HANDICAP SIGNS SHALL BE INSTALLED PLUMB PER FLORIDA STATUTES. SEE DETAIL ON THIS SHEET.
8. ALL REGULATORY SIGNS SHALL BE MADE OF HIGH INTENSITY REFLECTIVE MATERIAL, AS SPECIFIED IN THE LATEST EDITION OF THE MUTCD.
9. ALL SIGNS SHALL BE INSTALLED AT 7' FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT SURFACE.
10. CONTRACTOR SHALL PROVIDE ALL OFF ROW PAVEMENT MARKINGS AND SITE SIGNAGE PER OWNER STANDARDS AND REQUIREMENTS.
11. ALL PAVEMENT MARKINGS SHALL COMPLY WITH CITY OF STARKE STANDARD REQUIREMENTS.
12. ALL PAINT USED FOR THE PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT FDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
13. THERMOPLASTIC COMPOUND SHALL COMPLY WITH SECTION 711-2 OF THE FDOT STANDARDS AND SPECIFICATIONS.
14. REFLECTIVE PAVEMENT MARKERS SHALL CONFORM TO SECTION 706 OF THE FDOT STANDARDS AND SPECIFICATIONS.
15. ALL GLASS SPHERES FOR REFLECTIVE TRAFFIC PAINT SHALL CONFORM TO THE CURRENT FDOT STANDARDS AND SPECIFICATIONS.
16. PAINTED MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 710 OF THE FDOT STANDARDS AND SPECIFICATIONS.



HC TYPICAL SIGN W/BOLLARD DETAIL

GENERAL NOTES:

1. ALL TRAFFIC CONTROL SIGNS WITHIN THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF STARKE CRITERIA FOR SIGN, SIZE AND SHAPE AND LETTERING DIMENSIONS.
2. ALL TRAFFIC SIGN POSTS WITHIN THE PROJECT SHALL BE 2"x2" SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES AND IN ACCORDANCE WITH THE CITY OF STARKE STANDARDS & REQUIREMENTS.

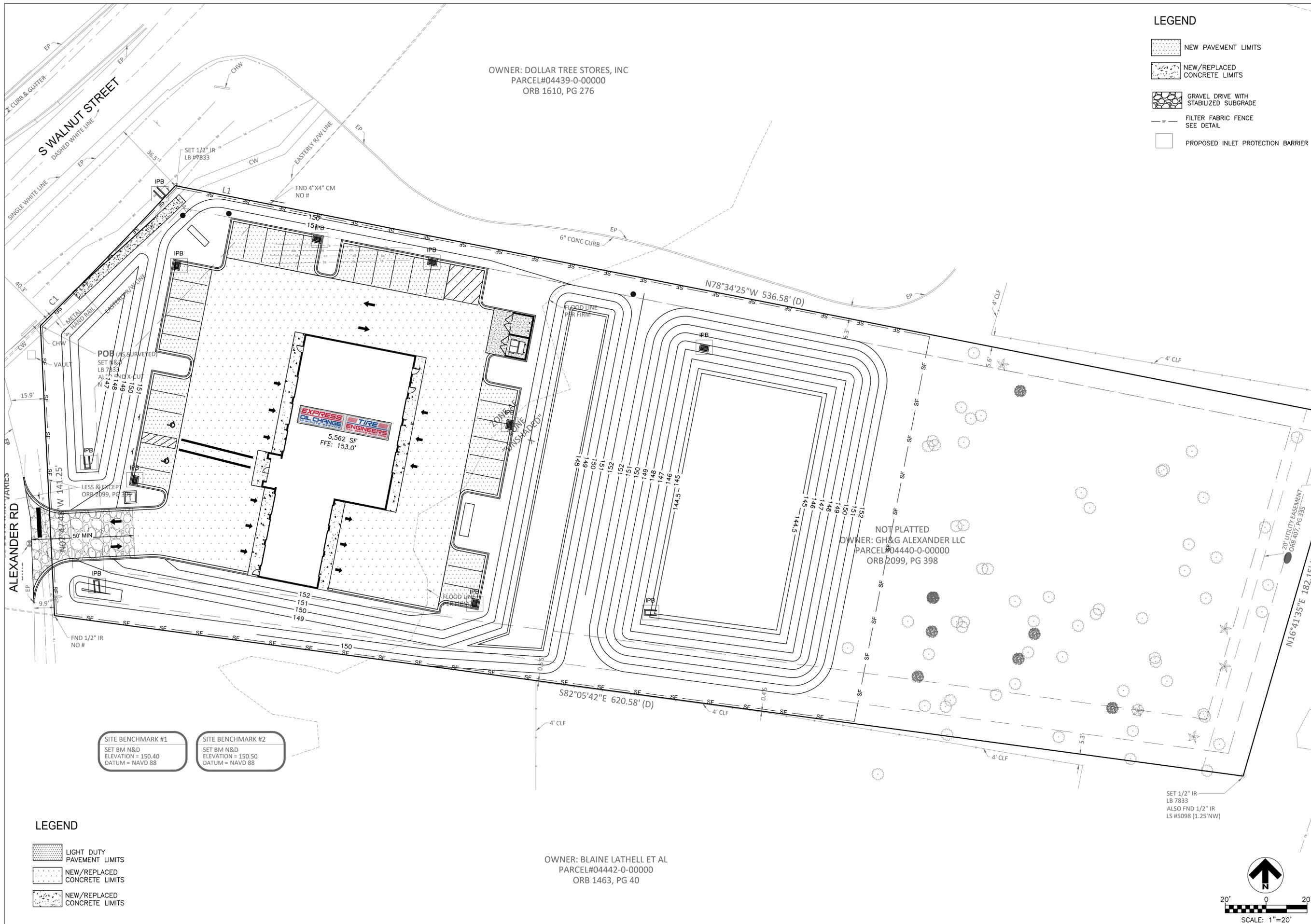
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COMMENT REVISIONS	2	12-27-24
COMMENT REVISIONS	1	12-4-24
REVISIONS	DATE	

EXPRESS OIL CHANGE
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STARKE, FL 32091

PAVEMENT AND MARKING DETAILS

H & T CONSULTANTS, INC.
PLANNING - ENGINEERING
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JACKSONVILLE, FLORIDA 32257
PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO:	
DRAWN: EO	
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OWNER: DOLLAR TREE STORES, INC
 PARCEL#04439-0-00000
 ORB 1610, PG 276

NOT PLATTED
 OWNER: GH&G ALEXANDER LLC
 PARCEL#04440-0-00000
 ORB 2099, PG 398

OWNER: BLAINE LATHELL ET AL
 PARCEL#04442-0-00000
 ORB 1463, PG 40

LEGEND

- NEW PAVEMENT LIMITS
- NEW/REPLACED CONCRETE LIMITS
- GRAVEL DRIVE WITH STABILIZED SUBGRADE
- FILTER FABRIC FENCE SEE DETAIL
- PROPOSED INLET PROTECTION BARRIER

SITE BENCHMARK #1
 SET BM N&D
 ELEVATION = 150.40
 DATUM = NAVD 88

SITE BENCHMARK #2
 SET BM N&D
 ELEVATION = 150.50
 DATUM = NAVD 88

LEGEND

- LIGHT DUTY PAVEMENT LIMITS
- NEW/REPLACED CONCRETE LIMITS
- NEW/REPLACED CONCRETE LIMITS

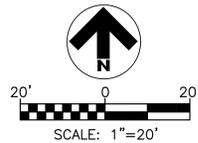
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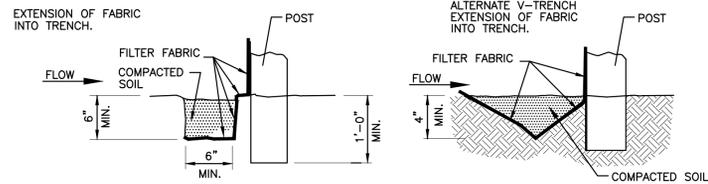
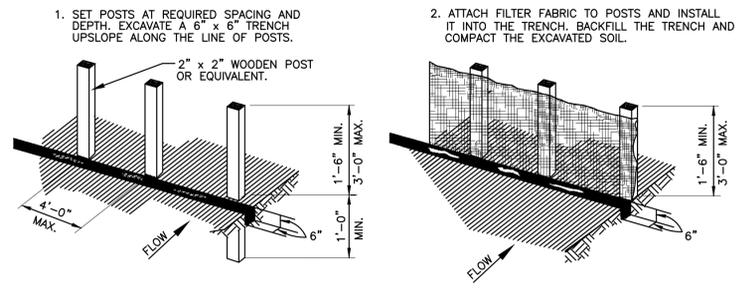
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EROSION CONTROL PLAN

H & T CONSULTANTS, INC.
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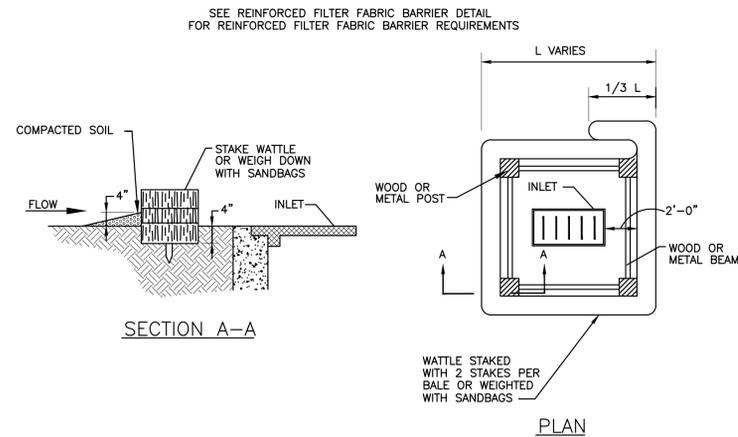
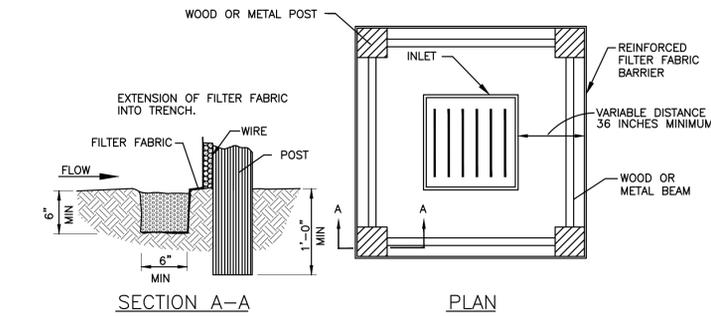




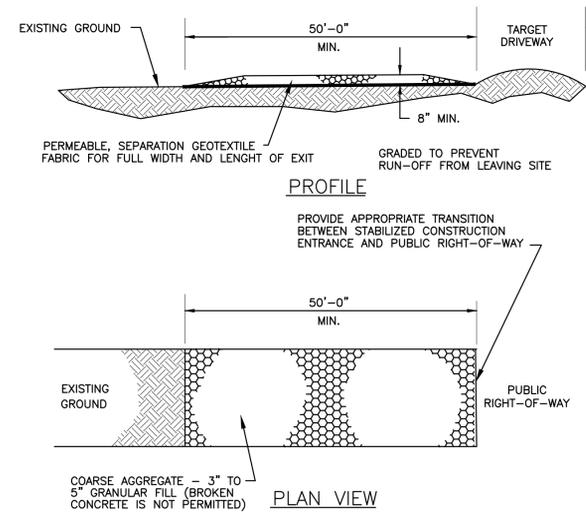
GENERAL NOTES:

1. SET POSTS AT 4-FOOT MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.
2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.
3. REMOVE SEDIMENT DEPOSITS WHEN SILT DEPTH REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE.

FILTER FABRIC FENCE



TYPICAL INLET PROTECTION BARRIERS



GENERAL NOTES:

1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
7. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE:
 - CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
 - WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
 - STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

STABILIZED CONSTRUCTION ACCESS

POLLUTION PREVENTION NOTES:

- EROSION AND SEDIMENT CONTROL BMPs IN ADDITION TO THOSE PRESENTED ON THE PLANS AND OUTLINED IN THE EROSION AND SEDIMENT CONTROL PLAN (ECP), BEST MANAGEMENT PRACTICES (BMP) PLAN, OR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTIES OR ROADWAYS, OFF SITE STORM WATER CONVEYANCES OR RECEIVING WATERS, OR ON SITE WETLANDS AND SURFACE WATERS. BMPs SHALL BE DESIGNED, INSTALLED, AND MAINTAINED BY THE SITE OPERATOR TO ENSURE THAT OFF SITE SURFACE WATER QUALITY REMAINS CONSISTENT WITH STATE AND LOCAL REGULATIONS. [THE OPERATOR IS THE ENTITY THAT OWNS OR OPERATES THE CONSTRUCTION ACTIVITY AND HAS AUTHORITY TO CONTROL THOSE ACTIVITIES AT THE PROJECT NECESSARY TO ENSURE COMPLIANCE.
- OFF SITE SURFACE WATER DISCHARGES, DISCHARGES TO THE MS4, OR DISCHARGES TO ONSITE WETLANDS OR SURFACE WATERS WITH TURBIDITY IN EXCESS OF 29 NEPHELOMETRIC TURBIDITY UNITS (NTUS) ABOVE BACKGROUND LEVEL SHALL BE IMMEDIATELY CORRECTED. SUCH INCIDENTS SHALL BE REPORTED TO AIR & WATER QUALITY WITHIN 24 HOURS OF THE OCCURRENCE. THE REPORT SHALL INCLUDE THE CAUSE OF THE DISCHARGE AND CORRECTIVE ACTIONS TAKEN.
- THE OPERATOR SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION, OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320 (4)(C)1, F.A.C., BY TAKING APPROPRIATE MEASURES TO STABILIZE AFFECTED AREAS.
- FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ENTER STORM WATER DRAINS OR WATER BODIES, OR FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED, CLEANED UP, AND IMMEDIATELY REPORTED TO AIR & WATER QUALITY (PH: 941.861.5000; FAX: 941.861.0986). SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP AS SOON AS PRACTICAL.
- IN CONTAMINATED SOIL AND/OR GROUNDWATER IS DISCOVERED DURING DEVELOPMENT OF THE SITE, ALL ACTIVITY IN THE VICINITY OF THE CONTAMINATION SHALL IMMEDIATELY CEASE, AND AIR & WATER QUALITY SHALL BE CONTACTED.
- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM:
 - NPDES CONSTRUCTION GENERIC PERMIT COVERAGE SHALL BE OBTAINED AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION COMMENCEMENT IN ACCORDANCE WITH RULE 62.621.300(4)(A), F.A.C.
 - A COPY OF THE CERTIFIED NPDES NOI, OR A COPY OF THE FDEP COVERAGE CONFIRMATION LETTER SHALL BE POSTED AT THE SITE.
 - THE SWPPP SHALL BE CERTIFIED IN ACCORDANCE WITH RULE 62-621.300(4)(A)PART V.D.6, F.A.C., AND A COPY OF THE CERTIFIED DOCUMENT SHALL BE SUBMITTED TO THE COUNTY AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
 - A COPY OF THE SWPPP, AND COPIES OF THE INSPECTION AND MAINTENANCE RECORDS SHALL BE MAINTAINED AT THE PROJECT SITE, AND SHALL BE READILY AVAILABLE TO COUNTY OR STATE INSPECTORS PER APPLICABLE CODE.
- THE DISCHARGE OF GROUNDWATER PRODUCED THROUGH DEWATERING, TO SURFACE WATERS, OR TO ANY PORTION OF THE MS4 WILL REQUIRE SEPARATE PERMITTING FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP). PERMIT(S) SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF DEWATERING. ANALYTICAL RESULTS FROM PRE-DISCHARGE TESTING SHALL BE PROVIDED THE FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE.

EXPRESS OIL CHANGE
1198 S WALNUT STREET
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PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO:

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CHECK: DT/ALT

DATE: 1/6/25

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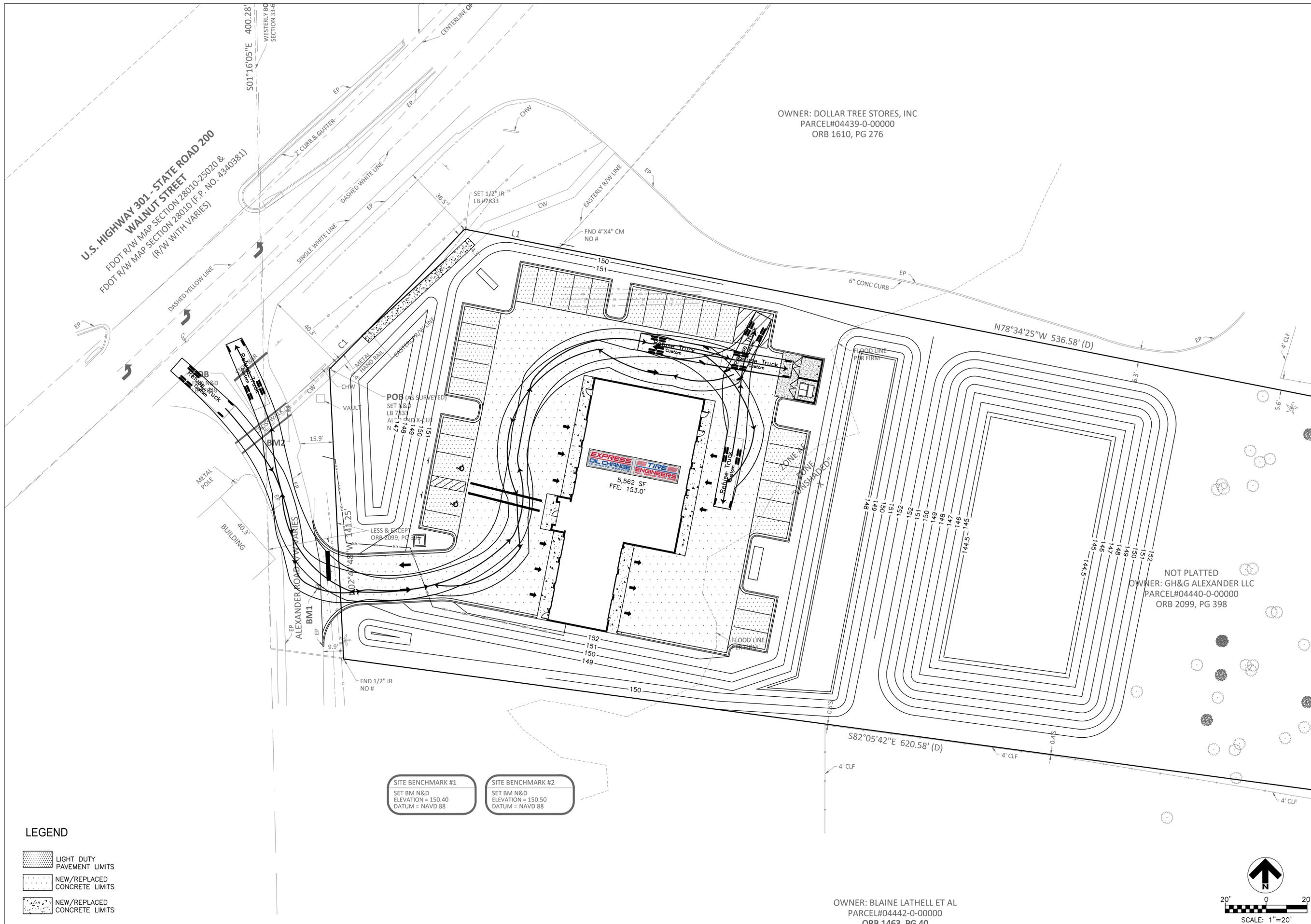
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DATE	12-27-24
DATE	12-4-24

REVISIONS	1
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REVISIONS	1

STORM WATER POLLUTION PREVENTION PLAN

OWNER'S REQUIREMENTS				CONTRACTOR'S REQUIREMENTS																																																																		
<p style="text-align: center;">SITE DESCRIPTION</p> <p>PROJECT NAME AND LOCATION: EXPRESS OIL CHANGE 1198 SOUTH WALNUT STREET STARKE, FL 32091</p> <p>OWNER NAME AND ADDRESS: ROBERT J BLANE 2505 WOODBERRY ST HYATTSVILLE, MD 20782</p> <p>DESCRIPTION: CONSTRUCTION OF A 5,670 SF OIL CHANGE STORE INCLUDING VEHICLE USE AND PARKING AREAS, STORMWATER/UTILITY INFRASTRUCTURE, FLOODPLAIN MITIGATION, ETC.</p> <p>SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING, GRUBBING, EXCAVATION, FILL PLACEMENT AND GRADING; STORM SEWER, UTILITIES CONSTRUCTION AND PREPARATION FOR FINAL PLANTING AND SEEDING.</p> <p>SOILS: SEE SOIL BORING REPORT FOR SOILS DATA</p> <p>SITE MAPS: * SEE ATTACHED GRADING PLAN FOR PRE & POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS. * SEE ATTACHED EROSION & TURBIDITY CONTROL PLAN FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS * SEE GENERAL NOTES FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.</p> <p>SITE AREA: 1. TOTAL AREA OF SITE = 2.77± ACRES 2. TOTAL AREA TO BE DISTURBED = 2.00± ACRES</p> <p>NAME OF RECEIVING WATERS: ON-SITE RETENTION POND</p>		<p style="text-align: center;">GENERAL</p> <p>THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.</p> <p style="text-align: center;">SEQUENCE OF MAJOR ACTIVITIES:</p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION BARRIERS, AND CONCRETE WASHOUT AREA 2. INSTALL SILT FENCES AND HAY BALES 3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN 4. CONSTRUCT SEDIMENTATION BASIN 5. CONTINUE CLEARING AND GRUBBING 6. STOCK PILE TOP SOIL IF REQUIRED 7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED 8. STABILIZE DENUED AREAS AND STOCKPILES AS SOON AS PRACTICABLE </td> <td style="width: 50%; border: none;"> 9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER. 10. APPLY BASE TO PROJECT 11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING 12. COMPLETE FINAL PAVING 13. REMOVE ACCUMULATED SEDIMENT FROM BASINS 14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED </td> </tr> </table> <p style="text-align: center;">TIMING OF CONTROLS/MEASURES</p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION BARRIERS, AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION & TURBIDITY CONTROL PLAN.</p> <p style="text-align: center;">CONTROLS</p> <p>IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.</p> <p style="text-align: center;">CONTROLS</p> <p>EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES</p> <ol style="list-style-type: none"> HAY BALE BARRIER: HAY BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO ENSURE AGAINST WASHOUT. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE 		1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION BARRIERS, AND CONCRETE WASHOUT AREA 2. INSTALL SILT FENCES AND HAY BALES 3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN 4. CONSTRUCT SEDIMENTATION BASIN 5. CONTINUE CLEARING AND GRUBBING 6. STOCK PILE TOP SOIL IF REQUIRED 7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED 8. STABILIZE DENUED AREAS AND STOCKPILES AS SOON AS PRACTICABLE	9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER. 10. APPLY BASE TO PROJECT 11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING 12. COMPLETE FINAL PAVING 13. REMOVE ACCUMULATED SEDIMENT FROM BASINS 14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED	<p>CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.</p> <ol style="list-style-type: none"> STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 14 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS. TEMPORARY REGASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SOODED. <p style="text-align: center;">STRUCTURAL PRACTICES</p> <ol style="list-style-type: none"> TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA. THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDANTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE: <ol style="list-style-type: none"> BLOCK & GRAVEL SEDIMENT FILTER – THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. GRAVEL SEDIMENT TRAP – THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES & UNPROTECTED AREAS. DROP INLET SEDIMENT TRAP – THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (5 < 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q < 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION & SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES & HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME. THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. 		<p style="text-align: center;">OTHER CONTROLS</p> <p style="text-align: center;">WASTE DISPOSAL</p> <p>ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p style="text-align: center;">HAZARDOUS WASTE</p> <p>ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p style="text-align: center;">SANITARY WASTE</p> <p>ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p style="text-align: center;">OFFSITE VEHICLE TRACKING</p> <p>A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY AND/OR AFTER ANY RAINFALL EVENT OF 0.05" OR GREATER TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPULAIN.</p> <p style="text-align: center;">INVENTORY FOR POLLUTION PREVENTION PLAN</p> <p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Concrete</td> <td><input type="checkbox"/> Fertilizers</td> <td><input type="checkbox"/> Wood</td> </tr> <tr> <td><input type="checkbox"/> Asphalt</td> <td><input type="checkbox"/> Petroleum Based Products</td> <td><input type="checkbox"/> Masonry Blocks</td> </tr> <tr> <td><input type="checkbox"/> Tar</td> <td><input type="checkbox"/> Cleaning Solvents</td> <td><input type="checkbox"/> Roofing Materials</td> </tr> <tr> <td><input type="checkbox"/> Detergents</td> <td><input type="checkbox"/> Paints</td> <td><input type="checkbox"/> Metal Studs</td> </tr> <tr> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> </tr> </table> <p style="text-align: center;">SPILL PREVENTION</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.</p> <p style="text-align: center;">GOOD HOUSEKEEPING</p> <p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.</p> <ul style="list-style-type: none"> * AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. * ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. * PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL. * SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. * WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER. * MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. * THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL. 		<input type="checkbox"/> Concrete	<input type="checkbox"/> Fertilizers	<input type="checkbox"/> Wood	<input type="checkbox"/> Asphalt	<input type="checkbox"/> Petroleum Based Products	<input type="checkbox"/> Masonry Blocks	<input type="checkbox"/> Tar	<input type="checkbox"/> Cleaning Solvents	<input type="checkbox"/> Roofing Materials	<input type="checkbox"/> Detergents	<input type="checkbox"/> Paints	<input type="checkbox"/> Metal Studs	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<p style="text-align: center;">HAZARDOUS PRODUCTS</p> <p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.</p> <ul style="list-style-type: none"> * PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. * ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. * IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED. <p style="text-align: center;">PRODUCT SPECIFIC PRACTICES</p> <p>THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:</p> <p style="text-align: center;">PETROLEUM PRODUCTS</p> <p>ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p style="text-align: center;">FERTILIZERS</p> <p>FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.</p> <p style="text-align: center;">PAINTS</p> <p>ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.</p> <p style="text-align: center;">CONCRETE TRUCKS</p> <p>CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.</p> <p style="text-align: center;">SPILL CONTROL PRACTICES</p> <p>IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:</p> <p>MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.</p> <p>MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SANDWUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.</p> <p>ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.</p> <p>THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p> <p>SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.</p> <p>THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.</p> <p>THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.</p> <p style="text-align: center;">MAINTENANCE/INSPECTION PROCEDURES</p> <p>EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.</p> <ul style="list-style-type: none"> * NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. * ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER. * ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT. * BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE. 		<ul style="list-style-type: none"> * SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. * THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST. * DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED. * TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. * A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED. THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. * THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT. * PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER. <p style="text-align: center;">NON-STORM WATER DISCHARGES</p> <p>IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:</p> <ul style="list-style-type: none"> * WATER FROM WATER LINE FLUSHING * PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED). * UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION). <p>ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.</p> <p style="text-align: center;">CONTRACTOR'S CERTIFICATION</p> <p>I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PARTS OF THIS CERTIFICATION.</p>																																											
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<p style="text-align: center;">CONTROLS</p> <p>THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.</p> <p style="text-align: center;">STORM WATER MANAGEMENT</p> <p>STORM WATER DRAINAGE WILL BE PROVIDED BY (DESCRIPTION:) _____ ON-SITE STORMWATER RETENTION POND</p> <p>FOR THE PROJECT, AREAS WHICH ARE NOT TO BE CONSTRUCTED ON, BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE, WHEN CONSTRUCTION IS COMPLETE, A TOTAL OF 2.00 ACRES WILL HAVE BEEN REGRADED, 0.77 ACRES LEFT UNDISTURBED. THE SITE DISCHARGES TO A WET DETENTION SYSTEM. WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN. THE RETENTION SYSTEM IS DESIGNED TO RECOVER TREATMENT VOLUME WITHIN 72 HOURS. THIS IS IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT FOR THIS TYPE OF DEVELOPMENT AT THE TIME OF PERMITTING.</p> <p style="text-align: center;">TIMING OF CONTROLS/MEASURES</p> <p>REFER TO " CONTRACTORS RESPONSIBILITY" FOR THE TIMING OF CONTROL/MEASURES.</p> <p style="text-align: center;">CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS</p> <p>IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS RELATED TO STORM WATER MANAGEMENT AND EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED.</p> <p>D.E.R. DREDGE/FILL PERMIT # <u> N/A </u> C.O.E. DREDGE/FILL PERMIT # <u> N/A </u> S.R.W.M.D. M.S.S.W. PERMIT # <u> N/A </u></p> <p style="text-align: center;">POLLUTION PREVENTION PLAN CERTIFICATION</p> <p>I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.</p> <p>SIGNED: _____ OWNER</p> <p>DATED: _____</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;">RESPONSIBLE FOR/DUTES</td> <td style="width: 10%; text-align: center;">GENERAL CONTRACTOR</td> <td style="width: 10%; text-align: center;">SUB-CONTRACTOR</td> </tr> <tr> <td style="text-align: center;">BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">SIGNATURE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		RESPONSIBLE FOR/DUTES	GENERAL CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS							SIGNATURE																																																				
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NO.	BY	DATE	SYMBOL	REVISIONS																																																																		
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DRAWN BY:	FLORIDA REGISTRATION NO.																																																																					
<p style="font-size: 24px; font-weight: bold;">STORM WATER POLLUTION PREVENTION PLAN</p>																																																																						



OWNER: DOLLAR TREE STORES, INC
 PARCEL#04439-0-00000
 ORB 1610, PG 276

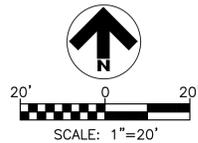
U.S. HIGHWAY 301 - STATE ROAD 200
 WALNUT STREET
 FDOT R/W MAP SECTION 28010-25020 &
 FDOT R/W MAP SECTION 28010 (F.P. NO. 4340381)
 (R/W WITH VARIES)

SITE BENCHMARK #1
 SET BM N&D
 ELEVATION = 150.40
 DATUM = NAVD 88

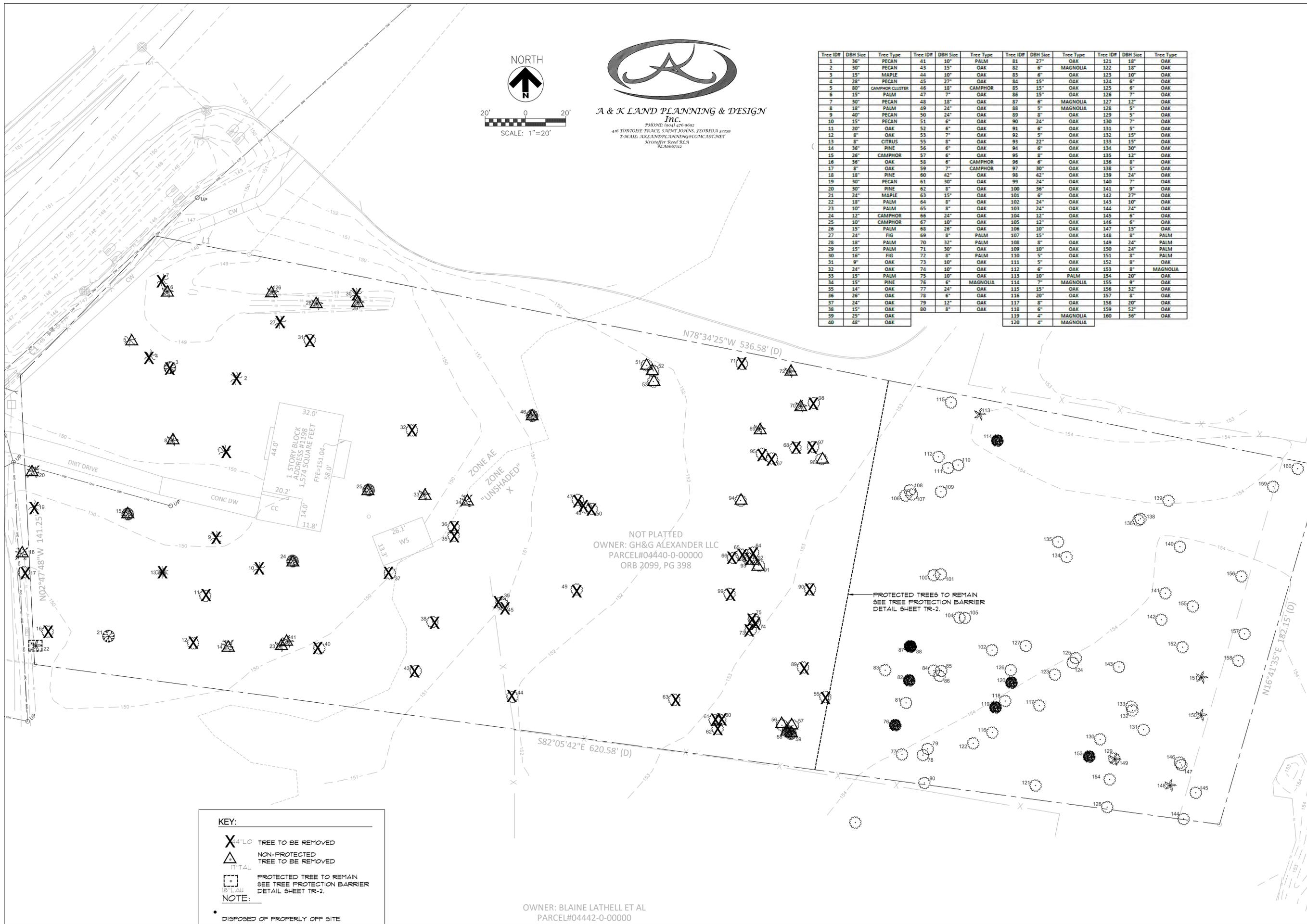
SITE BENCHMARK #2
 SET BM N&D
 ELEVATION = 150.50
 DATUM = NAVD 88

- LEGEND**
- LIGHT DUTY PAVEMENT LIMITS
 - NEW/REPLACED CONCRETE LIMITS
 - NEW/REPLACED CONCRETE LIMITS

OWNER: BLAINE LATHELL ET AL
 PARCEL#04442-0-00000
 ORB 1463, PG 40



EXPRESS OIL CHANGE 1198 S WALNUT STREET STARKE, FL 32091		COMMENT REVISIONS	
1-6-25	3	12-27-24	2
12-27-24	2	12-4-24	1
DATE		DATE	
DUMPSTER TRUCK MANEUVERING PLAN			
H & T CONSULTANTS, INC. PLANNING - ENGINEERING 9310 OLD KINGS ROAD SOUTH, SUITE 1001 JACKSONVILLE, FLORIDA 32257 PHONE: 904-419-1001 FAX: 904-419-1004		JOB NO:	
DRAWN: EO		CHECK: DT/ALT	
DATE: 1/6/25		SHEET	
C-12		SHEET OF	




 NORTH

 SCALE: 1"=20'

A & K LAND PLANNING & DESIGN
 Inc.
 PHONE: (904) 478-6602
 416 TORTOISE TRACE, SAINT JOHNS, FLORIDA 32259
 E-MAIL: AKLANDPLANNING@COMCAST.NET
 Kristoffer Reed, R.L.A.
 FL26602112

Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type
1	36"	PECAN	41	10"	PALM	81	27"	OAK	121	18"	OAK
2	30"	PECAN	43	15"	OAK	82	6"	MAGNOLIA	122	18"	OAK
3	15"	MAPLE	44	10"	OAK	83	6"	OAK	123	10"	OAK
4	28"	PECAN	45	27"	OAK	84	15"	OAK	124	6"	OAK
5	80"	CAMPBOR CLUSTER	46	18"	CAMPBOR	85	15"	OAK	125	6"	OAK
6	15"	PALM	47	7"	OAK	86	15"	OAK	126	7"	OAK
7	30"	PECAN	48	18"	OAK	87	6"	MAGNOLIA	127	12"	OAK
8	18"	PALM	49	24"	OAK	88	5"	MAGNOLIA	128	5"	OAK
9	40"	PECAN	50	24"	OAK	89	8"	OAK	129	5"	OAK
10	15"	PECAN	51	6"	OAK	90	24"	OAK	130	7"	OAK
11	20"	OAK	52	6"	OAK	91	6"	OAK	131	5"	OAK
12	8"	OAK	53	7"	OAK	92	5"	OAK	132	15"	OAK
13	8"	CITRUS	55	8"	OAK	93	22"	OAK	133	15"	OAK
14	36"	PINE	56	6"	OAK	94	6"	OAK	134	30"	OAK
15	26"	CAMPBOR	57	6"	OAK	95	8"	OAK	135	12"	OAK
16	36"	OAK	58	6"	CAMPBOR	96	6"	OAK	136	8"	OAK
17	8"	OAK	59	7"	CAMPBOR	97	30"	OAK	138	5"	OAK
18	18"	PINE	60	42"	OAK	98	42"	OAK	139	24"	OAK
19	30"	PECAN	61	30"	OAK	99	24"	OAK	140	7"	OAK
20	30"	PINE	62	8"	OAK	100	36"	OAK	141	9"	OAK
21	24"	MAPLE	63	15"	OAK	101	6"	OAK	142	27"	OAK
22	18"	PALM	64	8"	OAK	102	24"	OAK	143	10"	OAK
23	10"	PALM	65	8"	OAK	103	24"	OAK	144	24"	OAK
24	12"	CAMPBOR	66	24"	OAK	104	12"	OAK	145	6"	OAK
25	10"	CAMPBOR	67	10"	OAK	105	12"	OAK	146	6"	OAK
26	15"	PALM	68	26"	OAK	106	10"	OAK	147	15"	OAK
27	24"	FIG	69	8"	PALM	107	15"	OAK	148	8"	PALM
28	18"	PALM	70	32"	PALM	108	8"	OAK	149	24"	PALM
29	15"	PALM	71	30"	OAK	109	10"	OAK	150	24"	PALM
30	16"	FIG	72	8"	PALM	110	5"	OAK	151	8"	PALM
31	9"	OAK	73	10"	OAK	111	5"	OAK	152	8"	OAK
32	24"	OAK	74	10"	OAK	112	6"	OAK	153	8"	MAGNOLIA
33	15"	PALM	75	10"	OAK	113	10"	PALM	154	20"	OAK
34	15"	PINE	76	6"	MAGNOLIA	114	7"	MAGNOLIA	155	9"	OAK
35	14"	OAK	77	24"	OAK	115	15"	OAK	156	32"	OAK
36	26"	OAK	78	8"	OAK	116	20"	OAK	157	8"	OAK
37	24"	OAK	79	12"	OAK	117	8"	OAK	158	20"	OAK
38	15"	OAK	80	8"	OAK	118	6"	OAK	159	52"	OAK
39	25"	OAK				119	4"	MAGNOLIA	160	36"	OAK
40	48"	OAK				120	4"	MAGNOLIA			

KEY:

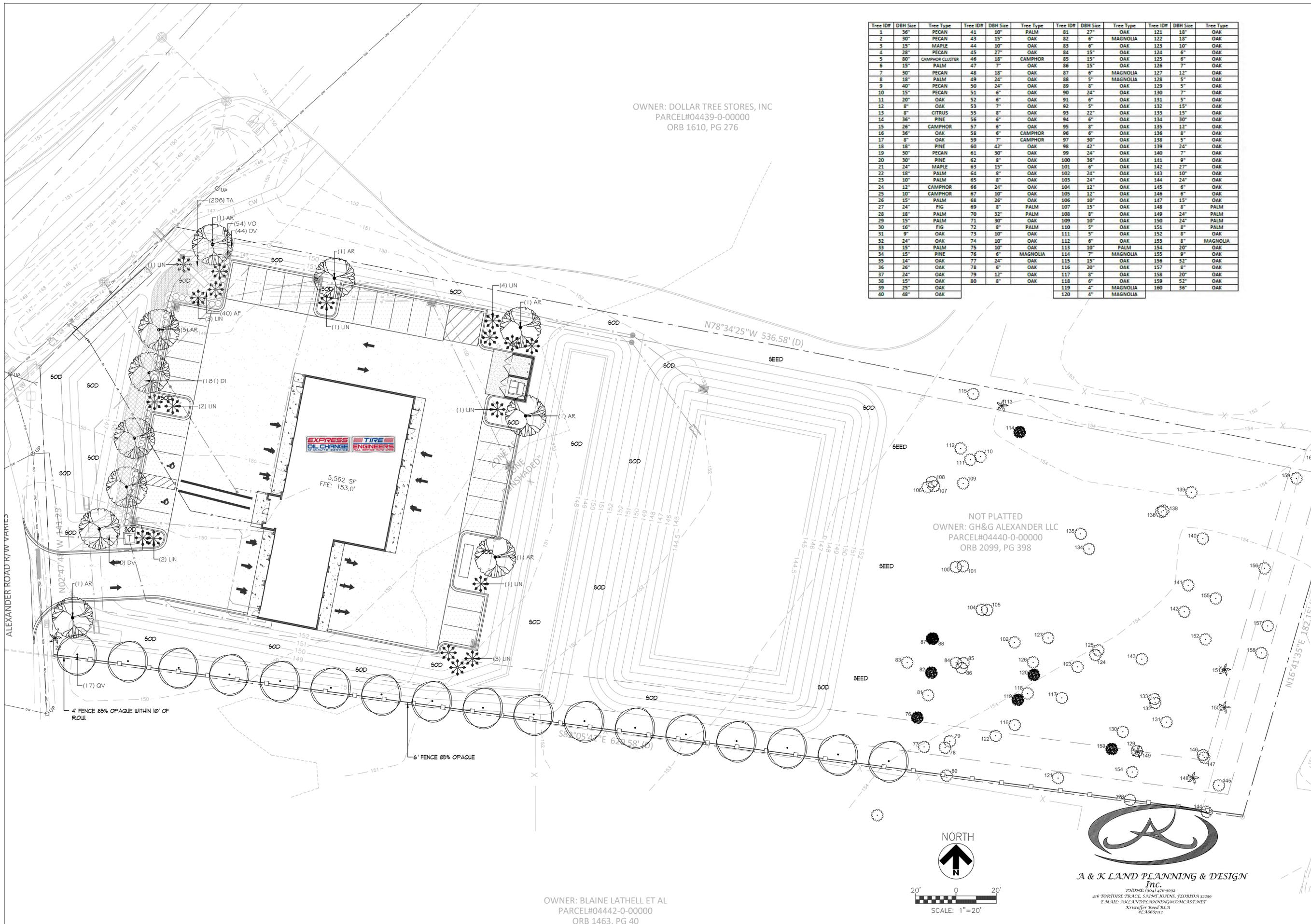
-  4"LO TREE TO BE REMOVED
-  NON-PROTECTED TREE TO BE REMOVED
-  PROTECTED TREE TO REMAIN SEE TREE PROTECTION BARRIER DETAIL SHEET TR-2.

NOTE:

- DISPOSED OF PROPERLY OFF SITE.

OWNER: BLAINE LATHELL ET AL
 PARCEL#04442-0-00000

	DATE	12/5/24			
	REVISIONS	PER CITY COMMENTS			
	NUMBER				
EXPRESS OIL CHANGE 1198 S WALNUT STREET STARKE, FL 32091					
TRRE PROTECTION / TRANSPLANT PLAN					
H & T CONSULTANTS, INC. PLANNING - ENGINEERING 9310 OLD KINGS ROAD SOUTH, SUITE 1001 JACKSONVILLE, FLORIDA 32257 PHONE: 904-419-1001 FAX: 904-419-1004					
JOB NO: 2024.86					
DRAWN: K.S.R.					
CHECK: S.H.					
DATE: 10/24/24					
PLATE					
TR-1					
SHEET OF					



Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type
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NUMBER	REVISIONS	DATE
1	PER CITY COMMENTS	12/5/24
2		
3		

EXPRESS OIL CHANGE
 1198 S WALNUT STREET
 STARKE, FL 32091

LANDSCAPE PLAN

H & T CONSULTANTS, INC.
 PLANNING - ENGINEERING
 9310 OLD KINGS ROAD SOUTH, SUITE 1001
 JACKSONVILLE, FLORIDA 32257
 PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO: 2024.86
 DRAWN: K.S.R.
 CHECK: S.H.
 DATE: 10/24/24
 PLATE

L-1

SHEET OF

General Notes and Specifications

- Prior to construction the landscape contractor shall be responsible for locating all underground utilities and shall avoid damage to all utilities during the course of the work. The landscape contractor is responsible for repairing any and all damage to utilities, structures, site appurtenances, etc., which occurs as a result of the landscape construction.
- When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions or obstructions, notify owner's representative before planting.
- All plants must be healthy, vigorous material, free of pests and disease.
- All trees, palms, and shrubs shall be grade "Florida Fancy" per Grades and Standards For Nursery Plants (parts one and two), available through Florida Dept. of Agriculture and Consumer Services.
- All plant material must be approved by the Landscape Architect before the plant material is installed.
- Any changes to the plant material (size, type, etc.), irrigation or any other deviations from the plans must be approved by the Landscape Architect prior to the change being implemented by the contractor. The contractor must provide written proof of authorization for any changes.
- All plants to be field grown or container grown as indicated on plant list. Store plants in shade and protect from weather. If plants cannot be planted immediately upon delivery, properly protect them with soil, wet peat moss, or, in a manner acceptable to owner's rep. Do not remove container grown stock from containers until planting time. Protect roots of plant from drying or other possible injury. Keep plant ball moist at all times.
- All plants shall be triangular spaced.
- Obtain agronomic soils test for all planting areas and tree pits prior to excavation of tree pits. Tests shall be performed by an approved soils testing laboratory and shall include fertility and suitability analysis with written recommendations for soil amendments, fertilizer and chemical conditioner application rates for soil preparation, planting backfill mix, and post maintenance fertilization program. Submit a copy of soils report to owner's rep. and landscape architect.
- Add soil amendments as recommended by soil test in quantities necessary to bring soil mixture to pH rating of between 5.5 and 6.0. Minerals used for pH correction shall be commercially produced for this purpose.
- All plants and planting areas must be completely mulched as specified with three (3) inches of organic mulch. Provide 4" minimum clearance of mulch from all shrub trunks and 6" minimum clearance from all tree trunks.
- The landscape contractor is responsible for verifying all quantities shown on these plans, before pricing the work.
- The planting shall be done in accordance with acceptable horticultural practices. This is to include proper planting mix, plant and tree pit preparation, pruning, staking or guying, wrapping, spraying, fertilization, planting, and adequate maintenance throughout the required maintenance period.
- The landscape contractor is responsible for fully maintaining all planting (including but not limited to: pruning, watering, fertilizing, cultivating, weeding, mowing, mulching, tightening and repairing of guys, resetting plants to proper grade or upright position, restoration of plant saucer, and furnishing and applying such sprays as necessary to keep free of insects and diseases. The landscape contractor's responsibility for maintenance (exclusive of replacement within the guarantee period) shall terminate one year from the date of final acceptance by owner and landscape architect.
- All trees, palms, shrubs and plant material shall be warranted for a period of one year after date of completion and acceptance of the entire project. Final acceptance of all landscaping under this contract shall constitute the beginning of the guarantee period. Replace, in accordance with the drawings and specifications, all plants that are dead or, as determined by the owner's representative, are in an unhealthy or unsightly condition, and have lost their natural shape due to dead branches, or other causes due to the contractor's negligence. Furnish and plant replacements which comply with requirements shown and specified. Warrant all replacement plants for one year after installation. The cost of such replacement(s) is at the contractor's expense.
- All plants are subject to approval by the owner's representative. Prior to planting, all trees and palms must be approved by the owner or owner's rep.
- Standards set forth in "American Standard for Nursery Stock" represent guideline specifications only and shall constitute minimum quality requirements for plant material.
- At the conclusion of this planting, if the owner's rep. or owner has reason to believe that the plants are not of the specified grade, he will request a re-grading or inspection, and such evidence will be the basis for requesting replacement of plants and for legal or other action according to law, should this become necessary.
- All planting beds to be treated with pre-emergent weed control prior to planting.
- Contractor is to check the site weekly to insure all plant material is healthy and well watered.
- All disturbed areas to be sodded or seeded with Paspalum notatum as noted.

CODE	QTY	COMMON / BOTANICAL NAME	SPACING	SPECIFICATIONS
TREES				
AR	11	Red Maple / <i>Acer rubrum</i>	AS SHOWN	8' - 10' Ht., 2" caliper
LIN	8	Grape Myrtle / <i>Lagerstroemia x Natchez</i>	AS SHOWN	8' - 10' Ht., 3 stem min., 2" caliper
QV	17	Southern Live Oak / <i>Quercus virginiana</i>	AS SHOWN	8' - 10' Ht., 2" caliper
SHRUBS				
VO	54	Dwarf Naiter's Viburnum / <i>Viburnum obovatum</i> Dwarf Naiter's	36" o.c.	24" ht. x 24" spd. minimum full 4 dense
GROUND COVERS				
AF	40	Foxtail Fern / <i>Asparagus aethiopicus</i>	24" o.c.	12" ht. x 12" spd. minimum full 4 dense, 1 gallon minimum
DI	181	Fortnight Lily / <i>Dietsia iridioides</i>	24" o.c.	12" ht. x 12" spd. minimum full 4 dense, 1 gallon minimum
DV	114	Flax Lily / <i>Dianella tasmanica</i> Variegata	24" o.c.	12" ht. x 12" spd. minimum full 4 dense, 1 gallon minimum
TA	298	Asian Jasmine / <i>Trachelospermum asiaticum</i>	12" o.c.	6" ht. x 12" spd. minimum full 4 dense, 1 gallon minimum

NOTES:

- MULCH ALL PLANTING BEDS WITH 3" ORGANIC MULCH.
- ALL DISTURBED AREAS NOT OTHERWISE LANDSCAPED SHALL BE SODDED WITH BAHIA SOD.
- ALL PLANT MATERIAL TO BE FLORIDA NO. 1 QUALITY OR BETTER.
- NO SUBSTITUTIONS WITHOUT PRIOR WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.
- ALL TREES AND PLANTS SHALL MEET MINIMUM SPECIFIED SIZES IN INCHES AND FEET, REGARDLESS OF CONTAINER SIZE INDICATED. WHERE DIFFERENCES OCCUR, THE LARGER SPECIFICATION SHALL PREVAIL.
- CONTRACTOR TO VERIFY ALL QUANTITIES

ORDINANCE CHAPTER 366 SCHEDULE AND IRRIGATION REQUIREMENTS:

MARCH-NOVEMBER (DAYLIGHT SAVING TIME)	NOVEMBER - MARCH (STANDARD TIME)
<ul style="list-style-type: none"> NO WATERING FROM 10AM TO 4 PM ODD NUMBER ADDRESSES OR THOSE ENDING WITH N-Z OR NO ADDRESS MAY WATER ON WEDNESDAY AND SATURDAY EVEN NUMBER ADDRESSES OR THOSE ENDING WITH A-M MAY WATER ON THURS. AND SUNDAY NON-RESIDENTIAL ADDRESSES MAY WATER ON TUESDAY AND FRIDAY APPLY UP TO 1/2" - INCH OR LESS OF WATER EACH CYCLE 	<ul style="list-style-type: none"> NO WATERING FROM 10 AM TO 4 PM ODD NUMBER ADDRESSES OR THOSE ENDING WITH N-Z OR NO ADDRESS MAY WATER ON SATURDAY EVEN NUMBER ADDRESSES OR THOSE ENDING WITH A-M MAY WATER ON SUNDAY NON-RESIDENTIAL ADDRESSES MAY WATER ON ONLY ON TUESDAY APPLY UP TO 3/4" - INCH OR LESS OF WATER ONE TIME PER WEEK

LANDSCAPE CALCULATIONS:

TOTAL AREAS:	120,812 SF.
ZONING:	Commercial
VIA. PUBLIC AREA:	2,142 SF.
10% VIA REQ. LANDSCAPE AREA:	2,142 SF.
LANDSCAPE AREA PROVIDED:	2,126 SF.
1 TREE OF 10% PER 100 SF.	
2,126 SF. / 100	
TREES REQUIRED:	21
TREES PROVIDED:	21

10% OPEN SPACE REQUIREMENT	
TOTAL AREA:	120,812 SF.
10% AREA REQUIRED:	12,081 SF.
10% AREA PROVIDED:	14,912 SF.

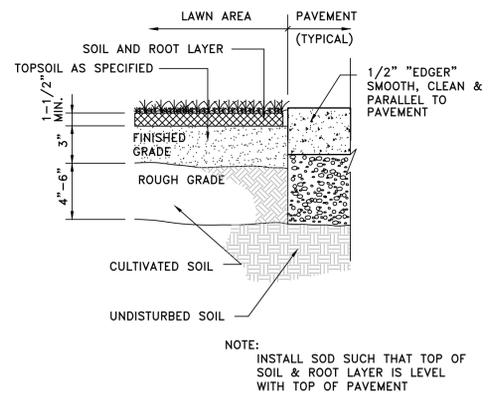
PERIMETER AREA REQUIREMENT BREAKDOWN

PERIMETER AREA NORTH SIDE:	584 L.F.
N/A	
AREA REQUIRED:	N/A
AREA PROVIDED:	N/A
PERIMETER AREA SOUTH SIDE:	586 L.F.
1 SF. / L.F. = 1' x 586 L.F.	
AREA REQUIRED:	4,102 SF.
AREA PROVIDED:	5,860 SF.
PERIMETER AREA EAST SIDE:	N/A L.F.
N/A	
AREA REQUIRED:	N/A
AREA PROVIDED:	N/A
PERIMETER AREA WEST SIDE:	206 L.F.
10 SF. / L.F. = 10' x 206 L.F.	
AREA REQUIRED:	2,060 SF.
AREA PROVIDED:	2,100 SF.

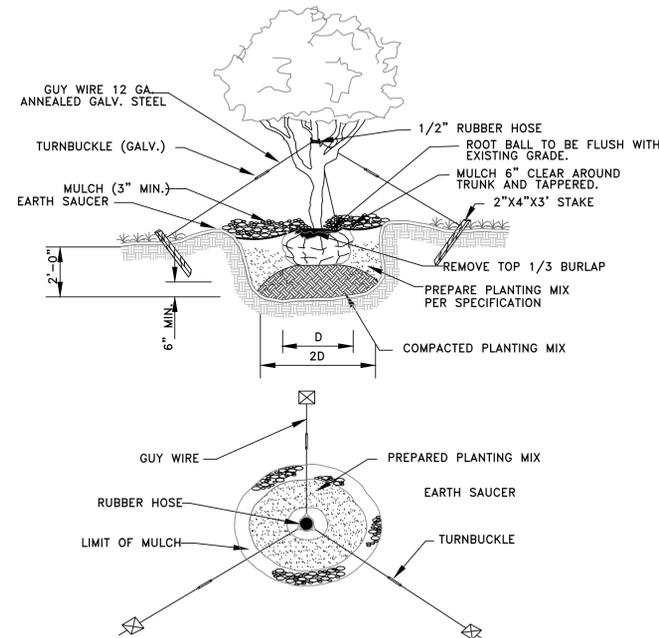
PERIMETER AND INTERIOR TREE REQUIREMENT BREAKDOWN

VIA. PUBLIC AREA:

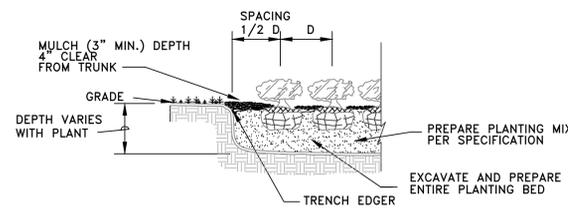
PERIMETER TREES NORTH SIDE:	584 L.F.
N/A	
TREES REQUIRED:	N/A
TREES PROVIDED:	N/A
PERIMETER TREES SOUTH SIDE:	586 L.F.
1 TREE / 25 L.F.	
TREES REQUIRED:	23
TREES PROVIDED:	23+
PERIMETER TREES EAST SIDE:	N/A
N/A	
TREES REQUIRED:	N/A
TREES PROVIDED:	N/A
PERIMETER TREES WEST SIDE:	206 L.F.
1 TREE / 25 L.F. + 40% SOD MAXIMUM (2,060 SF.)	
TREES REQUIRED:	8 (824 SF. SOD MAX.)
TREES PROVIDED:	8 (8 SF. SOD IN BUFFER)



SOD DETAIL



TREE PLANTING DETAIL



SHRUB & GROUND COVER PLANTING DETAIL



A & K LAND PLANNING & DESIGN Inc.

PHONE: (904) 476-9692
 416 TORTOISE TRAIL, SUITE 1000S, FLORIDA 32257
 E-MAIL: AKLANDPLANNING@COMCAST.NET
 Kristoffer Reed RLA
 L2N060112

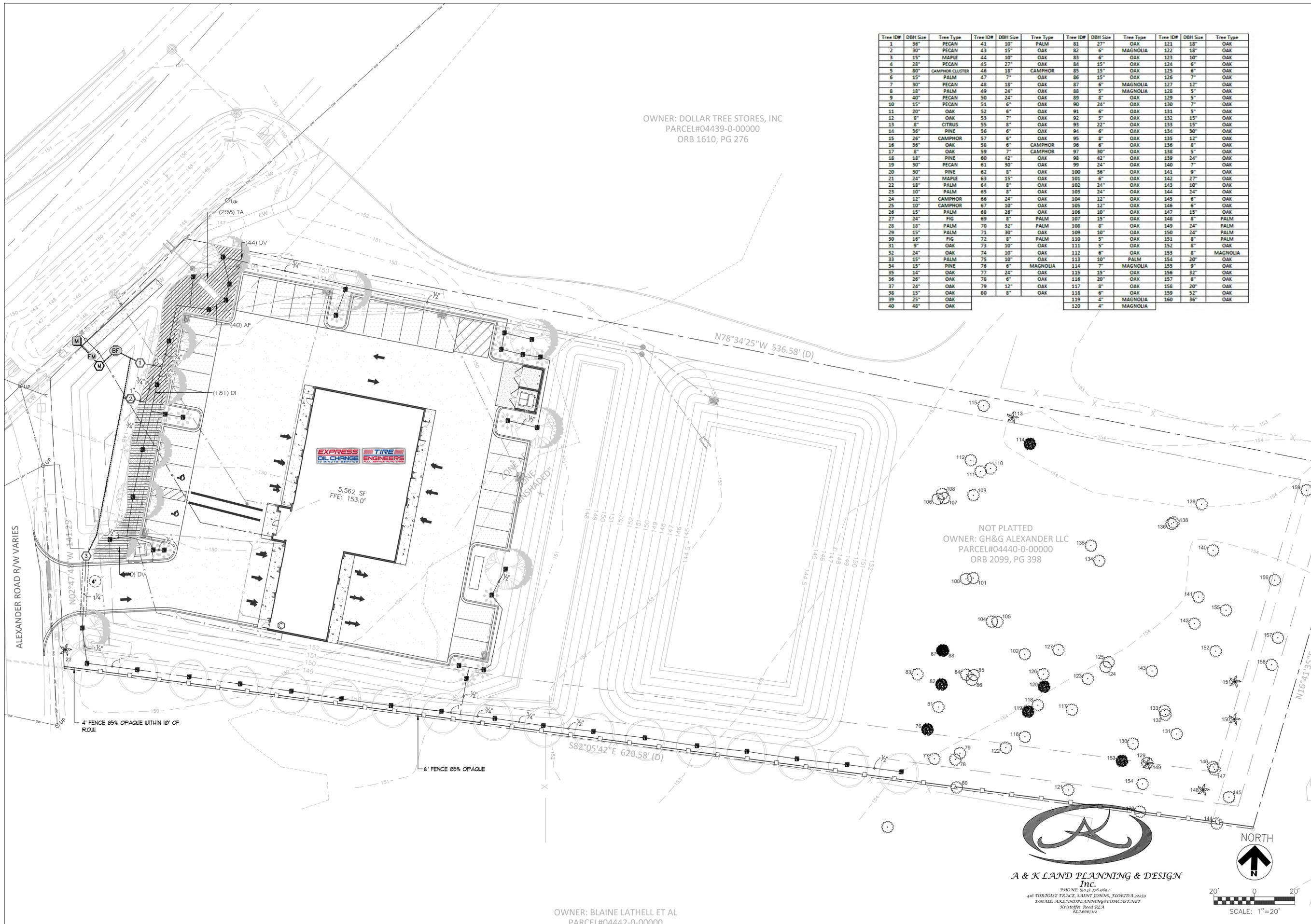
NUMBER	REVISIONS	DATE
1	PER CITY COMMENTS	12/5/24
2		

EXPRESS OIL CHANGE
 1198 S WALNUT STREET
 STARKE, FL 32091

LANDSCAPE DETAILS

H & T CONSULTANTS, INC.
 PLANNING - ENGINEERING
 9310 OLD KINGS ROAD SOUTH, SUITE 1001
 JACKSONVILLE, FLORIDA 32257
 PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO: 2024.86
 DRAWN: K.S.R.
 CHECK: S.H.
 DATE: 10/24/24
 PLATE
 L-2
 SHEET OF



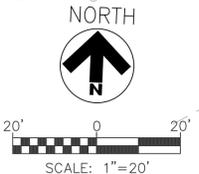
OWNER: DOLLAR TREE STORES, INC
 PARCEL#04439-0-00000
 ORB 1610, PG 276

Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type	Tree ID#	DBH Size	Tree Type
1	36"	PECAN	41	10"	PALM	81	27"	OAK	121	18"	OAK
2	30"	PECAN	43	15"	OAK	82	6"	MAGNOLIA	122	18"	OAK
3	15"	MAPLE	44	10"	OAK	83	6"	OAK	123	10"	OAK
4	28"	PECAN	45	27"	OAK	84	15"	OAK	124	6"	OAK
5	80"	CAMPHOR CLUSTER	46	18"	CAMPHOR	85	15"	OAK	125	6"	OAK
6	15"	PALM	47	7"	OAK	86	15"	OAK	126	7"	OAK
7	30"	PECAN	48	18"	OAK	87	6"	MAGNOLIA	127	12"	OAK
8	18"	PALM	49	24"	OAK	88	5"	MAGNOLIA	128	5"	OAK
9	40"	PECAN	50	24"	OAK	89	8"	OAK	129	5"	OAK
10	15"	PECAN	51	6"	OAK	90	24"	OAK	130	7"	OAK
11	20"	OAK	52	6"	OAK	91	6"	OAK	131	5"	OAK
12	8"	OAK	53	7"	OAK	92	5"	OAK	132	15"	OAK
13	8"	CITRUS	55	8"	OAK	93	22"	OAK	133	15"	OAK
14	36"	PINE	56	6"	OAK	94	6"	OAK	134	30"	OAK
15	26"	CAMPHOR	57	6"	OAK	95	8"	OAK	135	12"	OAK
16	36"	OAK	58	6"	CAMPHOR	96	6"	OAK	136	8"	OAK
17	8"	OAK	59	7"	CAMPHOR	97	30"	OAK	138	5"	OAK
18	18"	PINE	60	42"	OAK	98	42"	OAK	139	24"	OAK
19	30"	PECAN	61	30"	OAK	99	24"	OAK	140	7"	OAK
20	30"	PINE	62	8"	OAK	100	36"	OAK	141	9"	OAK
21	24"	MAPLE	63	15"	OAK	101	6"	OAK	142	27"	OAK
22	18"	PALM	64	8"	OAK	102	24"	OAK	143	10"	OAK
23	10"	PALM	65	8"	OAK	103	24"	OAK	144	24"	OAK
24	12"	CAMPHOR	66	24"	OAK	104	12"	OAK	145	6"	OAK
25	10"	CAMPHOR	67	10"	OAK	105	12"	OAK	146	6"	OAK
26	15"	PALM	68	26"	OAK	106	10"	OAK	147	15"	OAK
27	24"	FIG	69	8"	PALM	107	15"	OAK	148	8"	PALM
28	18"	PALM	70	32"	PALM	108	8"	OAK	149	24"	PALM
29	15"	PALM	71	30"	OAK	109	10"	OAK	150	24"	PALM
30	18"	FIG	72	8"	PALM	110	5"	OAK	151	8"	PALM
31	9"	OAK	73	10"	OAK	111	5"	OAK	152	8"	OAK
32	24"	OAK	74	10"	OAK	112	6"	OAK	153	8"	MAGNOLIA
33	15"	PALM	75	10"	OAK	113	10"	PALM	154	20"	OAK
34	15"	PINE	76	6"	MAGNOLIA	114	7"	MAGNOLIA	155	9"	OAK
35	14"	OAK	77	24"	OAK	115	15"	OAK	156	32"	OAK
36	26"	OAK	78	6"	OAK	116	20"	OAK	157	8"	OAK
37	24"	OAK	79	12"	OAK	117	8"	OAK	158	20"	OAK
38	15"	OAK	80	8"	OAK	118	6"	OAK	159	52"	OAK
39	25"	OAK			OAK	119	4"	MAGNOLIA	160	36"	OAK
40	48"	OAK			OAK	120	4"	MAGNOLIA			OAK

NOT PLATTED
 OWNER: GH&G ALEXANDER LLC
 PARCEL#04440-0-00000
 ORB 2099, PG 398

OWNER: BLAINE LATHELL ET AL
 PARCEL#04442-0-00000

A & K LAND PLANNING & DESIGN
 Inc.
 PHONE: (904) 476-6692
 416 TORTOISE TRACE, SAINT JOHNS, FLORIDA 32259
 E-MAIL: AKLANDPLANNING@COMCAST.NET
 Kristoffer, Rod, RLA
 FLA666712



DATE	REVISIONS	NUMBER
12/5/24	PER CITY COMMENTS	1
		2
		3

EXPRESS OIL CHANGE
 1198 S WALNUT STREET
 STARKE, FL 32091

IRRIGATION PLAN

H & T CONSULTANTS, INC.
 PLANNING - ENGINEERING
 9310 OLD KINGS ROAD SOUTH, SUITE 1001
 JACKSONVILLE, FLORIDA 32257
 PHONE: 904-419-1001 FAX: 904-419-1004

JOB NO: 2024.86
 DRAWN: K.S.R.
 CHECK: S.H.
 DATE: 10/24/24
 PLATE

1-1

SHEET OF

VALVE SCHEDULE EXPRESS OIL

NUMBER	MODEL	SIZE	TYPE	GPM	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PRECIP
1	Hunter ICV-6-FS (Zone Valve)	1"	Bubbler	11.5	30	5.32	3	38.3	1.7 in/h
2	Hunter ICV-6-FS (Zone Valve)	1"	Area for Dripline	15.25	40	0.7	3	43.7	0.71 in/h
3	Hunter ICV-6-FS (Zone Valve)	1"	Bubbler	11.5	30	4.84	3	37.8	1.7 in/h

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS
■	Hunter PCB	46	360	30	0.50	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY				
▨	Area to Receive Dripline Hunter PLD-10-18 In-Line Pressure Compensating Landscape Dripline with Built-In Check Valve, 1.0 GPH emitters at 18" O.C. Dripline laterals spaced at 18" apart, with emitters offset for triangular pattern. UV Resistant. Use PLD-LOC fitting or barbed fittings.	1,369 l.f.				
—	Irrigation Lateral Line: PVC Class 315 SDR 13.5 SDR 13.5 1/2" and 3/4" lines	624.3 l.f.				
- - - - -	Irrigation Lateral Line: PVC Class 160 SDR 26 SDR 26 for all 1" and larger lateral lines	468.9 l.f.				
-----	MAINLINE Irrigation mainline, Schedule 40 PVC pipe 1 1/4" size.	143.4 l.f.				
①	Hunter series ICV-10IG-FS-AS-ADJ (1" valve) Location shown for graphic clarity	2				
①	Hunter ICZ-101-XL (Drip Zone Valves) 1" Plastic Electric Remote With Filter Sentry. Each Drip Zone to Have: Flush Valve, Eco Indicator, Air Relief Tubing.	1				
Ⓜ	MASTER VALVE Hunter series ICV-10IG-FS-AS-ADJ (1" valve) Location shown for graphic clarity	1				
Ⓟ	BACKFLOW DEVICE Wilkins 950XLT- 1" or equal Location shown for graphic clarity	1				
Ⓜ	Water Meter 1"	1				
Ⓜ	FLOW SENSOR HUNTER, HC-100-Flow-B (1" size) LOCATIONS SHOWN FOR CLARITY ONLY	1				
②	SLEEVING Schedule 40 PVC, 2" Minimum, Size as specified on plan	26.6 l.f.				
Ⓞ	CONTROLLER Hunter series PHC-6 (6 Zone) Install with Mini-Click rain sensor. LOCATION SHOWN FOR CLARITY ONLY	1				

Irrigation Contractor shall be responsible for all applicable fees and permits.

All PVC pipe connection shall be glued together per ASTM D 2855, two step method.

All Pipe and Wire under paving shall be placed in Schedule 40 F.V.C. Sleeves for the full pavement coverage length and shall be at least 24" below grade.

Mainlines shall be buried to provide a minimum cover of 18", while all Lateral lines shall have a minimum of 12".

The Contractor should take care to reroute piping as necessary to avoid plant or tree roots.

All Sprinklers shall be site adjusted to prevent water overthrow onto building surfaces and walkways.

All Control Wiring to be 14/1 UF, direct burial.

Install a "MiniClick" rain sensor device.
Verify location with Owners Representative.

Install Backflow Preventer in an inconspicuous location such as shrubbery. Location shown for graphic clarity purposes only.

Contractor responsible for 100% irrigation coverage
All irrigation risers to be painted black

Mainline location shown for graphic clarity purposes only.
Valve box location shown for graphic clarity purposes only.

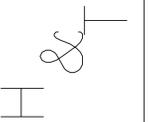
Irrigation system designed to not exceed 5 feet per second flow through any piping.
Any deviation from design upon installation voids these drawings and shall be done so as to not exceed 5' per second through any piping as well.

Irrigation water shall be free of particulates larger than 10 micron or .01 micrometers.

EXPRESS OIL CHANGE
1198 S WALNUT STREET
STARKE, FL 32091

IRRIGATION DETAILS

H & T CONSULTANTS, INC.
PLANNING - ENGINEERING
9310 OLD KINGS ROAD SOUTH, SUITE 1001
JACKSONVILLE, FLORIDA 32257
PHONE: 904-419-1001 FAX: 904-419-1004



JOB NO: 2024.86

DRAWN: K.S.R.

CHECK: S.H.

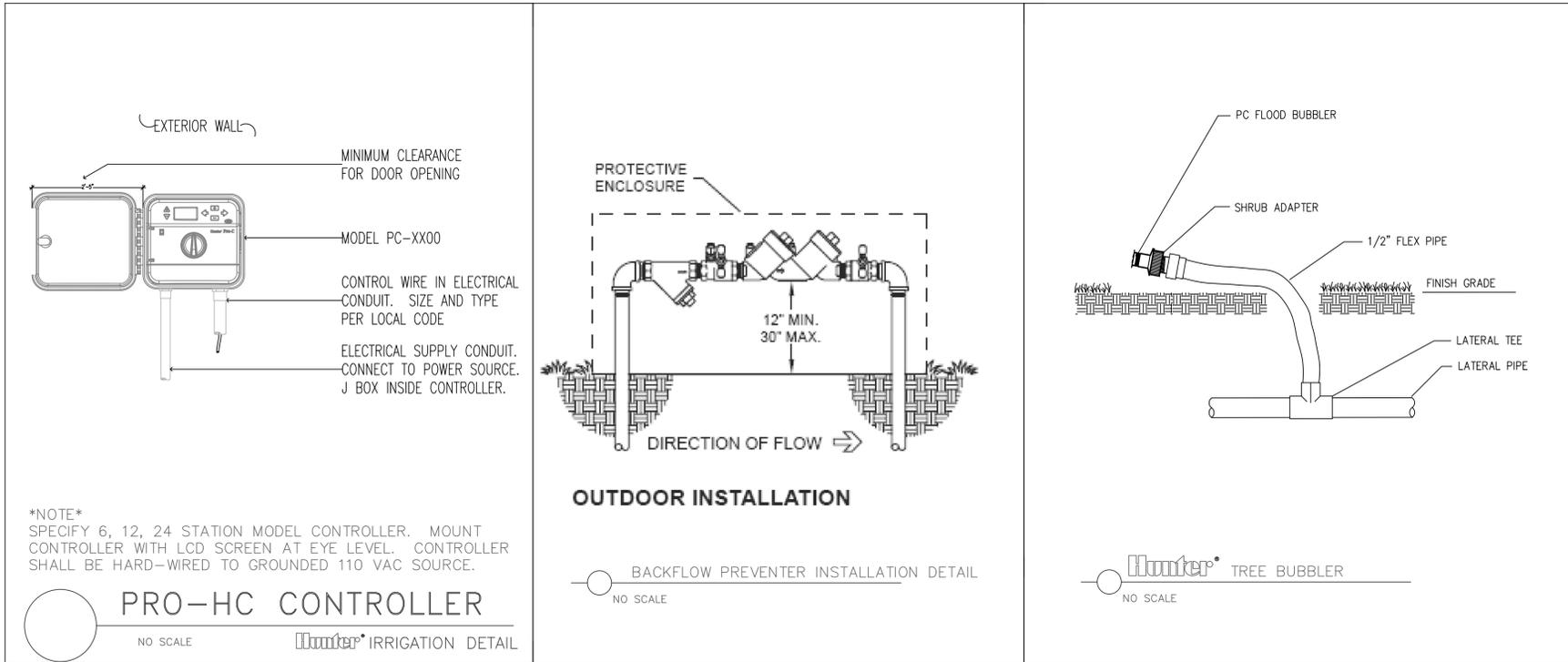
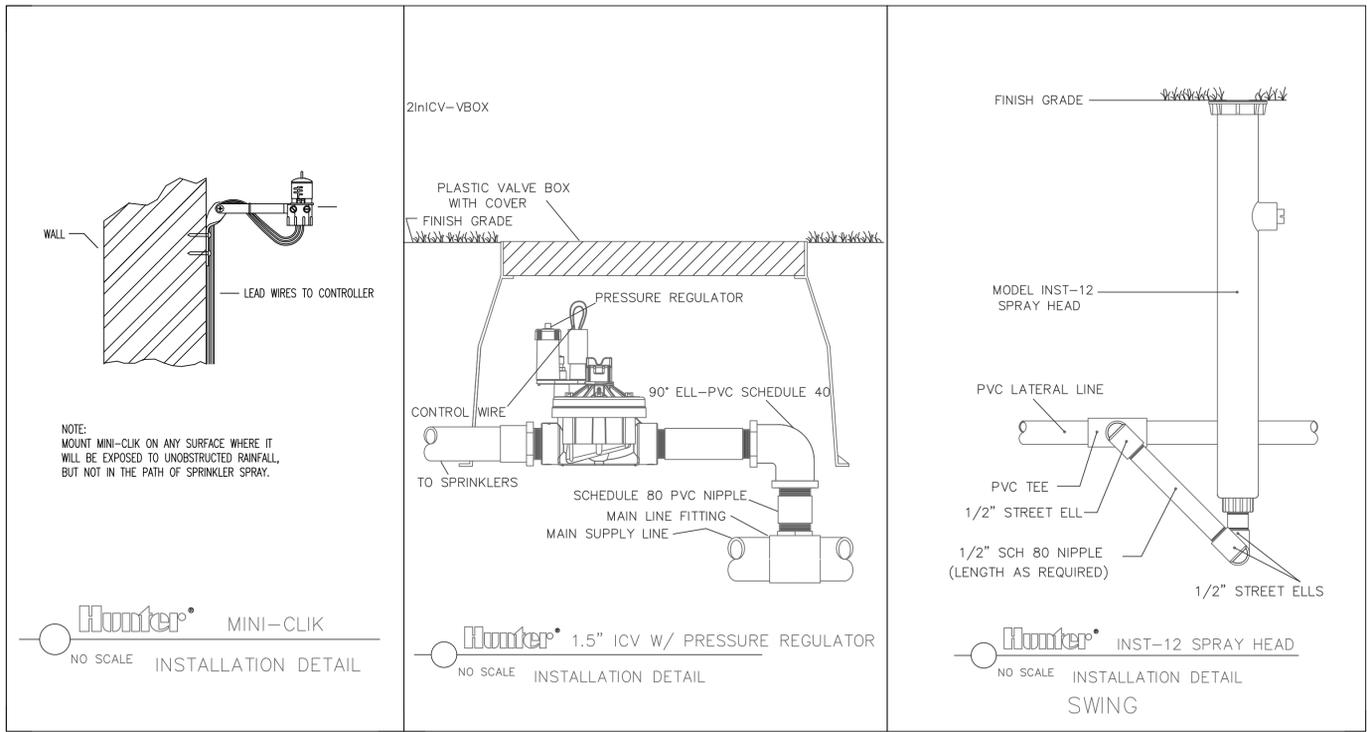
DATE: 10/24/24

PLATE

1-2

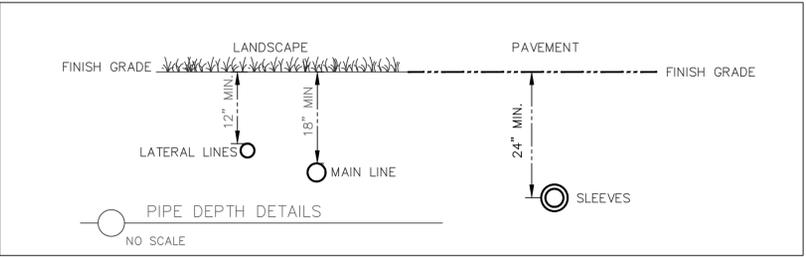
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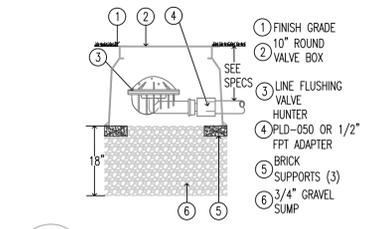


ORDINANCE CHAPTER 366 SCHEDULE AND IRRIGATION REQUIREMENTS:

MARCH-NOVEMBER (DAYLIGHT SAVINGS TIME)	NOVEMBER - MARCH (STANDARD TIME)
- NO WATERING FROM 10AM TO 4 PM	- NO WATERING FROM 10 AM TO 4 PM
- ODD NUMBER ADDRESSES OR THOSE ENDING WITH N-Z OR NO ADDRESS MAY WATER ON WEDNESDAY AND SATURDAY	- ODD NUMBER ADDRESSES OR THOSE ENDING WITH N-Z OR NO ADDRESS MAY WATER ON SATURDAY
- EVEN NUMBER ADDRESSES OR THOSE ENDING WITH A-M MAY WATER ON THURS. AND SUNDAY	- EVEN NUMBER ADDRESSES OR THOSE ENDING WITH A-M MAY WATER ON SUNDAY
- NON-RESIDENTIAL ADDRESSES MAY WATER ON TUESDAY AND FRIDAY	- NON-RESIDENTIAL ADDRESSES MAY WATER ON ONLY ON TUESDAY
- APPLY UP TO 1/2" - INCH OR LESS OF WATER EACH CYCLE	- APPLY UP TO 1/2" - INCH OR LESS OF WATER ONE TIME PER WEEK



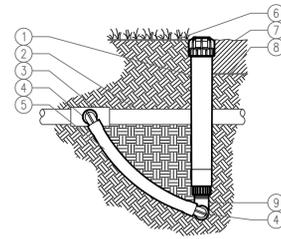
DATE	12/5/24
REVISIONS	PER CITY COMMENTS
NUMBER	1
EXPRESS OIL CHANGE	IRRIGATION DETAILS
1198 S WALNUT STREET	
STARKE, FL 32091	
H & T CONSULTANTS, INC.	
PLANNING - ENGINEERING	
9310 OLD KINGS ROAD SOUTH, SUITE 1001	
JACKSONVILLE, FLORIDA 32257	
PHONE: 904-419-1001 FAX: 904-419-1004	
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1-3	
SHEET	OF



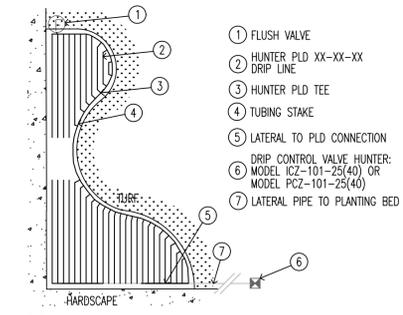
FLUSH VALVE AUTOMATIC
SCALE: N.T.S. HUNTER

LEGEND:

- 1 ECO INDICATOR - ECOID
- 2 LATERAL PIPE PER PLAN
- 3 FPT CONNECTION FROM LATERAL
- 4 SPIRAL BARB ELBOW - HSBF-XXX
- 5 FLEX[®] TUBING - FLEXSG
- 6 FINISHED GRADE IN TURF
- 7 ADJACENT MULCH
- 8 FINISHED GRADE IN PLANTER BED
- 9 MARLEX STREET ELBOW



ECO INDICATOR WITH FLEX TUBING
SCALE: N.T.S. HUNTER HM.EI.02



PLANTING BED
SCALE: N.T.S. HUNTER IRRIGATION DETAIL

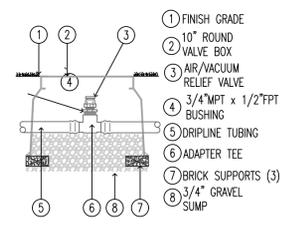


NUMBER	REVISIONS	DATE
1	PER CITY COMMENTS	12/5/24
2		
3		

EXPRESS OIL CHANGE
1198 S WALNUT STREET
STARKE, FL 32091
IRRIGATION DETAILS

H & T CONSULTANTS, INC.
PLANNING - ENGINEERING
9310 OLD KINGS ROAD SOUTH, SUITE 1001
JACKSONVILLE, FLORIDA 32257
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PLATE
1-4
SHEET OF

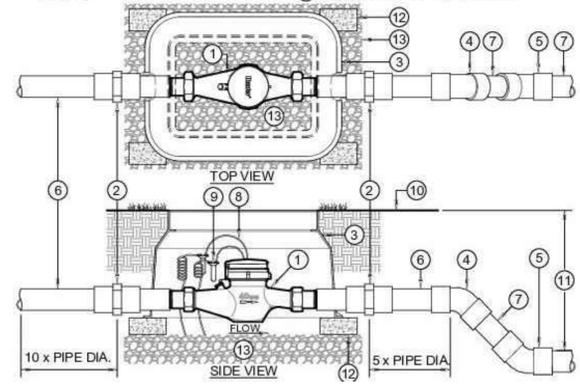


AIR RELIEF TUBING
SCALE: N.T.S. HUNTER

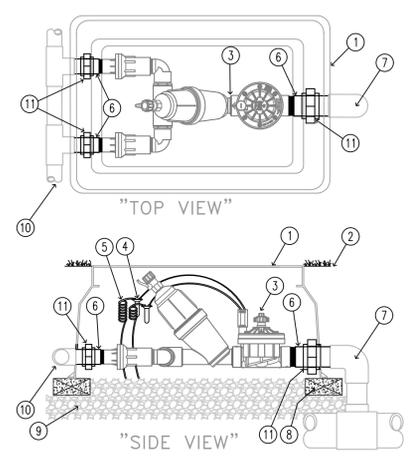
NOTE: INLET PIPE ENTERING METER: LENGTH MUST BE A MIN. OF 10 X PIPE DIA. OUTLET PIPE LEAVING METER: LENGTH MUST BE MIN. OF 5 X PIPE DIA. INLET AND OUTLET PIPE MUST BE STRAIGHT PIPE WITH NO FITTINGS OR TURNS UNTIL AFTER THESE SPECIFIED LENGTHS. PIPE AND FITTINGS MAY BE SCH 80 PVC SOLVENT WELD, THREADED SCH 80 PVC OR BRASS, AS REQUIRED FOR PROJECT.

DETAIL LEGEND:

- 1 HUNTER HC FLOW METER HC-150 WITH UNION CONNECTIONS
- 2 SCH 80 PVC FEMALE ADAPTER (S X T)
- 3 RECTANGULAR VALVE BOX PER SPECIFICATIONS
- 4 SCH 80 PVC 45 DEGREE ELBOW (S X S) TO LOWER MAIN LINE TO PROPER DEPTH (SIZE FOR LARGER MAIN LINE AS NEEDED)
- 5 SCH 80 PVC 45 DEGREE ELBOW (S X S) TO LOWER MAIN LINE TO PROPER DEPTH
- 6 2" DIA. (50 mm) MAIN LINE AT INLET & OUTLET
- 7 MAIN LINE TO SYSTEM (SEE LEGEND AND PLANS FOR TYPE AND SIZE)
- 8 TWO WIRES TO FLOW SENSOR TERMINALS AT CONTROLLER. MIN. 18 AWG-UF (2.03 mm²) SHIELDED WIRE WITH DIFFERENT COLOR FROM CONTROL/Common WIRE.
- 9 WEATHERPROOF WIRE CONNECTOR
- 10 FINISH GRADE
- 11 SPECIFIED SOIL COVER (SEE LEGEND)
- 12 COMMON BRICK
- 13 GRAVEL BASE, 6" (15 cm) DEEP

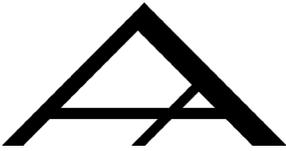


FLOW METER
SCALE: N.T.S. HUNTER IRRIGATION DETAIL



ICZ-151-40 DRIP CONTROL KIT
SCALE: N.T.S. HUNTER IRRIGATION DETAIL

- 1 SUPER JUMBO VALVE BOX
- 2 FINISH GRADE DRIP ZONE KIT
- 3 MODEL ICZ-151-40 WITH FILTER (TIP 45 DEGREES) REGULATOR 40 PSI
- 4 WATERPROOF CONNECTORS (2)
- 5 18-24" COILED WIRE
- 6 SCH 80 T.O.E. NIPPLE
- 7 MAIN LINE PIPE & FITTINGS
- 8 BRICK SUPPORTS (7)
- 9 3/4" MINUS WASHED GRAVEL
- 10 LATERAL PIPE AND FITTINGS
- 11 PVC SLIP UNIONS (2)



1855 Data Drive, Suite 150
Hoover, Alabama 35244
T: 205-983-6000 F: 205-983-6001
www.ahoarch.com

AHO ARCHITECTS, LLC

A R C H I T E C T ' S S U P P L E M E N T A L I N S T R U C T I O N S

ASI NUMBER: **1**

PROJECT NUMBER: 24052

PROJECT: Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

DATE OF ISSUANCE: 12/09/2024

DESCRIPTION: **Revisions to Construction Documents**

1. Replace sheet S1.1 Foundation Plan with revised sheet S1.1, dated 11/08/2024. The main level foundation plan was revised.

COPIES TO: Express Oil Change & Tire Engineers

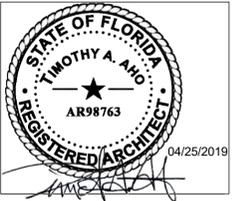
SIGNED: _____

Marie C. Brunson
Marie C. Brunson
Project Coordinator

EXPRESS OIL CHANGE & TIRE ENGINEERS

SINGLE BUILDING / RIGHT HAND OIL CHANGE / FRONT ENTER / SIDE TIRE STORAGE

1198 SOUTH WALNUT STREET
STARKE, FLORIDA 32091



ATTENTION AUTHORITY HAVING JURISDICTION

Notice is hereby given that Aho Architects, LLC, the Architect of Record on the above referenced project, will be providing construction administration services on a limited basis, supplemented by a third-party independent engineering consulting service as described below.

This project has been designed by the Architect and Engineers ("Design Team") for its specific location, or adapted from prototypical designs, to comply with the following codes, ordinances, and similar requirements adopted by the Authority Having Jurisdiction ("AHJ"):

- See codes listed on Sheet LS100.

During the Construction Administration Phase of the Project:

- General: The Design Team will respond to inquiries or requests from the Owner or Contractor, specifically related to documents prepared by the Design Team. As is standard in Construction Law and Professional Service Agreements, the Design Team shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Project(s), nor shall the Architect be responsible for the Owner's or Contractor's failure to perform the work in accordance with the requirements of the Permit Set Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Owner, Contractor, or of any other persons or entities performing portions of the work.
- Experienced Contractor: The Owner will use experienced and licensed Contractors familiar with the construction of Projects of this type and in similar locations, and experienced with the applicable building codes, selection of materials and systems, and methods of installation and construction; and able to implement the Permit Set Documents through completion of the Project(s).
- Submittals: The Design Team's Basic Construction Administration Services include review of critical submittals (e.g. shop drawings) by engineering disciplines (Structural). The Design Team shall also review, approve or take other appropriate action on any submittal for which the AHJ requires approval by the Architect/Engineer, as Additional Services.
- Site Visits: The Architect and Design Engineers typically will not be making any site visits unless specifically required to do so.
 - The Owner has been advised and acknowledges that some States and AHJs require the Architect to perform at least some site visits or provide a notice such as this statement.
 - In consideration of this, the Owner will provide site visits, observation, testing, and related work by a third party independent engineering consulting service:
 - The Owner has an agreement with Universal Engineering Sciences, LLC, a provider of geotechnical, environmental, construction materials and facilities engineering
 - Experienced Professional Engineers or field technicians under the responsible control of a Professional Engineer will perform site observation, construction materials testing, and required Special Inspections (per IBC Chapter 17; see Schedule of Special Inspections on structural drawings provided) including review of construction for conformance with the permit drawings, supplemental drawings, shop drawings/submittals, and similar relevant documents. Written reports shall be provided, with the Design Team included on the distribution list and involved in resolving any deficiencies noted or other items requiring the Design Team's input.
- If the above provisions are not acceptable to the AHJ and the AHJ gives notice requiring the Architect to make site visit(s), the Owner has agreed to authorize the Architect's Additional Services and Reimbursable Expenses to comply with the AHJ's requirements.

If you have any questions, or if there is anything else we can do for you, please do not hesitate to contact April Cain, the project manager or Tim Aho, Architect at the address/phone listed below, or by email at [HYPERLINK "mailto:acain@ahoarch.com"](mailto:HYPERLINKmailto:acain@ahoarch.com) acain@ahoarch.com or [HYPERLINK "mailto:taho@ahoarch.com"](mailto:HYPERLINKmailto:taho@ahoarch.com) taho@ahoarch.com. Thank you very much, and we appreciate the opportunity to be involved in this project in your jurisdiction.



*Image above is generic. See Civil for actual site conditions

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

No.	Description	Date

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Title Sheet

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
T100	
Scale	12" = 1'-0"

ARCHITECT
AHO ARCHITECTS, LLC
1855 DATA DRIVE, SUITE 150
HOOVER, ALABAMA 35244
205-983-6000

CIVIL ENGINEER
H & T CONSULTANTS, INC.
9310 OLD KINGS ROAD SOUTH
SUITE 1001
JACKSONVILLE, FL 32257
904-419-1001

STRUCTURAL ENGINEER
BARNETT-JONES-WILSON, LLC.
125 18TH STREET NORTH
PELL CITY, ALABAMA 35125
205-884-5334

MECHANICAL / PLUMBING ENGINEER
PINNACLE ENGINEERING, INC.
2111 PARKWAY OFFICE CIRCLE, SUITE 125
BIRMINGHAM, ALABAMA 35244
205-733-6912

ELECTRICAL ENGINEER
GIDEON WAMAE, P.E.
4120 OVERLOOK CIRCLE
TRUSSVILLE, ALABAMA 35173
205-413-4112

FINAL

GENERAL PROJECT NOTES

- These documents are considered accurate and true to the best knowledge of the Architect at this time, but do not necessarily represent, nor are they intended to represent, actual existing conditions, dimensions, and tolerances. Contractor shall field-verify existing conditions including, but not limited to materials, construction, elevations, and dimensions prior to bidding and undertaking the work. Items of concern shall be brought to the attention of the Architect. Submittal of a proposal (bid) by a Contractor and their Subcontractors shall constitute an acknowledgement and confirmation of having complied with these requirements.
- All work shall comply with all applicable local, state, and national codes, rules, ordinances and regulations and authorities having jurisdiction.
- The Contractor shall comply with all applicable provisions of the specifications, including, but not limited to all general conditions, supplementary general conditions, special conditions, and material and construction provisions, which apply to materials or construction methods required by this project.
- Where warranties are concerned, Contractor shall follow manufacturer's standards and recommendations unless specifically directed otherwise. Any conditions which might negatively affect the warranty shall be brought to the attention of the Architect in advance.
- The Owner and Contractor shall promptly report to the Architect any defects, suspected defects, or discrepancies in the Architect's work or services of which the Owner or Contractor may become aware, so that the Architect may take measures to minimize the consequences of such a defect. Failure to notify the Architect shall relieve the Architect of costs of remedying the defects above the sum such remedy would have cost had prompt notification been given.
- Neither the professional activities of the Architect, nor the presence of the Architect or its employees and consultants at a construction site shall relieve the Contractor or others of their obligations, duties, and responsibilities including, but not limited to: construction means and methods, sequence, techniques, or procedures necessary for performing, superintending, or coordinating all portions of the work in accordance with the contract documents and any health and safety precautions required by agencies having jurisdictional authority over the project. The Architect and its personnel have no authority to exercise control over any Contractor or other entity or their employees in connection with their means, methods, or safety precautions. The Contractor is solely responsible for jobsite safety. The Owner, Architect, and their Consultants shall be indemnified and shall be made additional insureds under the Contractor's general liability insurance policy.
- All work, unless specifically indicated otherwise, shall be the responsibility of the General Contractor and shall be performed by the tradesmen skilled in the required field.
- "Provide" shall mean to furnish and install, complete and ready for intended use.
- Provide pressure treated wood where in contact with concrete or masonry.
- The Contractor shall be responsible for all cutting, fitting, and patching that may be required to complete the work.
- Dimensions of existing construction and repetitive dimensions are sometimes omitted. Detailed dimensions not indicated may be found on large-scale drawings of the same areas. Drawings are intended to reflect the existing conditions as closely as possible, however, the Contractor shall field verify and accept all existing conditions and dimensions. Notify Architect of any discrepancies affecting the work.
- Provide all temporary services required to facilitate the work indicated, including but not limited to the following: power, lighting, heat, and water.
- The Contractor(s) shall provide all barriers, shoring, warning lights, etc. as required to conduct the work and maintain the site in a safe condition consistent with good construction practices and with all applicable rules and regulations.
- All exist. utility services including domestic water, sanitary sewer, electricity, fuel oil and/or gas shall be disconnected and made safe prior to any demolition work. Any work which might require interruption of utility services to Owner or other tenants, shall be approved and coordinated beforehand with the Owner.
- It is the intent of the bid and construction documents to indicate complete and fully operational systems (i.e. structural, HVAC, plumbing, electrical, roofing, etc.). The Contractor shall provide operational systems and testing which comply with applicable codes, regulations, and requirements of authorities having jurisdiction.
- Any work or utility outages which might disrupt the operations of the Owner or others shall be approved and coordinated in advance with the Owner and the Architect. The Contractor shall give the Owner and Architect at least three days advance notice prior to undertaking work which might cause disruption. Activities which produce utility outages, excessive noise, dust and other disruption shall be coordinated with the Owner and Architect. Some of these activities may need to occur at "off hours" to minimize disruption of the Owner's operations.
- All wood blocking, trim, decking, etc. shall be decay-resistant treated, or as specified.
- To prepare substrate for all wall mounted items, wall fixture, toilet accessories, etc. - fill all voids in the CMU surface to provide a sound base (provide blocking in stud walls) for all new wall mounted items, fixtures, etc. Install per manufacturer's specifications and recommendations.
- Do not paint any caulking or sealants which are subject to movement. Control joints shall be caulked after paint and special coating applications. Provide caulking or sealants in colors which match adjacent finished surface as approved by the Architect.
- Bidders shall be responsible for obtaining a copy of the Geotech Report from the Owner.
- The project may include some items that are delegated design. Bidders shall ensure these items are covered in their base bid.
- All questions that affect cost, time, etc. shall be presented in the form of RFI's to the Architect prior to bid.

ENERGY CODE EXEMPTION

Per 2023 Florida Building Code Energy Conservation Code - 8th Edition:

C402.1.1 Low Energy Buildings. The following buildings, or portions thereof, separated from the remainder of the building by building thermal envelope assemblies complying with this code shall be exempt from the building thermal envelope provisions of this code:

- Those with a peak design rate of energy usage less than 3.4 Btu/h x ft2 or 1.0 watt/ft2 of floor area for space conditioning purposes.
- Those that do not contain "conditioned space".

Per Chapter 2:

Definition of Conditioned Space: An area, room or space that is enclosed within the building thermal envelope and is directly or indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces; where they are separated from conditioned spaces by uninsulated walls, floors or ceilings; or where they contain uninsulated ducts, piping or other sources of heating or cooling.

While the Oil Change & Service areas do have radiant heaters, during normal operations, the Oil Change, Service, and Pit areas are **not enclosed** and are outside the building thermal envelope assembly. These areas are separated from the remainder of the building by building thermal envelope assemblies complying with this code. Section C403.2.13 allows radiant heating outside the building. Therefore, these areas shall be exempt from the building thermal envelope provisions of this code.

GENERAL ACCESSIBILITY NOTES

- All door hardware shall be accessible type per section 404 of the 2023 Florida Building Code, Accessibility.
- All walking surfaces shall have a maximum slope of 1:20 per section 405 of the 2023 Florida Building Code, Accessibility.
- All floor or ground surfaces shall be stable, firm, and slip resistant per section 302 of the 2023 Florida Building Code, Accessibility.
- Changes in level of 1/4" high maximum shall be permitted to be vertical per section 303 of the 2023 Florida Building Code, Accessibility.
- Provide maneuvering clearances at manual swinging doors per section 404 of the 2023 Florida Building Code, Accessibility.
- ADA mounting heights, dimensions, tolerances, etc. shall apply to all construction and the location of all fixtures, etc. unless specifically noted otherwise.

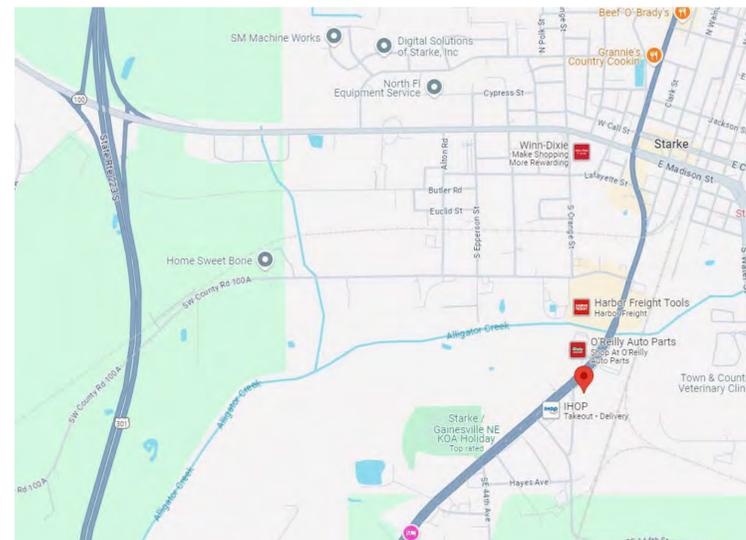
GENERAL INTERIOR NOTES

- Quantities (area, perimeter, etc.) shown on finish schedule are approximate and are provided as a convenience to the Contractor. Actual quantities may vary and it is the responsibility of the Contractor to field verify.
- Anything specified with a directional pattern (e.g. brushed aluminum, wood grain laminate, etc.) the pattern shall go in the same direction as directed by Architect.
- The Contractor shall provide all necessary blocking in walls for support of all equipment, shelving, accessories, grab bars, and other required elements.
- Provide pressure treated wood where in contact with concrete or masonry.
- Ease all edges on casework to prevent sharp corners.
- Paint all HVAC wall grilles to match adjacent surface color unless otherwise noted or instructed by the Architect.
- Use moisture resistant gypsum board at all walls subject to moisture unless wall will be subject to standing water or frequent wetting in which case you shall use cementitious backer.
- Provide thresholds where required. All shall be ADA compliant.
- All gypsum board to have a level 4 finish unless otherwise indicated.

BIDDING INQUIRES

Company: Express Oil Change
 Contact: Chris Plummer
 E-Mail: chris.plummer@expressoil.com
 Phone: 205-945-1771

Note: Sub-contractors to call bidding General Contractor for questions

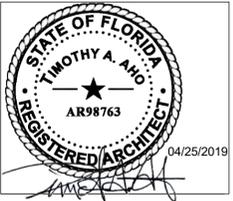


Express Oil Change & Tire Engineers
 1198 South Walnut Street
 Starke, FL 32091



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Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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General Information

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

G100

Scale 12" = 1'-0"

GENERAL NOTES

- GENERAL CONTRACTOR SHALL ENSURE EACH OF THE FOLLOWING HAVE BEEN REVIEWED BY THE MANUFACTURER FOR COMPLIANCE WITH LOCAL CONDITIONS/REQUIREMENTS PRIOR TO BIDDING/ORDERING/INSTALLING: ROOFING, DOORS, WINDOWS/STOREFRONT, GLAZING, DOOR HARDWARE, PAINT, AND FIRE EXTINGUISHERS.
- GENERAL CONTRACTOR SHALL PROVIDE SUBMITTALS / SHOP DRAWINGS FOR EACH PRODUCT LISTED UNDER ARCHITECTURAL SPECIFICATIONS. ALL SUBMITTALS / SHOP DRAWINGS ARE TO BE APPROVED BY THE OWNER AND/OR THE A/E PRIOR TO ORDERING.
- PROVIDE MANUFACTURER'S STANDARD WARRANTY FOR ALL SPECIFIED PRODUCTS.
- ALL EXTERIOR SIGNAGE AND SCONCES BY OTHERS.
- ALL FURNITURE AND EQUIPMENT BY OTHERS. COORDINATE PLACEMENT WITH OWNER PRIOR TO ROUGHING IN REQUIRED UTILITIES.
- ALL COMPARABLE PRODUCTS TO BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO BID.
- GC SHALL BE RESPONSIBLE FOR CHECKING WITH THE LOCAL AHJ ON ANY DEFERRED SUBMITTALS THAT MAY BE REQUIRED TO BE APPROVED BY THE AHJ PRIOR TO CONSTRUCTION.

DIVISION 4 - MASONRY

042200 - Concrete Unit Masonry

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Block USA or a comparable product by an approved manufacturer.

- Products:**
- A. Concrete Masonry Units
- Finish: Smooth and split-face
 - Min. Compressive Strength: See Structural
 - Density Classification: See Structural
 - Provide types, shapes and sizes as indicated
 - Integral Water Repellent: Provide RainBloc 80 by ACM Chemistries or a comparable product by an approved manufacturer.

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Argos or an approved comparable product by an approved manufacturer.

- Products:**
- B. Mortar
- Type: See Structural
 - Color: Argos Magnolia Dark at cmu.
 - Liquid Mortar Additive: Provide RainBloc for Mortar or a comparable product by an approved manufacturer.

Subject to compliance with requirements, provide products indicated below:

- Products:**
- C. Joint Reinforcement
- Type: Hot dipped galvanized, carbon steel (truss)
 - Size: 0.187" diameter
 - Length: Not less than 10'

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Mortar Net Solutions or an approved comparable products by an approved manufacturer.

- Subject to compliance with requirements, provide products indicated below:
- D. Single Wythe Concrete Masonry Unit Drainage System
- BlockFlash

055000 - Metal Fabrications

- Products:**
- A. Concrete-filled Steel Pipe Bollards
- Material: Schedule 40 steel pipe
 - Height: 3'-6"
 - Diameter: 4"
 - Finish: Painted (See Finish Schedule)

Installation: See drawings for installation details.

055113 - Metal Pan Stairs

Delegated Design: Engage a qualified professional engineer to design stairs and railings and provide sealed calculations and drawings.

- Products:**
- A. Metal Pan Stairs
- Steel Sheet Thickness: 0.067" minimum
 - Uniform Load: 100 lbf/ft
 - Concentrated Load: 300 lbf applied on an area of 4 sq. in.
 - Finish: Painted (See Finish Schedule)
 - Uniform and concentrated loads need not be assumed to act concurrently.
 - Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.
- B. Stair Tread Bar Ribbed Abrasive Nosing
- Basis of Design: Nystrom Model V951
 - Extents: Install Nosing to the full length of steps
 - Color: Safety Yellow
 - Type: Short Nose, Aluminum Extruded Anchor
- C. Stair Railings
- Rails and Posts: 1 5/8" diameter
 - Picket Infill: 1/2" round pickets spaced less than 4 inches clear.
- D. Installation: Install per manufacturer's standard written instructions.
- E. Warranty: Provide manufacturer's standard material warranty.

055133 - Ladders

Manufacturers: Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Grainger, or a comparable product by an approved manufacturer.

- Product:
- A. Fixed Welded-Steel Ladder by Grainger
- Model F14S C1 Cotterman Fixed (Pit Ladder)
 - Width: 20 inches
 - Height: 13 feet

Installation: Install ladder according to manufacturer's written instructions.

055213 - Pipe and Tube Railings

Delegated Design: Engage a qualified professional engineer to design stairs and railings and provide sealed calculations and drawings.

- A. Handrails & Top Rails of Guards
- Rails and Posts: 1 1/2" diameter
 - Uniform Load: 50lbf/ft in any direction.
 - Concentrated Load: 200 lbf applied in any direction
 - Uniform and concentrated loads need not be assumed to act concurrently.
 - Type: F or S
 - Material: Schedule 40
 - Finish: Painted (See Finish Schedule)
 - Seismic Performance: See Structural
- B. Infill of Guards
- Concentrated Load: 50 lbf applied horizontally on an area of 1 SF.
 - Infill load and other loads need not be assumed to act concurrently.

Installation: Install stairs and railings according to manufacturers' written instructions and with welded connections.

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

061000 - Rough Carpentry

- Products:**
- A. Framing with Dimensional Lumber (Interior Non-Load-Bearing)
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
- B. Miscellaneous Lumber (e.g. Blocking, Furring, etc.)
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
- C. Temporary Bracing, Shoring, etc. as required
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
- D. Plywood decking (Equipment Platform)
- Plywood Type: Exposure 1
 - Plywood Grade: BC
 - Thickness: As indicated on drawings
 - Square Edge
 - Class: C Fire Rating
 - Flame Spread Rating 76-200 / Smoke Developed Index <450
- E. Plywood decking (Dumpster Roof)
- Plywood Type: Exposure 1
 - Plywood Grade: BC
 - Thickness: As indicated on drawings
 - Square Edge

Note:

- All plywood which has any edge or surface permanently exposed to the weather shall be of the exterior type.
- All wood exposed to weather and/or in contact with masonry or concrete shall be pressure-treated lumber.

061533 - Composite Decking

- Products:**
- A. Plastic Decking for Dumpster Enclosure Doors
- Composite plastic lumber
 - Solid shapes made from a mixture of cellulose fiber and polyethylene or polypropylene.
 - Surface Texture: Smooth.
 - Color: See Finish Schedule.
 - Size: See dumpster details.

Installation: Install plastic decking according to manufacturers' written instructions.

Warranty: Provide manufacturer's standard material warranty.

066400 Plastic Paneling (Fiberglass Reinforced Panels)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Marlite Wall Systems, or a comparable product by one of the following:

- Kal-Lite
 - Crane Composites
 - Panolam
- Product Requirements:**
- A. Provide standard FRP (Fiber Reinforced Plastic) panels in 4' x 8' textured panels.
- B. Color: As indicated on the Finish Schedule.
- C. Conform to all building code requirements for interior finish for smoke and flame spread requirements tested in accordance with ASTM 84
- D. Wall required Rating - Class A

Submittals: Submit shop drawings (elevations of each wall) showing location of paneling and trim members.

Installation: Install per manufacturer's written standards.

Warranty: Provide manufacturer's standard warranty.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

071900 - Water Repellents

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Ghostshield or a comparable product from an approved manufacturer.

- Products:**
- A. Water Repellent
- ISO-Tek 8540
 - Color: Clear

Installation: Install water repellents according to manufacturers' written instructions.

Warranty: Provide manufacturer's standard product warranty.

072100 - Thermal Insulation

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Owens Corning, or a comparable product by one of the following:

- Johns Manville
 - CertainTeed
- Products:**
- A. Kraft Faced (Vapor Retarder) Batt Insulation:
- EcoTouch PINK Fiberglass Insulation
 - R-20 & R-38; where indicated

Installation: Install insulation and accessories according to manufacturers' written instructions.

Warranty: Provide manufacturers' standard material warranty.

072600 Vapor Retarders

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Reef Industries, or a comparable product by an approved manufacturer.

- Products:**
- A. Reinforced Under Slab Vapor Retarder:
- Griffoly 10 Mil Green
 - Thickness: 10 mil
 - Max Perm Rating: 0.1 perm
 - Lap: 12" and tape with manufacturer recommended tape

Installation: Install vapor retarders according to manufacturers' written instructions.

Warranty: Provide manufacturers' standard product warranty.

072726 - Fluid-Applied Membrane Air Barrier

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by W.R. Meadows, or a comparable product by an approved manufacturer.

- Products:**
- A. Liquid Membrane Air/Vapor & Liquid Moisture Barrier
- Air-Shield LMP

Installation: Install fluid applied membrane air barriers according to manufacturers' written instructions.

Warranty: Provide manufacturer's standard product warranty.

074113.16 - Standing-Seam Metal Roof Panels (Hurricane Zone)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Berridge Manufacturing Co. or comparable product by an approved manufacturer.

- Products:**
- A. Metal Panel: Cee-Lock (Florida Product Approval FL #11269 / TDI # RC-209)

- Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592.
 - Wind Loads: See Structural.
 - Other Design Loads: See Structural.
 - Deflection Limits: See Structural.
- Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 1680 and ASTM E 283 at the following test-pressure difference:
 - Test-Pressure Difference: 6.24 lbf/sq.ft.
- Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 and ASTM E 331 at the following test-pressure difference:
 - Test-Pressure Difference: 15 lbf/sq.ft.
- Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
 - Uplift Rating: UL 90.
- Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects.

Material: Metallic coated steel

Nominal Thickness: 24 gauge

Finish: Two-coat fluoropolymer.

Color: See Finish Schedule (verify sample with Owner prior to ordering)

Panel Coverage: 16.5 inches

Panel Height: 1.5 inches

Slope: As indicated on roof plan

- B. Substrate / Underlayment
- 5/8" exterior grade plywood with two layer of 15# felt (FL Product Approval #10626.2)

Installation: Install metal panels, underlayment, vents, and accessories according to manufacturers' written instructions.

Warranty: Provide manufacturers' standard material and product warranties.

075423 - Thermoplastic Polyolefin (TPO) Roofing:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Versico or comparable product by an approved manufacturer.

- Products:**
- A. VersiWeld 60 mil TPO fully adhered.
- ASTM D6878
- (Florida Approval Number: FL 14207 **Please Note: System must be selected based on design pressures per Structural drawing sheet S0.2.**)
- B. Underlayment: 1/2" Securock Gypsum Fiber Cover Board
- C. Polyisocyanurate Insulation
- Thickness: R-25
- D. Roof Walkways
- VersaWeld Heat Weldable Walkway Rolls
 - Color: White
 - Thickness: 180 mils
 - As an option, walkway rolls may be fully adhered to the membrane surface with QA Seam Tape/ TPO Primer.

075423 - Thermoplastic Polyolefin (TPO) Roofing (Continued) :

Installation: Install TPO, underlayment, insulation, vents, accessories, etc., according manufacturer's published installation instructions.

Warranty: Provide 20 Year NDL Manufacturers full system warranty

076500 - Stainless Steel Flexible Flashing

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by York Manufacturing, inc., or a comparable product by an approved manufacturer.

- Products:**
- A. Multi-Flash SS
- Type: Stainless steel core with polymer fabric laminated to the bottom stainless steel face with non-asphaltic adhesive. The top face (exposed side) must not be covered with a polymer fabric.
 - Stainless steel: type 304, ASTM A240 Domestically sourced per DFARS 252.225-7008 and /or DFARS 252.225-7009
 - Provide Drip Edge: Drip Edge: Stainless-steel with 30-degree 3/8" bent outer edge, hemmed. 3" by 8"

B. Installation: Install per manufacturer's written instructions.

C. Warranty: Manufacturer: **Warrant flexible flashing material for life of the wall.**

077100 - Roof Specialties (Hurricane Zone)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Roof Drainage Components & Accessories, Inc. or a comparable product by an approved manufacturer.

- Products:**
- A. Conductor head w/ built-in overflow (alum.): Match downspout color.
- B. Downspouts (alum.):
- Style: Smooth Box Downspout
 - Size: 3"x4"
 - Color: Match P-2
- C. Downspout boot - Match downspout color
- D. Straps
- Smooth Box Downspout Strap.
 - Color: Match Roof Color.
- E. Thru-wall scupper- match downspout color.

Installation: Install roof specialties according to manufacturers' written instructions.

Warranty: Provide manufacturers' standard material warranty.

077100 - Roof Specialties (Hurricane Zone)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Metal-Era Roofing Products or comparable product by an approved manufacturer.

- A. Coping Cap [FL Product Approval #29463-R2]
- Product: Creative Design Series - Creative Design Reveal Coping
 - 22 gauge w/ kynar finish
 - Color : To be selected from Manufacturer's Full Range of colors
 - Face & Back Dimension: 4 inches minimum (Dumpster)
 - Face Dimension: 12 inches minimum (Building)
 - Back Dimension: 8 inches minimum (Building)

Installation: Install roof specialties according to manufacturers' written instructions.

Warranty: Provide manufacturers' standard material warranty.

078443 - Joint Firestopping

Basis-of-Design Product: For joints in or between Fire-Resistance-Rated Construction: Subject to compliance with requirements, provide products indicated below by Itemco, or a comparable product by one of the following:

- 3M Fire Protection Products
- Owens Corning
- Hilti, Inc.
- ROCKWOOL

- A. **Scope:** Work specified under this Section includes all labor, materials, equipment, services, accessories and coordination as required to furnish and install all firestopping systems including but not limited to, the following:
- Firestopping sealant, fireproofing material required to render all fire rated assemblies fire and smoke tight in accordance with applicable codes, ordinances and requirements.
 - Penetrations of fire rated materials or assemblies shall be sealed by the trade whose work required the penetration, unless a firestop contractor is designated by the Contractor

- B. **System Description/ Design Requirements:**
- Fire-Rated Construction: Maintain vertical and horizontal barrier, structural floor-ceiling, and roof-ceiling fire resistance ratings at all penetrations, connections with other surfaces or types of construction, at separations required to permit building movement and sound or vibration absorption, and at other construction gaps.
 - Smoke Barrier Construction: Maintain vertical barrier and structural floor resistance to cold smoke at all penetrations, connections with other surfaces and types of construction and at all separations required to permit building movement and sound or vibration absorption, and at other construction gaps.
 - Provide products that upon curing, do not re-emulsify, dissolve, leach, breakdown or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water or other forms of moisture.
 - Provide firestop products that do not contain ethylene glycol.
 - Fire resistance rating must be equal to or exceed the fire resistance rating of the wall, floor or roof in or between which it is installed.
 - Exposed Joint firestopping systems must have a flame-spread and smoke-developed index of less than 25 and 450, respectively, as determined per ASTM E84

- C. **Installation:**
- Firestopping shall be installed at locations where openings are made and where shown or specified in accordance with manufacturer's written instructions, fire test assembly and as indicated on drawings.
 - Firestopping materials shall completely fill all void spaces regardless of geometric configuration and subject to tolerances established by the manufacturer.
 - Firestopping shall be installed at all piping, electrical conduit and cables, and ductwork penetrating fire rated assemblies and seal holes or voids made by penetrations to ensure an effective fire or fire/smoke barrier. Fire damper in ducts and penetrations of fire resistance rated construction shall be furnished and installed in accordance with the requirements in Mechanical Sections.
 - Identify joint firestopping systems with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of joint edge so labels are visible to anyone seeking to remove joint firestopping system. Include the following on the labels:
 - "Warning - Joint Firestopping - Do NOT Disturb. Notify Building Management of Any Damage."
 - Contractor's name, address and phone number.
 - Designation of applicable testing agency
 - Date of Installation
 - Manufacturer's name
 - Installer's name
- D. **Warranty:** Provide manufacturers' standard product warranty.



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stanke, Florida

FINAL

No.	Description	Date

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Architectural Specifications

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
<h1 style="margin: 0;">G200</h1>	
Scale	12" = 1'-0"

087100- Door Hardware (Standard Single Bldg. w/ Side Tire Storage) (continued):

Set 3.2 Doors: 14 Description: Pit Ladder			
4 Hinge (heavy weight)	T4A3386 NRP 4-1/2" x 4-1/2"	MK	
1 Exit Device (rim, nightlatch)	7150 WS PB627F	YA	
1 Cylinder	Mort / Cyl as required	YA	
1 Surface Closer	CLP8501	NO	
Set: 4.0 Doors: 5 Description: TOILET			
4 Hinge	TA2714 4-1/2" x 4-1/2"	MK	
1 Cylindrical Lock (privacy)	PB 5402LN	YA	
1 Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO	
1 Door Stop	409 / 446 [as required]	RO	
1 Gasketing	S773D	PE	
1 Surface Closer	8501 Reg / PA	NO	
Set: 5.0 Doors: 13 Description: OFFICE			
4 Hinge	TA2714 4-1/2" x 4-1/2"	MK	
1 Cylindrical Lock (entry)	PB 5401LN	YA	
1 Door Stop	409 / 446 [as required]	RO	
1 Threshold	271A Pemkote MSES25SS	PE	
1 Gasketing	S773D	PE	
1 Sweep	315CN	PE	
1 Surface Closer	8501 Reg / PA	NO	
Set: 6.0 Doors: 15 Description: BREAK			
4 Hinge	TA2714 4-1/2" x 4-1/2"	MK	
1 Passage Set	PB 5401LN	YA	
1 Surface Closer	8501 Reg / PA	NO	
1 Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO	
1 Kick Plate	K1050 8" X 2" LDW 4BE CSK	RO	
1 Door Stop	409 / 446 [as required]	RO	
1 Gasketing	S773D	PE	
Set: 7.0 Doors: 16 Description: SHOP TOILET			
4 Hinge	TA2714 4-1/2" x 4-1/2"	MK	
1 Cylindrical Lock (privacy)	PB 5402LN	YA	
1 Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO	
1 Door Stop	409 / 446 [as required]	RO	
1 Threshold	271A Pemkote MSES25SS	PE	
1 Gasketing	S773D	PE	
1 Sweep	315CN	PE	
1 Surface Closer	8501 Reg / PA	NO	
Set: 8.0 Doors: 6, 7, 8, 10, 11, 12, 17, 18, 19, 25, 26, 27 Description: OH DOOR			
1 Hardware	By door mfg		

Installation:
Install door hardware according to manufacturers' written instructions.
All door hardware (Interior and Exterior) to be keyed alike.

Warranty:
Provide manufacturers' standard product warranty.

088000- Glazing (IGU) Standard and Hurricane Non-Impact

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Vitro, or a comparable product by one of the following:

- Guardian Industries Corp.
- Or Approved equal

Products:

Notes:

- All glazing to have proper labels as required by local AHJ and building codes.
- All glazing shall be reviewed and approved by the local distributor to meet the requirements for the region in which the glazing is being installed. Any issues with items specified shall be brought to the attention of the Architect prior to bid.

A. GL-1 Insulated Glass Unit
Double Glazed Clear Solar Control Insulating Glass Unit Solarban® 90 on Clear 6mm (2) | Air 1/2" (12.7mm) | Clear 6mm

- Conformance: ASTM E 2190
- Outdoor Lite: Clear Float Glass as manufactured by Vitro Architectural Glass
 - Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
 - Glass Thickness: 6mm (1/4")
 - Magnetic Sputter Vacuum Deposition Coating (MSVD): ASTM C 1376.
 - Coating: Solarban® 90 on Surface # 2
 - Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
- Interspace Content: Air 1/2" (12.7mm)
- Indoor Lite: Clear float glass as manufactured by Vitro Architectural Glass
 - Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
 - Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
 - Glass Thickness: 6mm (1/4")
- Performance Requirements:
 - Visible Light Transmittance: 51 percent minimum.
 - Winter Nighttime U-Factor: 0.29 (Btu/hr*F) maximum.
 - Summer daytime U-Factor: 0.27 (Btu/hr*F) maximum.
 - Shading Coefficient: 0.27 maximum.
 - Solar Heat Gain Coefficient: 0.23 maximum.
 - Outdoor Visible Light Reflectance: 12 percent maximum.

B. GL-2 Monolithic Single-Glaze Float-Glass:
Monolithic Clear Glass Clear 6mm

- Clear float glass as manufactured by Vitro Architectural Glass
 - Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
 - Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
 - Glass Thickness: 6mm (1/4")
- Performance Requirements:
 - Visible Light Transmittance: 89 percent minimum.
 - Winter Nighttime U-Factor: 1.02 (Btu/hr*F) maximum.
 - Summer daytime U-Factor: 0.92 (Btu/hr*F) maximum.
 - Shading Coefficient: 0.94 maximum.
 - Solar Heat Gain Coefficient: 0.82 maximum.
 - Outdoor Visible Light Reflectance: 8 percent maximum.

C. Glazing Installation
1. Install per manufacturers' standard written instructions.

D. Glazing warranty
1. Provide manufacturers' standard product warranty.

DIVISION 9 - FINISHES

092900- Gypsum Board

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Lafarge, unless otherwise indicated, or a comparable product by one of the following:

- Georgia-Pacific
- USG
- National Gypsum

Products:

A. Moisture and Mold-Resistant Type: Mold Defense

- Thickness: 1/2 inch
- Long Edges: Tapered
- Finish: Level 4 in areas exposed to view. Level 1 in concealed areas.

B. Water-resistant Type: Watercheck (@ Toilet Rooms and behind plumbing fixtures)

- Thickness: 1/2 inch
- Long Edges: Tapered
- Finish: Level 4
- Cuts: All cuts in board shall be covered with special waterproofing sealant as recommended by the manufacturer.

C. Type X: Firecheck (As Required)

- Thickness: 5/8"
- Long Edges: Tapered
- Finish: Level 4
- All penetrations and joints to be sealed with fire caulk as recommended by the manufacturer.

Installation:
Install gypsum board and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

095000- Acoustical Tile Ceiling

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Armstrong World Industries, Inc.

Products:

A. Acoustical Ceiling Panels

- Style: 1775 Dune
- Surface Texture: Fine Texture
- Composition: Mineral Fiber
- Color: White
- Size: 24 inch x 24 inch
- Edge Profile: Square Lay-in

B. Metal Suspension Systems

- Suprafine XL 9/16" Exposed Tee Grid and Edge Molding
- Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft annealed, with a yield stress load of at least time three design load, but not less than 12 gauge.

Installation:
Install suspension system and panels in accordance with manufacturers' written instructions, and in compliance with ASTM C 636.

Warranty: Provide manufacturers' standard product warranty.

096513- Resilient Base and Accessories

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Roppe, or a comparable product by one of the following:

- Johnsontite, a Tarkett Company
- Armstrong World Industries
- Or Approved equal

Products:

A. Rubber Base: Pinnacle Rubber by Roppe

- Height: 4"
- Length: Coils in manufacturer's standard length
- Outside Corners: Job formed
- Inside Corners: Job formed
- Color as indicated on finish schedule.

B. Adhesives: As recommended by the manufacturer

Installation:
Install resilient base according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099113- Exterior Painting

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Sherwin Williams.

Products:

A. Masonry: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
 B. Steel: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
 C. Wood: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
 D. Aluminum: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

Note: Use 1 coat primer as recommended by manufacturer and 2 finish coats unless otherwise recommended by the manufacturer.

Installation:
Install exterior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099123- Interior Painting

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Sherwin Williams.

Products:

A. Masonry: Pro Industrial Pre-Catalyzed Water Based Epoxy Semi-Gloss, K46W151 Series
 B. Steel: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
 C. Wood: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
 D. Gypsum Board in Office Area: ProMar 200 Zero VOC Interior Latex Egshel, B20W2600 Series. Use extreme bond primer at vinyl graphics.
 E. Gypsum Board in Bay Area: ProMar 200 Zero VOC Interior Latex Egshel, B20W2600 Series. Use extreme bond primer at vinyl graphics.
 F. Gypsum Board Ceilings: ProMar 200 Zero VOC Interior Latex Flat, B30W2650 Series
 G. Sealed Concrete Floors: ArmorSeal Rextthane I Floor Coating + Shark Grip (1000 HS primer)

Note: Use 1 coat primer as recommended by manufacturer and 2 finish coats unless otherwise recommended by the manufacturer.

Installation:
Install interior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 10 - SPECIALTIES

101419- Dimensional Letter Signage - By others.

101423.13 Room-Identification Signage
See drawing on A602.

102600 - Wall and Door Protection

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by InPro Corporation.

Products:

A. Stainless Steel Flush Mount Corner Guards
 B. Corner Radius: 1/8"
 C. Height: 4'-0"
 D. Width: 1 1/2"
 E. Materials: Stainless Steel: Type 430, 16 gauge
 F. Attachment: Pre-drilled beveled holes and Phillips head screws.
 G. Finish: Stainless Steel No. 4 satin finish.
 H. Location: As indicated on drawings.
 J. Installation: Install per manufacturer's standard written instructions.
 K. Warranty: Provide manufacturers' standard product warranty.

102800- Toilet, Bath, and Laundry Accessories

The following list of accessories is essentially complete; however, the Contractor shall examine the drawings carefully and shall supply such items not specifically called for to provide a complete installation.

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Bradley Corporation or a comparable product by one of the following:

- Bobrick Washroom Equipment, Inc.
- American Specialties, Inc.
- Or Approved Equal

Products:

A. Robe Hook: Bradley Model 915.
 B. Grab Bars: Bradley Model 812-001-42, Model 812-001-36, and Model 812-001-24
 C. Toilet Tissue Dispenser: Bradley Model 5425 (**By Others**)
 D. Mirror: Bradley Model 780-2436
 E. Soap Dispenser: Bradley Model 6563 (**By Others**)
 F. Paper Towel Dispenser: Bradley Model 2494 (**By Others**)
 G. Under Lavatory Guard: Truebro Lav Guard 2 by IPS Corporation
 H. Baby Changing Station: Bradley Model 9631 (Light Gray)

Installation:

- Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and heights indicated.
- Install grab bars to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

Warranty:
Provide manufacturers' standard product warranty.

104413- Fire Department Lock Box

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Knox, or a comparable product by one of the following:

- Kidde
- Or Approved Equal

Products:

A. Lock Box: 3200 Series Hinged Door Surface Mount
 i. Color: As indicated on Finish Schedule

Installation:
1. Install fire department lock box in location and height as required by the authorities having jurisdiction.
2. Install per manufacturer's written installation instructions.

Warranty:
Provide manufacturers' standard product warranty.

104416- Fire Extinguishers

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Amerex Corporation, or a comparable product by one of the following:

- Larsens Manufacturing Company
- JL Industries
- Or Approved Equal

Products:

A. ABC Dry Chemical Extinguisher: Amerex Model B456
 B. Wall Bracket: Amerex Model 0546 Wall
 C. UL and ULC Rating: 4A-80BC

Installation:

- Install fire extinguishers in locations and heights indicated and in compliance with requirements of authorities having jurisdiction.
- Install fire extinguishers and brackets according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 12- FURNISHINGS

123623.13 Plastic-Laminate-Clad Countertops

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Wilsonart.

Products:

A. Plastic Laminate #1
 i. High pressure decorative laminate: NEMA LD3
 ii. Grade: HGS
 iii. Color: 4880-38 Carbon Mesh

B. Adhesives: as recommended by the manufacturer

Installation:
Install plastic laminate according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 31- EARTHWORK

313116- Termite Control

Provide EPA Registered termiticide acceptable to authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation.

DIVISION 33 - UTILITIES

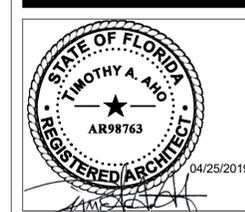
334600- Subdrainage

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Carlisle.

Products:

A. CCW MiraDrain 6200 and 9800
 B. CCW MiraStop
 C. CCW MiraClay Woven Geotextile
 D. CCW MiraClay Granules or Mastic

Installation:
Install subdrainage products according to manufacturers' written instructions.



Express Oil Change & Tire Engineers

Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage

Stark, Florida

FINAL

No.	Description	Date

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Architectural Specifications

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
G202	
Scale	12" = 1'-0"

EXPRESS OIL CHANGE & TIRE ENGINEER STANDARDS - EXTERIOR

PAINTED GRAY BRICK

Painted buildings include all of the same spaces as the RED BRICK buildings except the red brick is painted Summit Gray. Downspouts are painted to match the background of the building.

If the building does not have a Peak, the blue stripe will go all the way around the building.



Must have a Gray, Black, or Blue Roof

EXTERIOR

AWNING

The new metal awning adds a nice modern, industrial look to the buildings and features built-in lighting for customers entering and exiting in late afternoons. Standard size is 12' for most buildings.



Awnings by General Contractor. See Details

BRANDED SCONCES

48"X24" aluminum sconces light up your building from top to bottom with a glowing logo in center. E sconces are to be placed on oil change side. TE sconces are to be placed on mechanical side. Sconces to be evenly spaced between the bay doors, and vertically centered with the bay doors.



Branded Sconces by Others

CHANNEL LETTERS

While channel letters with 3" depth. Channel letter sizing is dictated by space and also may change due to the local sign regulations. In most cases, sizes vary from 18" to 24".

FONT
Interstate Bold Condensed - 50pt tracking

LETTERING FOR FRONT BUILDING
10 MINUTE OIL CHANGE
FULL SERVICE AUTO CARE
TIRE CENTER

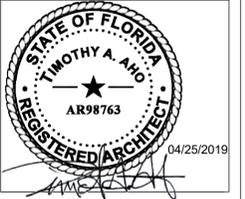
LETTERING FOR BACK BUILDINGS
TIRES ALIGNMENT ROTATE & BALANCE
DIAGNOSTICS A/C BRAKES

Letters by Others

Note: Items shown on this page are EOC standards. See Finish Schedule for actual materials to be used on this project.



www.ahoarch.com



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

No.	Description	Date

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EOC Standards - Exterior

Project number 24052
Date 10/24/2024
Drawn by ARC
Checked by N/A

G300

Scale 12" = 1'-0"

EXPRESS OIL CHANGE & TIRE ENGINEERS STANDARDS - INTERIOR

INTERIOR

INTERIOR PAINT
Adding two-toned blue walls to the interior creates a bold look that is consistent with EOC&TE branding. The vinyl graphics add an extra communication element.



13

IN-BAY MEDIA

IN-BAY MEDIA (OPTIONAL)
In-Bay Media relies on EOC&TE services to the customer with powerful animated, custom messages. The video is currently over 7 minutes long, allowing some messages to be viewed more than once.



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In Bay Media by Others

LOBBY

PAINT SCHEME

Paint 3 color stripe on all walls, except the "Word Wall" if permitted. The "Word Wall" will be painted Summit Gray and the vinyl words will be applied to it. For the "Word Wall", choose a blank wall or a wall that has the most blank coverage for the vinyl.

Paint 3 color stripe on all walls, except the "Word Wall". The "Word Wall" will be painted Summit Gray and the vinyl words will be applied to it. For the "Word Wall", see note on enlarged plan A103 for wall location.



15

BRANDED POSTERS

The new posters deliver powerful messages, and include a new design of the EOC&TE mission statement. Each poster is 36" x 48". Order on www.expressoil.com.



POSTER FRAMES, MAGAZINE AND ACE CARD HOLDERS
These frames and holders are made of aluminum to match the branding of EOC&TE.



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Branded Posters by Others.

LOBBY

CHAIRS

There are two options for chairs. Global Lounge large chairs for larger spaces and Europa Guest Chairs for smaller spaces. These chairs are heavy duty and come with a warranty. They are both black leather with metal accents.



TILE
All tile must be replaced unless it is in good shape and is a gray color. Replacement is Dal Tile Healthland H-05 Ashland with 6" wall base and Dark Grout.



17

Furniture by Others

TABLES & LAPTOP STATION

These tables have a heavy duty laminate top with chrome accent legs to match the chairs. They are fully customizable in shape and size to fit your space. Typically we use these tables for laptop workstations and for coffee tables. If you do not have space for both, choose which one you would like to have (coffee or laptop station). We also place powerstrips on top of tables that serve as the back. These can be purchased at Home Depot or online (search Wiremold Desktop Power Center or WSP200-S).



CHAIRS FOR LAPTOP WORKSTATION

Small, armless chairs with leather cushion seats.



18

Furniture by Others

VINYL SCHEDULE

The vinyl is fully customizable as far as size and layout. Each location is different. It is best to send the vendor clear measurements of the lobby wall and of the bay walls so they can size appropriately. Please be aware of piping or shelving, or anything else that may be in the way. PLEASE ALLOW 1 WEEK FOR PAINT TO CURE BEFORE APPLYING VINYL.

Bay Area - Army 700 Medium Gray and Rubber Duckie
Lobby Word Wall - Casual 631 Gray 071

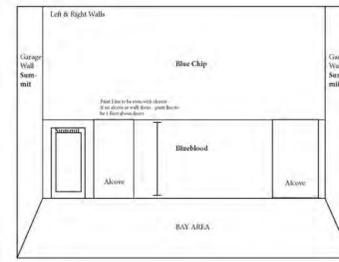


23

Wall Graphics by Others

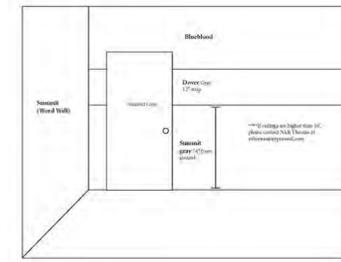
PAINT SCHEDULE

BAY AREA



25

LOBBY



26

See Finish Schedule for Paint Selections

FINAL

No.	Description	Date

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EOC Standards - Interior

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

G301

Scale 12" = 1'-0"

1 General Information

PROJECT INFORMATION
 Name of Project: Single Building / Right Hand Oil Change/ Front Enter/ Side Tire Storage
 Client: Express Oil Change & Tire Engineers
 Location: Starke, FL
 Authority Having Jurisdiction (AHJ): City: Starke County: N/A State: N/A
 Square Footage / Stories / Height: Main Level G.S.F. = 5,662 Stories = 1 + Pit Height = 24'- 2 3/4"
 Pit Level G.S.F. = 1,381
 Total G.S.F. = 7,043

PROJECT TYPE
 New Construction Addition Other
 Alteration Change of Occupancy

BUILDING USE
 Single Use Mixed Use (Separated) Mixed Use (Non-Separated)
 Description: Automotive repair garage used for general service on automobiles.

SPRINKLERED
 Yes Partial No

2 Codes

- APPLICABLE CODES**
- 2023 Florida Building Code, 8th Edition
 - 2023 Florida Building Code, Plumbing Code, 8th Edition
 - 2023 Florida Building Code Energy Conservation Code, 8th Edition
 - 2020 National Electrical Code
 - 2023 Florida Fire Prevention Code, 8th Edition
 - 2023 Florida Building Code, Accessibility, 8th Edition
 - 2021 NFPA 101
 - 2023 Florida Building Code, Fuel Gas Code, 8th Edition
 - 2023 Florida Building Code, Mechanical Code, 8th Edition

3 Use and Occupancy Classification(s)

- Assembly Group A-1
- High-Hazard Group H-2
- Residential Group R-2
- Assembly Group A-2
- High-Hazard Group H-3
- Residential Group R-3
- Assembly Group A-3
- High-Hazard Group H-4
- Residential Group R-4
- Assembly Group A-4
- High-Hazard Group H-5
- Storage Group S-1
- Assembly Group A-5
- Institutional Group I-1
- Storage Group S-2
- Business Group B
- Institutional Group I-2
- Utility & Misc Group U
- Educational Group E
- Institutional Group I-3
- Factory Group F-1
- Institutional Group I-4
- Factory Group F-2
- Mercantile Group M
- High-Hazard Group H-1
- Residential Group R-1

4 Special Detailed Requirements Based On Use and Occupancy (2023 FBC and 2023 FFPC)

- 406.8 Repair Garages**
 Project complies with 406.8 through 406.8.3
- 413 Combustible Storage**
 413.1 High-piled storage of combustible materials over 12'-0" or high-hazard commodities over 6'-0"
 Yes No
 413.2 Storage of combustible materials in attics, under-floor, and concealed spaces
 Yes No
- 414 Hazardous Materials**
 Project complies with 414.2 Control Areas
 Number of Control Areas Provided: Entire Building is one control area
 Location: Inside Outside
 Use: Open Closed Storage Only
- Types of Hazardous Materials (Table 307.1.1(1) of FBC and FFPC 42.3)**
 Class IIB Liquids Actual Storage per control area: 4040.13 gallons
 Class IA Flammable Liquids Actual Storage per control area: .94 gallons
 Class IB Flammable Liquids Actual Storage per control area: 3.25 gallons
 High-Hazard Commodities per FFPC 2023 section 34.3.9 (Rubber Tires)
 Allowable Quantity: 0-500 s.f. Actual Quantity: X<500 s.f.

5 General Building Heights and Areas (2023 FBC)

- 504 Building Height and Areas (Per Table 504.3, 504.4 and 506.2)**
 Allowable Building Height = 40'-0" Actual Building Height = 24'- 2 3/4"
 Allowable Number of Stories Above Grade Plane = 1 Actual Number of Stories Above Grade Plane = 1
 Allowable Area Factor = 9,000 s.f. Actual Area = 7,043 g.s.f.
- 505.3 Equipment Platforms**
 Project complies with 505.3 through 505.3.3 Not Applicable
- 508 Mixed Use and Occupancy**
 Mixed Use Occupancy (Separated) Mixed Use Occupancy (Non-Separated) Does not apply

6 Types of Construction (2023 FBC)

601 General and 705 Construction Classification
 Type IA Type IB Type IIA Type IIB Type IIIA
 Type IIIB Type IV Type VA Type VB

Table 601 Fire Resistance Rating Requirements for Building Elements

Building Elements	Hours Required	Hours Provided
Primary Structural Frame	0	0
Bearing Walls (Exterior)	0	0
Bearing Walls (Interior)	0	N/A
Nonbearing Walls & Partitions (Exterior)	0	0
Nonbearing Walls & Partitions (Interior)	0	0
Floor Construction & Associated Secondary Members	0	0
Roof Construction & Associated Secondary Members	0	0

Table 705.5 Fire Resistance Requirements for Exterior Walls Based on Fire Separation Distance

Fire Separation Distance	Rear East	Right South	Front West	Left North
X < 5				
5 ≤ X < 10				
10 ≤ X < 30				
X ≥ 30	>30'	>30'	>30'	>30'

X ≥ 30' for Group B and S-1 = 0 hours
 10 ≤ X < 30' for Group B and S-1 = 0 hours

8 Interior Finishes (2023 FBC)

Table 803.11 Interior Wall and Ceiling Finish Requirements by Occupancy

Group	Exit Enclosures and Exit Passageways	Corridors	Rooms and Enclosed Spaces
S-1	B	B	C
B	A	B	C

804.4.2 Minimum Critical Radiant Flux
 Class I Class II

9 Fire Protection Systems (2023 FBC)

- 903 Automatic Sprinkler Systems**
 Yes Partial Not Required
- 906 Portable Fire Extinguishers**
 Yes No
 Project complies with 906.1 through 906.10
 Project complies NFPA 10
- 907 Fire Alarm and Detection System**
 Yes Not Required

10 Means of Egress (2023 FBC)

DT_2023 FBC Table 1004.5 Maximum Floor Area Allowance Per Occupant (Group S-1)

Occupancy Classification	Name	Number	Area	S.F. Per Occupants	No. of Occupants
S-1	Oil Change	5	1271 SF	200	6.36
S-1	Corridor	6	115 SF	200	0.58
S-1	Service	9	2493 SF	200	12.42
S-1	Storage	10	188 SF	300	0.63
S-1	Pit	11	1247 SF	200	6.23
S-1	Storage	12	258 SF	300	0.86
S-1	Storage	13	500 SF	300	1.67
Subtotal				6063 SF	28.74

Please Note: The Group H-5 Fabrication and Manufacturing, 200 square foot per occupant load factor, for manufacturing function of space was used for the above calculations because there is not a function of space occupant load factor for repair garages.

DT_2023 FBC Table 1004.5 Maximum Floor Area Allowance Per Occupant (Group B)

Occupancy Classification	Name	Number	Area	S.F. Per Occupants	No. of Occupants
B	Service Writing	1	140 SF	150	0.93
B	Waiting Room	2	126 SF	150	0.84
B	Toilet	3	43 SF	150	0.29
B	Manager	4	51 SF	150	0.34
B	Break Room	7	61 SF	150	0.41
B	Toilet	8	45 SF	150	0.30
Subtotal				467 SF	3.11

10 Means of Egress (2023 FBC)

DT_2023 FBC Sections 1005.3.1 & 1005.3.2 Egress width Stairways and Other Egress Components (Group S-1)

Occupancy Classification	Name	Number	No. of Occupants	Egress - Stairways	Required Stairway Width	Other Egress Components	Required Capacity in Inches
S-1	Oil Change	5	6.36			0.2	1.27
S-1	Corridor	6	0.58			0.2	0.12
S-1	Service	9	12.42			0.2	2.48
S-1	Storage	10	0.63			0.2	0.13
S-1	Pit	11	6.23	0.3	1.87	0	0.00
S-1	Storage	12	0.86			0.2	0.17
S-1	Storage	13	1.67			0.2	0.33
Subtotal				28.74	0.3	1.87	4.50

DT_2023 FBC Table 1005.3.2 Egress width Other Egress Components (Group B)

Occupancy Classification	Name	Number	No. of Occupants	Other Egress Components	Required Capacity in Inches
B	Service Writing	1	0.93	0.2	0.19
B	Waiting Room	2	0.84	0.2	0.17
B	Toilet	3	0.29	0.2	0.06
B	Manager	4	0.34	0.2	0.07
B	Break Room	7	0.41	0.2	0.08
B	Toilet	8	0.30	0.2	0.06
Subtotal				3.11	0.62

Table 1006.2.1 Spaces with One Exit Or Exit Access Doorway

Occupancy	Max Occupant Load	Number of Exits Required	Max Occupant Load Provided	Number of Exits Provided	Common Path of Travel Allowable (Nonsprinkled)	Common Path of Travel Provided (Nonsprinkled)
S-1	29	1	28.74	4	100'-0"	<100'-0"
B	49	1	3.11	1	100'-0"	<100'-0"

Table 1006.3.2 Minimum Number of Exits or Access to Exits Per Story

Occupant Load Per Story	Minimum Number of Exits or Access to Exits from Story	Number of Exits or Access to Exits from Story Provided
1-500	2	5

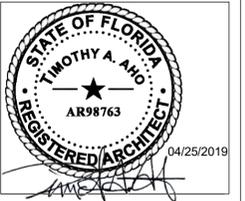
Table 1017.2 Exit Access Travel Distance

Occupancy	Without Sprinkler System (Feet)	With Sprinkler System	Max Travel Distance Allowable (Feet)	Max Travel Distance Provided (Feet)
S-1	200	N/A	200'-0"	71'-1"
B	200	N/A	200'-0"	84'-10"

12 Interior Environment (2023 FBC)

1208.1 Minimum Room Widths
 Habitable spaces are not less than 7 feet in any plan dimension
 Yes No

1208.2 Minimum Ceiling Heights
 Occupiable spaces, habitable spaces, and corridors have a ceiling height of not less than 7 feet 6 inches. Bathrooms, toilet rooms, kitchens, storage rooms, and laundry rooms have a ceiling height of not less than 7 feet.
 Yes No



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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Life Safety / Code Summary

Project number: 24052
 Date: 10/24/2024
 Drawn by: ARC
 Checked by: N/A

LS100

Scale: 12" = 1'-0"

29 Plumbing Systems (2023 FBC)

Table 2902.1 Minimum Number of Required Plumbing Fixtures

DT_Plumbing Fixture_Group S-1												
Total Occupant Load	Male	Female	Required Water Closets		Water Closets Provided	Required Lavatories		Lavatories Provided	Required Drinking Fountains	Drinking Fountains Provided	Required Service Sinks	Service Sinks Provided
			Male	Female		Male	Female					
28.74	14.37	14.37	0.14	0.14	1	0.14	0.14	1	0.03	1	1	1

DT_Plumbing Fixture_Group B												
Total Occupant Load	Male	Female	Required Water Closets		Water Closets Provided	Required Lavatories		Lavatories Provided	Required Drinking Fountains	Drinking Fountains Provided	Required Service Sinks	Service Sinks Provided
			Male	Female		Male	Female					
3.11	1.555	1.555	0.06	0.06	1	0.04	0.04	1	0.03	1	1	1

2902.2 Separate Facilities

Separate facilities provided for each sex

- Yes Not Required per 2902.2.1

2902.2.1 Family or assisted use toilet facilities serving as separate facilities

- Yes No

2902.3 Employee and public toilet facilities

- Employee toilet combined with public toilet facilities

2902.3.1 Access

Route to public toilet facilities does not pass through kitchens, storage rooms, or closets and is accessible.

- Yes No

2902.3.3 Location of toilet facilities in occupancies other than covered mall buildings

Located not more than one story above or below the space required to be provided with toilet facilities

- Yes No

Path of travel to such facilities does not exceed 500 feet

- Yes No

2902.4 Signage

- Yes No

Legible sign designating the sex provided in visible location near entrance to toilet facility

- Yes Not Required per 2902.2.1

Plumbing Fixture Notes:
 (1) High / Low drinking fountain provided for the entire building.
 (1) Service Sink provided for the entire building.
 (2) Family Assisted-Use Toilet Room each containing (1) lavatory and (1) water closet provided for the entire building.

5 Fire Service Features (2023 FFPC)

10.11 Premises Identification (2023 FFPC)

- Yes No

- Project complies 10.11.1 Address Identification

Key Boxes (2023 FFPC, Chapter 18)

- Yes No Not Required

- Project complies 18.2.2.1 Where Required

34 High Piled Combustible Storage (2023 FFPC)

34.9 Protection of Rubber Tires

- Yes No

- Project does contain high-hazard commodities (Rubber Tires)

Definitions per Chapter 3 of the Florida Fire Prevention Code

3.3.269.7 Miscellaneous Tire Storage: The Storage of rubber tires that is incidental to the main use of the building; storage areas that do not exceed 2000 square feet, and on-tread storage piles, regardless of the storage method, do not exceed 25 ft. in the direction of the wheel holes. Acceptable storage arrangements include (1) on-floor, on-side storage up to 12 feet high; (b) on-floor, on-tread storage up to 5 feet high (c) double-row or multirow fixed or portable rack storage on-side or on-tread up to 5 feet high ; (d) single-row fixed or portable rack storage on-side or on-tread up to 12 feet; and (e) laced tires in racks up to 5 feet in height.

- Project does contain miscellaneous tire storage (<500 s.f. of rubber tire storage not over 12 feet high).

30 Motor Fuel-Dispensing Facilities and Repair Garages (2023 FFPC)

(FFPC 30.2.4) Drainage and disposal of liquid and oil-soaked waste

- Yes No Not Required

- Garage floors do not contain floor drains. (FFPC 30.2.4.3)

42 Refueling (2023 FFPC)

(FFPC 42.3.3.1.7) Spill Control and Secondary Containment

- Not required. Project does not exceed maximum allowable quantity per control area.

(FFPC 42.3.3.8.3) Waste oil, motor oil and other Class III B Liquids

- Project complies with 42.3.3.8.3 for Waste oil, motor oil and other Class III B liquids.

(FFPC 42.3.3.8.3) Tank Location

- Tanks storing Class III B liquids inside buildings shall be permitted to be located at, below, or above grade

(FBC 906 & FFPC 42.7.2.6.2) Fire Extinguishers

- Project complies with 906.1 through 906.10 fire extinguishers and FFPC Section 42.7.2.6.2.1 through 42.7.2.6.2.4

60 Hazardous Materials - General Provisions (2023 FFPC)

Table 60.4.2.1.1.3 Maximum Allowable Quantity Per Control Area

- Project complies with Table 60.4.2.1.1.3
- Project contains Class III B Liquid Storage that does not exceed 13,200 liquid gallons per control area.
- Project contains Class III B Liquid Open-System that does not exceed 3,300 liquid gallons per control area.
- Project contains Flammable Liquid IA Storage that does not exceed 30 liquid gallons per control area.
- Project contains Flammable Liquid IA Open System that does not exceed 10 liquid gallons per control area.
- Project contains Flammable Liquid IB Storage that does not exceed 120 liquid gallons per control area.
- Project contains Flammable Liquid IB Open System that does not exceed 30 liquid gallons per control area.

60.4.2 Control Areas

- Project complies 60.4.2.1 through 60.4.2.2.3
- Entire building is one single control area.

3 Use and Occupancy Classification(s) (2021 NFPA 101)

- Business Group B (Incidental occupancy / accessory to Special-Purpose Industrial.) Section 6.1.14.1.3
- Industrial, Special-Purpose

6 Classification of Occupancy and Hazard of Contents (2021 NFPA 101)

6.1.14.3 Mixed Occupancies

- Mixed Use Occupancy (Separated) Mixed Use Occupancy (Non-Separated) Does not apply

6.1.14.1.3 Multiple Occupancies

Where incidental to another occupancy, areas used as follows shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of the Code that apply to the predominant occupancy:

- (1) Mercantile, business, industrial or storage use.

- The Business use is incidental to the Special Industrial use.

7 Means of Egress (2021 NFPA 101)

7.2.9.1 Fire Escape Ladders

General. Fire escape ladders complying with 7.2.9.2 and 7.2.9.3 shall be permitted in the means of egress only where providing one of the following (Item #4):

- Secondary means of egress from boiler rooms or similar spaces subject to occupancy not to exceed three persons who are all capable of using the ladder.

8 Features of Fire Protection (2021 NFPA 101)

8.7.1.1 Special Hazard Protection

Protection from any area having a degree of hazard greater than that normal to the general occupancy of the building or structure shall be provided by one of the following means:

- (1) Enclosing the area with a fire barrier without windows that has a 1-hour fire resistance rating in accordance with Section 8.3.

- 1-Hour Separation has been provided between Tire Storage and Service.

40 Industrial Occupancies (2021 NFPA 101)

40.2.2.10 Fire Escape Ladders

- Fire escape ladders complying with 7.2.9 shall be permitted.

40.2.5 Arrangement of Means of Egress & 40.2.6.1 Maximum Travel Distance to Exits

Table 40.2.5.1 & Table 40.2.6.1

Occupancy	Code References	Max. Travel without Sprinkler System (Feet)	Max Travel Distance Provided (Feet)	Max. Common Path Travel Distance (Feet) Allowable	Max. Common Path Travel Distance (Feet) Provided
Special Purpose Industrial	Tables 40.2.5.1 40.2.6.1	300'	71'-1"	50'	50'

Note: IBC 1017.2 only allows 200 feet max travel distance to exit. We comply with the more stringent requirement of the IBC.

(40.3.4.1, Table 40.2.6.1) Automatic Sprinkler Systems Required:

- Yes No

(40.3.4.1) Fire Alarm and Detection System Required:

- Yes No

Portable Fire Extinguishers Required:

- Yes No Project complies NFPA 10

Spaces with One Exit Or Exit Access Doorway

Code Reference	Occupancy	Number of Exits Required	Max. Common Path of Travel	Max. Dead-End Corridor	Number of Exits Provided
40.2.4.1.2 Table 40.2.5.1	Special Purpose Industrial	1	50'-0"	50'-0"	4

Minimum Number of Exits or Access to Exits Per Story

Occupancy	Code Reference	Minimum Number of Exits or Access to Exits from Story	Number of Exits or Access to Exits from Story Provided
Special Purpose Industrial	40.2.4.1.1	2	4



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL		
No.	Description	Date

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Life Safety / Code Summary	
Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
<h1>LS101</h1>	
Scale	12" = 1'-0"

LIFE SAFETY SYMBOL LEGEND

	Exit Sign		Maneuvering clearances at manual swinging doors
	Handicap Accessible Egress Width		Travel Distance
	Exit from room (# = minimum clear width in inches)		1 Hour Rated

Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
15	HVAC condensing unit. See Mechanical.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
33	ADA compliant room / exit sign. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
144	Electrical meter. See Electrical.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
219	Air compressor (By Others).
220	Scissor lift alignment (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
229	Rolling drain pan (By Others).
230	Tool cart (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.

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No.	Description	Date

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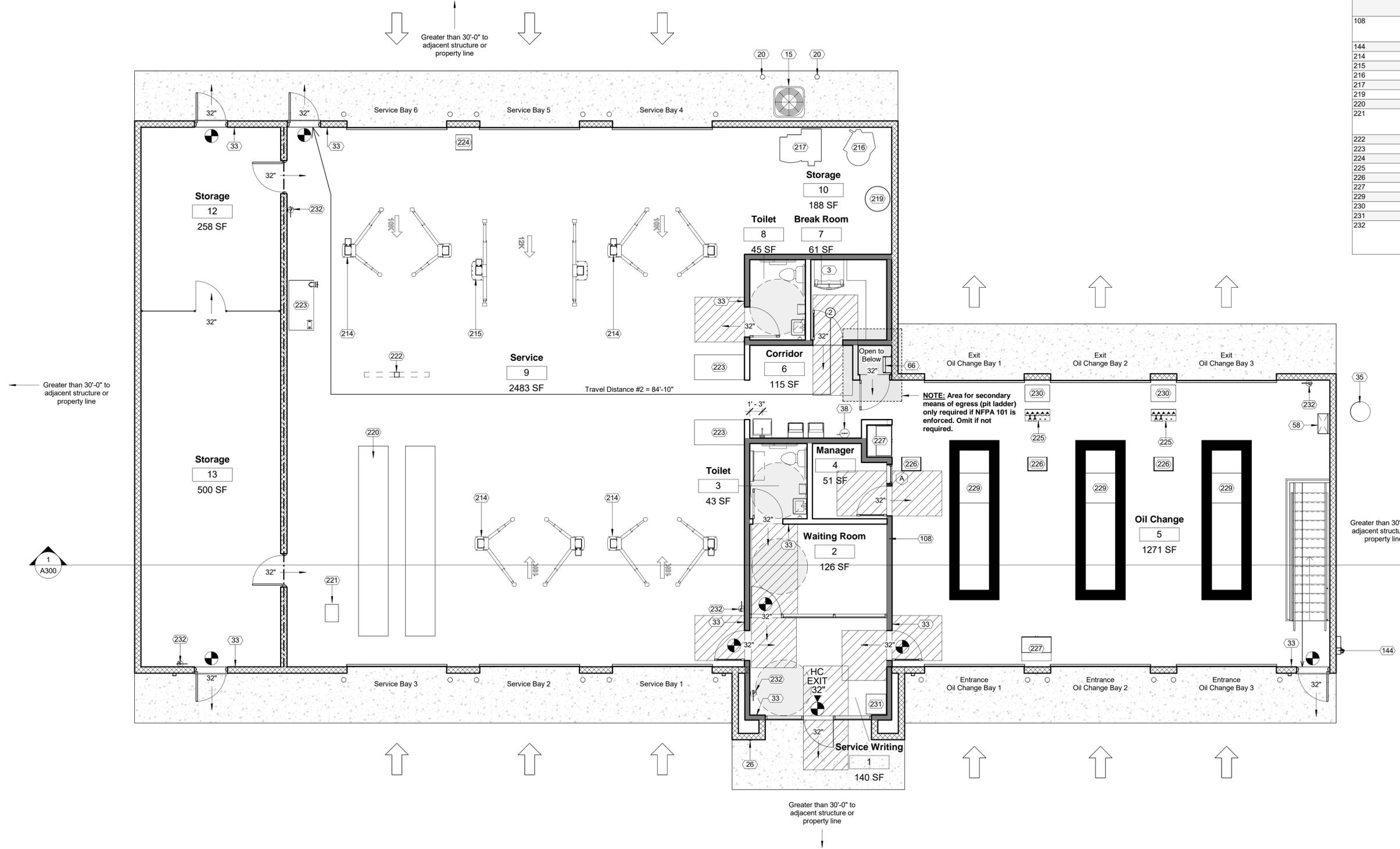
Life Safety Plan - Main

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

LS102

Scale As indicated

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1 05 Life Safety Plan Main
3/16" = 1'-0"



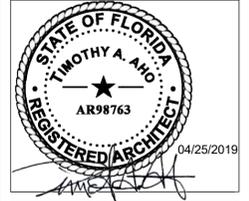
LIFE SAFETY SYMBOL LEGEND

-  Exit Sign
-  Maneuvering clearances at manual swinging doors
-  HC EXIT 32" Handicap Accessible Egress Width
-  # Travel Distance
-  32" Exit from room (# = minimum clear width in inches)
-  - - - - - 1 Hour Rated

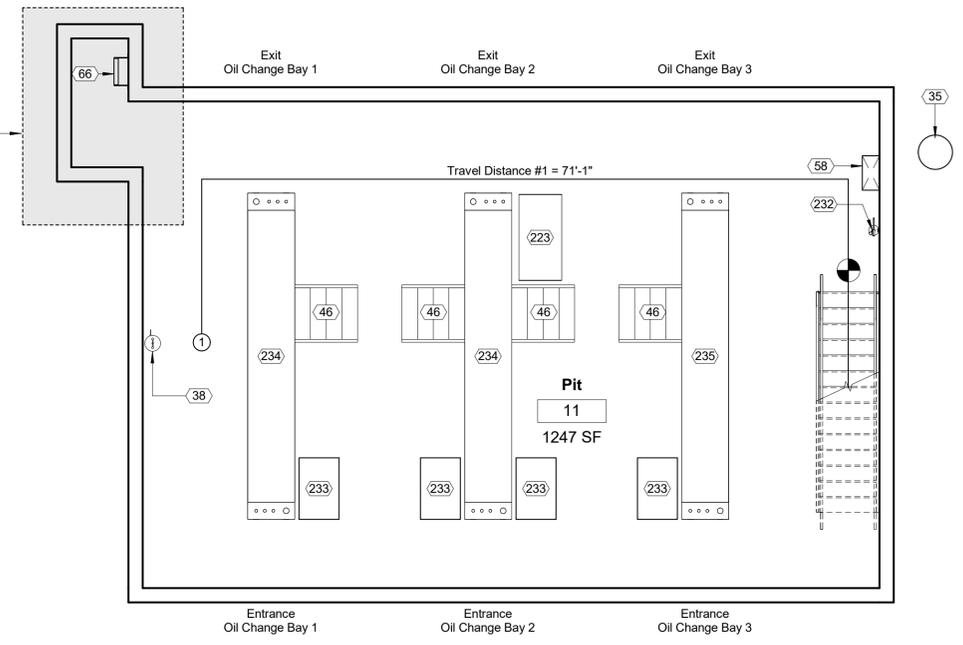
Keynote Schedule	
Tag	Text
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
223	Work bench (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
233	275-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.



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NOTE: Notch for secondary means of egress (pit ladder) only required if NFPA 101 is enforced. Omit if not required.



① 04 Life Safety Plan Pit
3/16" = 1'-0"

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Stark, Florida

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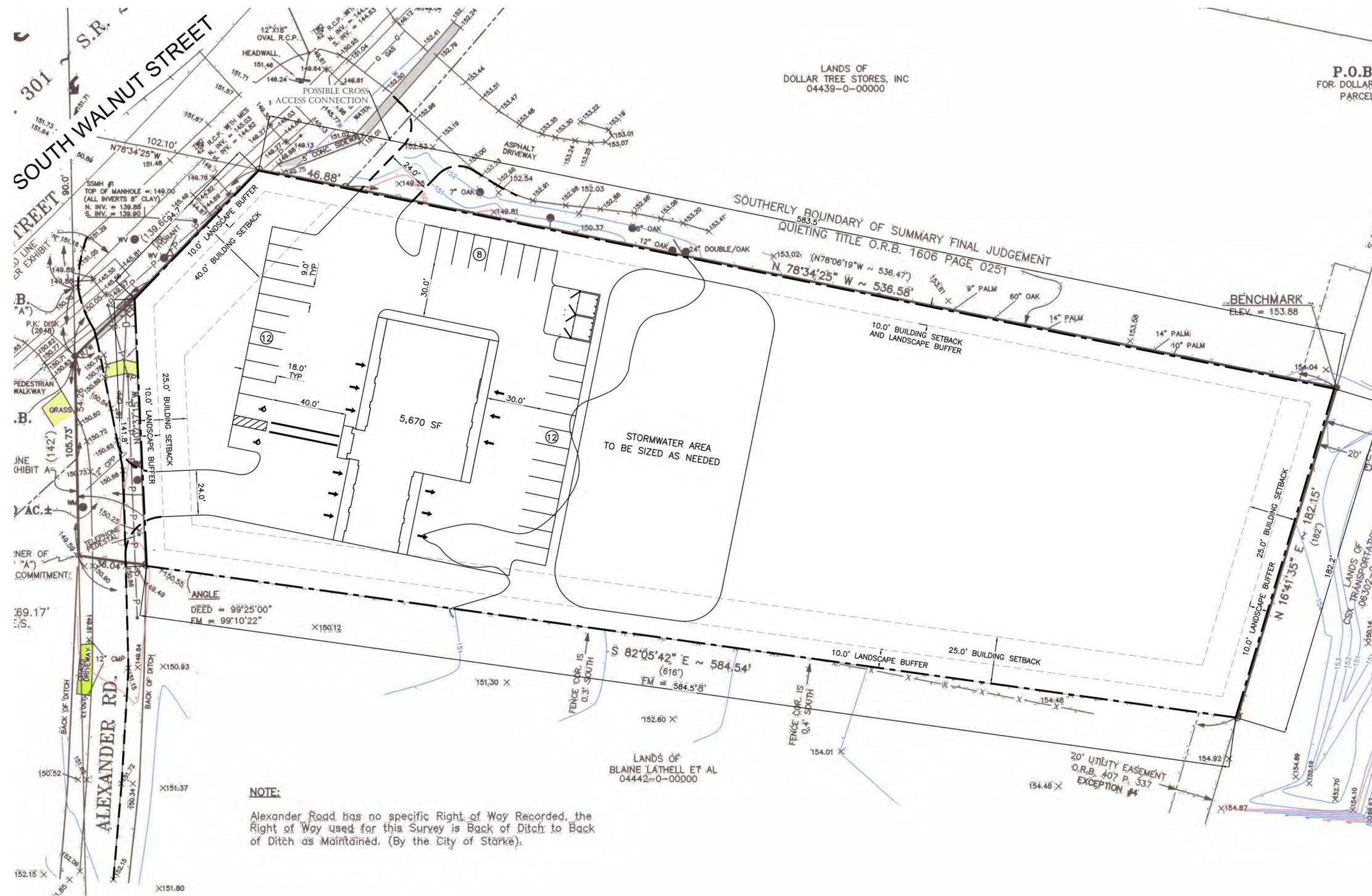
No.	Description	Date

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Life Safety - Pit

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
LS103	
Scale	As indicated





NOTE:
 THIS PLAN IS TO SHOW THE BUILDING AS IT RELATES TO THE SITE. A COMPLETE SET OF CIVIL DRAWINGS ARE TO BE SUBMITTED TO THE AHJ INDEPENDENT OF THIS SUBMITTAL. REFER TO THOSE DRAWINGS FOR ACTUAL INFORMATION.



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

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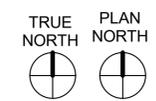
Architectural Site Plan

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

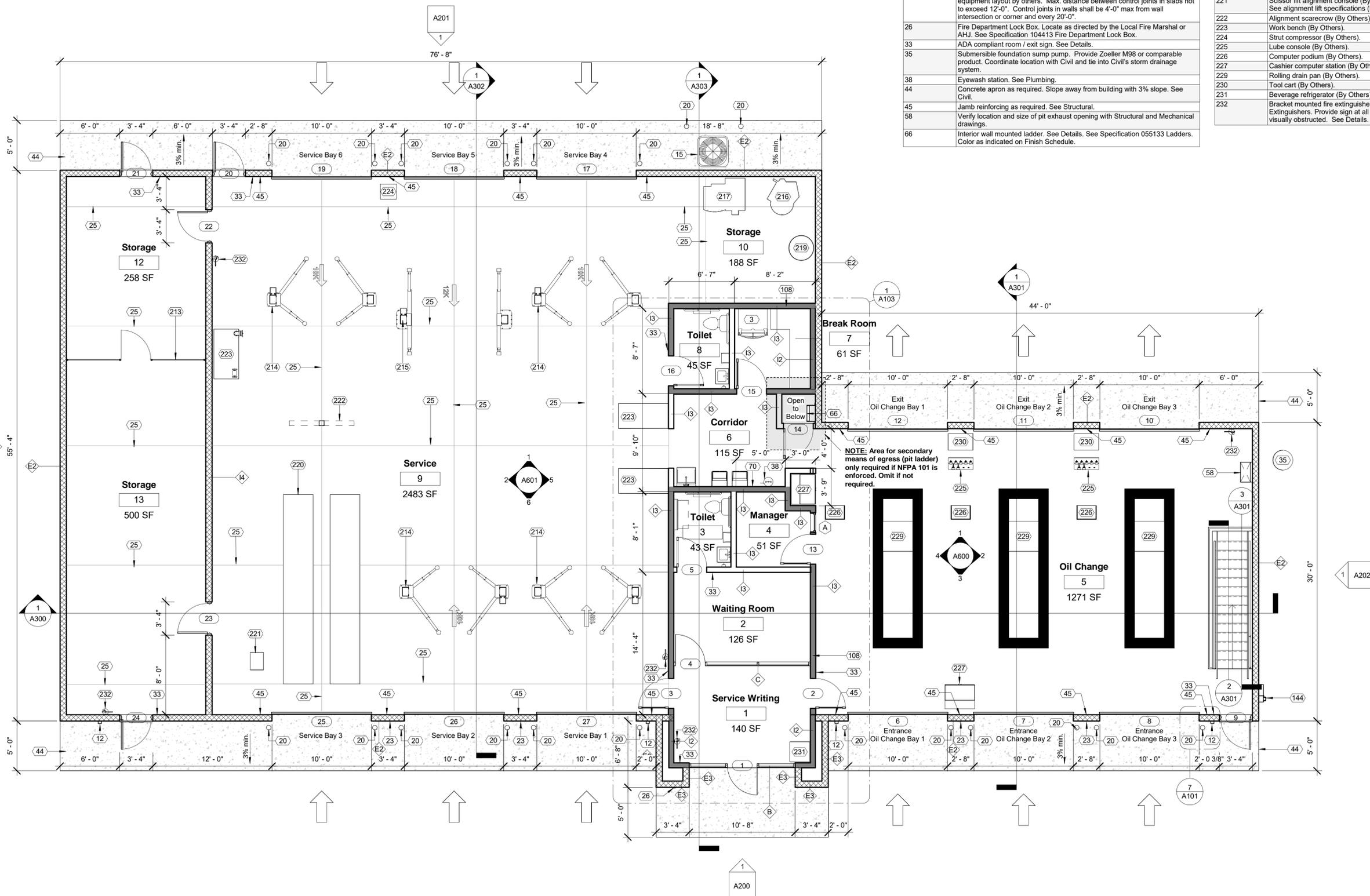
AS100

Scale N.T.S.

1 Architectural Site Plan
 N.T.S.



10/24/2024 4:46:39 PM



1 01 Floor Plan Main
3/16" = 1'-0"

Tag	Text
3	Location of 30" wide refrigerator (By Others).
12	Pre-finished metal conductor head with built-in overflow and downspout. Boot piped to storm drainage system unless otherwise indicated to discharge at grade. If discharging at grade, provide a pre-finished elbow and concrete splash block. See Civil for tie-in. See Specification 077100 Roof Specialties.
15	HVAC condensing unit. See Mechanical.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
23	Wall sconce (By Others). See Electrical. Locate junction box for sconces 5'-0" a.f.f. vertically and 4" from center horizontally. Verify with sign company prior to rough-in.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
33	ADA compliant room / exit sign. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
44	Concrete apron as required. Slope away from building with 3% slope. See Civil.
45	Jamb reinforcing as required. See Structural.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.

Tag	Text
70	Full-height FRP, entire wall. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
144	Electrical meter. See Electrical.
213	Full height chain-link fence with 3'-0"x7'-0" gate.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
219	Air compressor (By Others).
220	Scissor lift alignment (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
229	Rolling drain pan (By Others).
230	Tool cart (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.

NOTE: Area for secondary means of egress (pit ladder) only required if NFPA 101 is enforced. Omit if not required.



Express Oil Change & Tire Engineers
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 Starke, Florida

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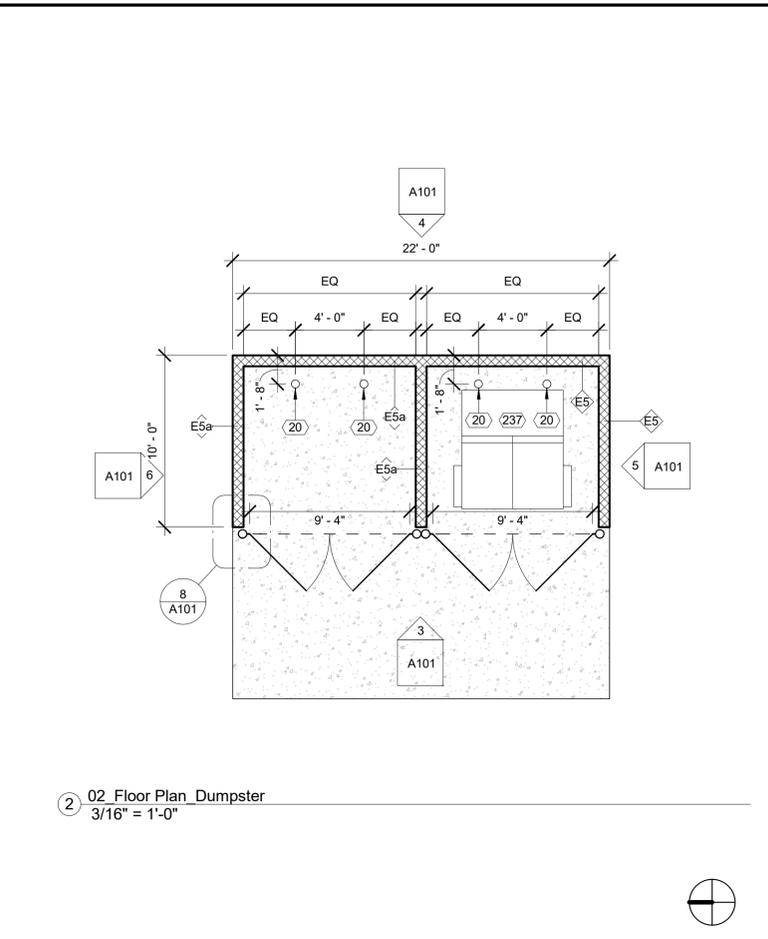
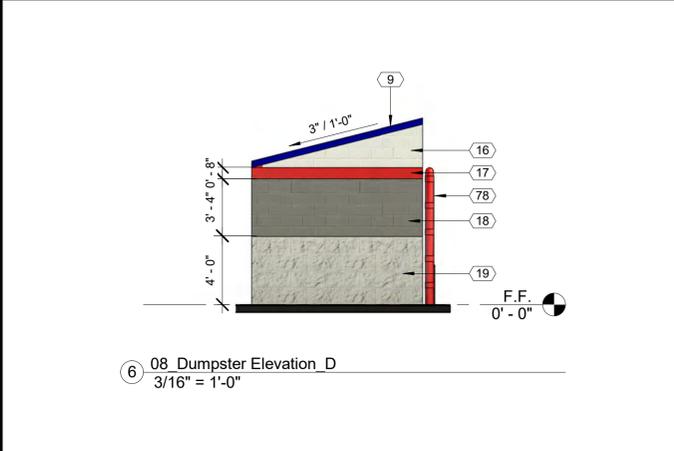
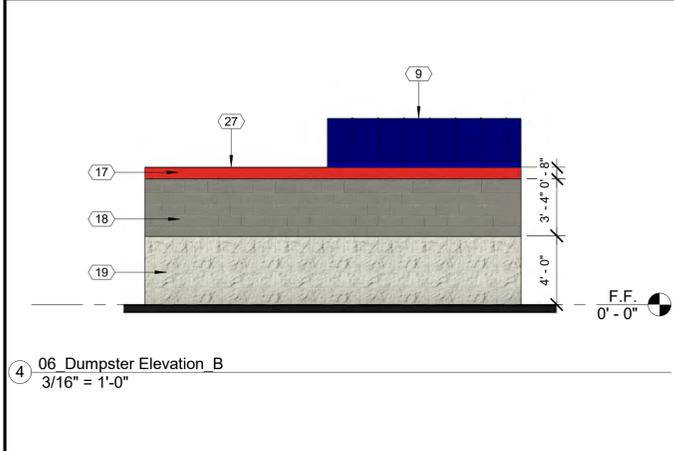
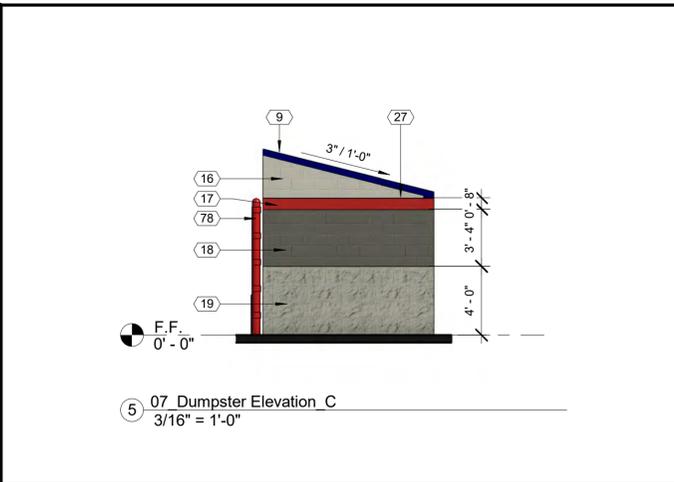
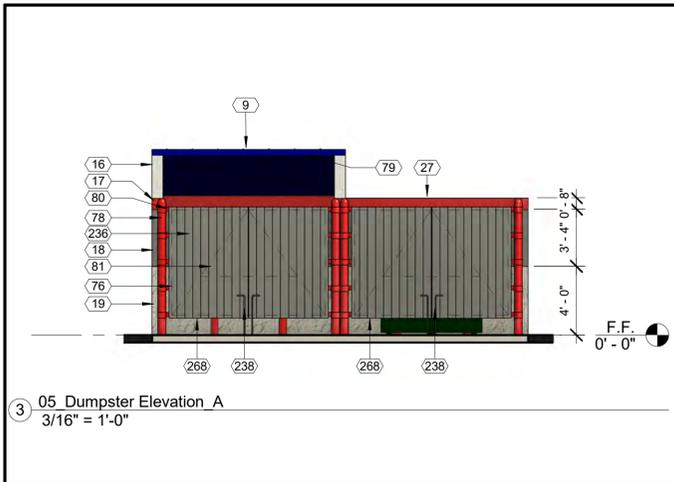
Floor Plan - Main

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

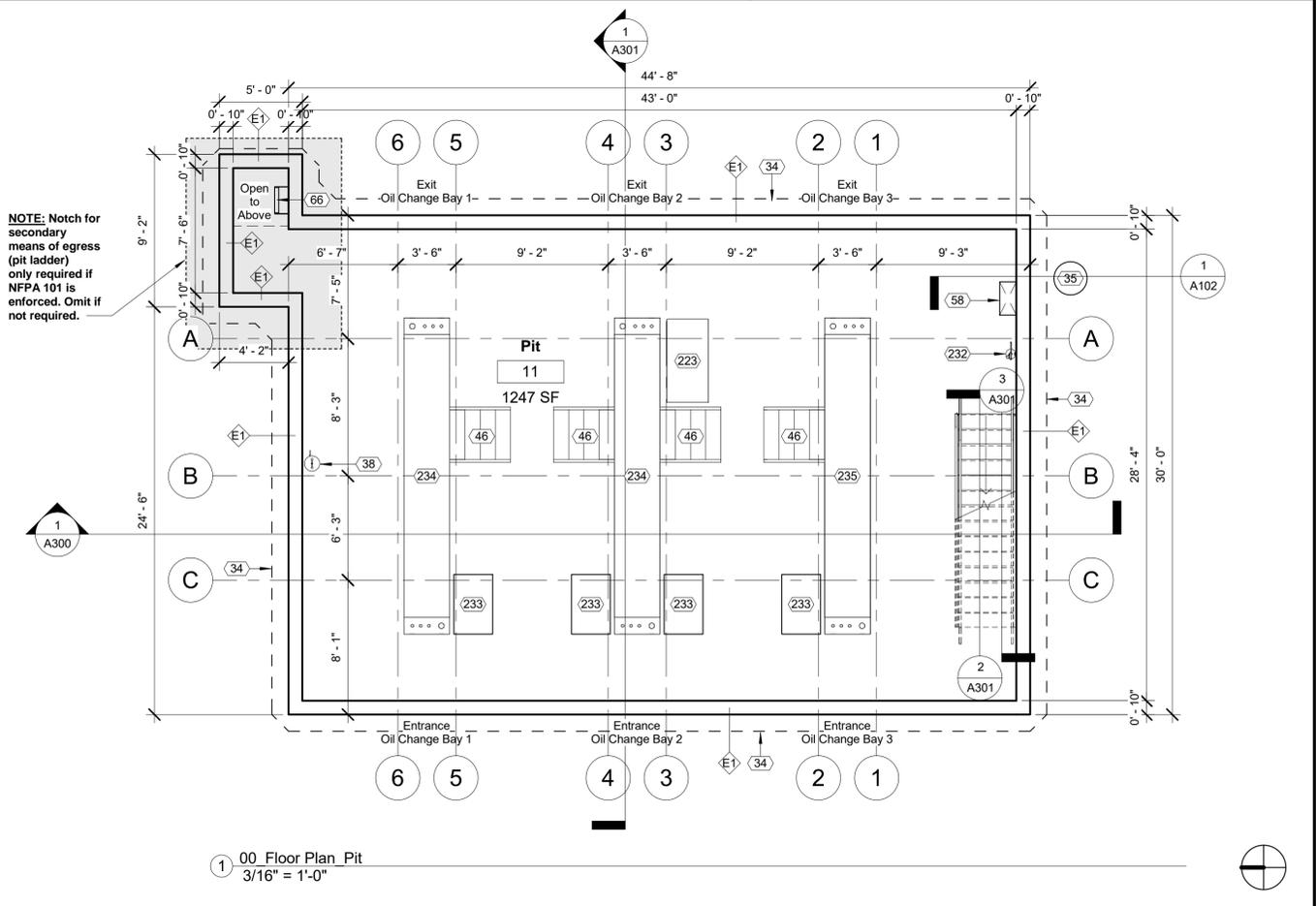
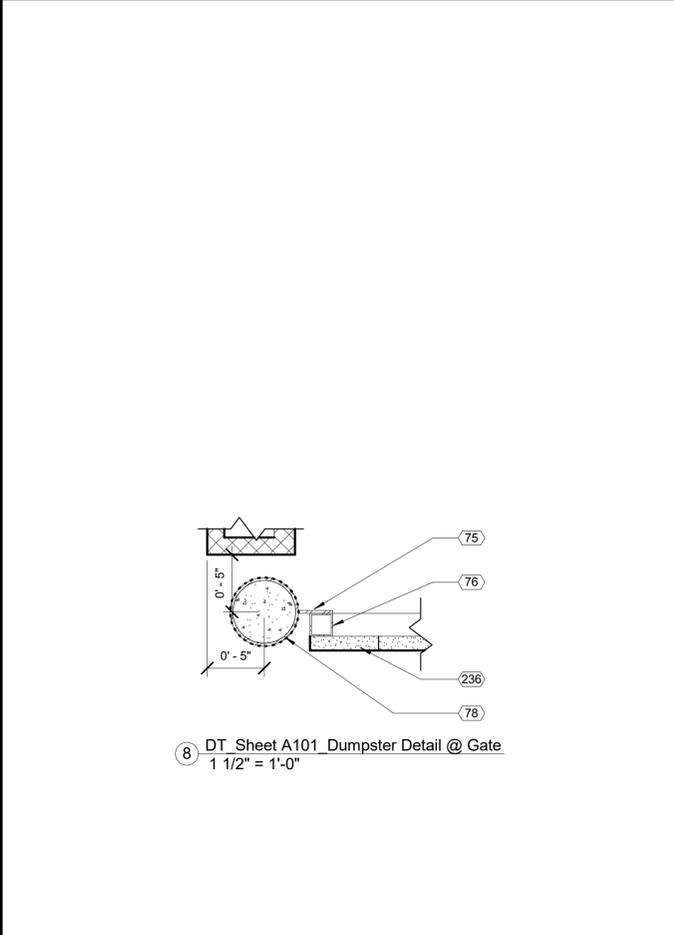
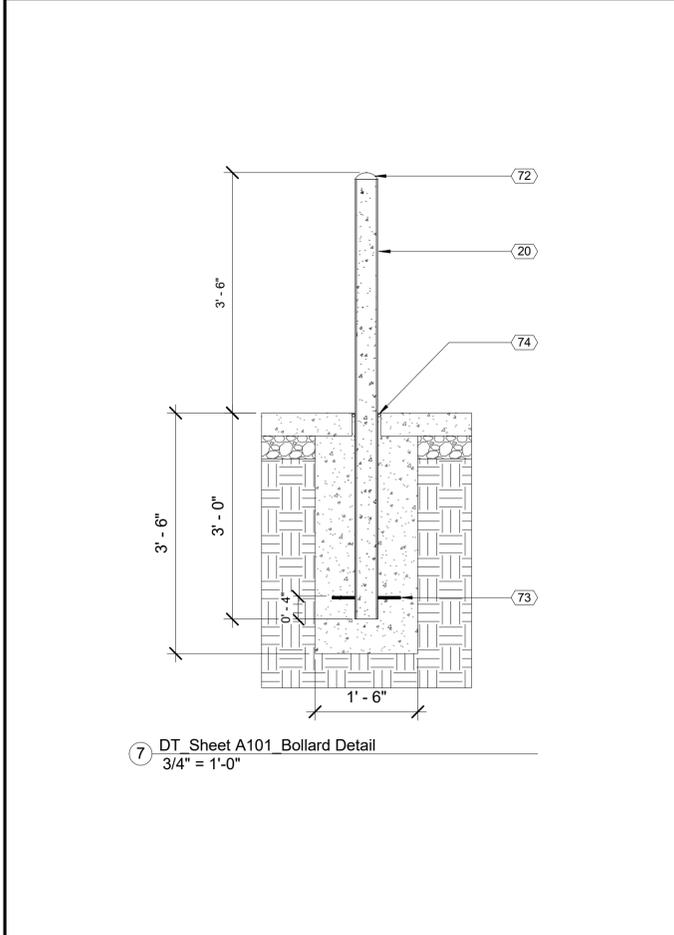
A100

Scale 3/16" = 1'-0"

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Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
17	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
34	4" perforated perimeter drain with silt filtration fabric. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
72	Painted concrete cap for pipe bollard. Color as indicated on Finish Schedule.
73	1/2" diameter x 4" long metal studs. Provide a total of 4.
74	1/2" expansion joint with backer rod and sealant.
75	1/4" x 6" painted steel bracket with continuous fillet weld to painted steel collar hinge and frame. Color as indicated on Finish Schedule.
76	2" x 2" x 1/4" painted steel gate frame with welded connections. Color as indicated on Finish Schedule.
78	6" diameter painted steel dumpster post. Color as indicated on Finish Schedule.
79	Wrap front face and underside of dumpster roof joists with metal panels to match standing seam metal roof.
80	Hinge collar with grease fitting. Collar welded all around to post. Typical.
81	2" x 2" x 1/4" painted steel cross bracing with horizontal bracing in thirds (beyond). Color as indicated on Finish Schedule.
223	Work bench (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
233	275-gallon Class III B new oil tank (By Others).
234	928-gallon Class III B new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
236	1x6 painted Trex slats secured to frame. See Finish Schedule for color.
237	Dumpster (By Others).
238	Cane bolts with stops.
268	Hold bottom of gate above grade as necessary to clear adjacent curb height to ensure gates can swing 180 degrees. Coordinate with Civil drawings for clearance needed.



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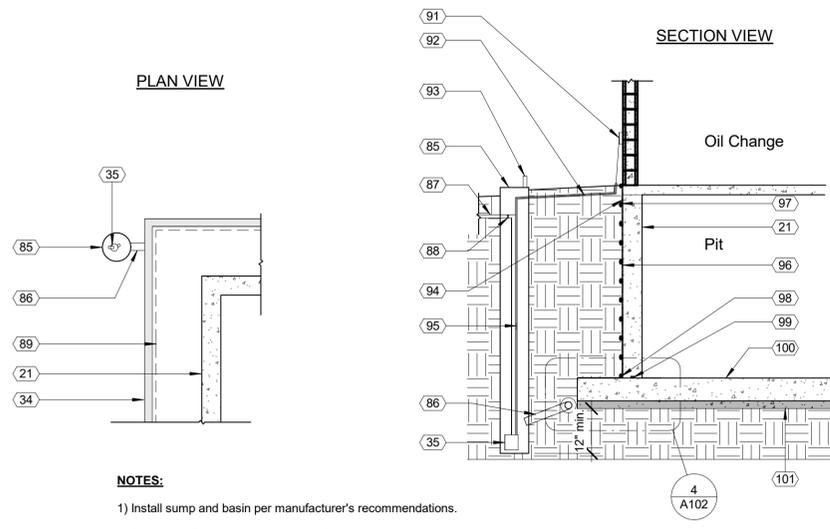
FINAL

No.	Description	Date

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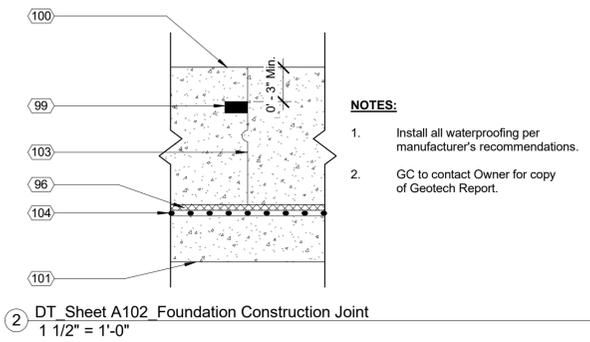
Pit Floor Plan and Site Details

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A101	
Scale	As indicated



- NOTES:**
- 1) Install sump and basin per manufacturer's recommendations.
 - 2) Provide traffic rated lid without vent if located in drive aisle.

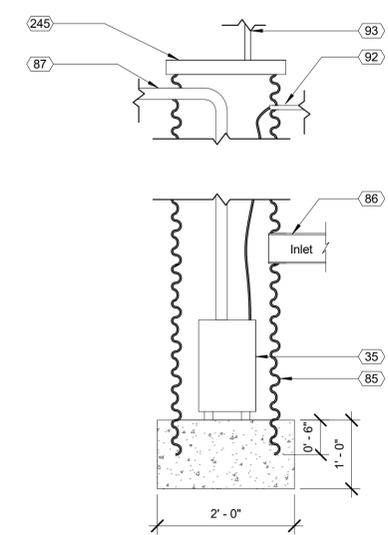
1 DT_Sheet A102_Sump Pump Detail
1/4" = 1'-0"



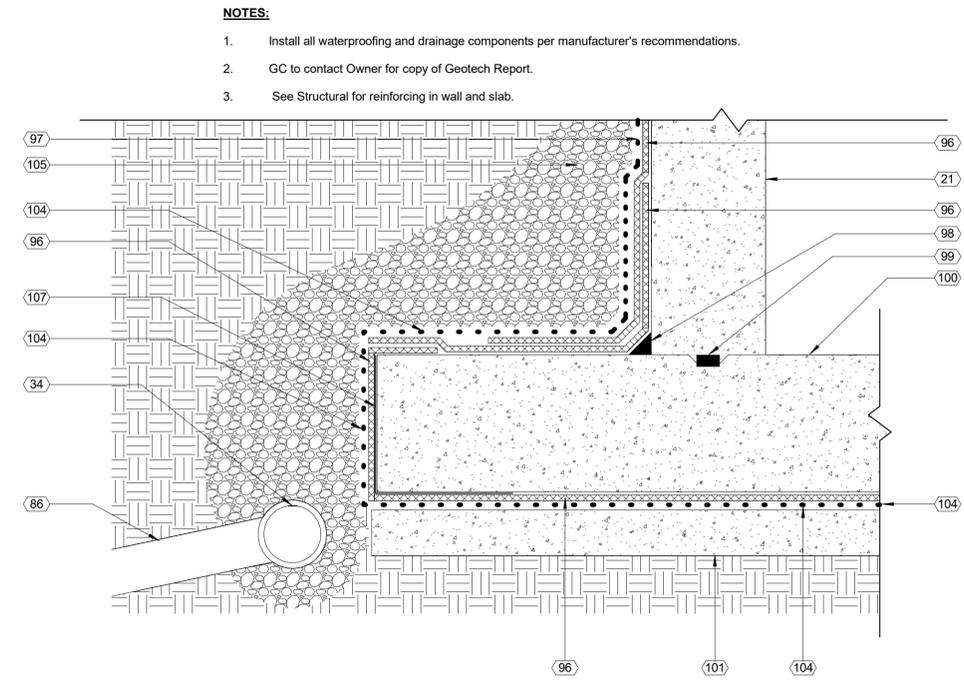
- NOTES:**
1. Install all waterproofing per manufacturer's recommendations.
 2. GC to contact Owner for copy of Geotech Report.

2 DT_Sheet A102_Foundation Construction Joint
1 1/2" = 1'-0"

Keynote Schedule	
Tag	Text
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
34	4" perforated perimeter drain with silt filtration fabric. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
85	18" diameter black corrugated pipe with inlet fittings and solid heavy duty corrugated locking pipe cover set in concrete with power grommet, or Nyloplast drain basin with inlet fittings and lockable cover and power grommet. Contractor's Option. Set pipe in concrete 2'x2'x1'. Embed pipe 6" into concrete.
86	4" discharge pipe to sump pump.
87	2" discharge pipe from sump pump to storm drainage system. Coordinate with Civil.
88	Install union at serviceable depth.
89	Concrete foundation. See Structural.
91	Provide power for sump pump. See Electrical.
92	Power cord for sump pump to be run in conduit from outlet to sump below grade.
93	2" - 3" vent pipe
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
95	Pull rope or wire for submersible sump pump.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
98	CCW MiraClay granules or CCW MiraClay mastic.
99	CCW MiraStop.
100	Concrete slab. See Structural.
101	4" mud slab if required. See Structural.
103	Construction joint.
104	CCW MiraDrain 9800.
105	3" washed #57 stone wrapped in silt filtration fabric.
107	CCW MiraClay 12" Reinforcing Angle Strip at all outside corners.
245	Lockable cover @ sump pump.



3 DT_Sheet A102_Sump Pump Section
3/4" = 1'-0"



4 DT_Sheet A102_Foundation Waterproofing with Gravel Fill
1 1/2" = 1'-0"



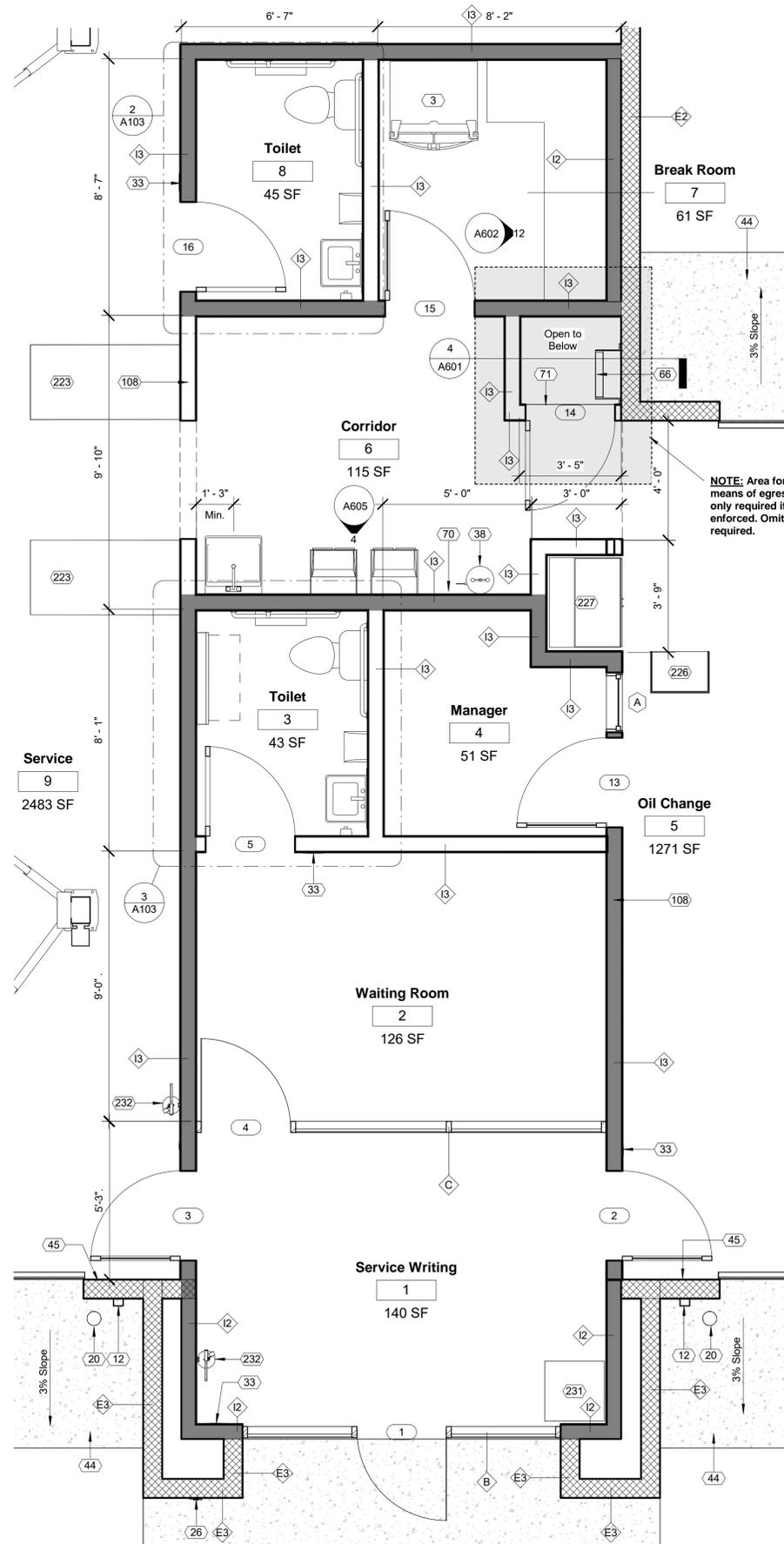
Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stark, Florida

FINAL

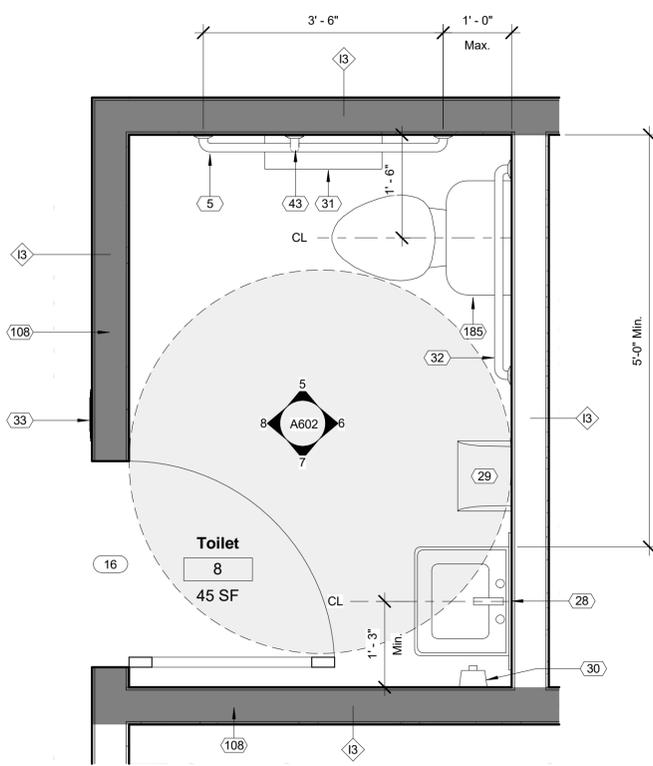
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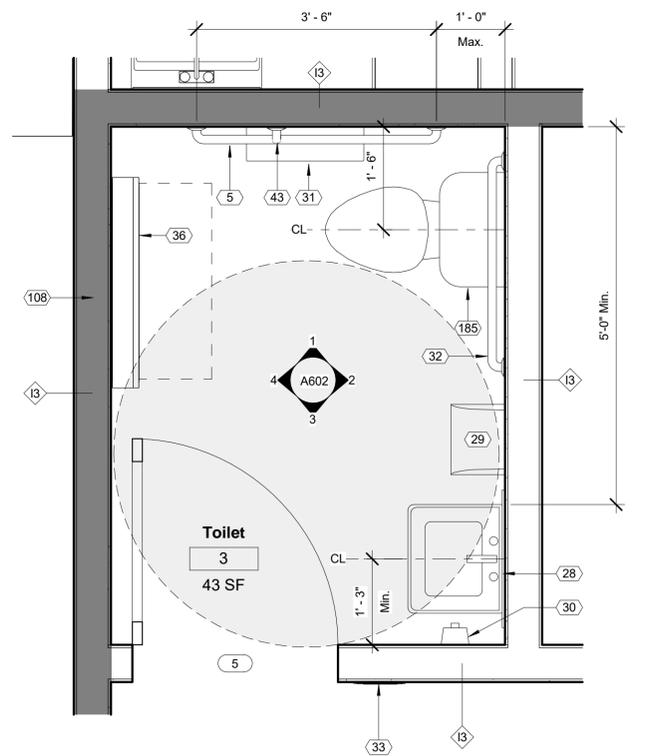
Foundation Details	
Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A102	
Scale	As indicated



1 08 Enlarged Plan Main
3/8" = 1'-0"



2 10 Enlarged Plan Toilet 8
3/4" = 1'-0"



3 09 Enlarged Plan Toilet 3
3/4" = 1'-0"

Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
5	42" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
12	Pre-finished metal conductor head with built-in overflow and downspout. Boot piped to storm drainage system unless otherwise indicated to discharge at grade. If discharging at grade, provide a pre-finished elbow and concrete splash block. See Civil for tie-in. See Specification 077100 Roof Specialties.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
28	Framed mirror. See Specification 102800 Toilet, Bath, and Laundry Accessories.
29	Automatic Towel Dispenser (By others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
30	Wall mounted soap dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
31	Jumbo Dual Roll Toilet Tissue dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
32	36" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
33	ADA compliant room / exit sign. See Details.
36	Surface mounted baby changing station with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
38	Eyewash station. See Plumbing.
43	24" vertical grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
44	Concrete apron as required. Slope away from building with 3% slope. See Civil.
45	Jamb reinforcing as required. See Structural.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
70	Full-height FRP, entire wall. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).
71	Edge of slab to align with framed wall in lieu of pit wall below.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
185	Flush valve on transfer side of water closet.
223	Work bench (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.



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 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

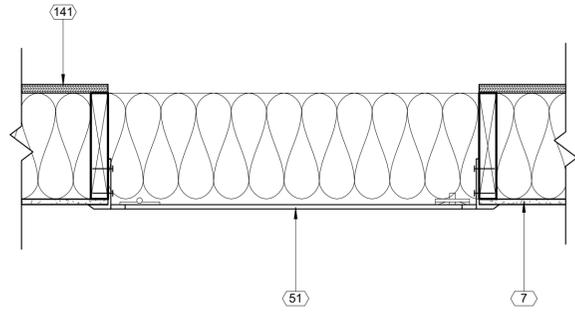
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Enlarged Floor Plans and Details

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A103

Scale As indicated

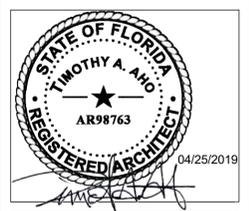


2 DT Sheet A104. Access Panel Detail
1 1/2" = 1'-0"

Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
7	Painted 1/2" gypsum board ceiling secured to structure above. 5/8" Type X where indicated.
11	Pre-finished metal canopy. See Details.
51	36"x36" removable insulated access panel.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
114	Contractor to ensure overhead door, track, etc. meets the minimum vertical clearance required for equipment (By Others). Typical.
115	Dashed line indicates extent of overhead doors. Typical.
116	See Engineering drawings for Mechanical/Electrical/Plumbing fixtures and equipment. Typical.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with gypsum board.
213	Full height chain-link fence with 3'-0"x7'-0" gate.
228	Convex mirrors (By Others).



1 01 RCP Main
3/16" = 1'-0"



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Starke, Florida

FINAL

No.	Description	Date

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Reflected Ceiling Plan - Main

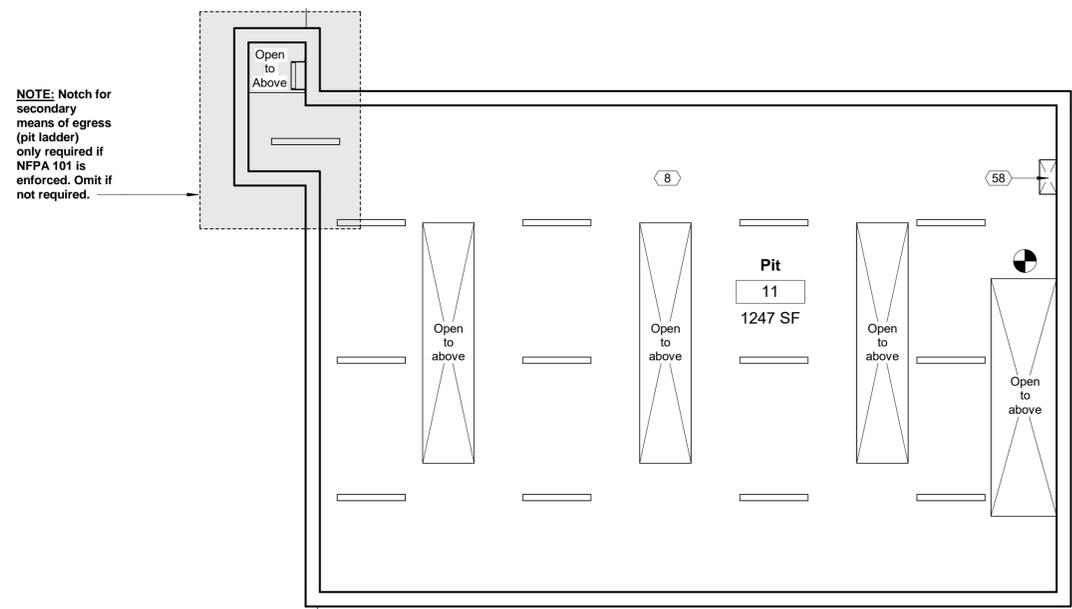
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Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A104

Scale: As indicated

10/24/2024 4:47:06 PM

Keynote Schedule	
Tag	Text
8	Exposed to structure above.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.



NOTE: Notch for secondary means of egress (pit ladder) only required if NFPA 101 is enforced. Omit if not required.

① 00_RCP_Pit
3/16" = 1'-0"



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Starke, Florida

FINAL

No.	Description	Date

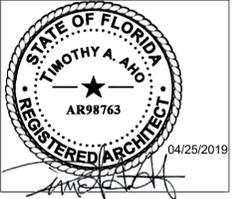
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Reflected Ceiling Plan - Pit

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A105	
Scale	3/16" = 1'-0"

10/24/2024 4:47:09 PM

Keynote Schedule	
Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
51	36"x36" removable insulated access panel.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
132	2x wood framing @ 16" o.c. with kraft face R-38 batt insulation in between. Kraft face in contact with substrate.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with gypsum board.



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 Starke, Florida

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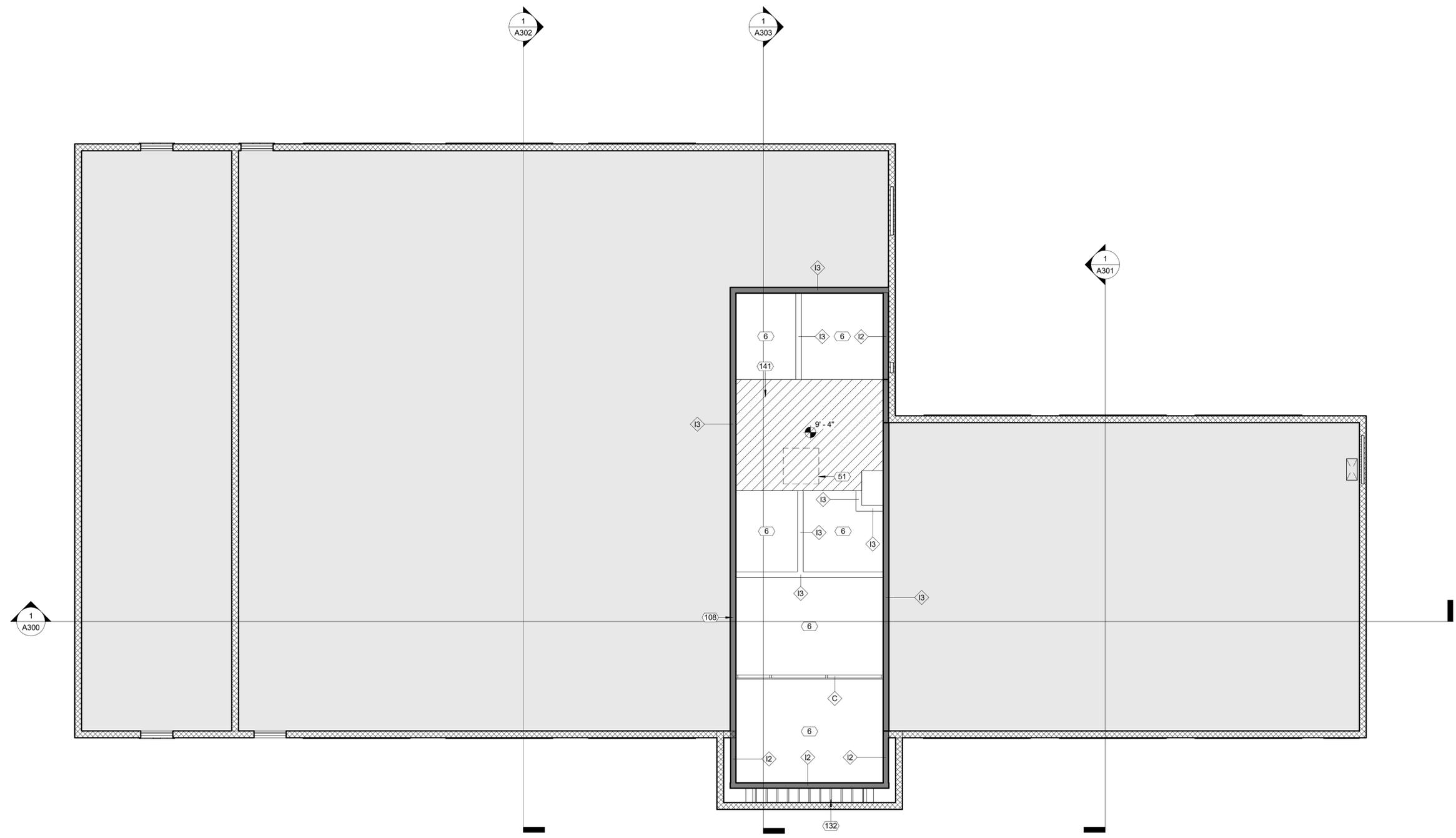
No.	Description	Date

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Floor Plan - Platform

Project number 24052
 Date 10/24/2024
 Drawn by ARC
 Checked by N/A

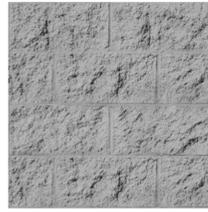
A106
 Scale 3/16" = 1'-0"



1 11 Floor Plan Platform
 3/16" = 1'-0"

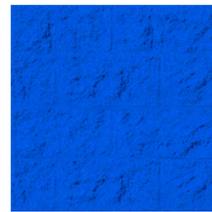
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EXTERIOR FINISH MATERIAL LEGEND



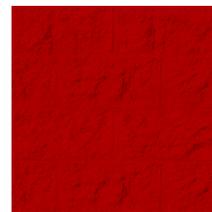
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Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: SW6966 Blueblood
Manuf: Sherwin Williams



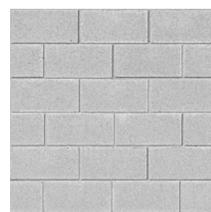
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Color: Safety Red
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: Dover Gray
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



STOREFRONT DOORS/WINDOWS

Color: Clear Anodized Aluminum
Manuf: YKK



TINTED GLAZING

Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

Keynote Schedule	
Tag	Text
1	Wall pack. See Electrical.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Boot piped to storm drainage system unless otherwise indicated to discharge at grade. If discharging at grade, provide a pre-finished elbow and concrete splash block. See Civil for tie-in. See Specification 077100 Roof Specialties.
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
17	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
23	Wall sconce (By Others). See Electrical. Locate junction box for sconces 5'-0" a.f.f. vertically and 4" from center horizontally. Verify with sign company prior to rough-in.
24	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
53	Conduit to be centered horizontally for lights in canopy. Verify with sign company prior to rough-in.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
144	Electrical meter. See Electrical.



① 01 Exterior Elevation Front (West)
3/16" = 1'-0"



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Starke, Florida

FINAL

No.	Description	Date

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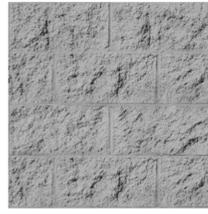
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Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A200

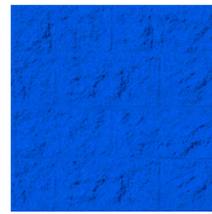
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EXTERIOR FINISH MATERIAL LEGEND



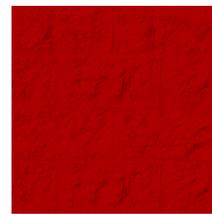
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Color: SW7669 Summit Gray
Manuf: Sherwin Williams



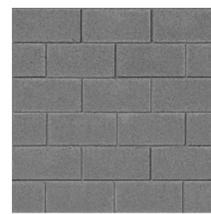
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Manuf: Sherwin Williams



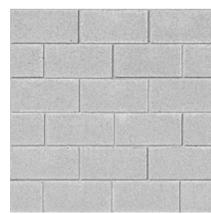
PAINTED SPLIT-FACE CMU

Color: Safety Red
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: Dover Gray
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



STOREFRONT DOORS/WINDOWS

Color: Clear Anodized Aluminum
Manuf: YKK



TINTED GLAZING

Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

Keynote Schedule	
Tag	Text
1	Wall pack. See Electrical.
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
17	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
144	Electrical meter. See Electrical.



1 02 Exterior Elevation Rear (East)
3/16" = 1'-0"



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Starke, Florida

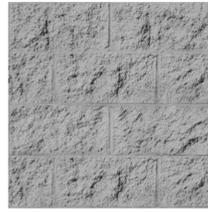
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No.	Description	Date

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Exterior Elevation - Rear (East)	
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Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A201	
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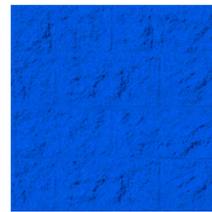
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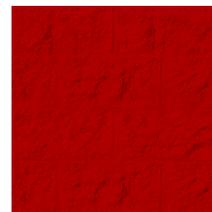
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Color: SW7669 Summit Gray
Manuf: Sherwin Williams



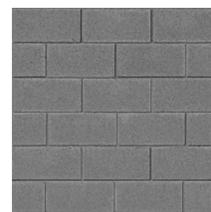
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Manuf: Sherwin Williams



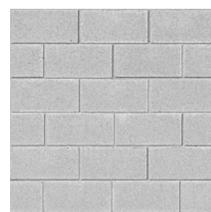
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Color: Safety Red
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: Dover Gray
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



STOREFRONT DOORS/WINDOWS

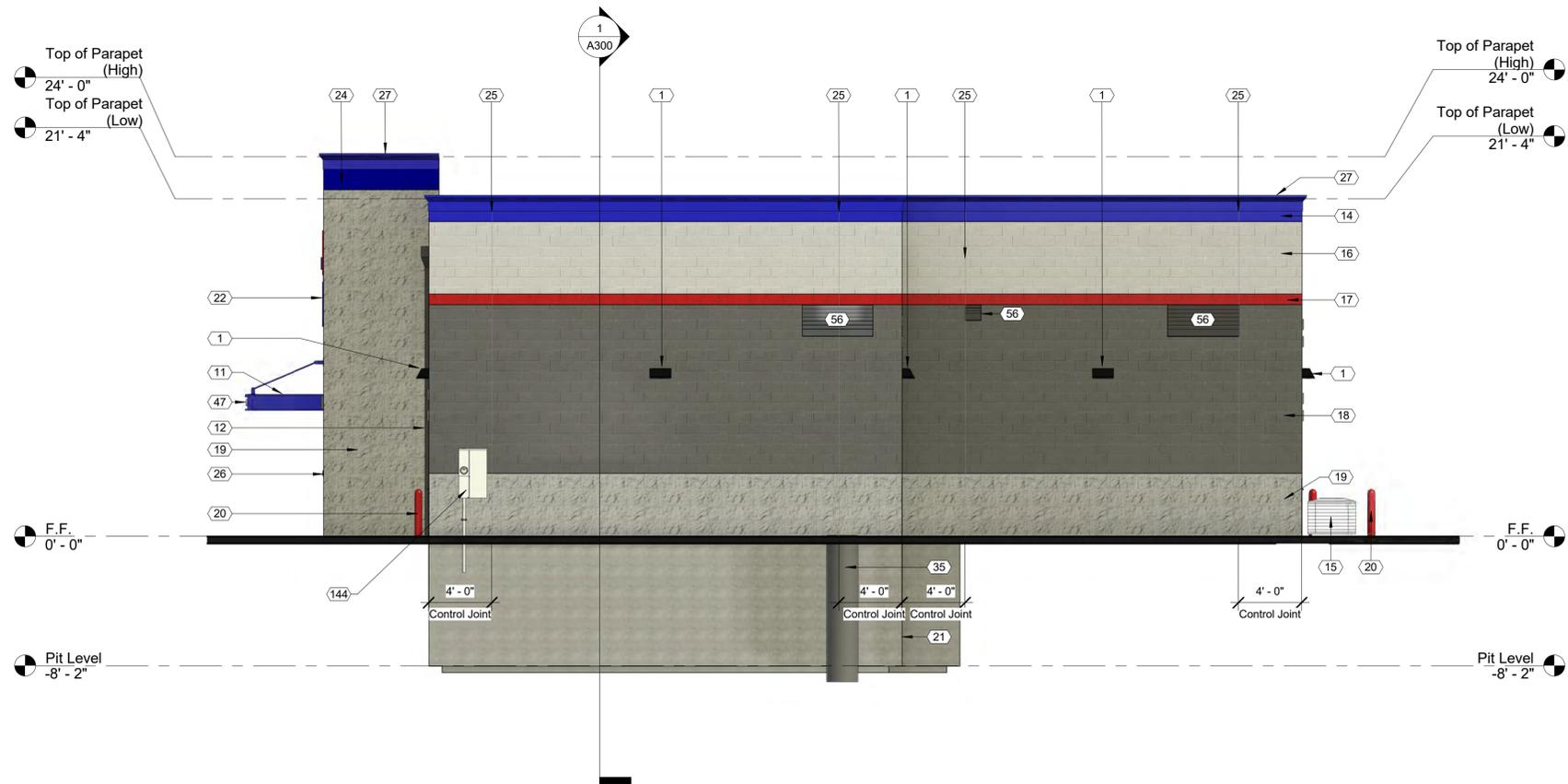
Color: Clear Anodized Aluminum
Manuf: YKK



TINTED GLAZING

Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

Keynote Schedule	
Tag	Text
1	Wall pack. See Electrical.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Boot piped to storm drainage system unless otherwise indicated to discharge at grade. If discharging at grade, provide a pre-finished elbow and concrete splash block. See Civil for tie-in. See Specification 077100 Roof Specialties.
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
17	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
24	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
144	Electrical meter. See Electrical.



① 03 Exterior Elevation Right (South)
3/16" = 1'-0"



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Starke, Florida

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No.	Description	Date

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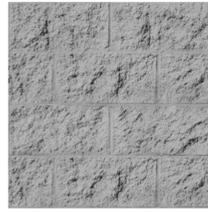
Exterior Elevation - Right (South)

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A202

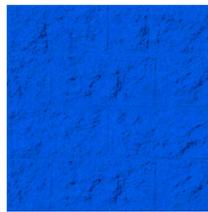
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EXTERIOR FINISH MATERIAL LEGEND



PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



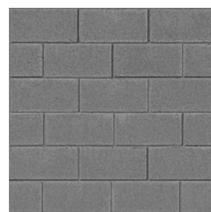
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Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: Safety Red
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: Dover Gray
Manuf: Sherwin Williams



PAINTED SMOOTH-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



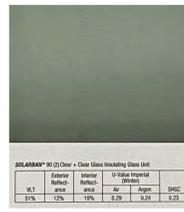
HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



STOREFRONT DOORS/WINDOWS

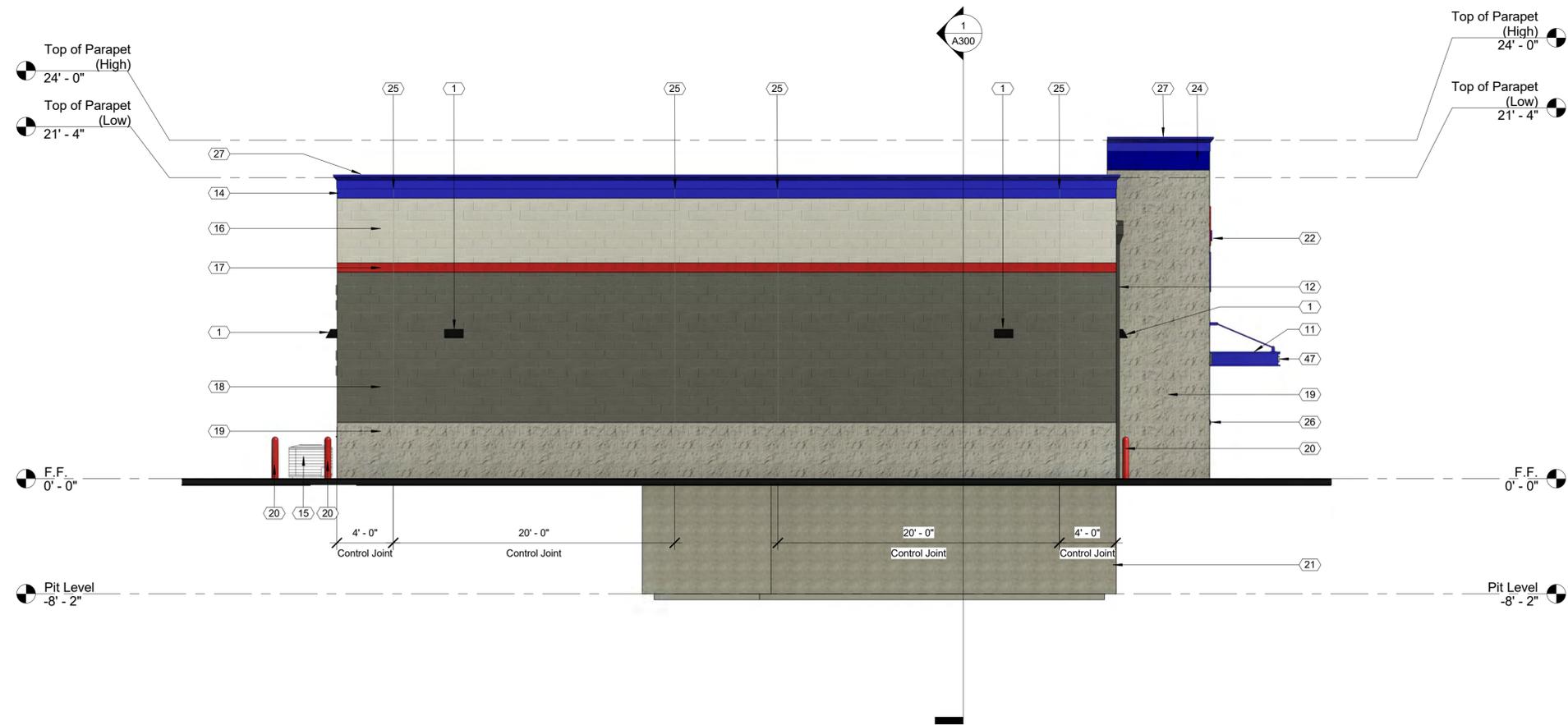
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Manuf: YKK



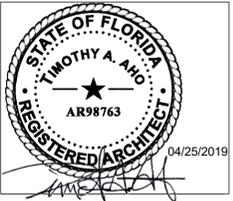
TINTED GLAZING

Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

Keynote Schedule	
Tag	Text
1	Wall pack. See Electrical.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Boot piped to storm drainage system unless otherwise indicated to discharge at grade. If discharging at grade, provide a pre-finished elbow and concrete splash block. See Civil for tie-in. See Specification 077100 Roof Specialties.
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
17	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
24	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.



① 04 Exterior Elevation Left (North)
3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

No.	Description	Date

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Exterior Elevation - Left (North)

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A203

Scale 3/16" = 1'-0"

FINAL

No.	Description	Date

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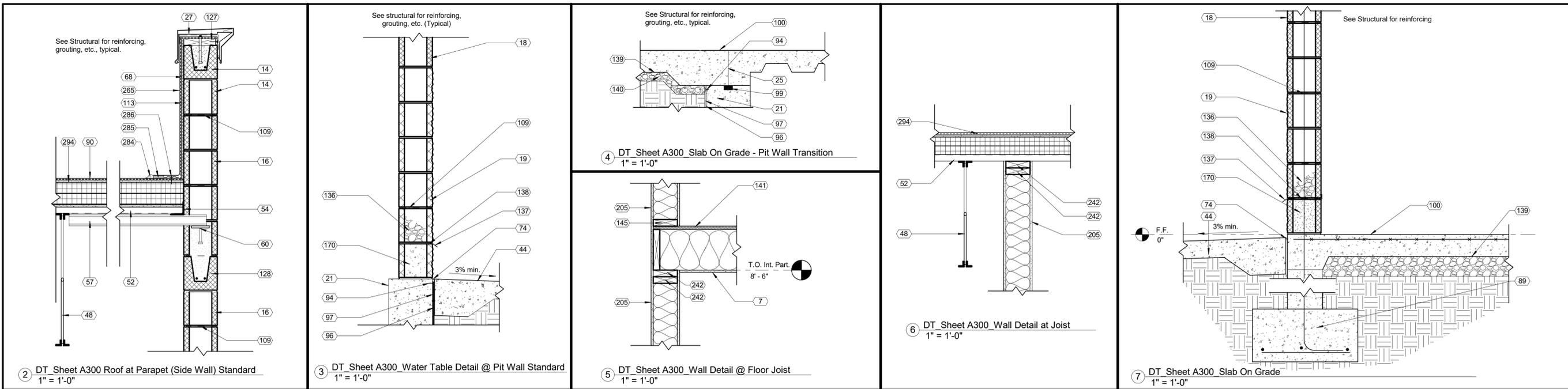
Building Sections

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A300

Scale As indicated

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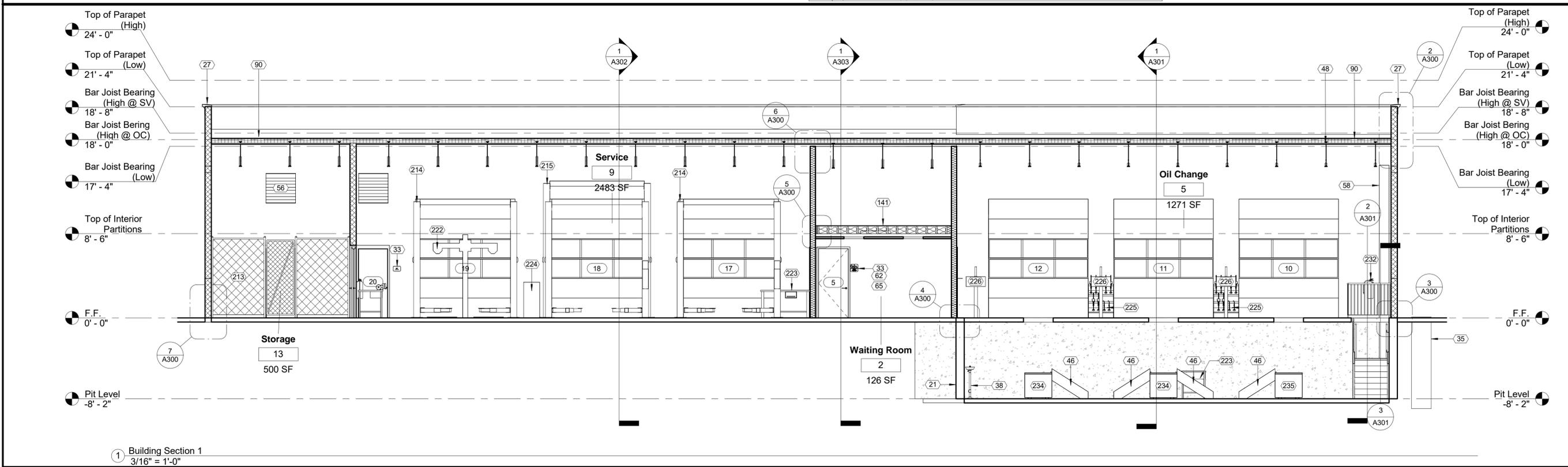


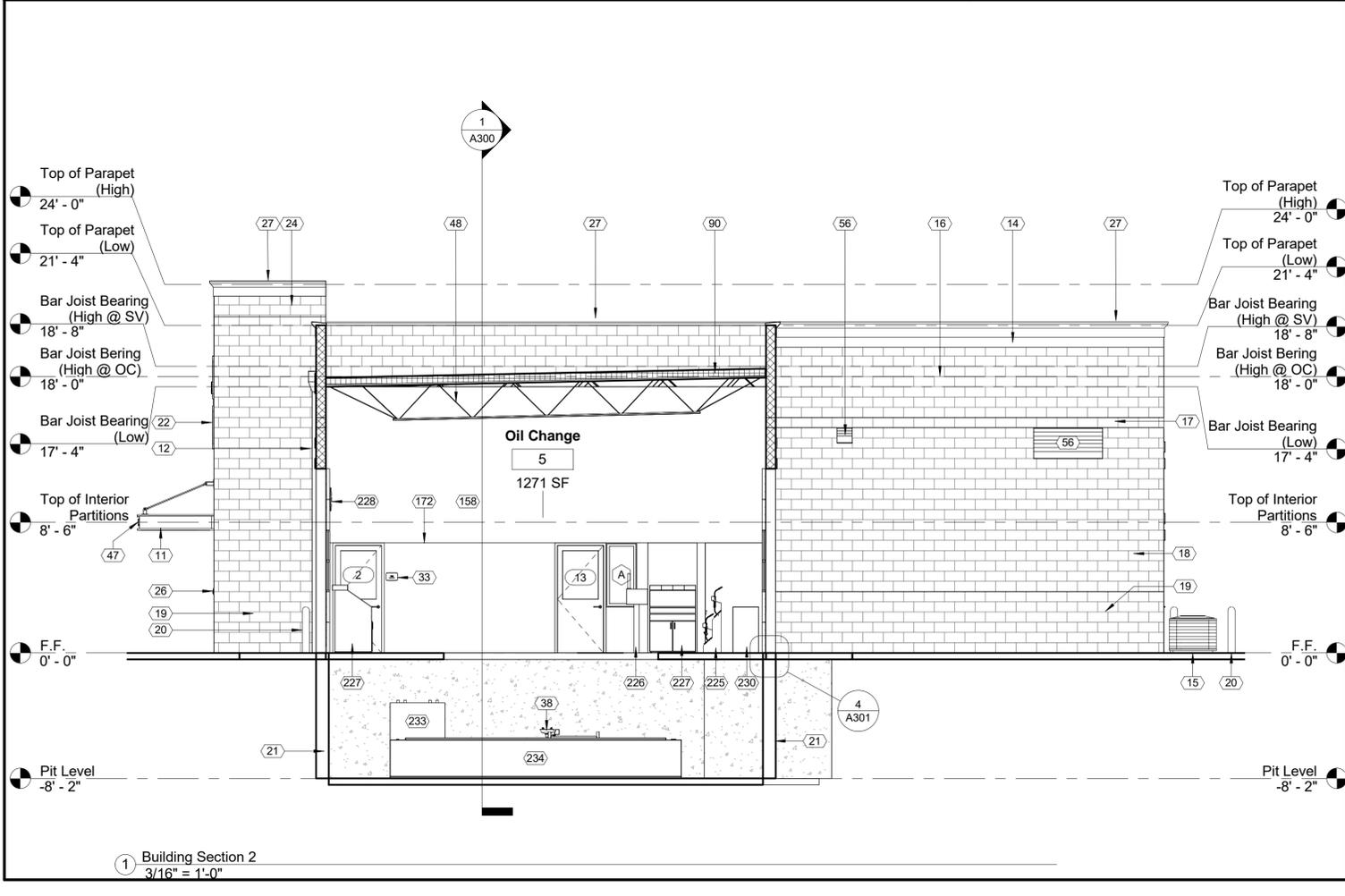
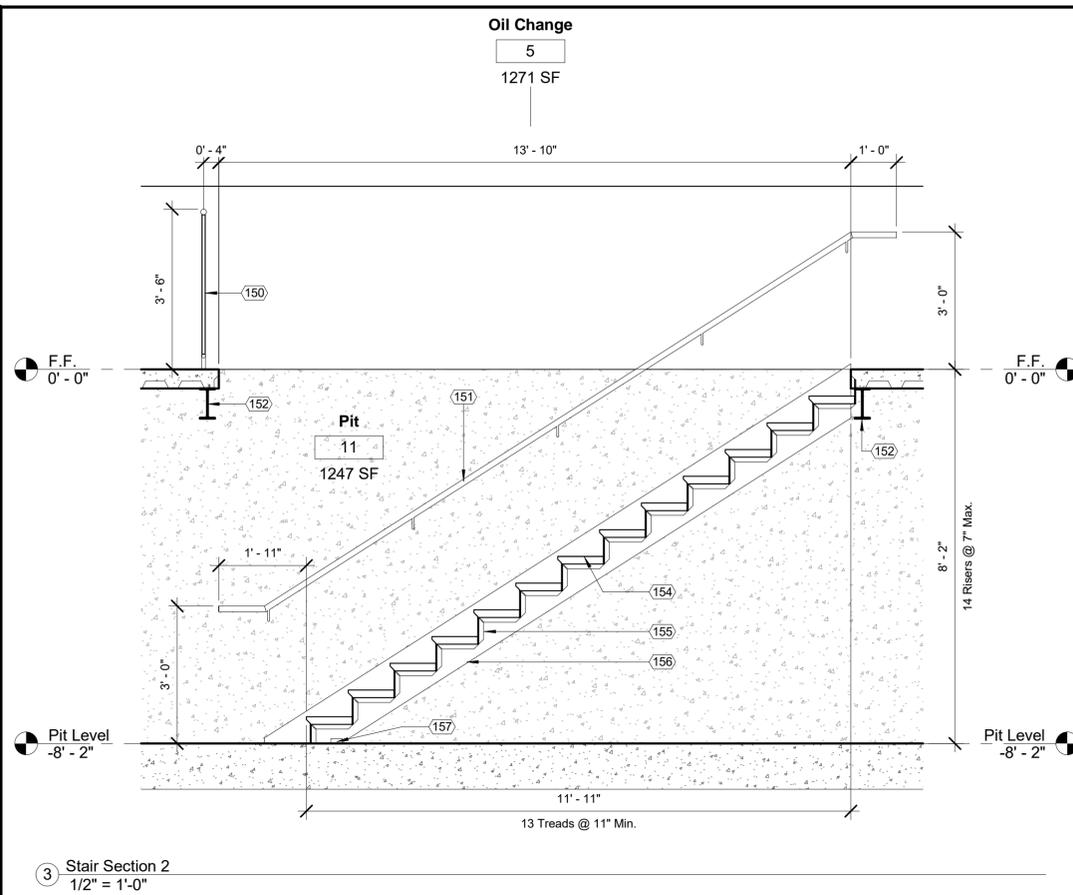
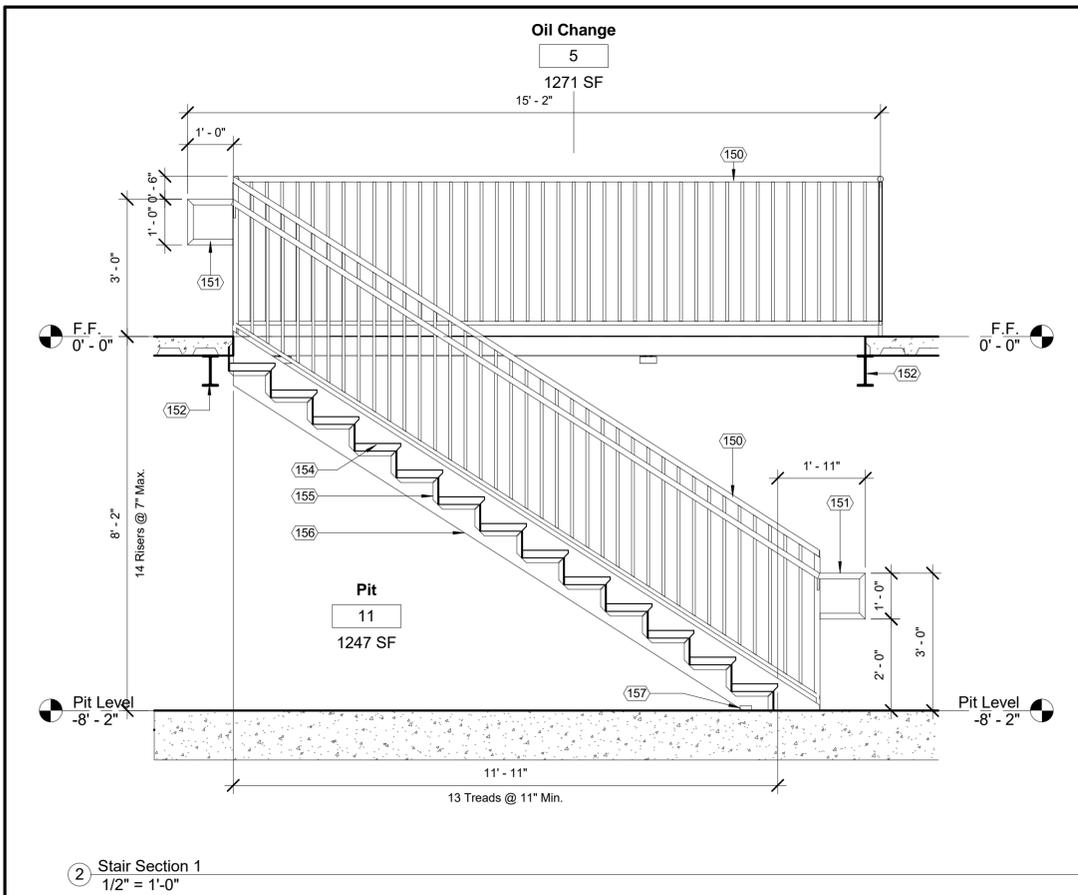
Tag	Text
7	Painted 1/2" gypsum board ceiling secured to structure above. 5/8" Type X where indicated.
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
33	ADA compliant room / exit sign. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
44	Concrete apron as required. Slope away from building with 3% slope. See Civil.

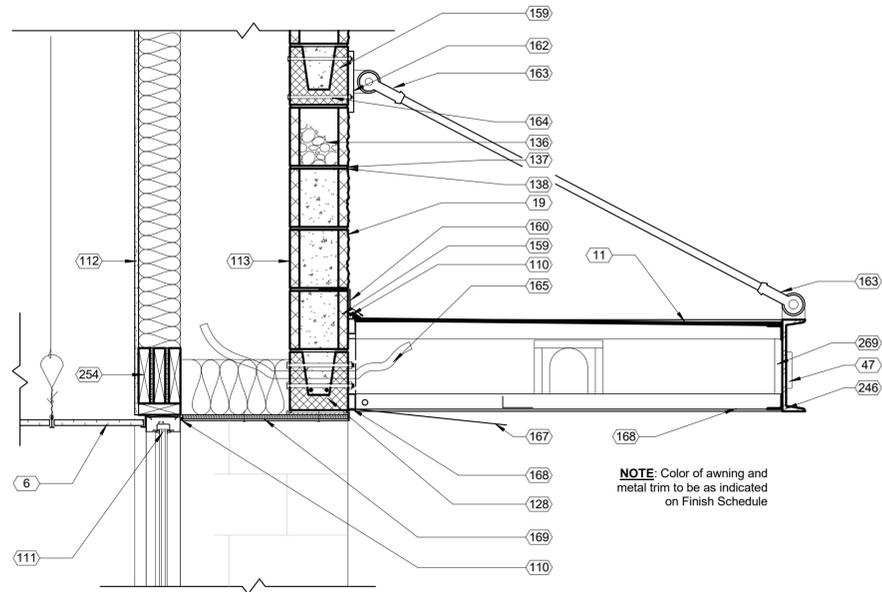
Tag	Text
46	Oil tank stairs (By Others).
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
57	Joist extension. See Structural.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
60	Steel plate with headed studs. See Structural.
62	4" high stainless steel chair rail (By Others).
65	Word Wall. Use extreme bond primer. Graphics (By Others).
68	1/2" exterior plywood sheathing.
74	1/2" expansion joint with backer rod and sealant.
89	Concrete foundation. See Structural.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
99	CCW MiraStop.

Tag	Text
100	Concrete slab. See Structural.
109	Horizontal joint reinforcement at 16" o.c. vertical.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
127	2x pressure treated wood nailer.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash. In addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.
138	Drainable weeps at every third mortar joint.
139	10 mil vapor barrier. See Specification 072600 Vapor Retarders.
140	Porous fill. See Geotechnical Report.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with gypsum board.
145	2x pressure treated wood sill plate.
170	Fill first course of CMU with grout.
205	1 layer of 1/2" painted gypsum board on both sides of 2"x6" wood studs at 16" o.c. Infill with kraft-faced R-20 batt insulation. Kraft in contact with gypsum board.
213	Full height chain-link fence with 3'-0"x7'-0" gate.
214	10K Lift (By Others).
215	12K Lift (By Others).
222	Alignment scarecrow (By Others).

Tag	Text
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
242	2x pressure treated wood top plate.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
284	Cut edge sealant at TPO roof membrane flashing.
285	Hot air weld at TPO membrane and membrane flashing.
286	Fastener and seam fastening plate.
294	1/2" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).

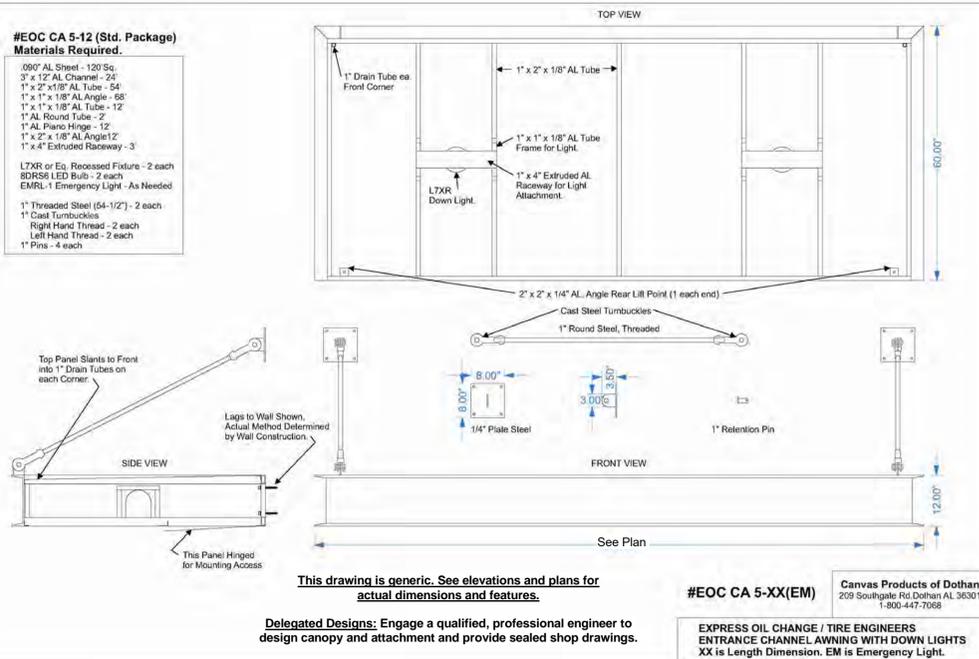






2 DT_Sheet A303 Awning Section
1" = 1'-0"

NOTE: Color of awning and metal trim to be as indicated on Finish Schedule



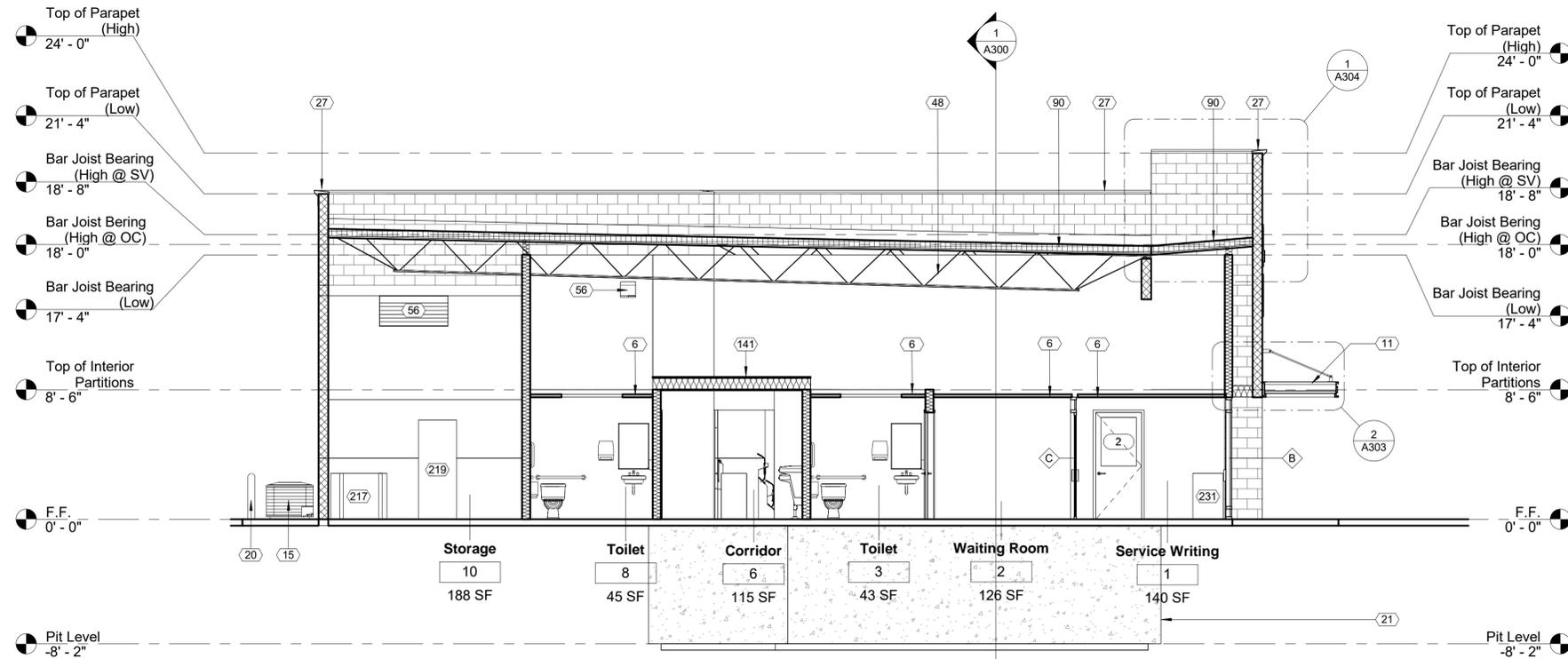
3 DT_Sheet A303 Awning Details
N.T.S.

Delegated Designs: Engage a qualified, professional engineer to design canopy and attachment and provide sealed shop drawings.

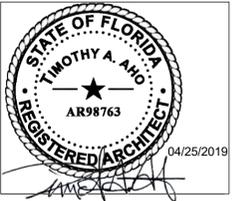
EXPRESS OIL CHANGE / TIRE ENGINEERS
ENTRANCE CHANNEL AWNING WITH DOWN LIGHTS
XX is Length Dimension, EM is Emergency Light.

Keynote Schedule

Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
11	Pre-finished metal canopy. See Details.
15	HVAC condensing unit. See Mechanical.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
48	Bar joist. See Structural.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
110	Sealant with backer rod.
111	Aluminum storefront with insulated glazing. See Details.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash. In addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.
138	Drainable weeps at every third mortar joint.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with gypsum board.
159	Painted smooth-face grout-filled CMU where canopy attaches to wall construction. See Structural.
160	Pre-finished aluminum flashing to match color of canopy. Turn out onto canopy.
162	Pre-finished 8"x8"x1/4" steel plate anchored to wall using through wall fasteners by Canopy manufacturer's designated design.
163	Pre-finished 1" cast steel turnbuckle with 1" threaded steel rod and 1" pins.
164	Anchor canopy to wall using through wall fasteners by Canopy manufacturer's designated design.
165	Provide a 1" flexible conduit extending 12" beyond the face of the wall for canopy lighting. See Electrical.
167	Pre-finished hinged panel for mounting access. Color to match canopy.
168	1"x2" aluminum tube. Typical.
169	Pre-finished metal over 1/2" pressure treated plywood. Terminate at aluminum storefront. Turn up pre-finished metal 1" at edge where metal meets canopy. Secure panel to plywood with fasteners compatible with type and color of metal being used.
217	Wheel balancer (By Others).
219	Air compressor (By Others).
231	Beverage refrigerator (By Others).
246	3"x12" aluminum channel.
254	2x wood framing at opening.
269	1" drain tube beyond. Slope top panel of canopy toward the drain tube at the front of the canopy.



1 Building Section 4
3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

No.	Description	Date

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Building Sections

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A303

Scale As indicated



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

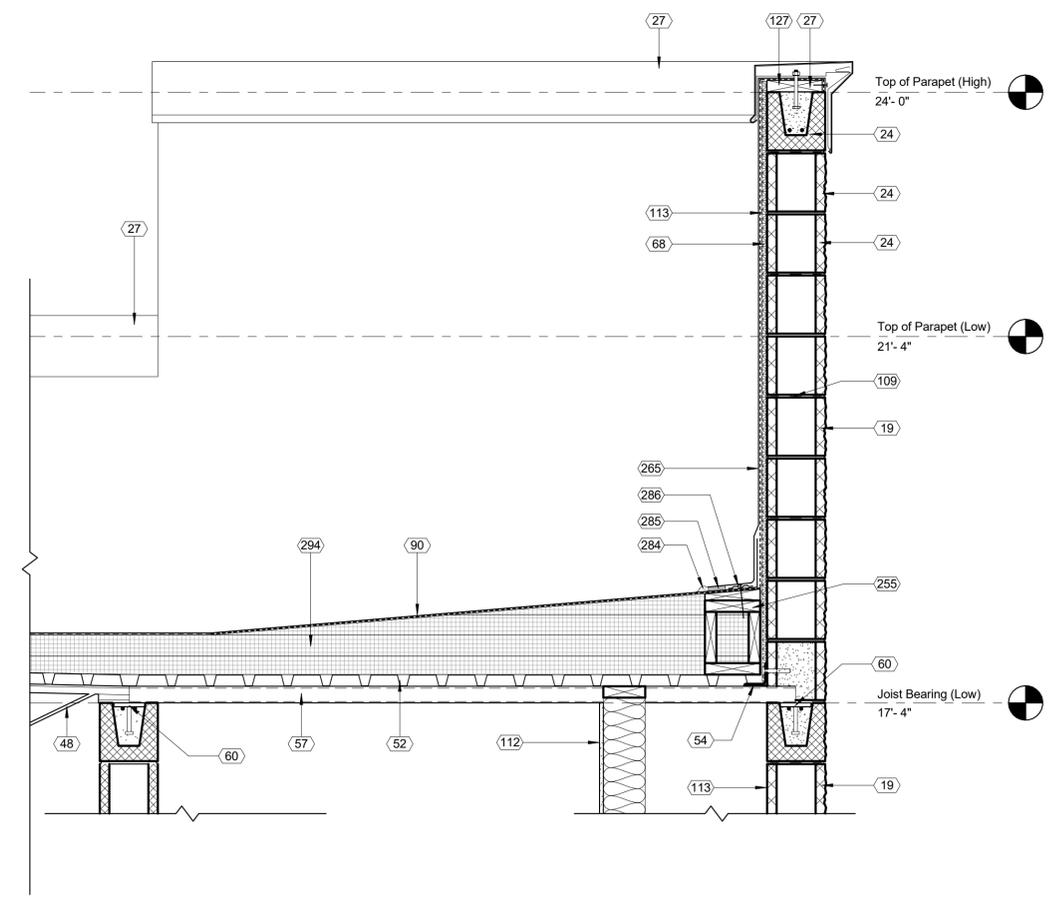
No.	Description	Date

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Building Sections

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A304	
Scale	1" = 1'-0"

Keynote Schedule	
Tag	Text
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
24	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
57	Joist extension. See Structural.
60	Steel plate with headed studs. See Structural.
68	1/2" exterior plywood sheathing.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
109	Horizontal joint reinforcement at 16" o.c. vertical.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
127	2x pressure treated wood nailer.
255	2x pressure treated wood blocking.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
284	Cut edge sealant at TPO roof membrane flashing.
285	Hot air weld at TPO membrane and membrane flashing.
286	Fastener and seam fastening plate.
294	1/2" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).



1 DT Sheet A304 Section Detail @ Front Entry Tower
1" = 1'-0"

FINAL

No.	Description	Date

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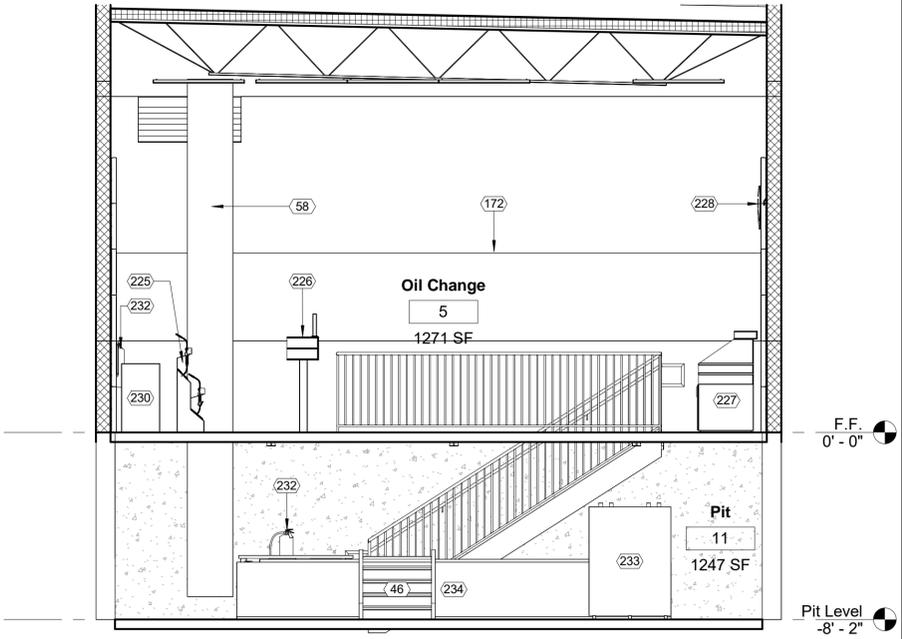
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Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

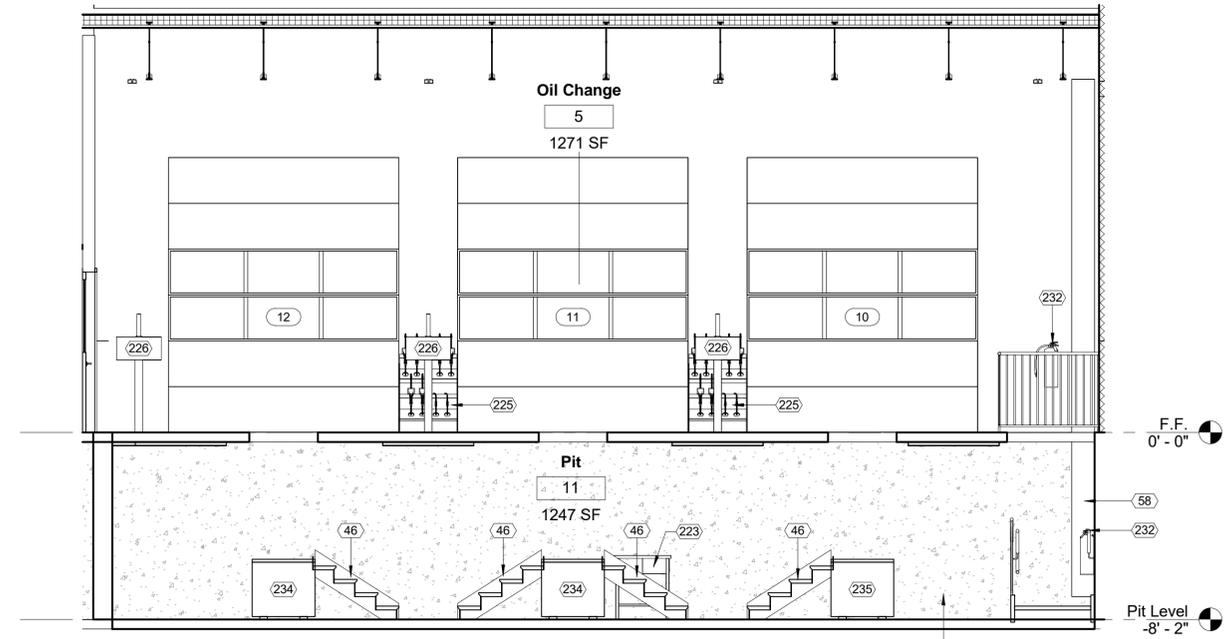
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Scale 1/4" = 1'-0"

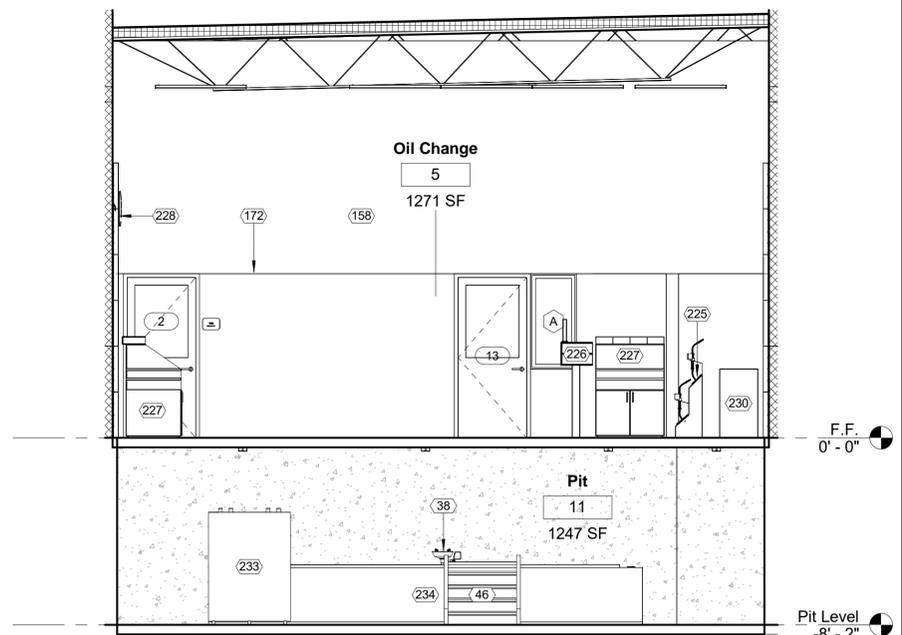
Tag	Text
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
33	ADA compliant room / exit sign. See Details.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
223	Work bench (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
228	Convex mirrors (By Others).
230	Tool cart (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.



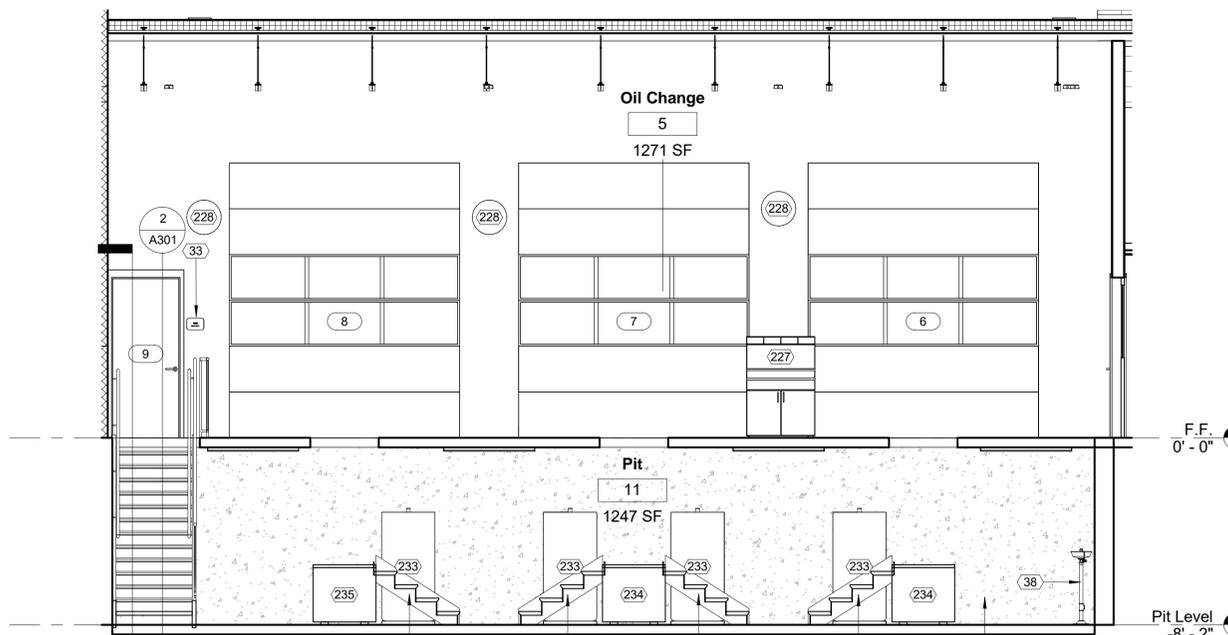
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1/4" = 1'-0"



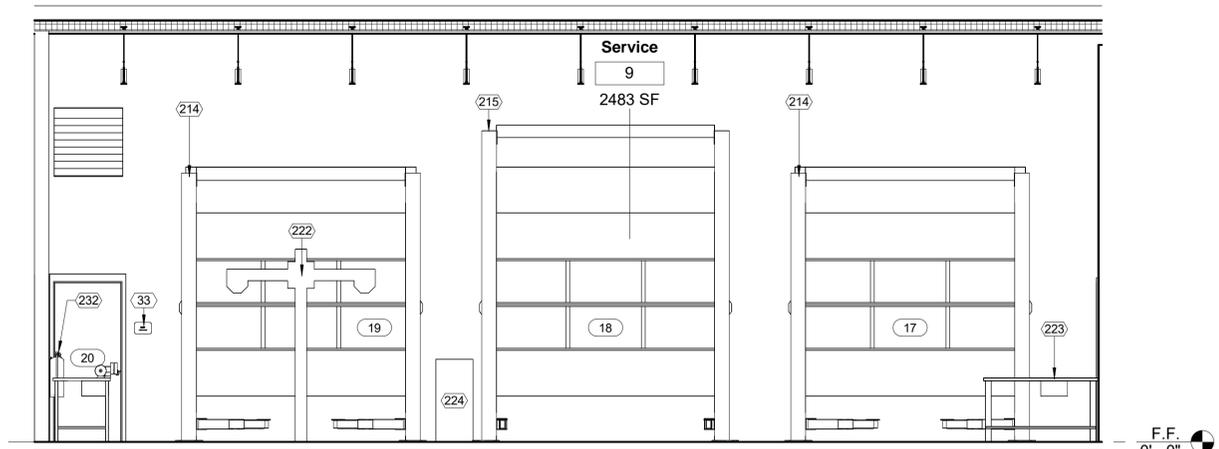
1 Oil Change Interior Elevation A
1/4" = 1'-0"



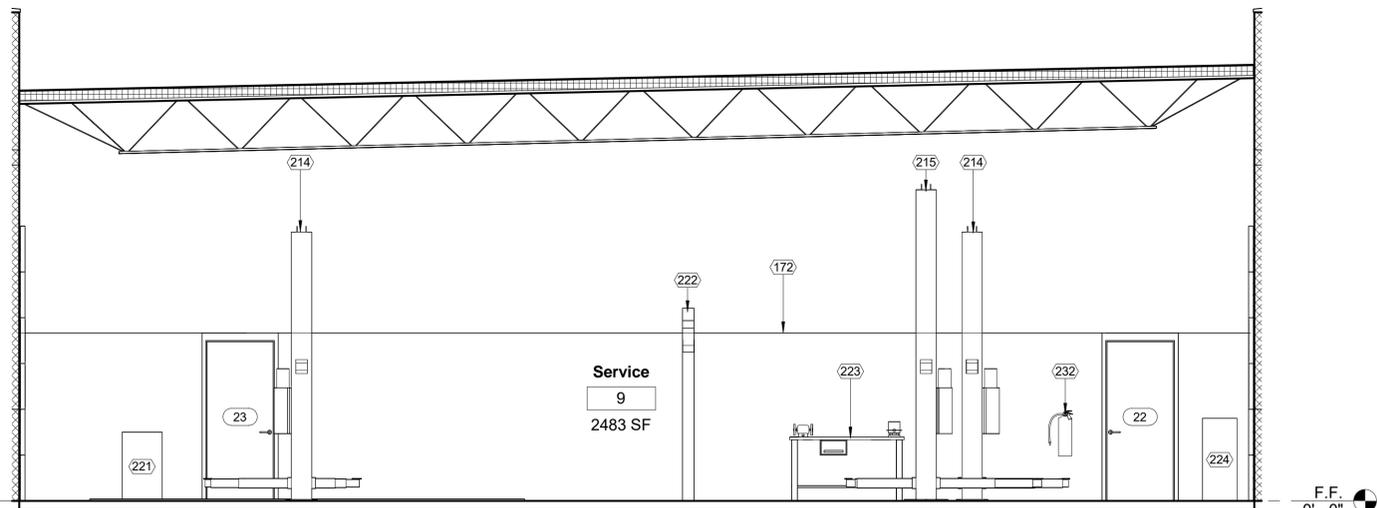
4 Oil Change Interior Elevation D
1/4" = 1'-0"



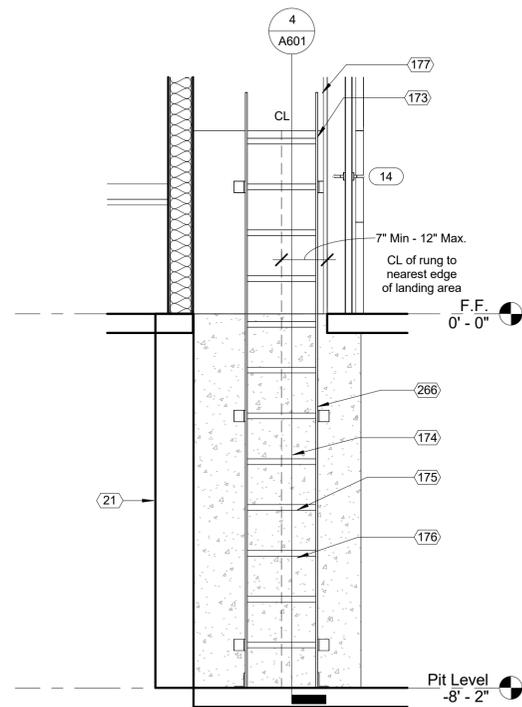
3 Oil Change Interior Elevation C
1/4" = 1'-0"



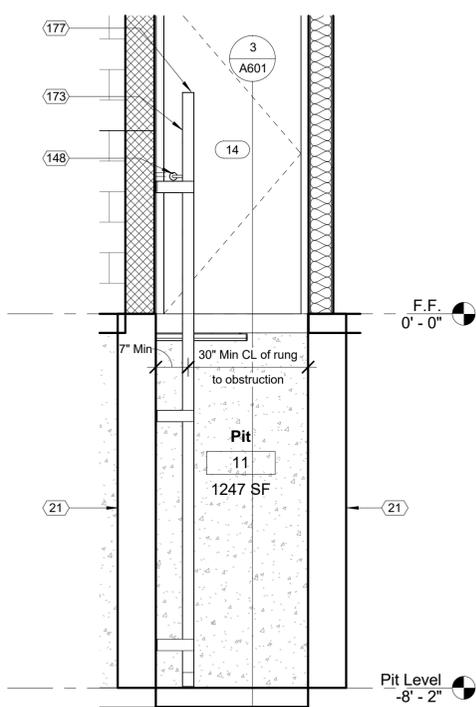
1 Service Bay Interior Elevation A
1/4" = 1'-0"



2 Service Bay Interior Elevation D
1/4" = 1'-0"

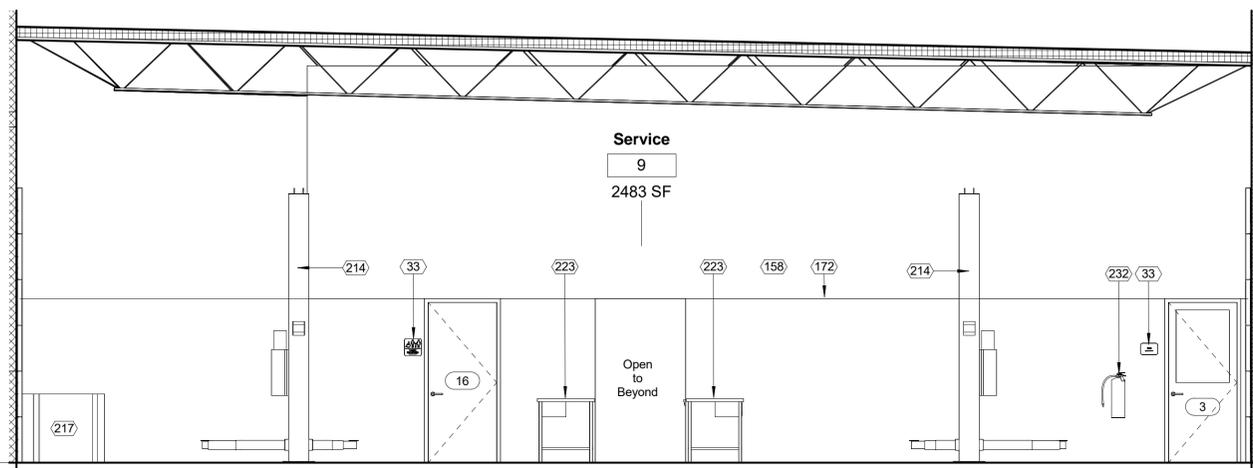


3 Pit Ladder Elevation
1/2" = 1'-0"

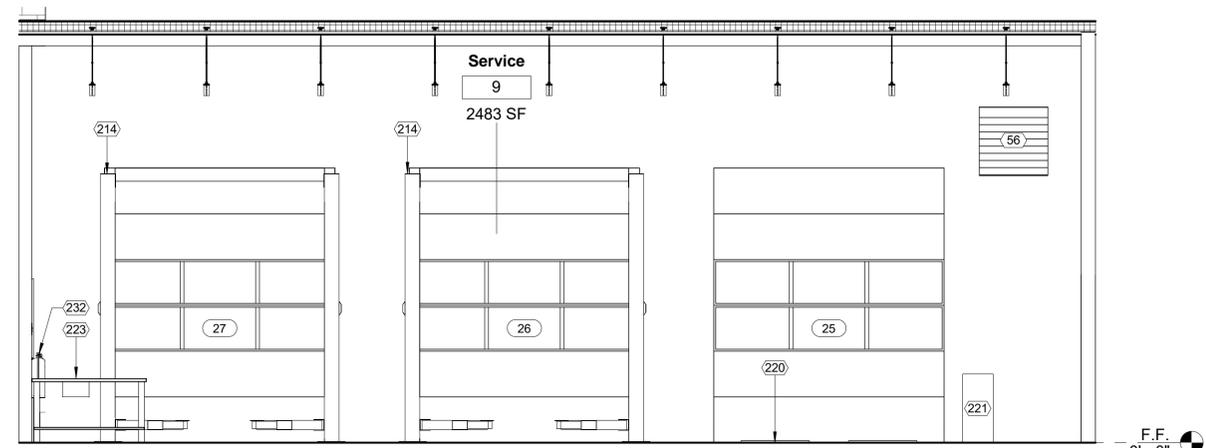


4 Pit Ladder Section
1/2" = 1'-0"

Keynote Schedule	
Tag	Text
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
33	ADA compliant room / exit sign. See Details.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
148	Latch side of door to be located on side nearest the wall mounted ladder.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
173	Pit ladder to comply fully with OSHA 1910.23 and 1926.1053.
174	Rungs shall be capable of supporting a single concentrated load of at least 250 lbs. applied to the middle of the rung.
175	Rungs shall be corrugated, knurled, dimpled, coated with skid-resistant material or otherwise treated to minimize slipping.
176	Rungs to be uniformly spaced 10" min. to 14" max. as measured between centerline of rungs.
177	Extend ladder above landing surface to ensure proper grip.
214	10K Lift (By Others).
215	12K Lift (By Others).
217	Wheel balancer (By Others).
220	Scissor lift alignment (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment screw (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
266	Pit ladder to be painted P-5 Safety Yellow.



5 Service Bay Interior Elevation B
1/4" = 1'-0"



6 Service Bay Interior Elevation C
1/4" = 1'-0"

Express Oil Change & Tire Engineers

Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stark, Florida

FINAL

No.	Description	Date

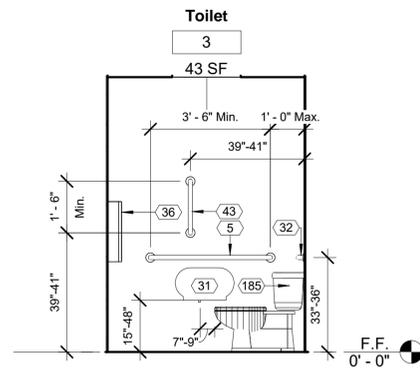
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Interior Elevations

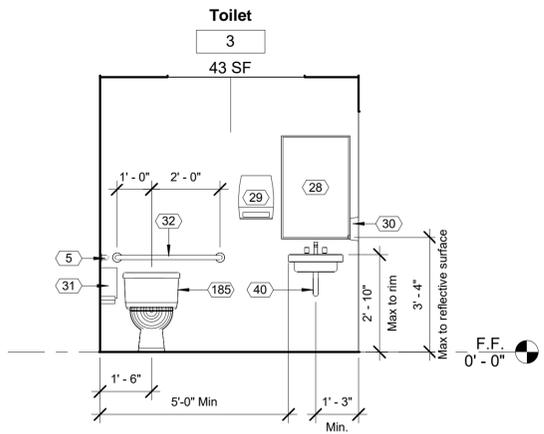
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Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A601

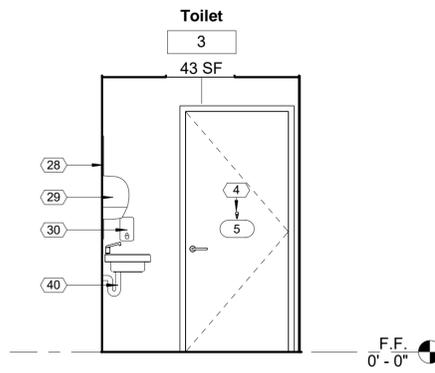
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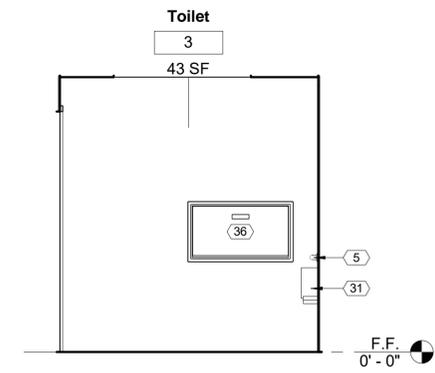
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3/8" = 1'-0"



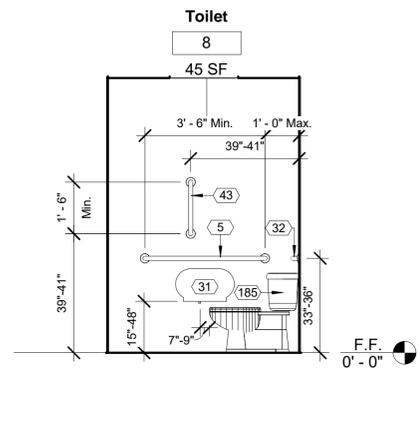
2 Toilet #3 Interior Elevation B
3/8" = 1'-0"



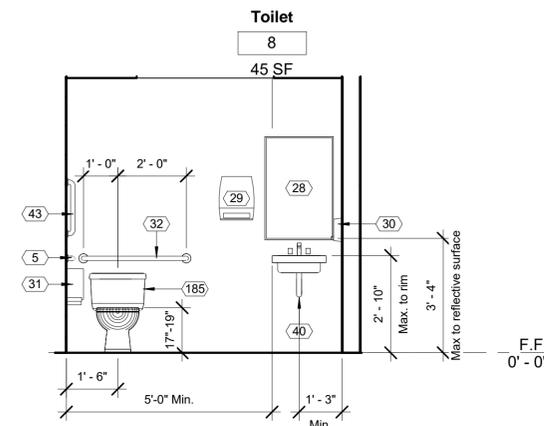
3 Toilet #3 Interior Elevation C
3/8" = 1'-0"



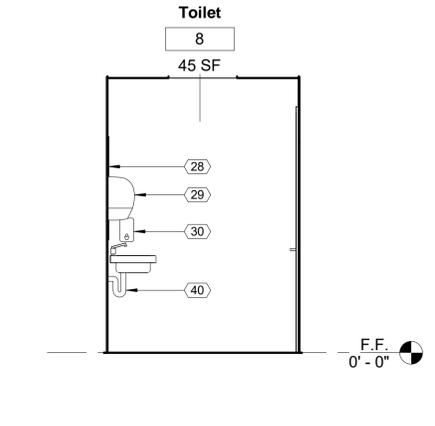
4 Toilet #3 Interior Elevation D
3/8" = 1'-0"



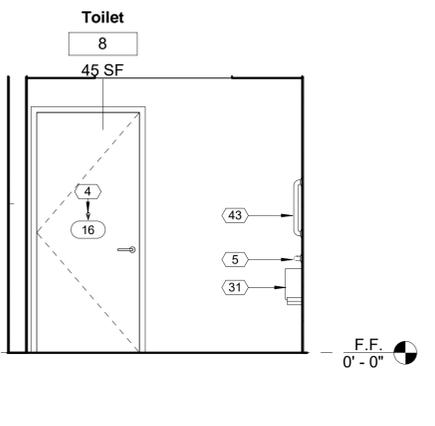
5 Toilet #8 Interior Elevation A
3/8" = 1'-0"



6 Toilet #8 Interior Elevation B
3/8" = 1'-0"

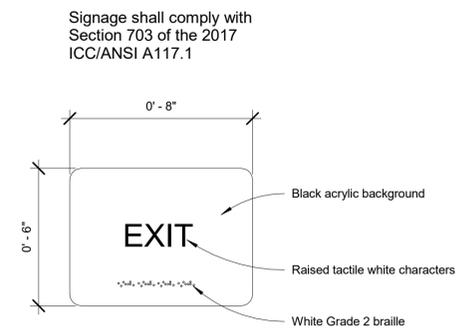
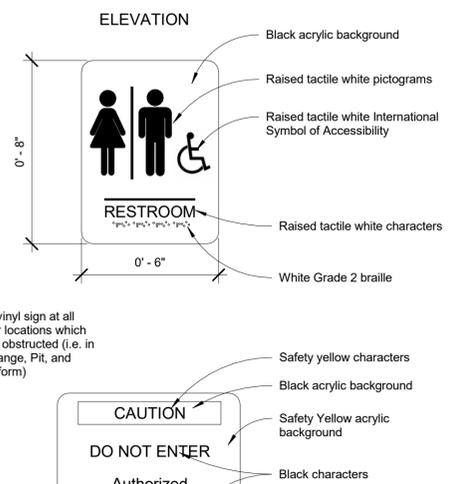
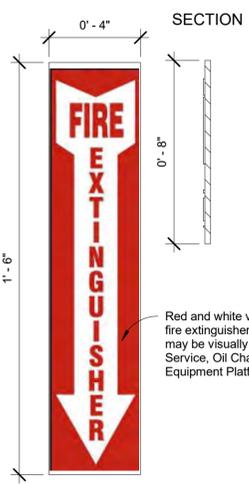


7 Toilet #8 Interior Elevation C
3/8" = 1'-0"

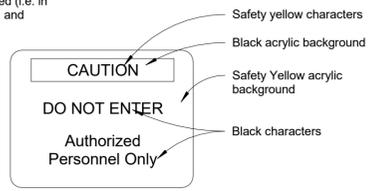


8 Toilet #8 Interior Elevation D
3/8" = 1'-0"

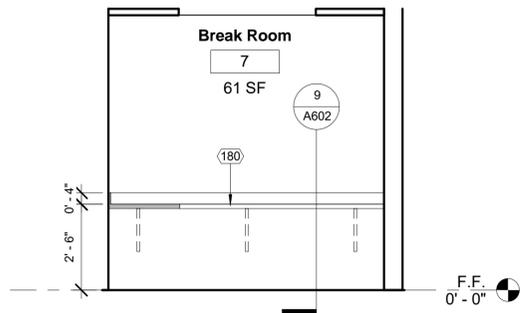
Keynote Schedule	
Tag	Text
4	Robe hook mounted at 48" A.F.F. See Specification 102800 Toilet, Bath, and Laundry Accessories.
5	42" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
28	Framed mirror. See Specification 102800 Toilet, Bath, and Laundry Accessories.
29	Automatic Towel Dispenser (By others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
30	Wall mounted soap dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
31	Jumbo Dual Roll Toilet Tissue dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
32	36" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
36	Surface mounted baby changing station with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
40	Under lavatory guard. See Specification 102800 Toilet, Bath, and Laundry Accessories.
43	24" vertical grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
179	Plastic laminate over 1x wood blocking. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
180	Plastic laminate over 3/4" plywood. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
181	1x wood blocking.
182	Concealed countertop bracket.
183	2x wood cleat.
184	Finish base. See Specification Section 096513 Resilient Base Accessories. See Finish Schedule for color.
185	Flush valve on transfer side of water closet.



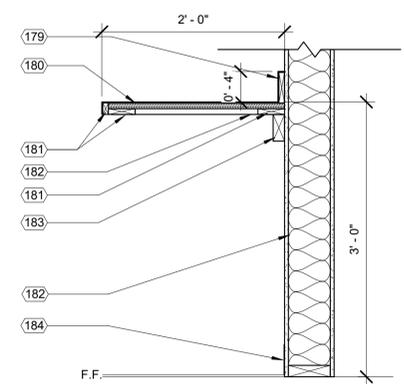
Signage shall comply with Section 703 of the 2017 ICC/ANSI A117.1



10 DT_Sheet A602_Signage @ OC Building
3" = 1'-0"



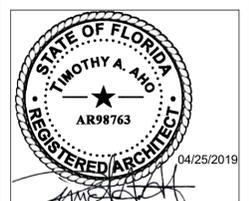
12 Break Room Interior Elevation A
3/8" = 1'-0"



9 DT_Sheet A602_Countertop Section @ Wall
1" = 1'-0"



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 Starke, Florida

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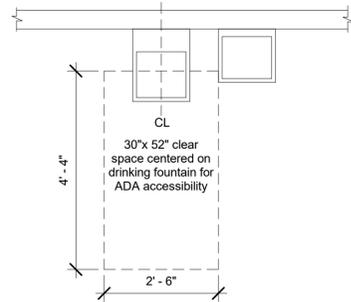
No.	Description	Date

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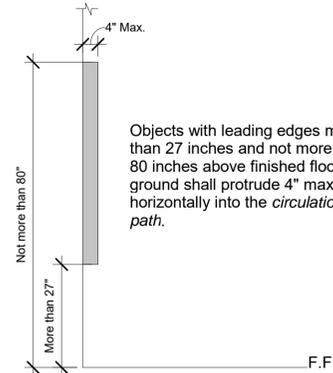
Interior Elevations

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

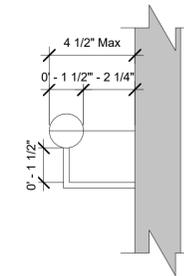
A602
Scale As indicated



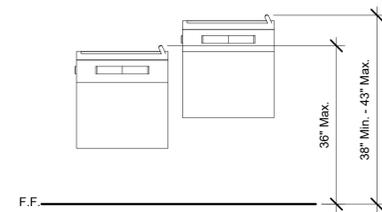
① DT_Sheet A605_Drinking Fountain_Plan View
1/2" = 1'-0"



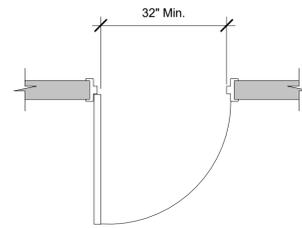
② DT_Sheet A605_Limits of Protruding Objects
1/2" = 1'-0"



③ DT_Sheet A605_Handrail Detail
3" = 1'-0"

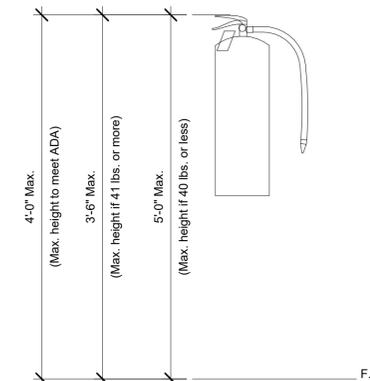


④ DT_Sheet A605_Drinking Fountain_Front View
1/2" = 1'-0"

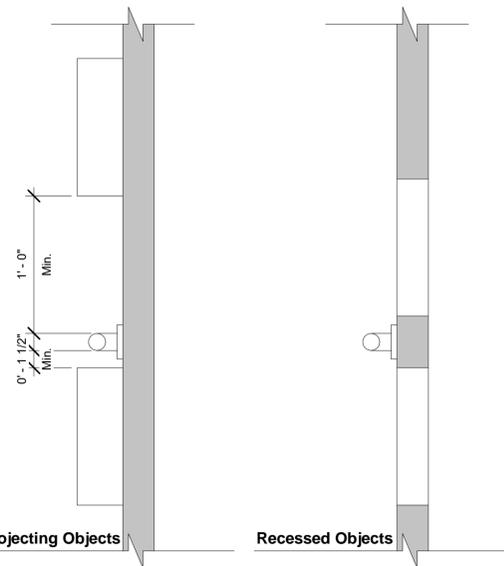


⑤ DT_Sheet A605_Clear Width @ Doorways
1/2" = 1'-0"

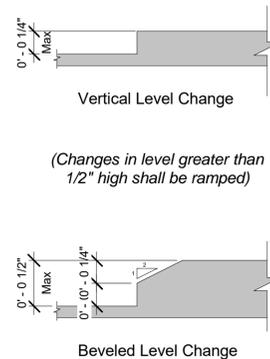
Mounting heights for portable fire extinguishers
(cabinet and bracket mounted) per
IBC Chapter 9)



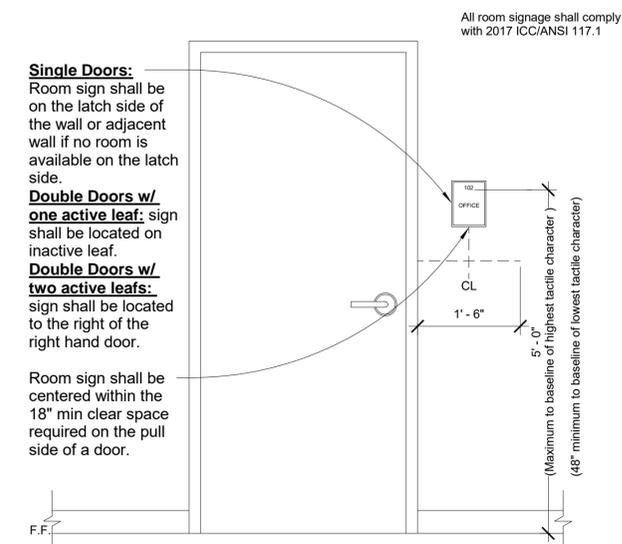
⑥ DT_Sheet A605_Fire Extinguisher Mounting Heights
1" = 1'-0"



⑦ DT_Sheet A605_Spacing of Grab Bars
1 1/2" = 1'-0"



⑧ DT_Sheet A605_Level Change
12" = 1'-0"



⑨ DT_Sheet A605_Signage Mounting Heights
3/4" = 1'-0"

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Interior
Dimensional Info.

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

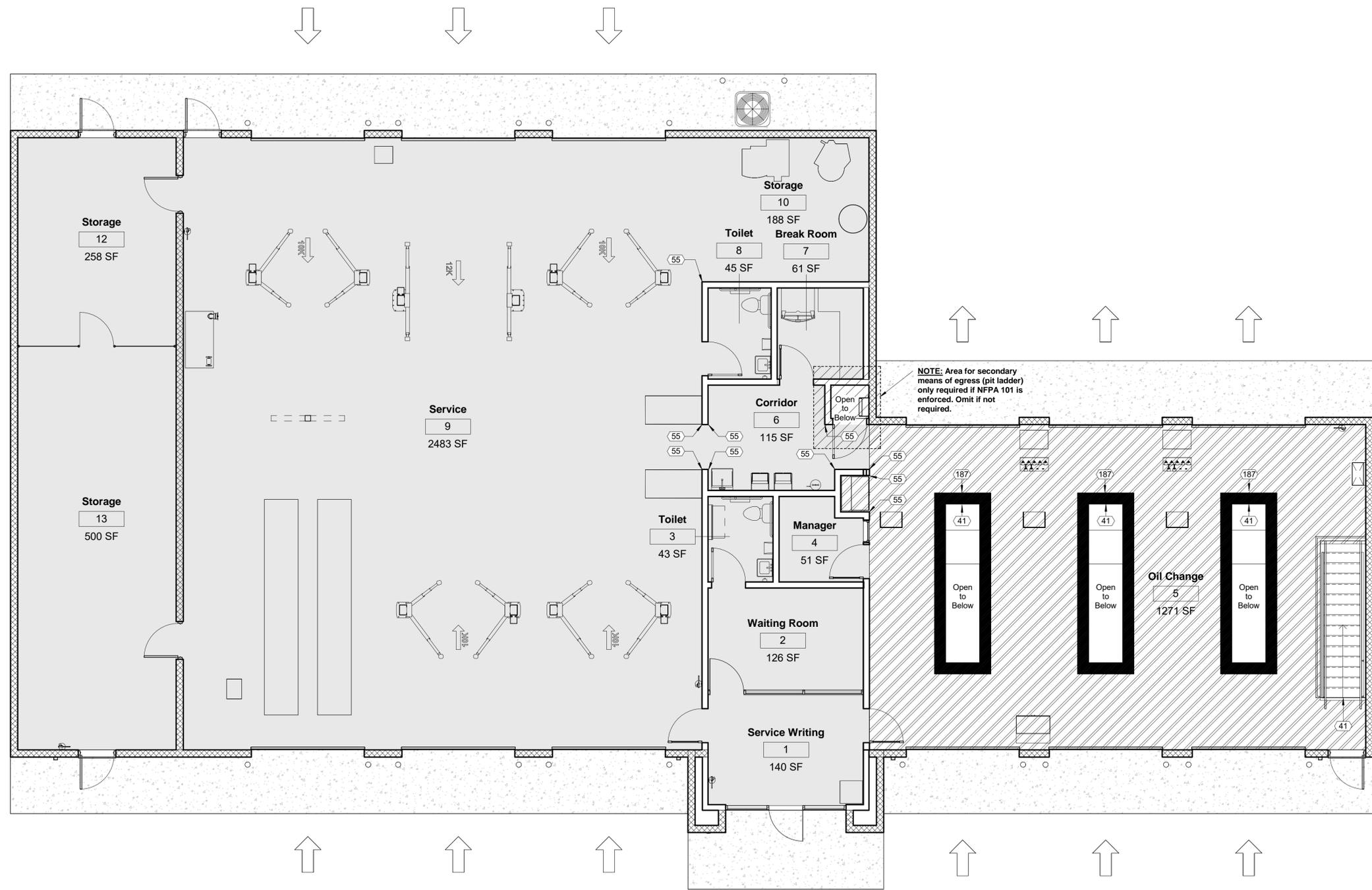
A605

Scale As indicated

FLOOR FINISH LEGEND

- Sealed Concrete
- Stonhard Flooring (By Others)
- Safety Yellow Paint.

Keynote Schedule	
Tag	Text
41	Paint structural steel at openings P-5 Safety Yellow. Typical for all pit and stairwell openings.
55	Stainless steel corner guard. See Specification 102600 Wall and Door Protection.
187	Paint 12" P-5 Safety Yellow around pit openings. Verify paint is compatible with floor finish.



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Floor Finishes - Main

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A610	
Scale	As indicated



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No.	Description	Date

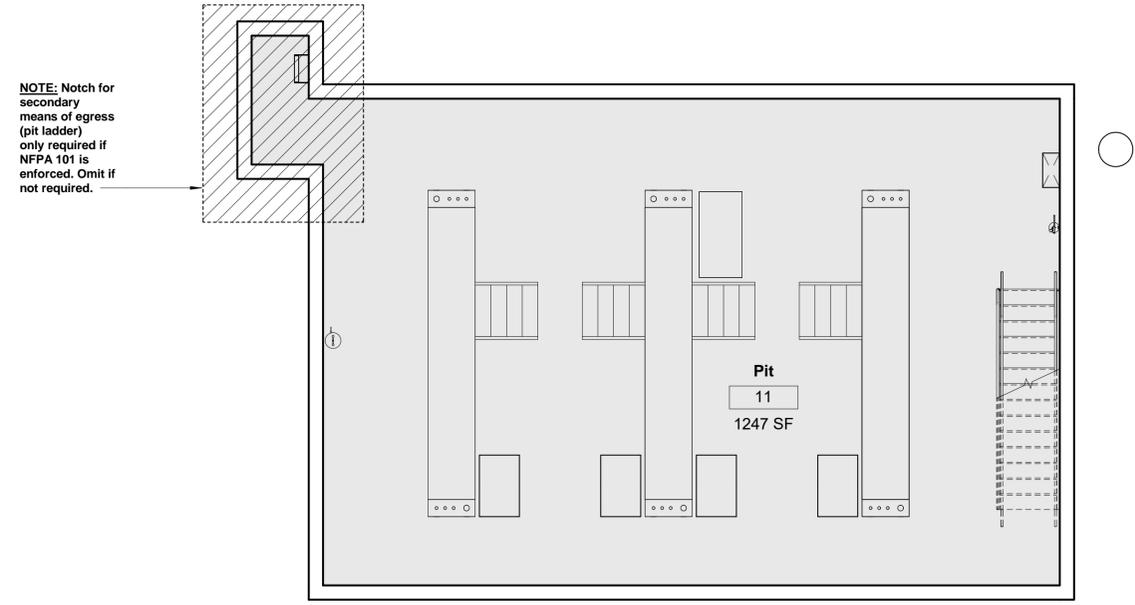
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Floor Finishes - Pit

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A
A611	
Scale	As indicated

FLOOR FINISH LEGEND

- Sealed Concrete
- Stonhard Flooring (By Others)
- Safety Yellow Paint.

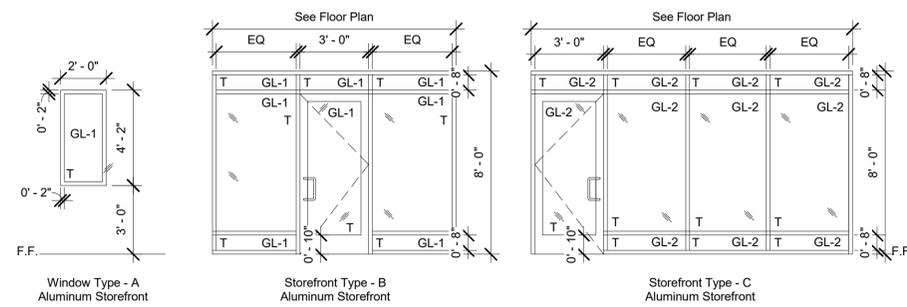


① 06_Floor Finish Plan_Pit
3/16" = 1'-0"

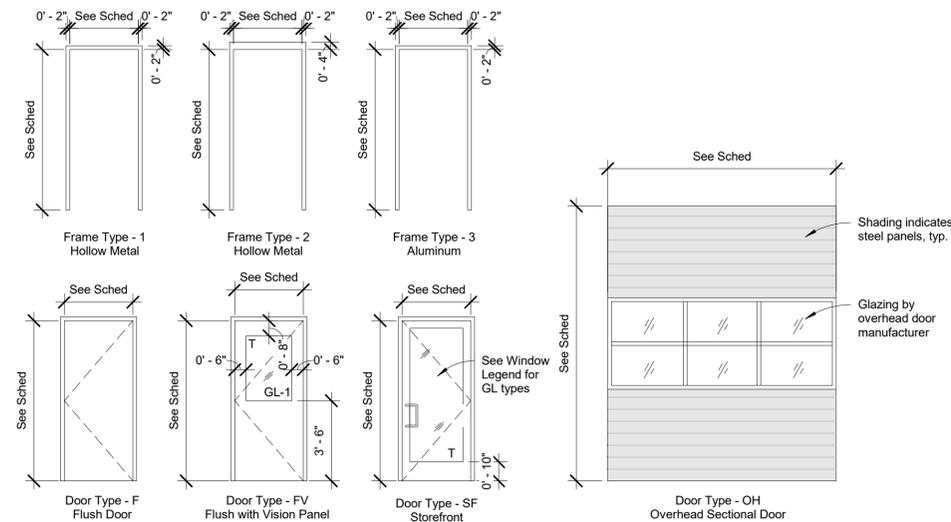


Door and Frame Schedule												
Number	Door						Frame			Glass	UL Label	Notes
	Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish			
1	3' - 0"	7' - 0"	0' - 1 3/4"	SF	Metal / Glass	Factory Finish	3	Aluminum	Factory Finish	Tempered		If required by the Fire Marshal or AHJ, add lettering that reads "This door must remain unlocked when business is occupied."
2	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
3	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
4	3' - 0"	7' - 0"	0' - 1 3/4"	SF	Metal / Glass	Factory Finish	3	Aluminum	Factory Finish	Tempered		
5	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
6	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
7	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
8	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
9	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
10	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
11	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
12	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
13	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
14	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
15	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
16	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
17	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
18	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
19	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
20	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
21	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
22	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A	45 Min.	Provide Fire Rated label on Door and Frame
23	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A	45 Min.	Provide Fire Rated label on Door and Frame
24	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
25	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
26	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
27	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		

WINDOW LEGEND



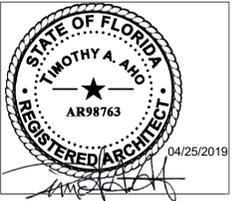
DOOR AND FRAME LEGEND



NOTE: Refer to floor plan for direction of door swing.



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No.	Description	Date

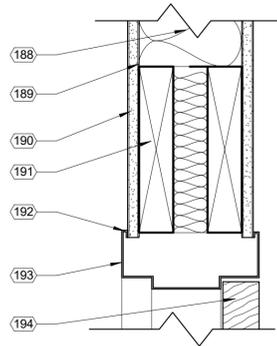
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Schedules

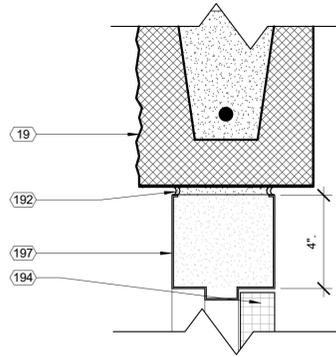
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Date	10/24/2024
Drawn by	ARC
Checked by	N/A

A620

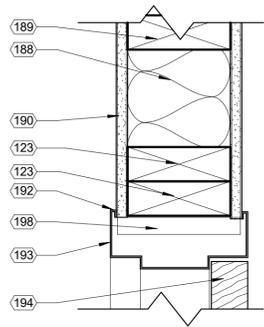
Scale 1/4" = 1'-0"



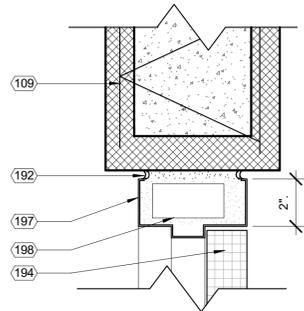
1 DT_Sheet A621_Door Head Detail_Wood
3" = 1'-0"



2 DT_Sheet A621_Door Head Detail_Masonry
3" = 1'-0"



3 DT_Sheet A621_Door Jamb Detail_Wood
3" = 1'-0"



4 DT_Sheet A621_Door Jamb Detail_Masonry
3" = 1'-0"

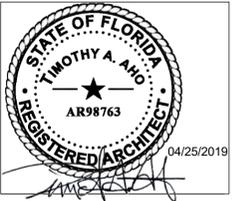
Keynote Schedule	
Tag	Text
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
109	Horizontal joint reinforcement at 16" o.c. vertical.
123	Blocking. See Structural.
188	Kraft-faced batt insulation. Kraft in contact with gypsum board.
189	2x wood studs at 16" o.c.
190	1/2" painted gypsum board.
191	Double 2"x8" wood header.
192	Caulk all around on both sides.
193	Painted hollow metal frame with returns. See Finish Schedule for color.
194	Scheduled door. See plans for details.
197	Painted hollow metal frame, grouted solid.
198	Jamb anchors. Provide 3 per jamb.

Keynote Schedule	
Tag	Text

Material Schedule							
Abbreviation	Material Description	Manufacturer	Style Name or Number	Color (Description)	Size	Finish	Material Notes
ACT-1	Acoustical Ceiling Tile	Armstrong	1775 Dune	White	24"x24"	N/A	Suprafine XL 9/16" Exposed Tee Grid
P-1	Paint - Color 1	Sherwin Williams	See Paint Schedule on G202	SW6966 Blueblood	N/A	See Paint Schedule on G202	
P-2	Paint - Color 2	Sherwin Williams	See Paint Schedule on G202	Custom Color (Dover Gray)	N/A	See Paint Schedule on G202	
P-3	Paint - Color 3	Sherwin Williams	See Paint Schedule on G202	SW7669 Summit Gray	N/A	See Paint Schedule on G202	
P-4	Paint - Color 4	Sherwin Williams	See Paint Schedule on G202	SW6959 Bluechip	N/A	See Paint Schedule on G202	
P-5	Paint - Color 5	Sherwin Williams	See Paint Schedule on G202	Safety Yellow	N/A	See Paint Schedule on G202	
P-6	Paint - Color 6	Sherwin Williams	See Paint Schedule on G202	Safety Red	N/A	See Paint Schedule on G202	
P-7	Paint - Color 7	Sherwin Williams	See Paint Schedule on G202	SW7006 Extra White	N/A	See Paint Schedule on G202	
PL-1	Plastic Laminate - Color 1	Wilsonart	4880-38	Carbon Mesh	N/A	N/A	
RB	Rubber Base	Ropee	Pinnacle	175 Slate	4"	N/A	
SC	Sealed Concrete	Sherwin Williams	See Paint Schedule on G202	Haze Gray	N/A	See Paint Schedule on G202	Add SharkGrip for added slip resistance
SH	StonHard Flooring	StonHard	N/A	N/A	N/A	N/A	Provided and installed by (Others)
FRP-1	Fiberglass Reinforced Panels	Marlite	4'X8' Textured Panels	P430N Medium Gray	4'X8'	Pebbled	

Finish Schedule for Additional Items					
1.	Doors & Frames: Paint P-3	9.	Keynote 16: P-3	17.	Door Hardware: Satin Chrome
2.	Bollards & Dumpster Posts: P-6	10.	Keynote 17: P-6	18.	Window Gaskets: Light Gray
3.	Exterior Pole Sign: By others.	11.	Keynote 18: P-2	19.	Exterior Aluminum Storefront & Door: Clear Anodized
4.	Conductor Head / Downspouts: Match P-2	12.	Keynote 19: P-3	20.	Abrasive Nosing: Safety Yellow
5.	Electrical covers to be brushed aluminum	13.	Knox Box: Aluminum	21.	Interior Aluminum Storefront & Door: Clear Anodized
6.	Paint all louvers to match adjacent finish	14.	Roof: White TPO	22.	Chair Rail: Stainless Steel by others
7.	Keynote 14: P-1	15.	Coping Cap @ Dumpster: Match P-6	23.	Word Wall: P-3
8.	Stairs & Railings & Interior Ladder (if req'd): P-5	16.	Coping Cap @ Bldg: Match P-1	24.	Canopy: Match P-1
				25.	Dumpster Gate / Frame: P-3
				26.	Overhead Door: White
				27.	Lintel at OH Doors: P-3
				28.	Countertop Carbon Mesh: PL1
				29.	Keynote 24: P-1
				30.	SSMR @ Dumpster: Royal Blue

Number	Name	Area	Floor Finish	Base Finish	Walls				Ceiling Finish	Remarks
					Rear (East)	Right (South)	Front (West)	Left (North)		
1	Service Writing	140 SF	SC	RB	Storefront	P-1, P-2, P-3	Storefront & P-1, P-2, P-3	P-1, P-2, P-3	ACT-1	See G301 for paint patterns
2	Waiting Room	126 SF	SC	RB	P-3 & Vinyl Graphics (By Others)	P-1, P-2, P-3	Storefront	P-1, P-2, P-3	ACT-1	See G301 for paint patterns. Word Wall with Vinyl Graphics (By Others) to be painted P-3
3	Toilet	43 SF	SC	RB	FRP-1	FRP-1	FRP-1	FRP-1	ACT-1	
4	Manager	51 SF	SC	RB	P-3	P-3	P-3	P-3	ACT-1	
5	Oil Change	1271 SF	SH	None / RB	P-3	P-1, P-4	P-3	P-1, P-4 & Vinyl Graphics (By Others)	No Ceiling	Rubber base on gypsum board walls only. See G301 for paint patterns.
6	Corridor	115 SF	SC	RB	P-1	P-1	FRP-1	P-1	P-7	
7	Break Room	61 SF	SC	RB	P-3	P-3	P-3	P-3	ACT-1	
8	Toilet	45 SF	SC	RB	FRP-1	FRP-1	FRP-1	FRP-1	ACT-1	
9	Service	2483 SF	SC	None / RB	P-3	P-1, P-4 & Vinyl Graphics (By Others)	P-3	P-1, P-4	No Ceiling	Rubber base on gypsum board walls only. See G301 for paint patterns.
10	Storage	188 SF	SC	None / RB	P-3	P-1, P-4	P-1, P-4	None	No Ceiling	
11	Pit	1247 SF	SC	None	None	None	None	None	N/A	Paint all structural steel in Pit P-5 Safety Yellow.
12	Storage	258 SF	SC	None	P-3	P-3	Fence	P-3	No Ceiling	
13	Storage	500 SF	SC	None	Fence	P-3	P-3	P-3	No Ceiling	



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Finish Schedules & Head, Jamb, and Sill Details

Project number 24052
Date 10/24/2024
Drawn by ARC
Checked by N/A

A621

Scale As indicated



① 02_3D View_Front (West)

*See Civil for actual site conditions, including dumpster enclosure location.



② 03_3D View_Rear (East)

*See Civil for actual site conditions, including dumpster enclosure location.

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Starke, Florida

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No.	Description	Date

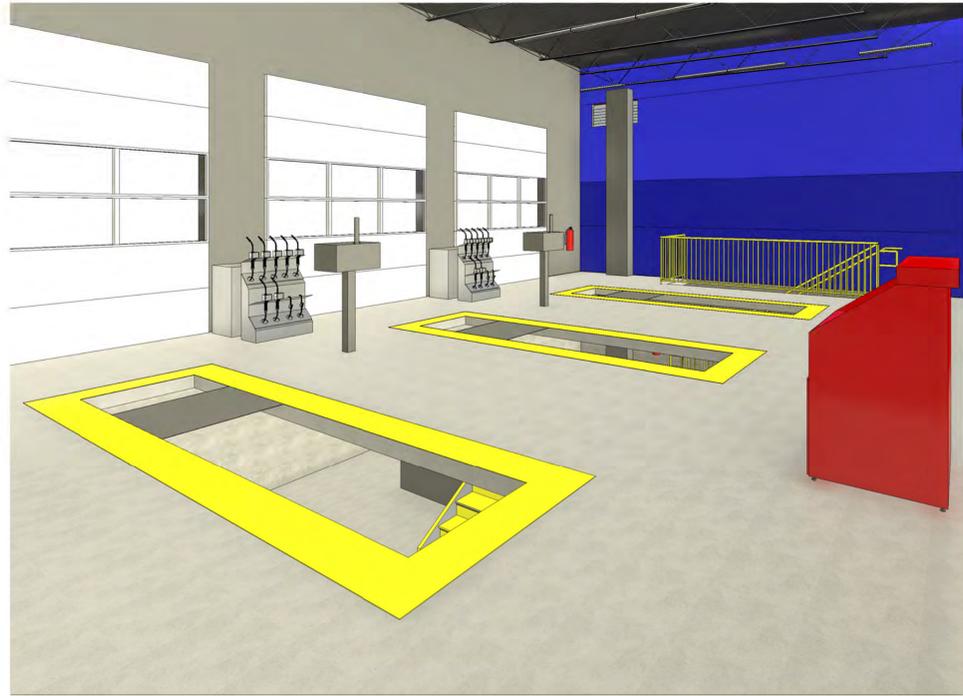
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3D Views

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

R100

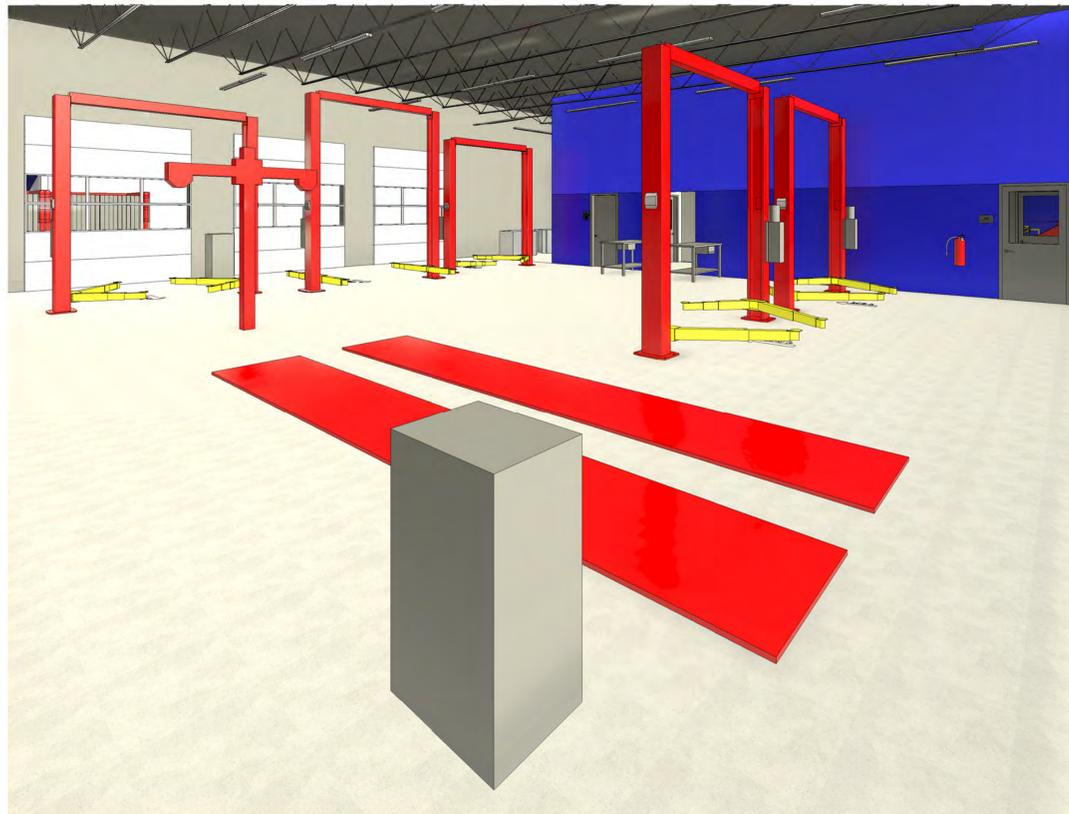
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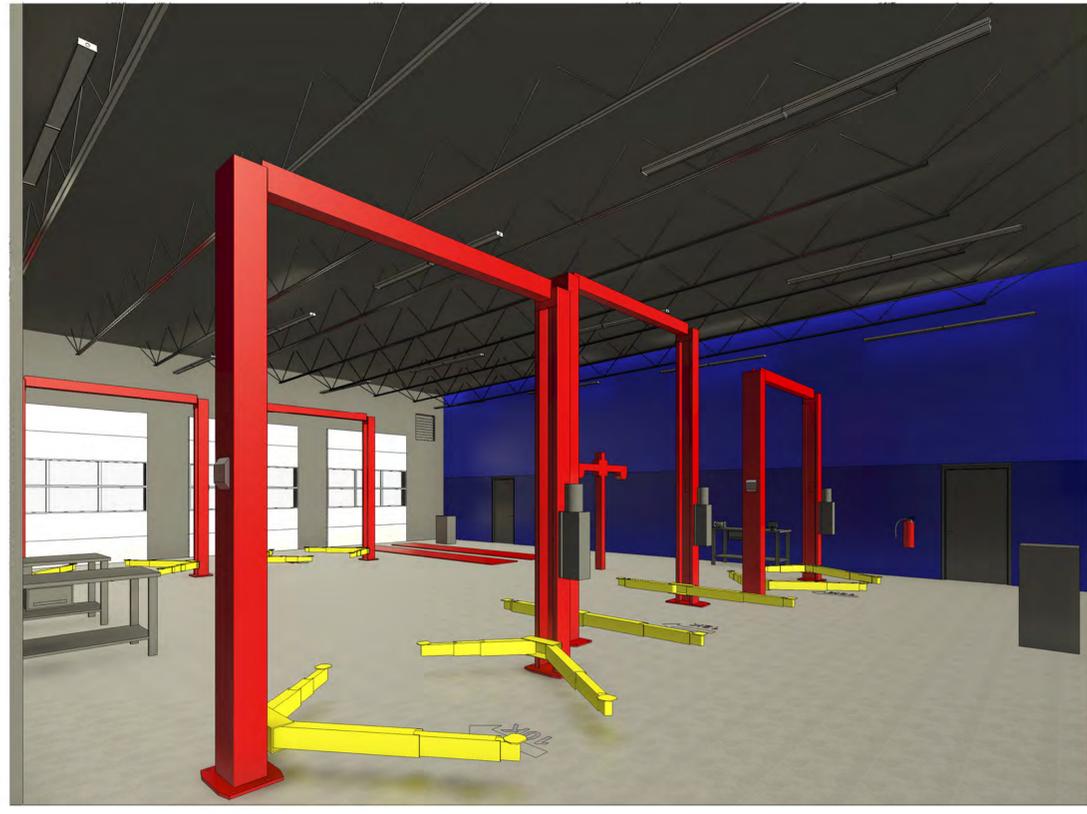
① 04_3D View_Oil Change A



② 05_3D View_Oil Change B



③ 06_3D View_Service Bay A



④ 07_3D View_Service Bay B

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No.	Description	Date

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3D Views

Project number	24052
Date	10/24/2024
Drawn by	ARC
Checked by	N/A

R101

Scale



10/24/2024

Express Oil Change & Tire Engineers
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 Starke, Florida

FINAL

No.	Description	Date

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General Notes

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S0.1

Scale 3/4" = 1'-0"

SCHEDULE OF SPECIAL INSPECTIONS

Inspection/Test/Certification	C or P	Extent/Comments
General Conditions Review of Structural Documents and Shop Drawings to determine differences not approved by Architect or Engineer of Record	Continuous	Structural Documents should take precedence over any shop drawings. Special Inspector should use the Architectural and Structural Documents as the primary documents for review of construction. Shop drawing should be used as secondary document to review details not shown on the Architectural and Structural Documents. Any discrepancy between the two documents should be resolved by the Architect or Engineer of Record before proceeding with construction.
The Special Inspector duties for missing details, conflicting details or coordination issues.	Continuous	Reasonable attempts have been made on the part of the design team to properly coordinate drawings. However in the event that a question arises on the project the Special Inspector shall obtain clarification from the Architect on all items. No changes shall be made to the drawings or construction without written conformation.
Fabricators Review the quality control procedures of the following fabricators for completeness and adequacy relative to the fabricator's scope of work: steel fabricator, lightgauge truss fabricator, wood truss fabricator. The following fabricators, if registered and approved by the building official, may submit "Certificates of Compliance" at the completion of their scope of work that their fabricated items were constructed in accordance with the approved construction documents: steel fabricator, lightgauge truss fabricator, wood truss fabricator. Fabricators having successfully completed no fewer than 5 similar projects may also submit for approval with documentation of similar projects.	Periodic	
Soils and Deep Foundations Verify bearing capacities of soils beneath footings.	Periodic	As recommended in approved soils report and specified in earthwork specifications.
Verify assumed bearing capacities and determine settlements of soils beneath footings and building pad.	Periodic	As noted on the drawings, recommended by the geotechnical engineer, and specified in earthwork specifications.
Verify site preparation prior to beginning fill placement. Verify fill material type, placement method, lift thickness, and compaction of fill material. Verify in-place density of compacted fill. Inspect installation of pile foundations including installation of test piles.	Periodic	As recommended in approved soils report and specified in earthwork specifications.
Inspect installation of drilled pier foundations and installation of test piers. Inspect reinforcing in each pier and test concrete.	Continuous	As recommended in approved soils report and specified in pile specifications.
Inspect helical pile installation.	Continuous	Record installation equipment used, pile dimensions, tip elevations, final depth, final installation torque.
Concrete Construction Inspect concrete formwork except as noted above for proper dimensions. Verify that construction joints are properly keyed. Verify that slab recesses, if any, have been installed. Inspect reinforcing steel except as noted above for installation including size, spacing and bar clearances. Verify that lap splices and embedment lengths are per the construction documents. Verify that dowels for work above are properly aligned and spaced to match other work.	Periodic	Prior to each pour.
Inspect bolts	Periodic	For each proposed mix
Verify each proposed concrete mix for the project.	Periodic	For each proposed mix
Sample all concrete for strength tests and test concrete for slump, air content, temperature, and other tests.	Continuous	During placement operations. Reference concrete specifications for specific tests and frequencies.
Inspect concrete placement except as noted above.	Continuous	
Inspect all concrete curing operations as noted in the extents column.	Periodic	Monitor during hot, cold and windy conditions. Reference concrete specifications.
Verify sawed joints in slabs on grade are completed within 4 hours of the final set of the concrete	Continuous	
Masonry Construction Inspect proportions of site prepared mortar and grout. Inspect construction of mortar joints. Inspect reinforcement for correct size and spacing. Inspect work for correct location and type of embeds and anchor bolts. Inspect work for size and location of structural elements. Inspect masonry cells and cleanouts prior to placement of grout. Inspect grout proportions. Inspect placement of reinforcement. Inspect grouting operations to ensure compliance with code and construction documents. Inspect protection of masonry during cold weather and hot weather.	Periodic	At beginning of masonry construction and every _____ square feet of masonry thereafter.
Inspect preparation of grout specimens, mortar specimens and / or prisms.	Continuous	During preparation of all specimens.
Verify compliance with all required inspection provisions of the construction documents and approved submittals.	Periodic	As required for duration of project.
Steel Construction Inspection of the steel pieces Inspection of frame		
Inspect high-strength bolts, nuts and washers: a. Identify markings to conform to ASTM standards specified in the construction documents. b. Inspect manufacturer's certificate of compliance.	Periodic	Reference project specifications and ASTM material specifications; AISC 335, (Sect A3.4); AISC LRFD (Sect A3.3).
Inspect high-strength bolting: Bearing-type connections.	Periodic	
Inspect and verify structural steel material: a. Identification markings to conform to ASTM standards specified in the approved construction documents. b. Manufacturers' certified mill test reports.	Periodic	Confirm that materials meet applicable ASTM specifications noted in construction documents.
Inspect and verify weld filler materials: a. Identification markings to conform to AWS specification in the approved construction documents. b. Manufacturer's certificate of compliance required.	Periodic	Confirm that materials meet applicable ASTM specifications noted in construction documents.
"Inspect welding: Structural Steel: 1) Complete and partial penetration groove 2) Multipass fillet welds. 3) Single-pass fillet welds > 5/16" *	Continuous	Per specifications and AWS D1.1
"Inspect welding: Structural Steel: 1) Single-pass fillet welds ≤ 5/16" 2) Floor and deck welds. "	Periodic	Per specifications and AWS D1.1
6. Inspect steel frame joint details for compliance with approved construction documents: a. Details such as bracing and stiffening. b. Member locations. c. Application of joint details at each connection.	Periodic	Inspect complete frame.
Verify deck support angles are provided for all opening greater than 100 square inches.	Periodic	
Metal Deck Verify depth and gauge of all deck elements Verify adequate bearing of ends of decking	Periodic	
Steel Joist 1. Installation of open-web steel joists a. End connections - welded or bolted b. Bridging - horizontal or diagonal.	Periodic	
1. Standard bridging 2. Bridging that differs from the SJL specifications listed in Section 2207.1	Periodic	
Special Inspections for Wind Resistance Roof Cladding and Roof Framing Connections Wall Connections to Roof and Floor Diaphragms and Framing Roof and Floor Diaphragm Systems, including Collectors, Drag Struts, and Boundary Elements. Vertical Windforce-Resisting Systems, including Braced Frames, Moment Frames, and Shearwalls Windforce-Resisting System Connections to the Foundation. Fabrication and installation of components and assemblies required to meet the impact-resistance requirements of Section 1609.1.4.	Periodic	

GENERAL NOTES

- Contractor shall compare structural drawings and architectural drawings. Any omissions or discrepancies between plans, details, and specifications shall be brought to the attention of the Architect or Engineer before bidding. In all cases, more stringent requirement governs. Architectural dimensions and elevations will control.
- Structural drawings or parts of the structural drawings may not be used as shop drawings without prior written approval.
- All or parts of these drawings were produced with computer aided drafting. Drawings are available from the Engineer in DWG format on request.
- Contractor proposed changes to details must be clearly noted on the first sheet of all shop drawings. Contractor is responsible for temporary bracing of the structure during construction.
- Review of submittal information shall be for general compliance with the contract documents and shall not include checking of detailed dimensions or detailed quantities.

DESIGN LOADS

- Reference code for loading 2023 Florida Building Code.
 - Building Classification II
 - Wind Load
 - Basic Wind Speed (3 sec gust) 123 mph
 - Wind Exposure C
 - Internal Pressure Coefficient +/- 0.18
 - Velocity Pressure (qz) 32.9 psf
 - Roof Snow Load
 - Ground Snow Load (Pg) 0 psf
 - Flat Roof Snow Load (Pf) 0 psf
 - Snow Exposure (Ce) 1.0
 - Importance Factor 1.0
 - Thermal Factor (Ct) 1.0
 - Seismic Load
 - Importance Factor 1.0
 - Mapped Spectral Response Accelerations
 - Ss 0.13
 - S1 0.057
 - Site Class D
 - Spectral Response Coefficients
 - Sds 0.11
 - Sd1 0.081
 - Seismic Design Category B
 - Base Seismic-Force-Resisting System(s) and Response Modification Factor
 - Intermediate Reinforced Masonry Shear Walls 3.5
 - Design Base Shear xx kips
 - Seismic Response Coefficient (Cs) 0.xx
 - Analysis Procedure = Equivalent Lateral Force
 - Live Load
 - Roof Load 20 psf
 - Service Bay and slabs on grade 100 psf
 - Mezzanine 50 psf

FOUNDATIONS

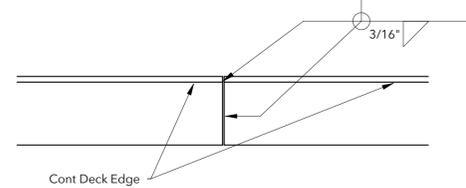
- Foundation design for this project was based on soils information provided by UES.
- Bearing capacity _____ 2000 psf
- All footings are to bear on engineered fill.
- Install corner bars at all footing intersections and corners (Provide lap length e.w.)
- All footing elevations are given to the top of the footings.
- Footing steps shown on the plans are furnished as a guide for estimating quantities. Final elevations are to be set in the field. Bearing elevations must be approved by a Soils Engineer before any concrete is placed.
- Coordinate foundation elevations with plumbing requirements. Step footings as required to clear plumbing lines.
- Provide drainage for all retaining walls, see architectural for notes and details.

MASONRY

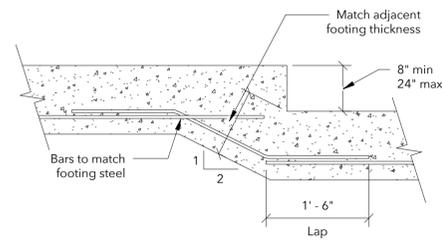
- All masonry work to be in accordance with "Building Code Requirements for Concrete Masonry Structures" TMS 402-2016 and "Specifications for Masonry Structures" TMS 602-2016
- Fill all concrete masonry units with concrete or grout from the top of the footing to the finish floor or to 8" above finish grade whichever is higher.
- Use ladder type joint reinforcement (Dur-O-Wall SW DA3100 or better) at 16" on center in all cavity walls where brick is used for one or more of the wythes.
- Use truss type joint reinforcement (Dur-O-Wall SW DA3100 or better) at 16" o/c. in all other masonry walls.
- Provide joint reinforcement at 8" o/c. for all walls constructed with stack bond.
- Use Type "M" or Type "S" mortar in accordance with IBC Table 2103.7(1).
- Minimum compressive strength of concrete masonry f'm = 2500 psi. Submit for review test data on strength of units before starting any masonry work.
- Minimum compressive strength of grout f'm = 2500 psi. Use 3/8" max size aggregate. See Special Inspection Schedule for any testing requirements. Grout slump shall be 8" to 11".
- Use "Fine" grout for all reinforced piers and reinforced wall in accordance with ASTM C 476.
- Each grout lift shall not exceed 5'-0" unless cleanouts are provided in the bottom course.
- Fill cells under all lintels with grout.
- Provide lintels over all openings through wall. See lintel details for reinforcement.
- Unless otherwise noted provide control joints in all walls 4'-0" from wall intersections or corners and at 20'-0"
- Extend all horizontal steel and bond beams thru control joints.
- Vertical Reinforcement shall extend into the bond beam.
- Unless noted, all bars are to be located at the center of cell. Where bars are specified at each face, provide minimum 3/4" clear space between reinforcement and CMU face shell.
- Anchor bolt into grouted cell locations only, unless noted otherwise.



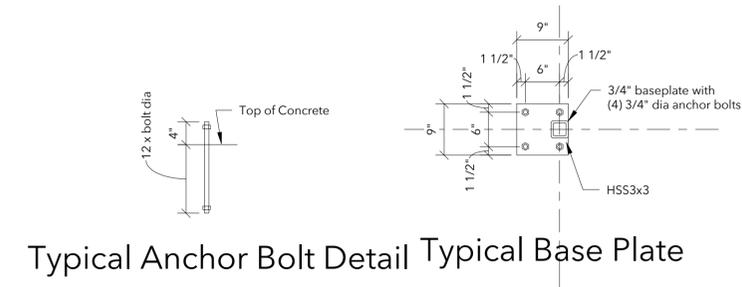
10/24/2024



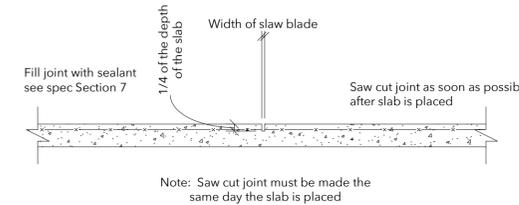
Typical Roof Deck Edge Angle Splice Detail



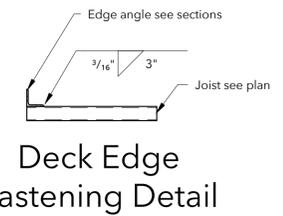
Single Footing Step



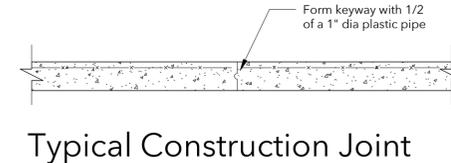
Typical Anchor Bolt Detail Typical Base Plate



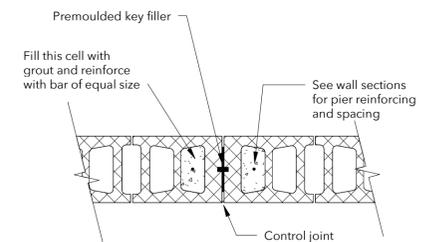
Typical Control Joint



Deck Edge Fastening Detail

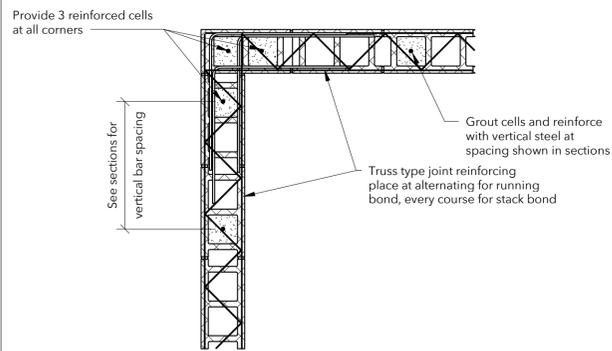


Typical Construction Joint

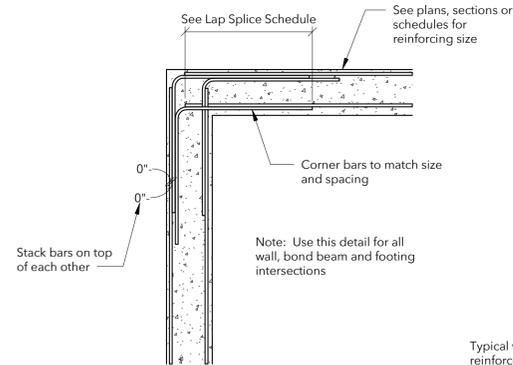


Typical Masonry Wall Control Joint

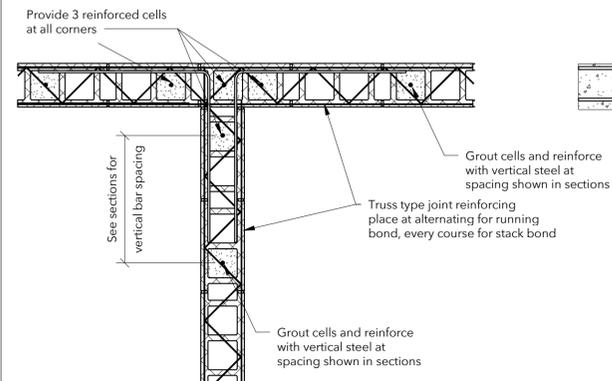
Note:
 1. See architectural plan for spacing. If spacing is not shown place joints at 3 times the wall height but not greater than 20'-0" o.c., and at 4'-0" from corners
 2. Extend all horizontal reinforcing including bond beam steel thru control joints.



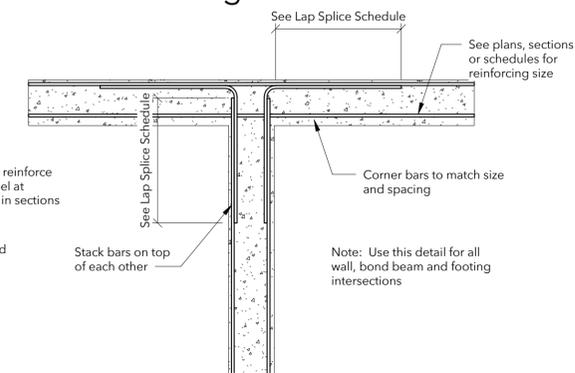
Typical Joint Reinforcing at Corner



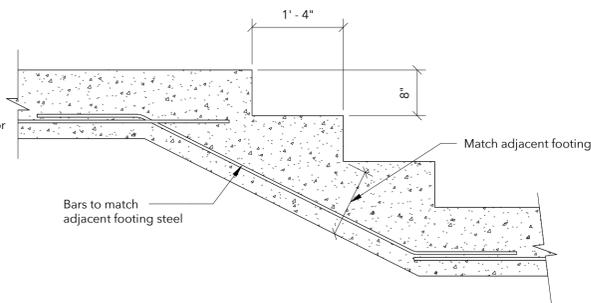
Typical Beam, Wall or Footing Reinforcing at Corners



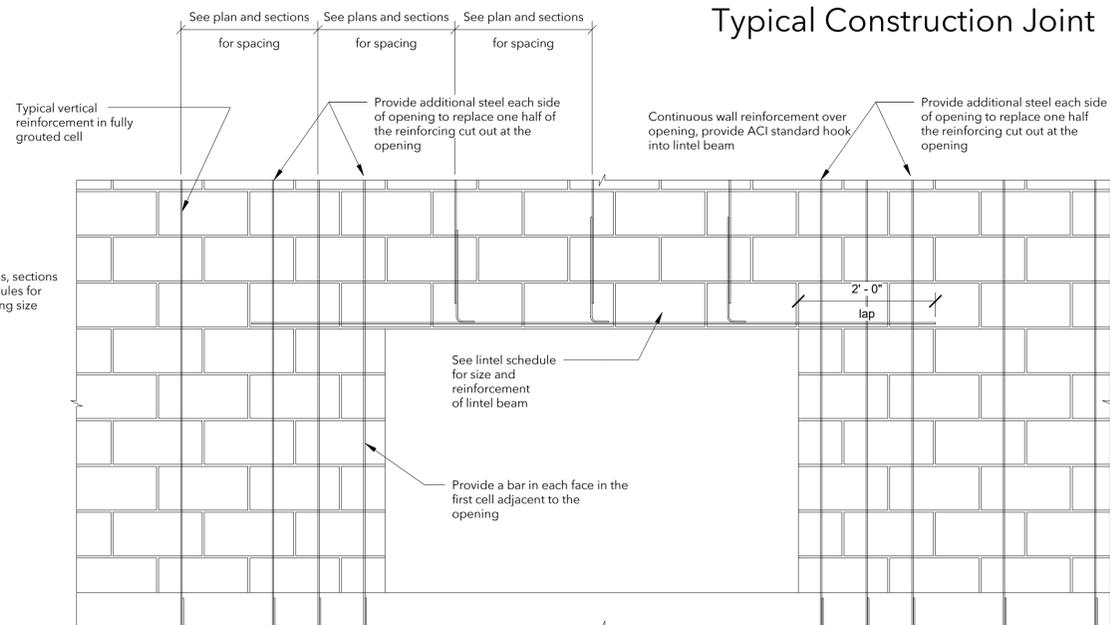
Typical Joint Reinforcing at Intersection



Typical Beam, Wall or Footing Reinforcing at Intersections



Multiple Footing Step



CMU Lintel Elevation

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 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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Typical Details

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S0.2

Scale 3/4" = 1'-0"



10/24/2024

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

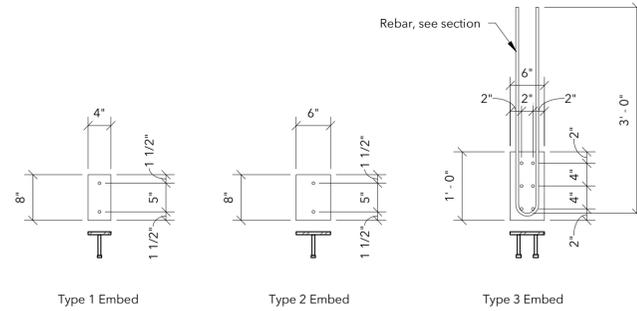
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Schedules

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S0.3

Scale 3/4" = 1'-0"



Embed plates
 3/4" plate w/ 1/2"x4"headed studs

Metal Deck Attachment Schedule

Area	Support Fastener/Pattern	Sidelap Fastener/Pattern
Roof - typical	3/8" puddle welds 36/4 pattern	2 - #10 TEK screws
Roof - hatched area	3/8" puddle welds 36/4 pattern	4 - #10 TEK screws

Reinforcing Steel Lap Splice Lengths

Bar Size	Column Splices	Bm, Ftg & Wall Splices	
		Top Bars	Other Bars
# 3	12"	19"	15"
# 4	15"	25"	19"
# 5	19"	31"	24"
# 6	23"	37"	29"
# 7	26"	54"	42"
# 8	30"	62"	48"
# 9	34"	70"	54"
# 10	38"	79"	61"
# 11	42"	87"	67"

- Notes:
- Top bars are any horizontal reinforcing steel that has another layer of steel more than 2" below the bars or reinforcing steel that has more than 12" of concrete below the bars.
 - All horizontal reinforcing bars in walls may be detailed as "Other Bars".
 - All corner bars may be detailed as "Other Bars".

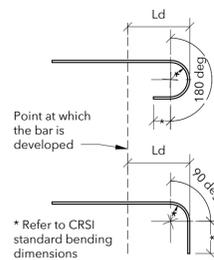
Reinforcing Steel Lap Splice & Development Length for Concrete Masonry

Bar Size	Bar in center of wall			Bar in each face of wall
	6" CMU	8" CMU	12" CMU	
#3	16"	16"	16"	16"
#4	21"	21"	21"	30"
#5	32"	26"	26"	46"
#6	61"	43"	40"	85"
#7	NA	60"	46"	115"
#8	NA	NA	61"	NA

- Notes:
- Lengths are for vertical splices in walls.
 - Bar length for center of wall are based on f'm of 1500 psi or greater.
 - Bar length for face of wall are based on f'm of 2000 psi or greater.
 - Refer to General Notes and details for masonry strength.

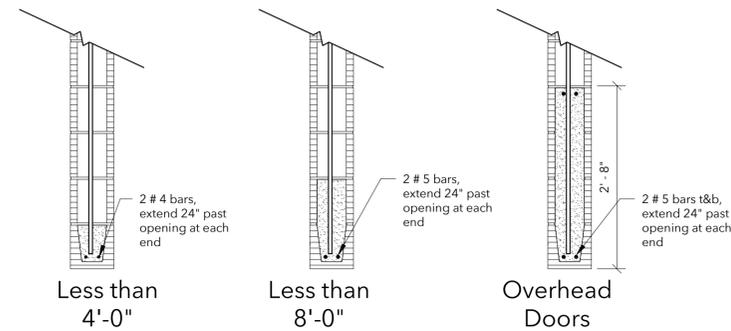
Components and Cladding Schedule
 a = 6.5'

Area (sf)	Zone 1,2,3 (+) psf	Zone 1 (-) psf	Zone 2 (+) psf	Zone 2 (-) psf	Zone 3 (+) psf	Zone 3 (-) psf	Zone 4 (+) psf	Zone 4 (-) psf	Zone 5 (+) psf	Zone 5 (-) psf
10	12.7	-34.4	46.2	-55.5	33.5	-36.2	33.5	-44.6		
50	12.7	-34.4	46.2	-55.5	30.0	-32.8	30.0	-37.7		
100	11.8	-33.5	-39.7	-39.7	28.5	-31.3	28.5	-34.8		



CONCRETE SCHEDULE

Concrete Use	Design Strength	Max W/C Ratio	Slump Limits	Entrained Air Range	Weight	Notes
Basement Walls	4000 psi	n/a	6" to 8"	3% to 5%	150 pcf	Use HRWR
Slabs on Composite Metal Deck	4000 psi	n/a	6" to 8"	---	150 pcf	Use HRWR
Slabs on Grade/Grade Beams	4000 psi	n/a	6" to 8"	---	150 pcf	Use HRWR

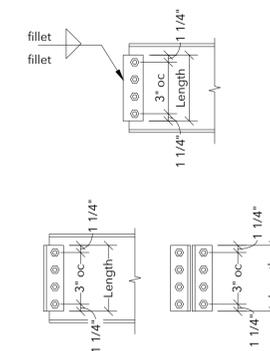


CMU Lintel Schedule

Beam to Column Single Shear Plate Connection Schedule

Min Beam Depth	Max end reaction	Length	# of bolts	Plate thickness	Fillet weld size
W10	16.7k	5-1/2"	2	5/16"	3/16"

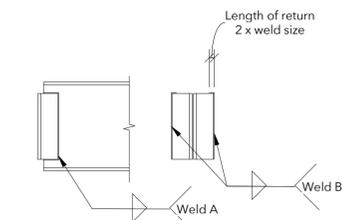
- Use this table for Wide Flange Beams to HSS Columns
- Loads are ASD
- Bolts are 3/4" dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane. More than 5 bolts must have short-slotted holes.
- Plate is A36 and welds are E-70XX electrodes
- Beam reactions that exceed the max reaction in this table will use the Double Angle Frame Connection Schedule below.

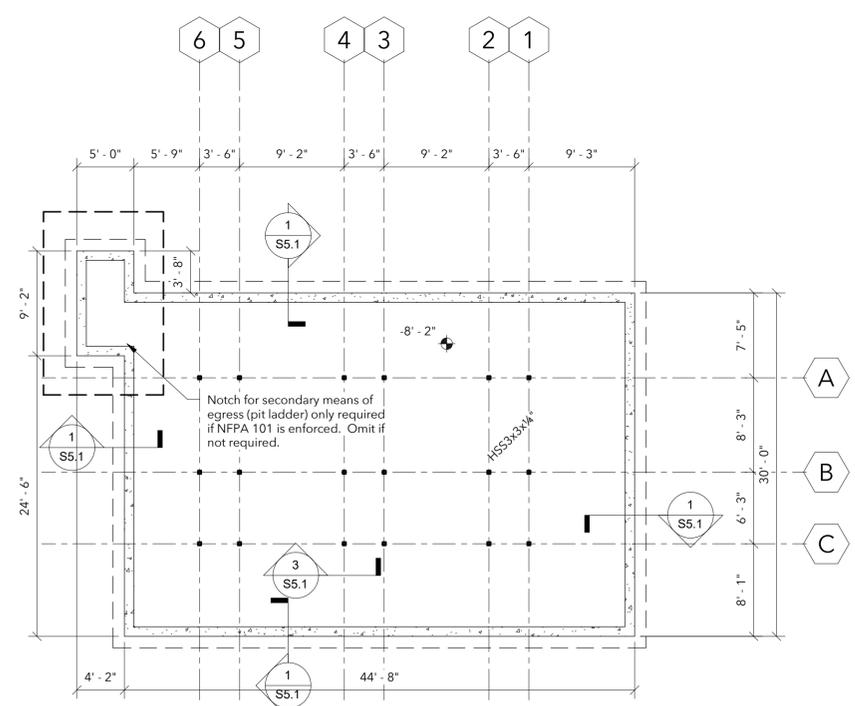
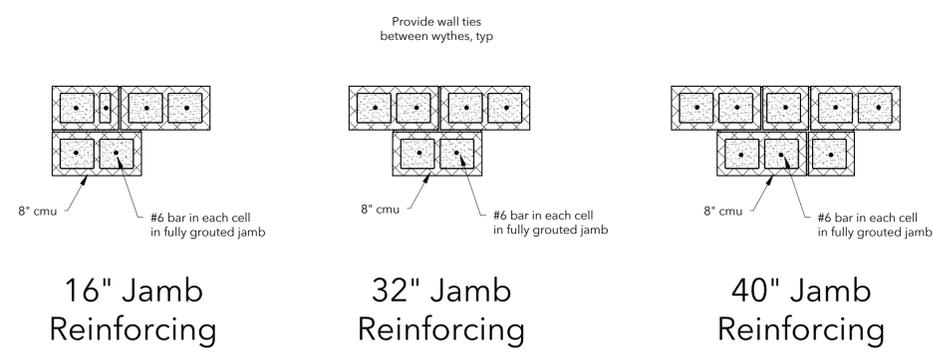


Beam Double Angle Shear Connection Schedule

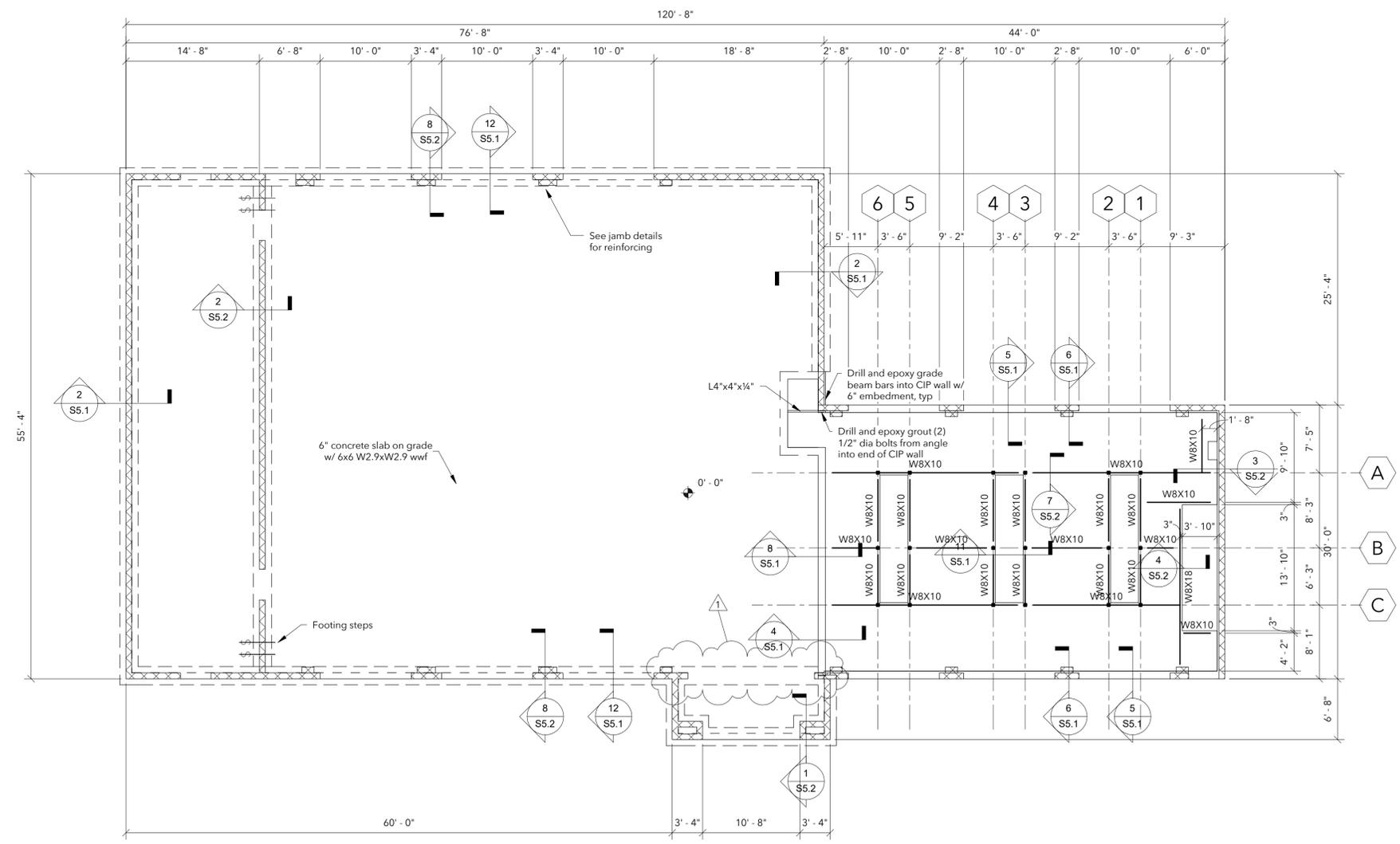
Min Beam Depth	Max end reaction	Length	rows of bolts	Angle thickness	Weld A fillet size	Weld B fillet size
W10	14.6k	5-1/2"	2	1/4"	3/16"	1/4"

- Use this table for Wide Flange Beams to Wide Flange Columns or other Beams
- Loads are ASD
- Bolts are 3/4" dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane.
- Angles are A36 and welds are E-70XX electrodes
- Beam reactions that exceed the max reaction in this table will shall be designed by steel fabricator and submit signed/sealed calculations prepared by a Professional Engineer licensed in the State of the Project





PIT FOUNDATION PLAN
 1/8" = 1'-0"



FOUNDATION PLAN
 1/8" = 1'-0"
Sheet Notes:
 1. See Sheet No S0 for typical details and general notes.
 2. Reference all elevations to finish floor elevation (+) 0'-0".
 3. Floor construction 3" concrete slab with 6x6 W2.9xW2.9 wwf over 2" x 20 ga. galvanized composite metal deck. Total slab thickness = 5". Provide 5/8" dia puddle welds on 36/4 pattern w/ (3) #12 TEK screw sidelap fasteners per span.
 4. All steel beam reactions shall be designed for 10 kips (ASD) unless noted otherwise.
 5. Refer to architectural for all dimensions, slopes, elevations, etc. not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date
1	ASI#1	11.08.24

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Foundation Plan

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

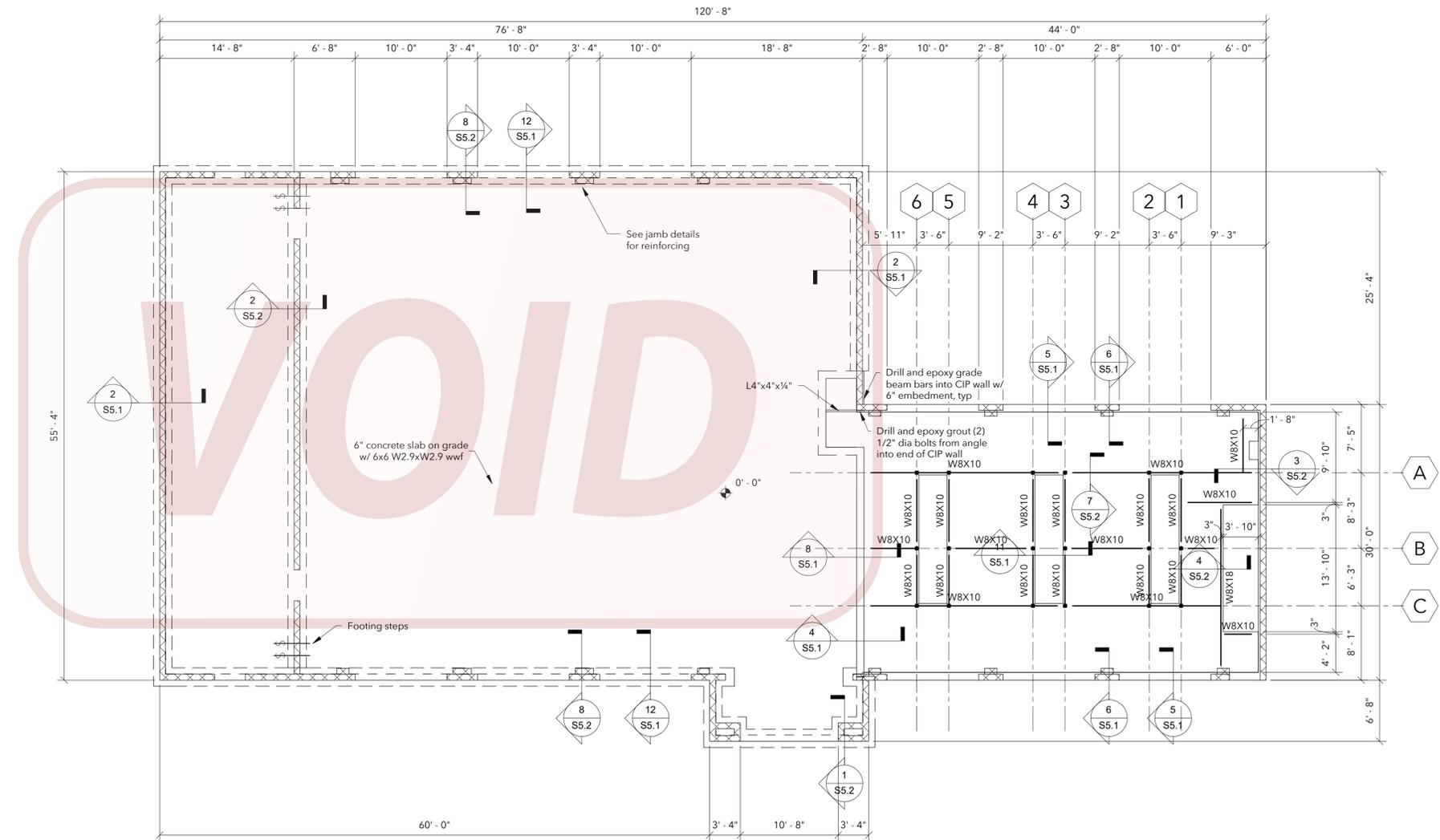
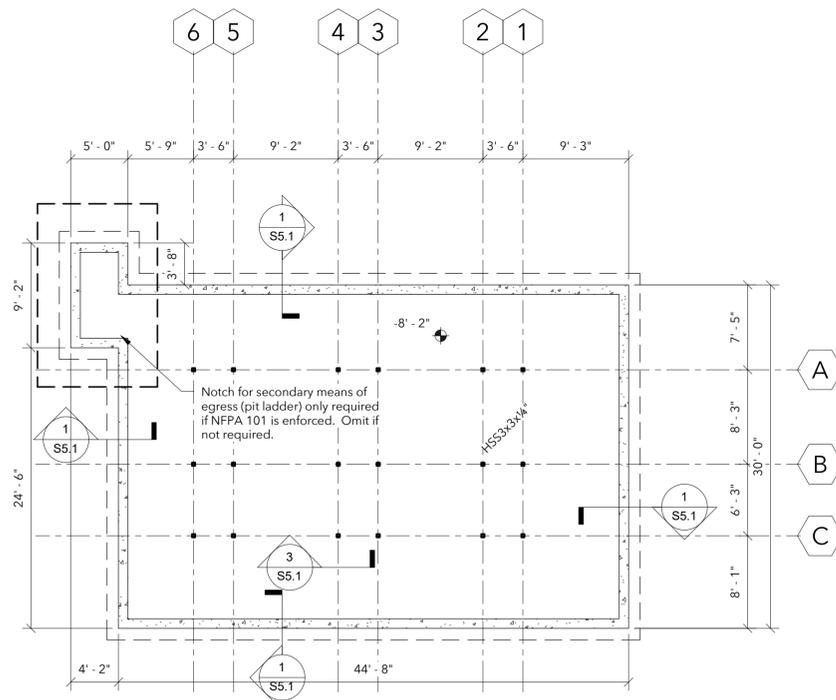
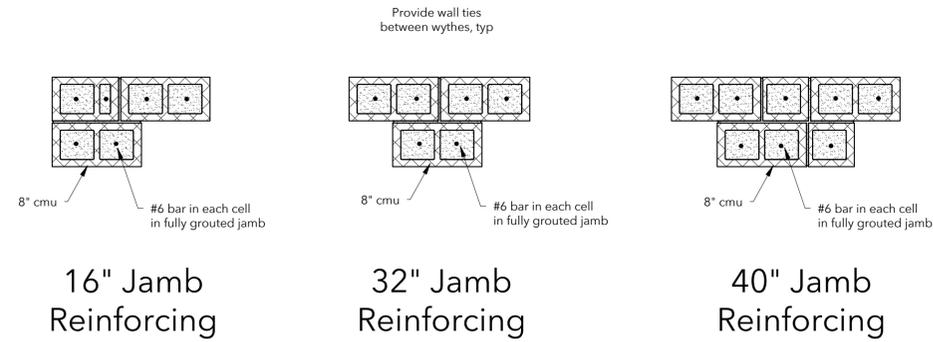
S1.1

Scale As indicated



10/24/2024

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida



- Sheet Notes:**
- See Sheet No S0 for typical details and general notes.
 - Reference all elevations to finish floor elevation (+) 0'-0".
 - Floor construction 3" concrete slab with 6x6 W2.9xW2.9 wwf over 2" x 20 ga. galvanized composite metal deck. Total slab thickness = 5". Provide 5/8" dia puddle welds on 36/4 pattern w/ (3) #12 TEK screw sidelap fasteners per span.
 - All steel beam reactions shall be designed for 10 kips (ASD) unless noted otherwise.
 - Refer to architectural for all dimensions, slopes, elevations, etc. not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.

FINAL

No.	Description	Date

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Foundation Plan

VOID

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd
S1.1	
Scale	As indicated



10/24/2024

Express Oil Change & Tire Engineers
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 Starke, Florida

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No.	Description	Date

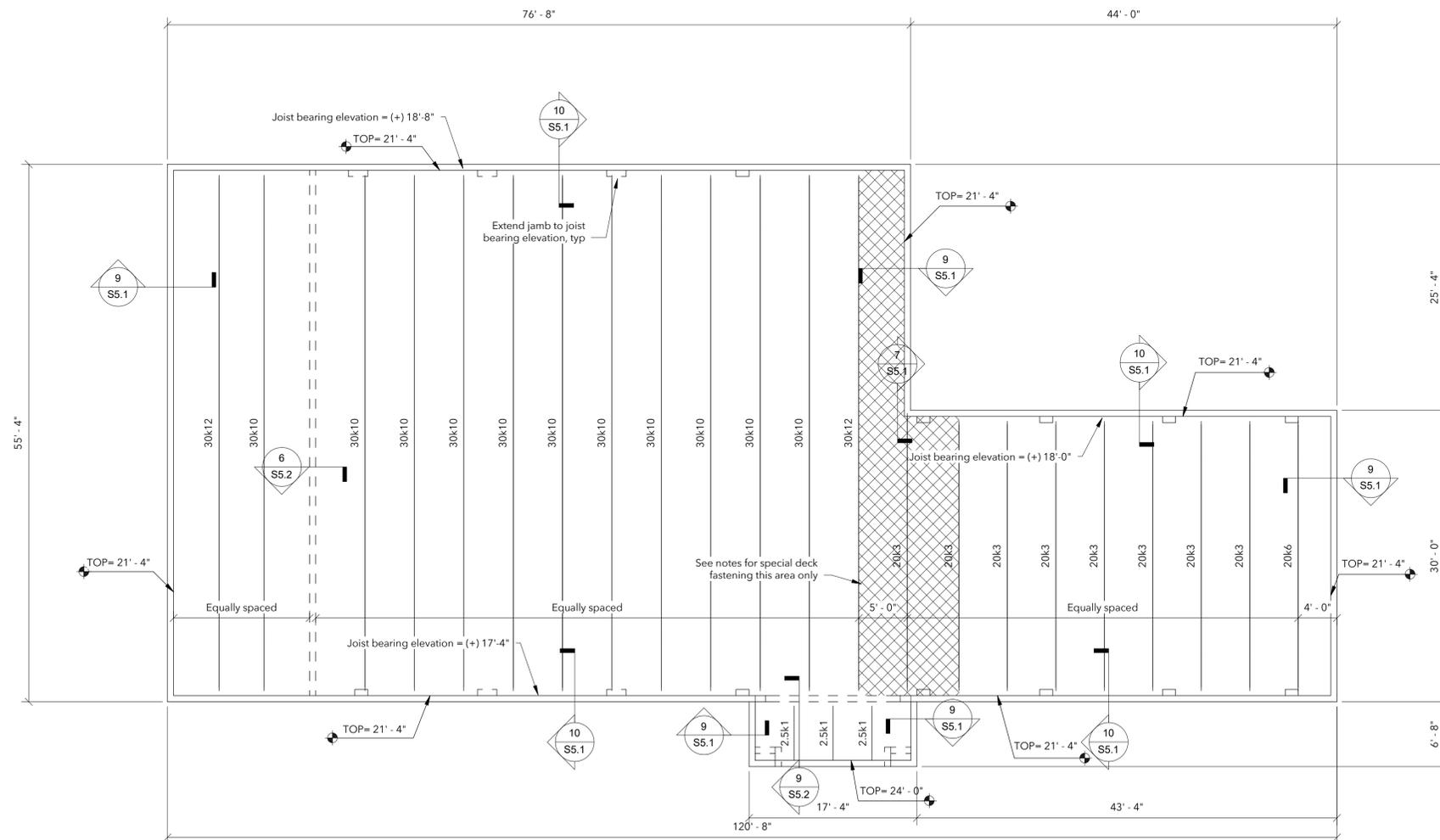
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Roof Framing Plan

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S3.1

Scale As indicated



ROOF FRAMING PLAN

1/8" = 1'-0"

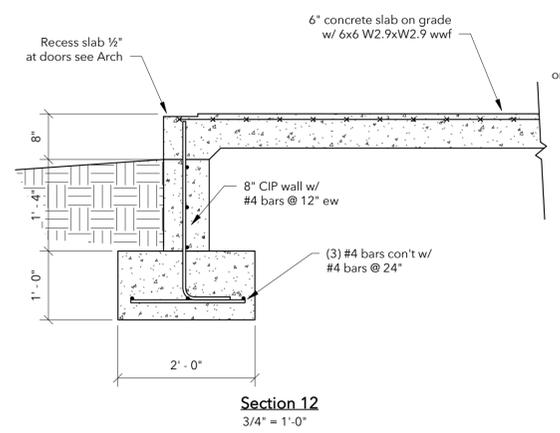
Sheet Notes:

1. See S0.x Sheets for typical details and general notes.
2. Reference all elevations to finish floor elevation (+)10'-0"
3. See plan for Joist Bearing Elevations.
4. Roof construction 1 1/2" x 22 ga. type B painted metal deck. See S0.3 sheets for attachment details.
5. Refer to architectural drawings for all dimensions, slopes, elevations, etc... not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.

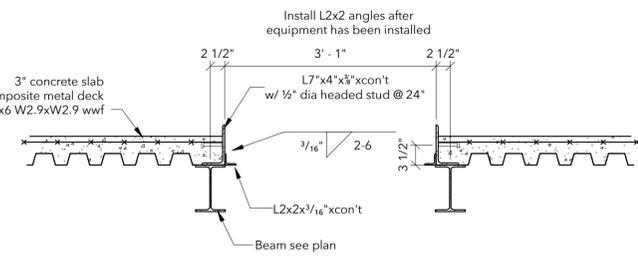


10/24/2024

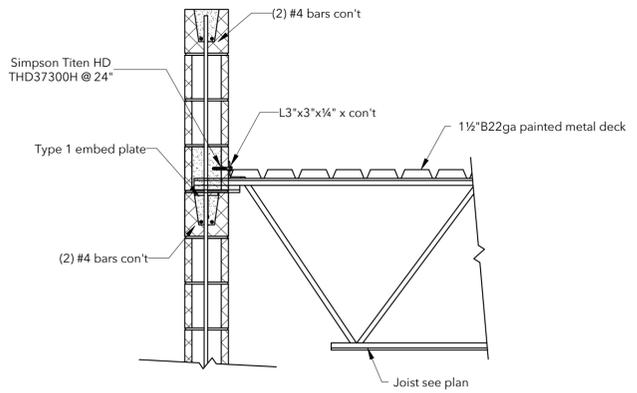
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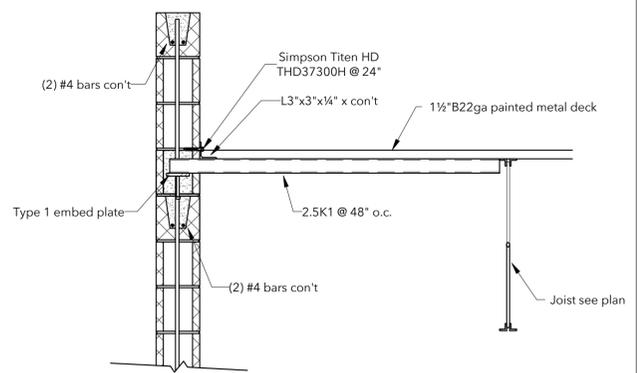
Section 12
3/4" = 1'-0"



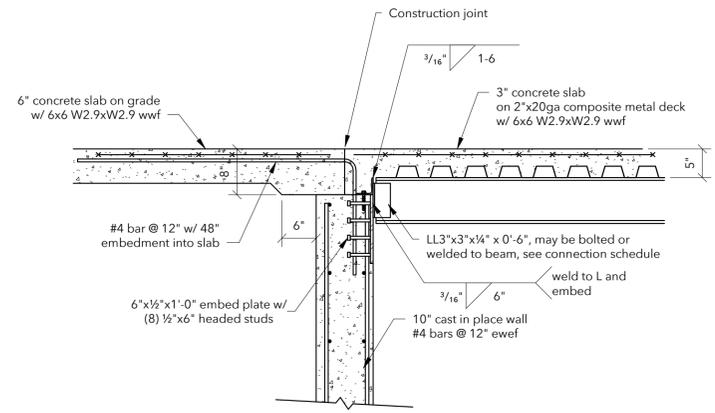
Section 11
3/4" = 1'-0"



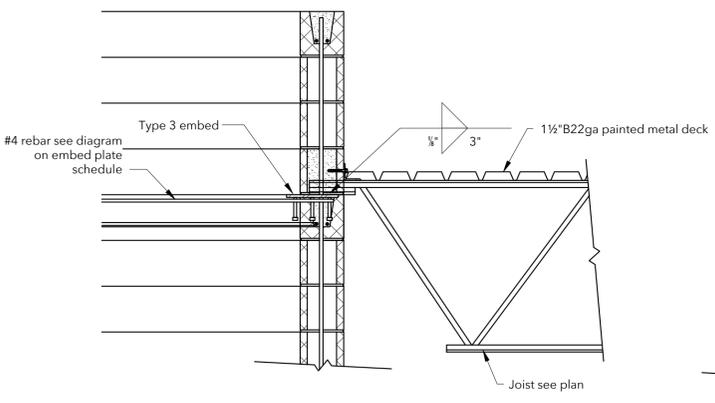
Section 10
3/4" = 1'-0"



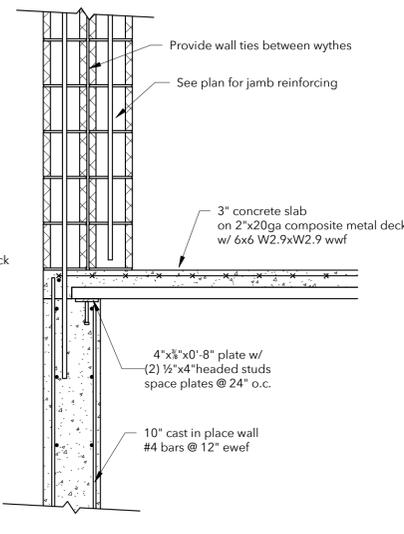
Section 9
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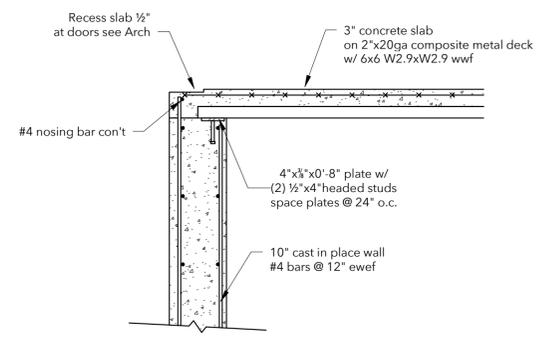
Section 8
3/4" = 1'-0"



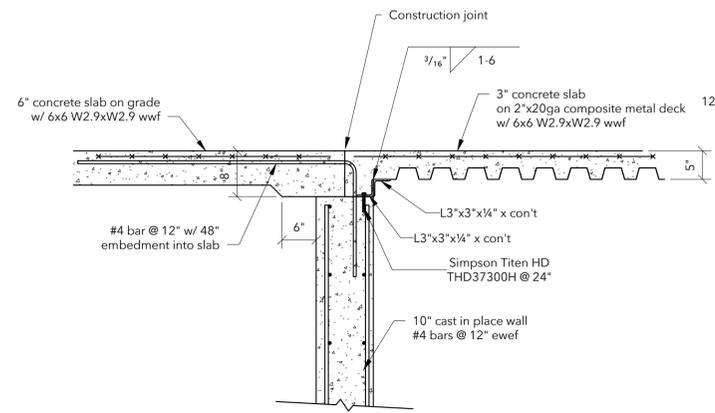
Section 7
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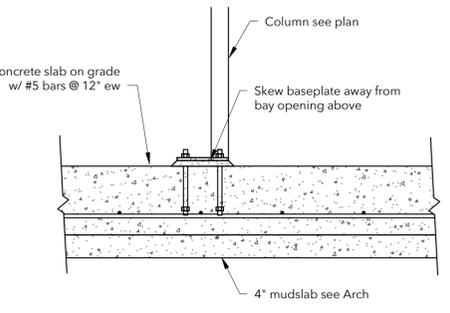
Section 6
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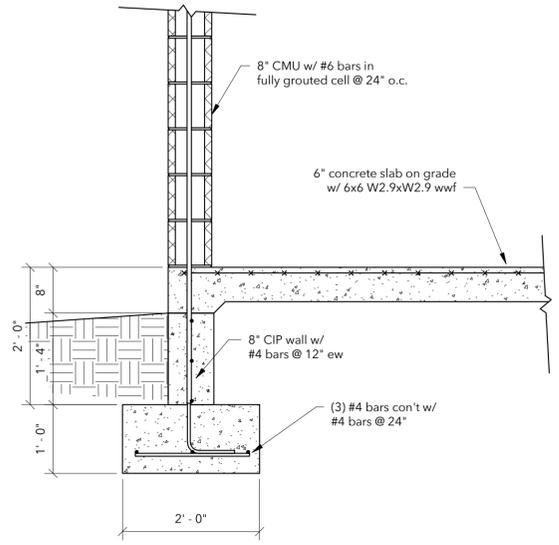
Section 5
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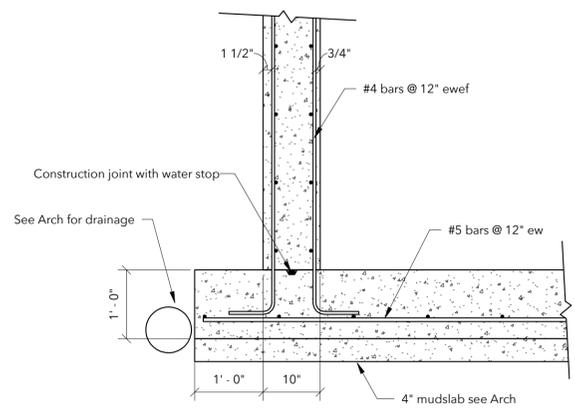
Section 4
3/4" = 1'-0"



Section 3
3/4" = 1'-0"



Section 2
3/4" = 1'-0"



Section 1
3/4" = 1'-0"

FINAL

No.	Description	Date

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Sections and Details

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S5.1

Scale 3/4" = 1'-0"



10/24/2024

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No.	Description	Date

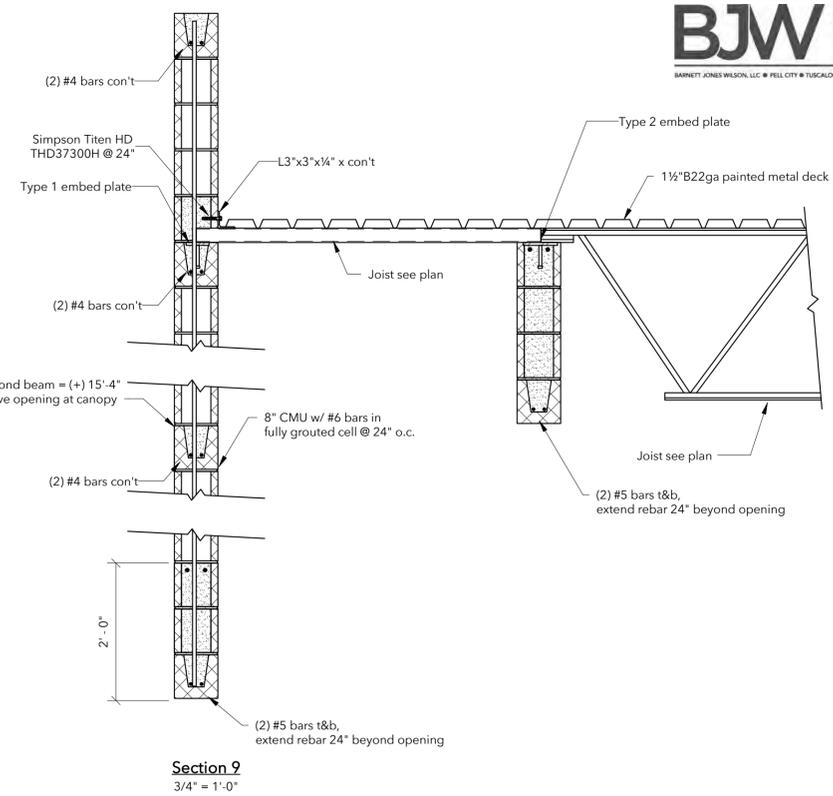
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Sections and Details

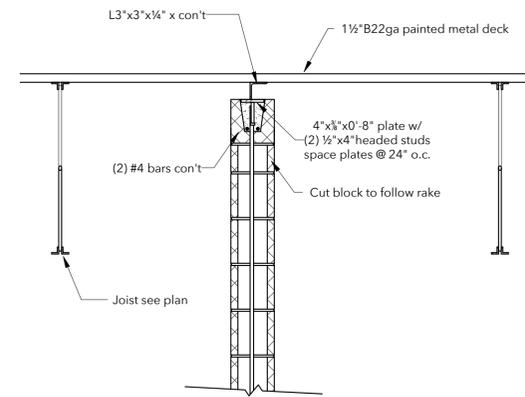
Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S5.2

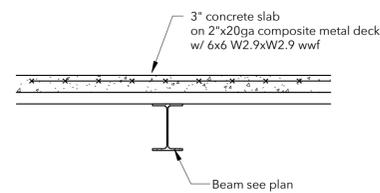
Scale 3/4" = 1'-0"



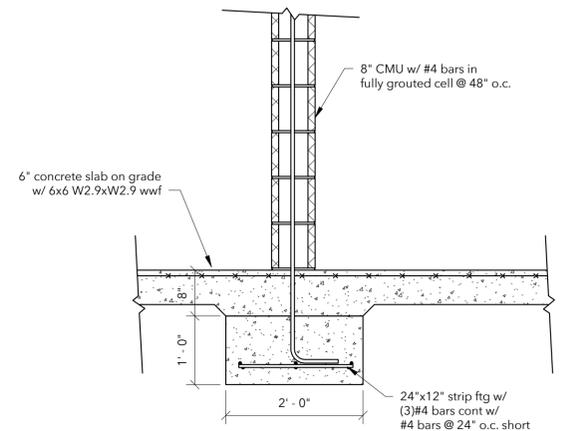
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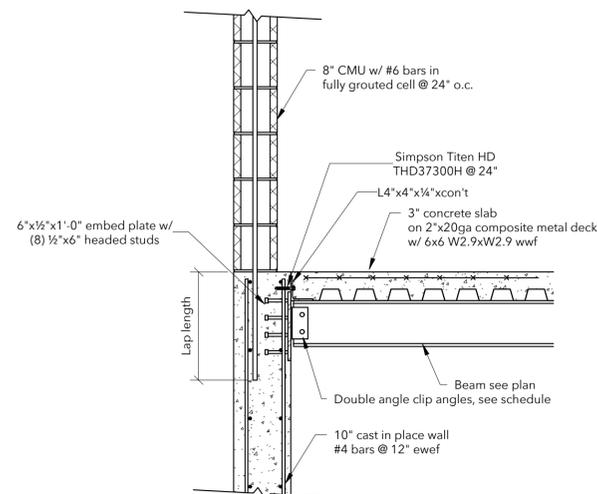
Section 6
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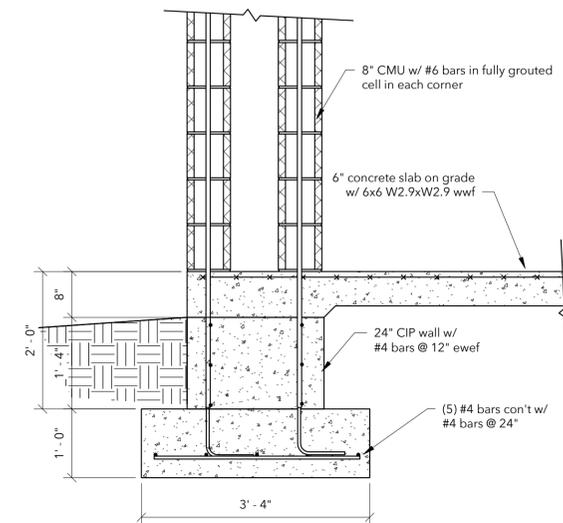
Section 7
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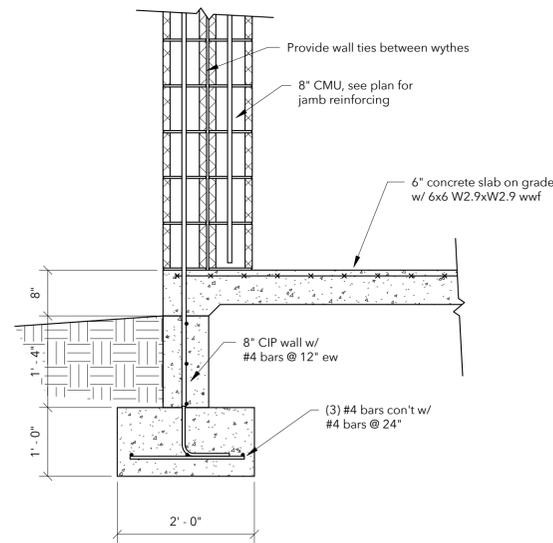
Section 2
3/4" = 1'-0"



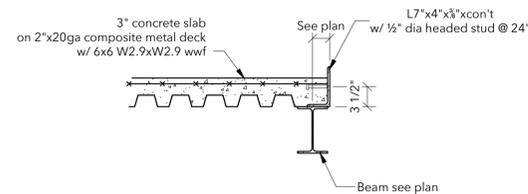
Section 3
3/4" = 1'-0"



Section 1
3/4" = 1'-0"



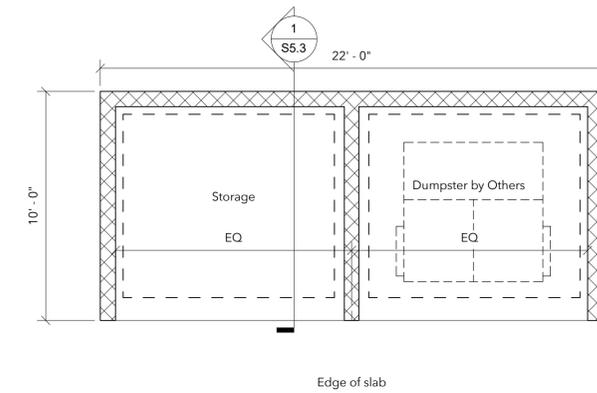
Section 8
3/4" = 1'-0"



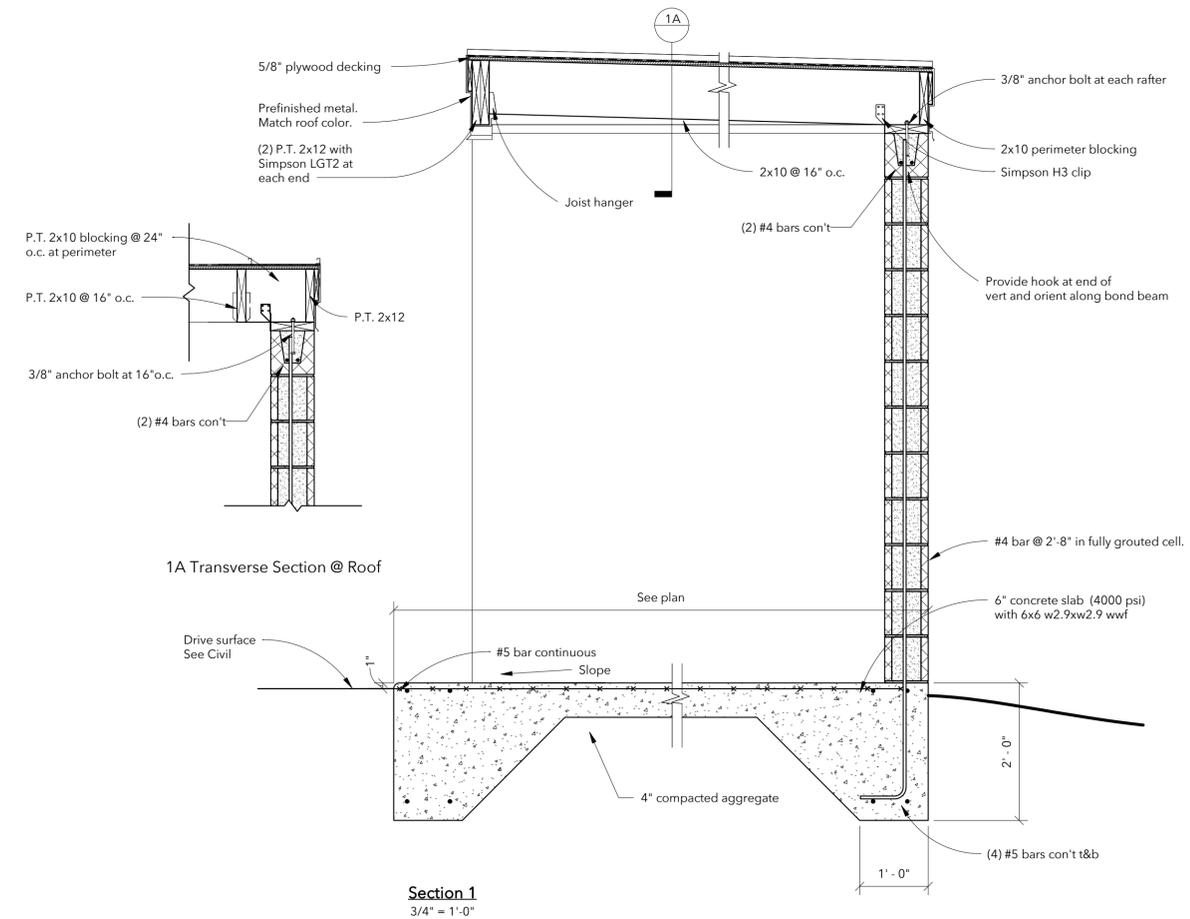
Section 4
3/4" = 1'-0"



10/24/2024



Dumpster Enclosure Plan
 1/4" = 1'-0"



Section 1
 3/4" = 1'-0"

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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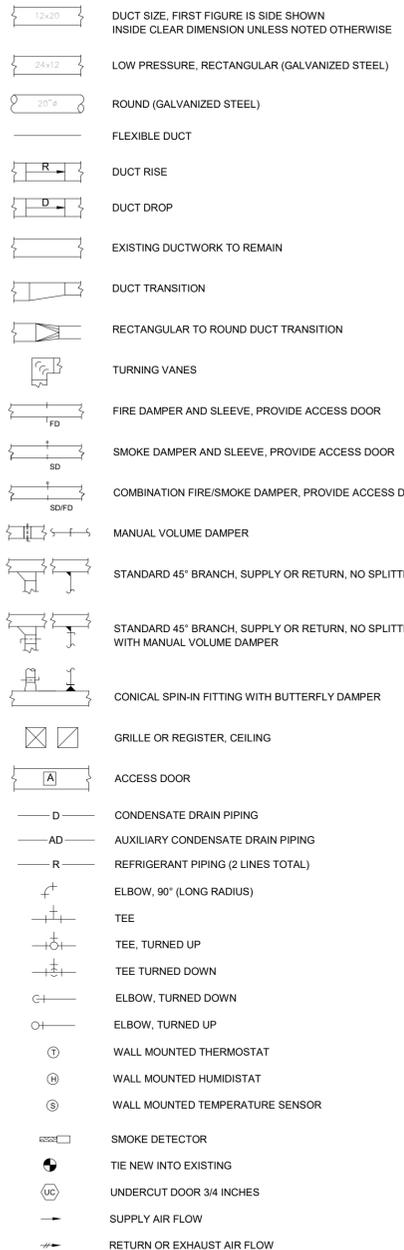
Sections and Details

Project number	24052
Date	10/24/2024
Drawn by	jcj
Checked by	jd

S5.3

Scale As indicated

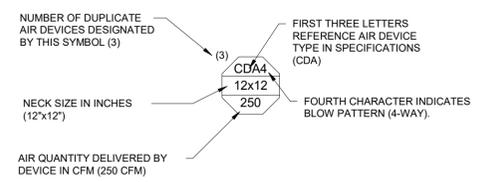
LEGEND



NOTE: THIS LEGEND IS FOR REFERENCE ONLY. ALL SYMBOLS WHICH APPEAR WITHIN THE LEGEND MAY NOT APPLY TO THIS PROJECT.

ABBREVIATIONS

- AB CLVG ABOVE CEILING
- ABV. ABOVE
- AC ALTERNATING CURRENT
- A/C AIR COMPRESSOR
- AFF ABOVE FINISHED FLOOR
- AHU AIR HANDLING UNIT
- AI ANALOG INPUT
- AL ALTERNATE
- AMP AMPERE
- AO ANALOG OUTPUT
- APPROX. APPROXIMATELY
- ARCH. ARCHITECTURAL
- AVG AVERAGE
- B BOILER
- BTU BRITISH THERMAL UNIT
- CFM CUBIC FEET PER MINUTE
- CH CHILLER
- CHWP CHILLED WATER PUMP
- CLG CEILING
- CT COOLING TOWER
- CU CONDENSING UNIT
- CWP CONDENSER WATER PUMP
- DEFL DEFLECTION
- DET DETAIL
- DI DIGITAL INPUT
- DIA DIAMETER
- DI DIGITAL INPUT
- DO DIGITAL OUTPUT
- EDB ENTERING DRY BULB
- ELEC. ELECTRICAL
- ELEV. ELEVATION
- EWB ENTERING WET BULB
- EWT ENTERING WATER TEMPERATURE
- EXH EXHAUST
- EXIST. EXISTING
- F DEGREES FAHRENHEIT
- GFF GAS FIRED FURNACE
- GPM GALLONS PER MINUTE
- FPM FEET PER MINUTE
- FPS FEET PER SECOND
- FT FOOT OR FEET
- HD HEAD
- HP HORSE POWER
- HR HOURS
- HT HEIGHT
- HTR HEATER
- HVAC HEATING, VENTILATION AND AIR CONDITIONING
- HWP HOT WATER PUMP
- HX HEAT EXCHANGER
- HZ FREQUENCY (HERTZ)
- ID INSIDE DIAMETER
- IN. INCHES
- KW KILOWATT
- KWH KILOWATT HOUR
- MAX MAXIMUM
- MBH 1000 BTU PER HOUR
- MECH. MECHANICAL
- MFR. MANUFACTURER
- MIN MINIMUM
- NO. NUMBER
- N/A NOT APPLICABLE
- NC NOISE CRITERIA
- O.D. OUTSIDE DIAMETER
- OA OUTSIDE AIR
- OVAL DUCTWORK
- ORIG. ORIGINAL
- PH PHASE
- PIU POWERED INDUCTION UNIT
- PRESS PRESSURE
- RTN RETURN AIR
- RTU ROOFTOP AIR HANDLING UNIT
- SDC STAND ALONE DIGITAL CONTROLLER
- SENS SENSIBLE
- SQ SQUARE
- SPLY SUPPLY
- TEMP TEMPERATURE
- VAV VARIABLE AIR VOLUME
- W WATT
- W/ WITH
- W.P.D. WATER PRESSURE DROP



1 AIR DEVICE LEGEND
MEP## NO SCALE

AIR HANDLING UNIT SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	CFM	OA CFM	E.S.P. (IN. W.C.)	FAN		COOLING COIL	ELECTRIC HEAT			ELECTRICAL				MOUNTING	WEIGHT (LBS.)	REMARKS	
					H.P.	DRIVE		TOTAL (KW) (208v)	TOTAL (KW) (240v)	STAGES	DISCONNECT	VOLTS/PH./HZ. 208/1/60		VOLTS/PH./HZ. 240/1/60				
												UNIT MCA	UNIT MOCP	UNIT MCA				UNIT MOCP
AHU-1	TRANE GAM5B0836	1195	150	0.50	1/2	--	CC-1	10.8	14.4	2	BY DIV. 26	48	50	55	60	HORIZONTAL	--	1), 2), 3)

REMARKS:
1) UNIT MOUNTED ON EQUIPMENT PLATFORM.
2) PROVIDE WITH 1" THROWAWAY FILTERS.
3) ROUTE CONDENSATE TO HUB DRAIN.

COIL SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	TYPE	MAXIMUM FINS PER INCH	ROWS (MIN)	MAXIMUM FACE VEL. (FPM)	AIR					DX REFR. TYPE	REMARKS	
						CFM	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)			DELTA P (IN. W.C.)
CC-1	TRANE	DIRECT EXPANSION	--	--	--	1195	78.0	66.0	57.9	56.2	0.5	R-410A	1)

REMARKS:
1) FURNISHED WITH UNIT.

OUTDOOR HEAT PUMP SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	SERVICE	COOLING CAPACITY		HEATING CAPACITY		ELECTRICAL			SEER	COP @47	WEIGHT (LBS.)	REMARKS	
			NOMINAL (TONS)	AMBIENT TEMP. (F)	MBH	AMBIENT TEMP. (F)	UNIT MCA	UNIT MOCP	DISCONNECT					VOLTS/PH./HZ.
HP-1	TRANE 4TTWR4036	AHU-1	3	95	30.6	47	18	30	BY DIV. 16	208/1/60	14.6	3.5	225	1), 2), 3)

REMARKS:
1) PROVIDE LONG LINE ACCESSORIES AS REQUIRED BY MANUFACTURER.
2) UNITS SHALL BE SIZED AT 95°F AMBIENT AIR TEMPERATURE.
3) LOCATE UNIT ON HOUSEKEEPING PAD. ANCHOR UNIT TO PAD WITH EXPANSION BOLTS.

POWER VENTILATOR SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	CFM	E.S.P. (IN. W.C.)	RPM	MAX SONES	ELECTRICAL			LOCATION	TYPE	DRIVE	WGT (LBS.)	REMARKS	
						DISCONNECT	MOTOR STARTER	WATTS						
EF-1	COOK GC-146	70	0.35	849	1.5	BY DIV. 26	BY DIV. 23	32	115/1/60	CEILING	CENTRIFUGAL	DIRECT	15	1), 3), 5)
EF-2	COOK GC-146	70	0.35	849	1.5	BY DIV. 26	BY DIV. 23	32	115/1/60	CEILING	CENTRIFUGAL	DIRECT	15	1), 3), 5)
EF-3	COOK 150SQN17D	3000	0.35	1649	21.4	BY DIV. 26	BY DIV. 23	1 HP	115/1/60	INLINE	CENTRIFUGAL	DIRECT	120	2), 3), 6)
EF-4	COOK 24XP28D102	4200	0.25	971	15.8	BY DIV. 26	BY DIV. 23	3/4 HP	115/1/60	WALL	PROPELLER	DIRECT	150	2), 4)

REMARKS:
1) PROVIDE OCCUPANCY SENSOR FOR FAN OPERATION IN EACH RESTROOM.
2) FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS. INTERLOCK WITH LOCAL SWITCH. COORDINATE WITH ELECTRICAL.
3) PROVIDE WITH FAN SPEED CONTROLLER.
4) PROVIDE WITH FAN INLET GUARDS.
5) PROVIDE WITH BACKDRAFT DAMPER.
6) PROVIDE FAN WITH EC VARIFLOW DRIVE PACKAGE.

RADIANT HEATER SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	HEATING CAPACITY (MBH)	AMPS	ELECTRICAL		WEIGHT (LBS)	MOUNTING HEIGHT	REMARKS
				DISCONNECT	VOLTS/PH./HZ.			
RH-1	RE-VERBER-RAY DX3L-30-100 (PROPANE)	100	0.1	BY DIV. 26	115/1/60	160	13' 6"	1), 2), 4), 5), 6)
RH-2	RE-VERBER-RAY DR-50 (PROPANE)	50	0.1	BY DIV. 26	115/1/60	50	11' 9"	1), 2), 3), 4), 6)
RH-3	RE-VERBER-RAY DR-50 (PROPANE)	50	0.1	BY DIV. 26	115/1/60	50	11' 9"	1), 2), 3), 4), 6)

REMARKS:
1) MAINTAIN DISTANCES FROM COMBUSTIBLES PER MANUFACTURERS INSTALLATION DETAILS.
2) PROVIDE WITH 24V TRANSFORMER AND LOW VOLTAGE THERMOSTAT.
3) ANGLE UNITS AT 30 DEGREES FROM HORIZONTAL. SUSPEND UNITS FROM STRUCTURE WITH 3/8" THREADED RODS.
4) HEIGHT SHOWN MEASURED FROM BOTTOM OF HEATING RAY HEAD/TUBE.
5) PROVIDE HEATER WITH SIDE SHIELDS TO DIRECT HEAT DOWNWARD.
6) PROVIDE UNIT WITH PROPANE HEAT.

OUTSIDE AIR CALCULATIONS

MECHANICAL CODE OUTSIDE AIR REQUIREMENT															MAX OA REQUIRED	
Served By	Space Name	Supply Air (cfm)	Area (sq. ft)	Occupancy Classification	Max Number of Occupants/SF (per 1000 SF)	Number of Occupants Rp	O.A. Area	O.A. People	O.A. Area	O.A. People	Zone	Corrected CFM	Vot	Primary O.A. Fraction	Ventilation Ev	Remarks
							Air Rate (cfm / sq. ft) Ra	Air Rate (cfm/person) Pz	Air Rate (cfm) Vbz	Air Rate (cfm) Vz						
AHU-1	1 Service Writing	320	140	Lobbies	--	1	0.06	5	8	5	13	0.80	17	17	0.05	1
	2 Waiting Room	275	126	Lobbies	--	15	0.06	5	8	75	83	0.80	103	103	0.38	0.775
	4 Manager	125	51	Office	5	1	0.06	5	3	5	8	0.80	10	10	0.08	1
	7 Break Room	275	61	Break Room	35	1	0.06	10	4	10	14	1.80	8	8	0.03	1
														OA	Lowest Ev	
														137.61	1.00	



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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Mechanical Legend, Abbreviations and Schedules

Project number 24052
Date 10/24/2024
Drawn by CA
Checked by JB

M0.01

Scale 12" = 1'-0"



Engineering & Design Consultants
2111 Parkway Office Circle, Suite 125
Birmingham, AL 35244
(205) 733-6912 FAX: (205) 733-6913
Job No. 24261



10/24/24

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stark, Florida

FINAL		
No.	Description	Date

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Mechanical Specifications	
Project number	24052
Date	10/24/2024
Drawn by	CA
Checked by	JB
<h1>M0.03</h1>	
Scale	12" = 1'-0"

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SECTION 15870 - POWER VENTILATORS

- A. POWER VENTILATORS WHICH ARE SCHEDULED OR REFERRED TO BY MODEL NUMBER OR CATALOGUE NUMBER ARE INTENDED TO INCLUDE ALL MATERIALS COVERED BY SUCH NUMBER, ANY REQUIRED ACCESSORIES FOR THE INSTALLATION OF THE FAN ARE TO BE BY THE SAME MANUFACTURER UNLESS OTHERWISE NOTED.
- B. ALL WIRING AND ELECTRICAL COMPONENTS SHALL COMPLY WITH THE NATIONAL ELECTRIC CODES (NEC). ALL MATERIALS SHALL BE UL LISTED. FANS SHALL BE UL 705. FANS SHALL BEAR THE AMCA CERTIFIED RATINGS SEAL FOR SOUND AND AIR PERFORMANCE. FAN ASSEMBLY SHALL BEAR AN ENGRAVED ALUMINUM NAMEPLATE. FANS WHEELS SHALL BE BALANCED IN ACCORDANCE WITH AMCA STANDARD 204-95.
- C. EACH UNIT SHALL HAVE A BIRDSCREEN CONSTRUCTED OF GALVANIZED WIRE MESH WITH 2 IN. OPENINGS MOUNTED VERTICALLY IN THE UNIT DISCHARGE. THE BIRDSCREEN SHALL PRODUCE MINIMAL EFFECT ON AIR AND SOUND PERFORMANCE.
- D. INSTALL FAN IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL FANS WITH CLEARANCES FOR SERVICE AND MAINTENANCE. MAKE FINAL DUCT CONNECTIONS TO FANS WITH FLEXIBLE CONNECTORS.
- E. ROOF CURBS SHALL BE CONSTRUCTED USING MINIMUM 14 GAUGE GALVANIZED STEEL WITH FULLY MITERED AND WELDED CORNERS. INTEGRAL BASE PLATES INTERNALLY REINFORCED WITH 1 IN. X 1/2 IN. X 1/8 IN. STEEL ANGLE. FACTORY INSULATED WITH L 1/2 IN. THICK THREE POUND PER CU. FT. DENSITY FIBERGLASS INSULATION. CURBS SHALL BE FABRICATED WITHOUT CANTS. MINIMUM HEIGHT OF CURB SHALL BE 8 IN. ABOVE FINISHED ROOF. CURBS SHALL BE CONSTRUCTED TO MATCH SLOPE OF ROOF AND PROVIDE A LEVEL TOP SURFACE FOR MOUNTING OF MECHANICAL EQUIPMENT.
- F. BACK DRAFT DAMPER SHALL BE 6063T5 EXTRUDED ALUMINUM FRAME, .025 IN THICK FORMED ALUMINUM BLADES, EXTRUDED VINYL EDGE SEALS, SYNTHETIC BEARINGS, MILL FINISH.
- G. DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER - BELT DRIVE:
- FAN SHALL BE SPUN ALUMINUM OF BOLTED AND WELDED CONSTRUCTION UTILIZING CORROSION RESISTANT FASTENERS. THE SPUN ALUMINUM STRUCTURAL COMPONENTS SHALL BE CONSTRUCTED OF MINIMUM 16 GAUGE MARINE ALLOY ALUMINUM, BOLTED TO A RIGID ALUMINUM SUPPORT STRUCTURE. THE ALUMINUM BASE SHALL HAVE CONTINUOUSLY WELDED CURB CAP CORNERS FOR MAXIMUM LEAK PROTECTION. THE DISCHARGE BAFFLE SHALL HAVE A ROLLED BEAD.
 - AN INTEGRAL CONDUIT CHASE SHALL BE PROVIDED THROUGH THE CURB CAP AND INTO THE MOTOR COMPARTMENT TO FACILITATE WIRING CONNECTIONS.
 - FAN WHEEL SHALL BE CENTRIFUGAL BACKWARD INCLINED, CONSTRUCTED OF 100% ALUMINUM, INCLUDING A PRECISION MACHINED CAST ALUMINUM HUB. WHEEL INLET SHALL OVERLAP AN AERODYNAMIC ALUMINUM INLET CONE. MOTOR SHALL BE HEAVY DUTY TYPE WITH PERMANENTLY LUBRICATED SEALED BALL BEARINGS AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE AND ENCLOSURE.
 - BEARINGS SHALL BE DESIGNED AND INDIVIDUALLY TESTED SPECIFICALLY FOR USE IN AIR HANDLING APPLICATIONS. CONSTRUCTION SHALL BE HEAVY DUTY REGREASABLE BALL TYPE IN A CAST IRON HOUSING SELECTED FOR A MINIMUM L50 LIFE IN EXCESS OF 200,000 HOURS AT MAXIMUM CATALOGED OPERATING SPEED.
 - BEARINGS AND DRIVES SHALL BE MOUNTED ON A MINIMUM 14 GAUGE STEEL ASSEMBLY, ISOLATED FROM THE UNIT STRUCTURE WITH RUBBER VIBRATION ISOLATORS. THESE COMPONENTS SHALL BE ENCLOSED IN A WEATHER TIGHT COMPARTMENT, SEPARATED FROM THE EXHAUST AIRSTREAM. DRIVES SHALL BE PRECISION MACHINED CAST IRON TYPE, KEYPED AND SECURELY ATTACHED TO THE WHEEL AND MOTOR SHAFTS. DRIVES SHALL BE SIZED FOR 150% OF THE INSTALLED MOTOR HORSEPOWER. BELTS SHALL BE OIL AND HEAT RESISTANT, NON-STATIC TYPE.
 - FAN SHALL BE MODEL ACE-B AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.
- H. SQUARE INLINE EXHAUSTER - DIRECT DRIVE:
- THE FAN SHALL BE OF BOLTED AND WELDED CONSTRUCTION UTILIZING CORROSION RESISTANT FASTENERS. HOUSING SHALL BE MINIMUM 18 GAUGE STEEL WITH AIRFLOW STRAIGHTENING VANES, INTEGRAL DUCT FLANGES AND HINGED ACCESS DOOR.
 - FAN WHEEL SHALL BE CENTRIFUGAL BACKWARD INCLINED, CONSTRUCTED OF 100% ALUMINUM, INCLUDING A PRECISION MACHINED CAST ALUMINUM HUB. WHEEL INLET SHALL OVERLAP AN AERODYNAMIC ALUMINUM INLET CONE.
 - MOTOR SHALL BE HEAVY DUTY TYPE WITH PERMANENTLY LUBRICATED SEALED BALL BEARINGS AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE AND ENCLOSURE.
 - FAN SHALL BE MODEL SQ-D AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.
- I. CEILING MOUNTED EXHAUST FAN - DIRECT DRIVE:
- GC 100 SERIES: THE FAN WHEEL HOUSING AND INTEGRAL OUTLET DUCT SHALL BE INJECTION MOLDED FROM A SPECIALLY ENGINEERED RESIN EXCEEDING UL REQUIREMENTS FOR SMOKE AND HEAT GENERATION. THE OUTLET DUCT SHALL HAVE PROVISION FOR AN ALUMINUM BACKDRAFT DAMPER WITH CONTINUOUS ALUMINUM HINGE ROD. THE INLET BOX SHALL BE MINIMUM 22 GAUGE GALVANIZED STEEL. MOTOR SHALL BE ISOLATION MOUNTED TO A ONE PIECE GALVANIZED STAMPED STEEL INTEGRAL MOTOR MOUNTING INLET. A FIELD WIRING COMPARTMENT WITH RECEPTACLE SHALL BE STANDARD. TO ACCOMMODATE DIFFERENT CEILING THICKNESS, AN ADJUSTABLE PREPUNCHED MOUNTING BRACKET SHALL BE PROVIDED. A WHITE, NON-YELLOWING, HIGH IMPACT STYRENE INJECTION MOLDED GRILL SHALL BE PROVIDED AS STANDARD. WHEEL SHALL BE CENTRIFUGAL FORWARD CURVED TYPE, INJECTION MOLDED OF POLYPROPYLENE RESIN.
 - MOTOR SHALL BE OPEN DRIP PROOF TYPE WITH PERMANENTLY LUBRICATED SEALED BEARINGS AND INCLUDE IMPEDANCE OR THERMAL OVERLOAD PROTECTION AND DISCONNECT PLUGS. MOTOR SHALL BE FURNISHED AT THE SPECIFIED VOLTAGE.
 - FAN SHALL BE MODEL GC AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.

SECTION 15892 - LOW PRESSURE DUCTWORK

- A. GENERAL:
- DUCT SYSTEM SHALL BE FABRICATED WITH SHEET METAL THICKNESSES AND REINFORCED IN ACCORDANCE WITH SMACNA, AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN. DUCTS 18 INCHES AND LARGER ON ANY SIDE SHALL BE STIFFENED BY BEADING ON NOT TO EXCEED 12 INCH CENTERS, UNLESS NOTED OTHERWISE. THE MINIMUM PRESSURE/VELOCITY CLASSIFICATION SHALL BE 2 INCH W.G. PLUS OR MINUS, AT 2500 FT. PER MINUTE, DUCT SEAL CLASS "X". DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
 - DUCTWORK HANGERS SHALL BE SUPPORTED BY FASTENERS ATTACHED TO STRUCTURAL STEEL. REPAIR FIRE PROOFING WHICH WAS REMOVED FOR DUCTWORK INSTALLATION. INSTALLATION TO BE DONE BY AN APPROVED QUALIFIED TRADESMAN.
 - INSTALL IN THE DUCTWORK DEVICES FURNISHED BY THE TEMPERATURE CONTROLS SUB-CONTRACTOR. INSTALL SMOKE DETECTORS IN DUCTWORK FURNISHED BY THE DIVISION 16 CONTRACTOR.
 - WATER AND OTHER PIPES SHALL NOT BE ALLOWED TO PASS THROUGH AIR RISERS OR DUCTS, UNLESS APPROVED BY THE ENGINEERS, AND WHEN THIS OCCURS, THE SIZE OF SAID DUCT OR RISER SHALL BE PROPORTIONATELY INCREASED. SANITARY WASTE AND VENT PIPING SHALL NOT PENETRATE ANY DUCTWORK.
- B. GALVANIZED STEEL DUCTWORK:
- GALVANIZED STEEL DUCTWORK SHALL CONFORM TO ASTM A653 (680). ALL LONGITUDINAL SEAMS SHALL BE GROOVED, DOUBLE OR PITTSBURGH TYPE.
- C. DUCTWORK FITTINGS:
- FOR RECTANGULAR DUCTWORK, VANES SHALL BE PROVIDED IN ELBOWS WITH 90 DEGREE THROATS AND THROAT RADII LESS THAN 1-1/2 TIMES DUCT WIDTH. VANES SHALL BE LOCATED IN ACCORDANCE WITH ASHRAE STANDARDS. DOUBLE-VANE AIRFLOW TYPE TURNING VANES SHALL BE PROVIDED FOR ALL SQUARE TURNS.
- D. HANGERS AND SUPPORTS:
- PROVIDE CONCRETE INSERTS OR STRUCTURAL STEEL FASTENERS APPROPRIATE FOR BUILDING MATERIALS. PROVIDE TRAPEZE AND RISER SUPPORTS AS REQUIRED. SUPPORT MATERIALS SHALL BE THE SAME AS DUCTWORK SUPPORTING.
 - HANGERS AND STRAPS SHALL BE GALVANIZED STEEL WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE" STANDARDS.
 - DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS OR SELF-TAPPING METAL SCREWS, COMPATIBLE WITH DUCT MATERIALS.
- E. SEALANT MATERIAL:
- SEALANTS SHALL BE SOLVENT OR WATER BASED TYPE U.L. CLASSIFIED MEETING NFPA 90A CLASS 1 WITH ZERO FIRE AND SMOKE DEVELOPMENT RATING. SEALER SHALL BE UNITED SHEET METAL, UNITED DUCT SEALER, OR HARDCAST IRON GRIP NO. 801. TRANSVERSE SEAMS SHALL BE TAPED AND SEALED WITH TWO LAYERS OF UNITED SHEET METAL, UNI-CAST OR CALKED WITH DUCT SEALER.
- F. FLEXIBLE CONNECTORS:
- INSTALL FLEXIBLE CONNECTORS AT ALL SUPPLY AND EXHAUST FANS AND OTHER AIR HANDLING UNITS WITH INLET AND OUTLET DUCT OR CASING CONNECTIONS. CONNECTORS SHALL NOT BE PAINTED. CONNECTORS SHALL NOT BE USED AS TRANSITION PIECES BETWEEN FAN AND DUCTWORK.
 - CONNECTORS SHALL NOT BE LONGER THAN 4 INCHES LONG (IN CLEAR) AND PROPERLY ATTACHED TO DUCT AND FAN CONNECTION COLLARS BY 1 X 1/8 INCH DRAW BAND (FABRICATED OF THE SAME MATERIAL AS ADJACENT DUCTWORK) FIRMLY CLAMPED AROUND COLLARS IN SUCH A MANNER AS TO BE AIRTIGHT AND SECURED TO COLLARS WITH SHEET METAL SCREWS.
 - FLEXIBLE CONNECTORS SHALL BE U.L. LISTED, NEOPRENE COATED HEAVY GLASS FABRIC. FABRIC SHALL BE VENTGLAS, MANUFACTURED BY VENTFABRICS, INC.
- G. FLEXIBLE DUCTWORK:
- FLEXIBLE DUCTS SHALL BE USED FOR STRAIGHT RUNS OF DUCT OR OFFSETS UP TO 45 DEGREES, BUT NOT EXCEEDING 48 INCHES IN LENGTH. THE USE OF FLEXIBLE DUCTS AS ELBOWS WITH MORE THAN A 45 DEGREE BEND WILL NOT BE PERMITTED.
 - FLEXIBLE DUCT SHALL BE UL LISTED AND LABELED AS CLASS 1, AIR DUCT CONNECTOR, IN ACCORDANCE WITH U.L. STANDARD 181 AND SHALL MEET THE REQUIREMENTS OF THE LATEST NFPA BULLETIN, NO. 90A AND NO. 90B FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATING.
 - FLEXIBLE DUCT SHALL BE RATED FOR A MAXIMUM PRESSURE OF 6 INCH POSITIVE AND 3/4 INCH NEGATIVE AND 4000 FPM MAXIMUM VELOCITY. AIR DUCT SHALL CONSIST OF: OPE LINER, COATED SPRINGS STEEL WIRE HELIX, FIBERGLASS INSULATING BLANKET, FIBERGLASS SCRIM AND REINFORCED ALUMINUM VAPOR BARRIER. THERMAL CONDUCTANCE SHALL BE .23 OR LESS.
 - DUCT SHALL BE FLEXMASTER TYPE 8M OR PRIOR APPROVED EQUAL.
- A. VOLUME DAMPERS:
- SINGLE BLADE DAMPERS SHALL BE CONSTRUCTED OF 22 GAUGE GALVANIZED STEEL (BLADE AND FRAME). SINGLE BLADE DAMPERS SHALL BE LIMITED TO A 12 INCH HIGH BLADE. BLADE EDGES SHALL BE CRIMPED OR REINFORCED. DAMPER LEVERS SHALL INDICATE POSITIVELY THE OPEN AND CLOSED POSITION. END BEARINGS SHALL BE MOLDED SYNTHETIC. DAMPERS SHALL BE RUSKIN MD25 OR APPROVED EQUAL (RUSKIN MDRS25 FOR ROUND DUCTS).
 - MULTIBLADE DAMPERS SHALL BE CONSTRUCTED OF SHEET METAL THE SAME MATERIAL AS THE ADJACENT DUCTWORK. DAMPER FRAME SHALL BE NOT LESS THAN 16 GA. DAMPER BLADES NOT WIDER THAN 6 INCHES CRIMPED OR REINFORCED. DAMPER LEVERS SHALL INDICATE POSITIVELY THE OPEN AND CLOSED POSITION. END BEARINGS SHALL BE MOLDED SYNTHETIC. DAMPER SHALL BE RUSKIN MD35 OR APPROVED EQUAL.
- B. FIRE DAMPERS:
- FIRE DAMPERS SHALL BE UNDERWRITERS APPROVED AND LABELED (UL555). DAMPERS SHALL BE FABRICATED OF GALVANIZED STEEL AND SHALL BE OF SUCH A DESIGN AND LENGTH AS TO FUNCTION AS A WALL MOUNTING SLEEVE, WHICH SHALL BE A PART OF THE FIRE DAMPER. SLEEVES SHALL BE OF WELDED OR BOLTED CONSTRUCTION. CRIMPING OR TABS WILL NOT BE ACCEPTABLE SUBSTITUTES FOR WELDING OR BOLTING.
 - FIRE DAMPERS SHALL BE RUSKIN DDB22 SERIES FOR 1 1/2 HOUR RATING. FIRE DAMPERS SHALL BE RUSKIN DDB23 SERIES FOR 3 HOUR RATING. INSTALL STYLE A FIRE DAMPERS BEHIND DUCTED GRILLES AND REGISTERS IN RATED WALLS. INSTALL STYLE B OR C FIRE DAMPERS IN DUCTED OPENINGS IN RATED WALLS. AIR BALANCE AND PREFCO ARE APPROVED EQUAL.
- C. DAMPER HARDWARE:
- ALL HARDWARE SHALL BE SMACNA ACCEPTED. INSULATED DUCTWORK (CONCEALED) - VENTLOK 638 ELEVATED DIAL REGULATOR. INSULATED DUCTWORK (EXPOSED) - VENTLOK 644 - SELF LOCKING REGULATOR. UNINSULATED DUCTWORK - VENTLOK 555 OR 560 QUADRANTS.
- D. DUCT ACCESS DOORS:
- ACCESS DOORS SHALL BE HINGED, CONSTRUCTED OF THE SAME MATERIAL AS THE DUCTWORK. DOOR EDGES SHALL BE SEALED WITH 3/4 INCH WIDE X 1/8 INCH THICK NEOPRENE SPONGE GASKETING. DOOR HARDWARE SHALL BE VENTLOK #100 LATCHES. ACCESS DOORS ON INSULATED DUCTWORK SHALL BE DOUBLE WALL CONSTRUCTION WITH 1 INCH OF RIGID 3 PCF FIBERGLASS INSULATION.
 - PROVIDE DUCT ACCESS DOORS AT ALL DUCT MOUNTED DEVICES REQUIRING ADJUSTMENT OR RESETTING. ACCESS DOORS SHALL BE APPROXIMATELY 18 INCHES HIGH BY 24 INCHES WIDE. IN SMALLER DUCTWORK, THE HEIGHT SHALL BE REDUCED TO BE 2 INCHES LESS THAN THAT OF THE DUCTWORK.

SECTION 15906 - TEMPERATURE CONTROLS

- A. GENERAL:
- FURNISH AND INSTALL AN ELECTRIC SYSTEM OF AUTOMATIC TEMPERATURE CONTROL AS SPECIFIED ON THE DRAWINGS AND AS SHOWN ON THE DRAWINGS AND AS MANUFACTURED BY HONEYWELL, JOHNSON CONTROLS, INVENSYN, OR APPROVED EQUAL.
 - EXTRA COSTS INCURRED BY USE OF OTHER THAN BASE BID CONTROL SYSTEM, SUCH AS WIRING, CONTRACTOR MECHANICAL CHANGES, CHANGES IN DESIGN, ADDED SUPERVISION, ETC., SHALL BE THE RESPONSIBILITY OF THE TEMPERATURE CONTROL SUBCONTRACTOR (TCSC).
 - SYSTEM DOCUMENTATION SHALL INCLUDE THE FOLLOWING: MANUFACTURER'S DATA SHEETS OF ALL PRODUCTS (ORIGINAL COPIES); COMPLETE DESCRIPTION OF OPERATION OF ALL CONTROL LOOPS, INCLUDING RECOMMENDED SETPOINTS AND RANGES OF ADJUSTMENT; FULLY LABELED ELEMENTARY DIAGRAM (ELECTRICAL LADDER DIAGRAM), AND LISTS OF ALL PROPOSED DEVICES AND EQUIPMENT.
- B. MOTOR OPERATORS: MOTOR OPERATOR SHALL BE SPRING RETURN TYPE, WHICH RETURNS MOTOR ACTUATOR SHAFT TO ITS FULL NORMAL MECHANICAL TRAVEL UPON POWER FAILURE. DAMPER MOTOR DRIVE MECHANISM WILL INCLUDE HOLDING BRAKE TO KEEP THE RETURN SPRING FROM DRAWING THE ACTUATOR FROM DRIVING TOWARD ITS NORMAL POSITION UNLESS POWER IS INTERRUPTED. SUPPLY AND INSTALL ELECTRIC MOTOR OPERATORS FOR ALL DAMPERS. UNIT SHALL BE HONEYWELL MS8105A SERIES OR APPROVED EQUAL.

C. AUTOMATIC DAMPERS: ALL CONTROL DAMPERS SHALL BE STANDARD PRODUCTS OF DAMPER OR TEMPERATURE CONTROL MANUFACTURERS UNLESS NOTED OTHERWISE. LOCAL FABRICATION OF DAMPERS IS NOT ALLOWED. DAMPERS SHALL BE OPPOSED BLADE TYPE. FURNISH FOR INSTALLATION BY THE MECHANICAL CONTRACTOR ALL MOTOR OPERATED DAMPERS. DAMPERS SHALL BE RUSKIN MODEL CDS0. GREENHECK IN AN APPROVED EQUAL.

D. THERMOSTATS:

 - PROVIDE HVAC THERMOSTAT WITH THE FOLLOWING FEATURES: SEVEN DAY PROGRAMMING, TWO OCCUPIED/TWO UNOCCUPIED PERIODS PER DAY, AUTOMATIC HEAT/COOL CHANGEOVER WITH 2" MINIMUM DEAD BAND, TWO STAGES HEATING, TWO STAGE COOLING, TOUCHSCREEN DISPLAY, AUXILIARY CONTACT, AND TEMPERATURE OVERRIDE. THERMOSTAT SHALL BE HONEYWELL VISIONPRO 8000 OR EQUAL.
 - PROVIDE HEATER AND VENTILATION THERMOSTAT WITH THE FOLLOWING FEATURES: SINGLE STAGE CONTROL, ON/OFF/AUTO SWITCHING, AND ADJUSTABLE SETPOINT CONTROL.

E. TEMPERATURE CONTROL WIRING:

 - ALL CONTROL WIRING AND CONDUIT REQUIRED TO COMPLETE THE TEMPERATURE CONTROL SYSTEM SHALL BE PROVIDED BY THE TEMPERATURE CONTROL SUB-CONTRACTOR. ALL WIRING SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OUTLINED IN DIVISION 16. WIRE SIZE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NATIONAL ELECTRIC CODE. MINIMUM CONDUIT SHALL BE 1/2 INCH DIAMETER. TCSC SHALL BE RESPONSIBLE FOR ALL CONTROL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO BID.
 - ELECTRIC CONNECTIONS BETWEEN THE VARIOUS UNIT CONTROL CABINETS SHALL BE MADE BY THE TCSC. ALL WIRING MUST BE TAGGED ON BOTH ENDS WITH PANEL NUMBER AND TERMINAL NUMBER.
 - THE TCSC IS RESPONSIBLE FOR ALL REQUIRED PROCESS AND ELECTRICAL CONNECTIONS TO ALL EQUIPMENT, CONTROL DEVICES, AND FIELD INSTRUMENTS. TCSC SHALL FURNISH AND INSTALL ALL CONDUITS, RACKWAYS, ETC., REQUIRED. TCSC SHALL FURNISH AND INSTALL ALL CONTROL AND INTERLOCK WIRING. TCSC SHALL FURNISH AND INSTALL ALL REQUIRED AUXILIARY STARTER CONTACTS OR RELAYS, ETC., FOR A COMPLETE ELECTRICAL INTERLOCK AND CONTROL WIRING SYSTEM.

F. INSTALLATION:

 - THE ENTIRE CONTROL SYSTEM, INCLUDING LOW VOLTAGE WIRING, WITH THE EXCEPTION OF DUCT MOUNTED AUTOMATIC DAMPERS AND SMOKE DETECTORS, SHALL BE INSTALLED BY THE TEMPERATURE CONTROL CONTRACTOR, WHO SHALL MAKE ALL TESTS AND ADJUSTMENTS. ALL CONTROLS SHALL BE FIELD-TESTED AND FIELD-CALIBRATED.
 - SET POINTS OF ALL CONTROLLING INSTRUMENTS ARE INDICATED AT A SPECIFIC POINT; HOWEVER, ALL SET POINTS SHALL BE ADJUSTABLE UP AND DOWN FROM THE POINT INDICATED.
 - CONTRACTOR SHALL SUBMIT TENTATIVE LOCATIONS OF ALL CONTROL DEVICES AND COMPONENTS (INCLUDING TEMPERATURE SENSORS) TO THE ARCHITECT FOR WRITTEN APPROVAL PRIOR TO INSTALLATION. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO LOCATION OF CONTROL DEVICES AND COMPONENTS TO LOCATION OF CONTROL DEVICES AND COMPONENTS. EFFECTS OF DRAFTS, RADIANT HEAT, VIBRATION, ETC ARE TO BE CONSIDERED WHEN INSTALLING CONTROL DEVICES AND COMPONENTS.
 - PRIOR TO ORDERING FACTORY ASSEMBLED EQUIPMENT WHICH CONTAINS INTEGRAL CONTROL DEVICES AND COMPONENTS, THE CONTRACTOR SHALL OBTAIN A WRITTEN STATEMENT FROM BOTH THE MANUFACTURER AND THE INSTALLING CONTRACTOR THAT THEY HAVE REVIEWED THE APPROPRIATE SUBMITTAL DATA AND ARE AWARE OF THE MAKE, MODEL, TYPE, SIZE, CHARACTERISTICS, ETC. OF THE FACTORY ASSEMBLED CONTROL DEVICES AND COMPONENTS WHICH THEY SHALL BE REQUIRED TO INTERFACE TO AND/OR CONTROL.
 - ALL CONTROL DEVICES (BOTH FIELD AND PANEL MOUNTED) SHALL BE LABELED TO INDICATE BOTH THEIR CONTROL SYSTEMS DESIGNATION, E.G., RTU-1 THERMOSTAT, UNLESS INDICATED OTHERWISE. ABBREVIATIONS AND ACRONYMS FOR ALL ID TAGS AND PANEL FACEPLATES SHALL BE APPROVED BY THE ENGINEER.
 - ALL CONTROL DEVICES ARE TO BE MOUNTED IN ACCESSIBLE LOCATIONS. ALL DEVICES EXPOSED TO THE WEATHER SHALL BE HOUSED IN WEATHERPROOF ENCLOSURES.
 - AT THE COMPLETION OF THE JOB, TCSC SHALL CORRECT HIS DRAWINGS TO INCLUDE ANY CHANGES MADE DURING CONSTRUCTION. TCSC SHALL PROVIDE COLOR-CODED DRAWINGS INDICATED ALL TEMPERATURE ZONES AND EQUIPMENT (3 COPIES).

G. OPERATION TEST AND OWNERS INSTRUCTION:

 - AT COMPLETION, TCSC SHALL OPERATE THE SYSTEM FOR A PERIOD OF AT LEAST THREE DAYS OF EIGHT HOURS EACH ON THE NEW SYSTEMS TO DEMONSTRATE FULFILLMENT OF THE REQUIREMENTS OF THE CONTRACT. DURING THIS TIME, ALL ADJUSTMENTS SHALL BE MADE TO THE EQUIPMENT SO THAT IT IS IN FIRST CLASS OPERATING CONDITION. THE ENTIRE SYSTEM IS TO BE LEFT IN OPERATING CONDITION ACCEPTABLE TO THE ENGINEER.
 - UPON COMPLETION OF THE WORK AND ACCEPTANCE BY THE OWNER, TCSC SHALL PROVIDE ONE SCHEDULED FOUR-HOUR PERIOD OF FORMAL INSTRUCTION TO THE OWNER'S OPERATING PERSONNEL WHO HAVE RESPONSIBILITY FOR THE MECHANICAL SYSTEM.

H. SEQUENCE OF OPERATIONS:

 - HVAC UNITS:
 - NORMAL OPERATION:
 - UNITS SHALL BE CONTROLLED BY SPACE THERMOSTAT. FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED MODE AND INTERMITTENTLY DURING UNOCCUPIED MODE.
 - HEATING AND COOLING SHALL BE ENABLED BY THERMOSTAT.
 - COOLING SETPOINT SHALL BE 73°F (ADJUSTABLE).
 - HEATING SETPOINT SHALL BE 68°F (ADJUSTABLE).
 - OUTSIDE AIR DAMPER SHALL OPEN DURING OCCUPIED MODE AND CLOSE DURING UNOCCUPIED MODE. OUTSIDE AIR DAMPER SHALL BE NORMALLY CLOSED AND RETURN TO NORMAL POSITION UPON LOSS OF POWER.
 - EXHAUST FANS:
 - INTERLOCK EXHAUST FANS AS NOTED ON SCHEDULE.

SECTION 15936 - REGISTERS, GRILLES AND DIFFUSERS

- A. PRODUCT PERFORMANCE DATA SHALL BE TAKEN FROM TESTS CONDUCTED IN ACCORDANCE WITH ANSI/ASHRAE 70, AND ARI-890.
- B. THE NOMINAL OR DUCT CONNECTION SIZE OF GRILLES (NOT OVERALL DIMENSIONS) IS GIVEN ON PLANS. GRILLES AND REGISTERS INCLUDING VOLUME CONTROLLERS SHALL BE CONSTRUCTED OF THE SAME MATERIALS SPECIFIED FOR THE GRILLE. THE GRILLE FINISH SHALL BE WHITE UNLESS NOTED OTHERWISE.
- C. REFER TO ARCHITECTURAL DRAWINGS FOR THE VARIOUS CEILING TYPES. REFER TO DRAWINGS OF REFLECTED CEILING PLANS FOR LOCATION OF CEILING DIFFUSERS AND GRILLES. MOUNTING FRAMES SHALL BE PROVIDED FOR ALL GRILLES AND REGISTERS MOUNTED IN DRYWALL, PLASTER, CONCRETE OR MASONRY OPENINGS.
- D. SUPPLIER SHALL CHECK ALL AIR DISTRIBUTION AND RETURN AIR DEVICES FOR PROPER PERFORMANCE, NOISE AND ACCESSORIES. ANY DEVICE EXCEEDING NOISE LEVEL HEREIN SPECIFIED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEERS.
- E. CONTRACTOR SHALL COORDINATE OPENINGS IN HARD CEILINGS, FURRED WALLS, MASONRY WALLS, AND FLOORS. MOUNT EACH DEVICE SECURELY TO AVOID RATTLING AND VIBRATION.
- F. DEVICES SHALL BE PARALLEL TO THE PLANE OF THE SURFACES THEY ARE MOUNTED. CEILING DIFFUSER TYPE A - TITUS MODEL TDC STEEL LOUVERED FACE DIFFUSER WITH 12 X 12 INCH MODULE AND 9 X 9 INCH UNIFORM BACKPAN. DIFFUSER SHALL INCLUDE ROUND NECK, REMOVABLE CORE OF FIXED DEFLECTION LOUVERS AND EQUALIZING GRID. DIFFUSER SHALL BE SUITABLE FOR SURFACE MOUNTING WITH AIR PATTERN AS SHOWN ON DRAWINGS.
- G. RETURN/EXHAUST/GRILLES TYPE A - TITUS MODEL 350 RL STEEL GRILLE. GRILL SHALL INCLUDE ONE SET OF FIXED BLADES SET AT 35° DEFLECTION ON 3/4 INCH SPACING.
- H. RETURN/EXHAUST/GRILLES TYPE B - TITUS MODEL 50F ALUMINUM EGG CRATE GRILL. GRILLE SHALL INCLUDE 2 X 2 X 2 INCH ALUMINUM GRID.
- I. RETURN/EXHAUST GRILLES TYPE C - TITUS MODEL 33R STEEL HEAVY DUTY BAR GRILLE. GRILLE SHALL INCLUDE ONE SET OF FIXED BLADES SET AT 38° DEFLECTION ON 2 INCH SPACING. BARS SHALL BE 14 GAUGE STEEL. BARS SHALL BE REINFORCED BY PERPENDICULAR STEEL BARS SPACED ON 6 INCH MAXIMUM CENTERS.

SECTION 15990 - TESTING, ADJUSTING AND BALANCING

- A. THE TEST AND BALANCE CONTRACTOR SHALL BE AN INDEPENDENT CONTRACTOR THAT REGULARLY PERFORMS AIR AND WATER SYSTEMS TESTING AND BALANCING. MINIMUM QUALIFICATIONS FOR ACCEPTANCE SHALL BE GENERAL MEMBERSHIP IN NEBB OR AABC, EXCEPT THAT AFFILIATION WITH MANUFACTURERS, INSTALLING, CONTRACTORS, OR ENGINEERING FIRMS MAY NOT PRECLUDE ACCEPTANCE.
- B. CONTRACTOR SHALL SUBMIT TENTATIVE LOCATIONS OF ALL CONTROL DEVICES AND COMPONENTS (INCLUDING TEMPERATURE SENSORS) TO THE ARCHITECT FOR WRITTEN APPROVAL PRIOR TO INSTALLATION. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO LOCATION OF CONTROL DEVICES AND COMPONENTS TO LOCATION OF CONTROL DEVICES AND COMPONENTS. EFFECTS OF DRAFTS, RADIANT HEAT, VIBRATION, ETC ARE TO BE CONSIDERED WHEN INSTALLING CONTROL DEVICES AND COMPONENTS.
- C. PRIOR TO ORDERING FACTORY ASSEMBLED EQUIPMENT WHICH CONTAINS INTEGRAL CONTROL DEVICES AND COMPONENTS, THE CONTRACTOR SHALL OBTAIN A WRITTEN STATEMENT FROM BOTH THE MANUFACTURER AND THE INSTALLING CONTRACTOR THAT THEY HAVE REVIEWED THE APPROPRIATE SUBMITTAL DATA AND ARE AWARE OF THE MAKE, MODEL, TYPE, SIZE, CHARACTERISTICS, ETC. OF THE FACTORY ASSEMBLED CONTROL DEVICES AND COMPONENTS WHICH THEY SHALL BE REQUIRED TO INTERFACE TO AND/OR CONTROL.
- D. ALL CONTROL DEVICES (BOTH FIELD AND PANEL MOUNTED) SHALL BE LABELED TO INDICATE BOTH THEIR CONTROL SYSTEMS DESIGNATION, E.G., RTU-1 THERMOSTAT, UNLESS INDICATED OTHERWISE. ABBREVIATIONS AND ACRONYMS FOR ALL ID TAGS AND PANEL FACEPLATES SHALL BE APPROVED BY THE ENGINEER.
- E. ALL CONTROL DEVICES ARE TO BE MOUNTED IN ACCESSIBLE LOCATIONS. ALL DEVICES EXPOSED TO THE WEATHER SHALL BE HOUSED IN WEATHERPROOF ENCLOSURES.
- F. AT THE COMPLETION OF THE JOB, TCSC SHALL CORRECT HIS DRAWINGS TO INCLUDE ANY CHANGES MADE DURING CONSTRUCTION. TCSC SHALL PROVIDE COLOR-CODED DRAWINGS INDICATED ALL TEMPERATURE ZONES AND EQUIPMENT (3 COPIES).
- G. OPERATION TEST AND OWNERS INSTRUCTION:
- AT COMPLETION, TCSC SHALL OPERATE THE SYSTEM FOR A PERIOD OF AT LEAST THREE DAYS OF EIGHT HOURS EACH ON THE NEW SYSTEMS TO DEMONSTRATE FULFILLMENT OF THE REQUIREMENTS OF THE CONTRACT. DURING THIS TIME, ALL ADJUSTMENTS SHALL BE MADE TO THE EQUIPMENT SO THAT IT IS IN FIRST CLASS OPERATING CONDITION. THE ENTIRE SYSTEM IS TO BE LEFT IN OPERATING CONDITION ACCEPTABLE TO THE ENGINEER.
 - UPON COMPLETION OF THE WORK AND ACCEPTANCE BY THE OWNER, TCSC SHALL PROVIDE ONE SCHEDULED FOUR-HOUR PERIOD OF FORMAL INSTRUCTION TO THE OWNER'S OPERATING PERSONNEL WHO HAVE RESPONSIBILITY FOR THE MECHANICAL SYSTEM.

- TESTING, ADJUSTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN ASHRAE APPLICATIONS HANDBOOK, AABC OR NEBB NATIONAL STANDARDS.
- CUT INSULATION, DUCTS, PIPES, AND EQUIPMENT CABINETS FOR INSTALLATION OF TEST PROBES TO THE MINIMUM EXTENT NECESSARY TO ALLOW ADEQUATE PERFORMANCE OF PROCEDURES. AFTER TESTING AND BALANCING, CLOSE PROBE HOLES AND PATCH INSULATION WITH NEW MATERIALS IDENTICAL TO THOSE REMOVED. RESTORE VAPOR BARRIER AND FINISH ACCORDING TO THE INSULATION SPECIFICATIONS FOR THIS PROJECT.
- MARK EQUIPMENT SETTINGS WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL, INCLUDING DAMPER-CONTROL POSITIONS, VALVE INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES. TO SHOW FINAL SETTINGS.
- SET HVAC SYSTEM AIRFLOW AND WATER FLOW RATES WITHIN THE FOLLOWING TOLERANCES:
- SUPPLY, RETURN, AND EXHAUST FANS: PLUS 5 TO PLUS 10 PERCENT.
 - AIR OUTLETS AND INLETS: 0 TO MINUS 10 PERCENT.
 - HEATING-WATER FLOW RATE: 0 TO MINUS 10 PERCENT.
 - COOLING-WATER FLOW RATE: 0 TO MINUS 5 PERCENT.
- WITHIN 90 DAYS OF COMPLETING TESTING, ADJUSTING, AND BALANCING, PERFORM ADDITIONAL TESTING AND BALANCING TO VERIFY THAT BALANCED CONDITIONS ARE BEING MAINTAINED THROUGHOUT AND TO CORRECT UNUSUAL CONDITIONS. IF FINAL TESTING, ADJUSTING, AND BALANCING PROCEDURES WERE NOT PERFORMED DURING NEAR-PEAK SUMMER AND WINTER CONDITIONS, PERFORM ADDITIONAL INSPECTIONS, TESTING, AND ADJUSTING DURING NEAR-PEAK SUMMER AND WINTER CONDITIONS.
- THE MECHANICAL CONTRACTOR'S RESPONSIBILITIES: FURNISH THE TEST AND BALANCE CONTRACTOR ONE COMPLETE SET OF ACCEPTED EQUIPMENT DATA AND ONE COMPLETE SET OF ACCEPTED MECHANICAL SHOP DRAWINGS. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADVISING THE TEST AND BALANCE CONTRACTOR OF ANY CHANGE(S) MADE TO THE SYSTEM(S) DURING THE CONSTRUCTION PROCESS. MECHANICAL CONTRACTOR SHALL PROVIDE DRAWINGS, SPECIFICATIONS, SHOP DRAWINGS, CONTROL DIAGRAMS, ETC. DETAILING THE CHANGE(S) TO THE TEST AND BALANCE CONTRACTOR. REPLACE AND/OR INSTALL PULLEYS, BELTS, DAMPERS AND TRIM PUMP IMPELLERS AS REQUIRED FOR THE CORRECT BALANCE AS DIRECTED BY THE TEST AND BALANCE CONTRACTOR. ALLocate TIME IN THE CONSTRUCTION SCHEDULE FOR TEST AND BALANCE PROCEDURE. ASSIST THE TEST AND BALANCE CONTRACTOR IN COORDINATING WORK WITH THE OTHER TRADES, AND PREPARE THE SYSTEM FOR TESTING AND BALANCING.



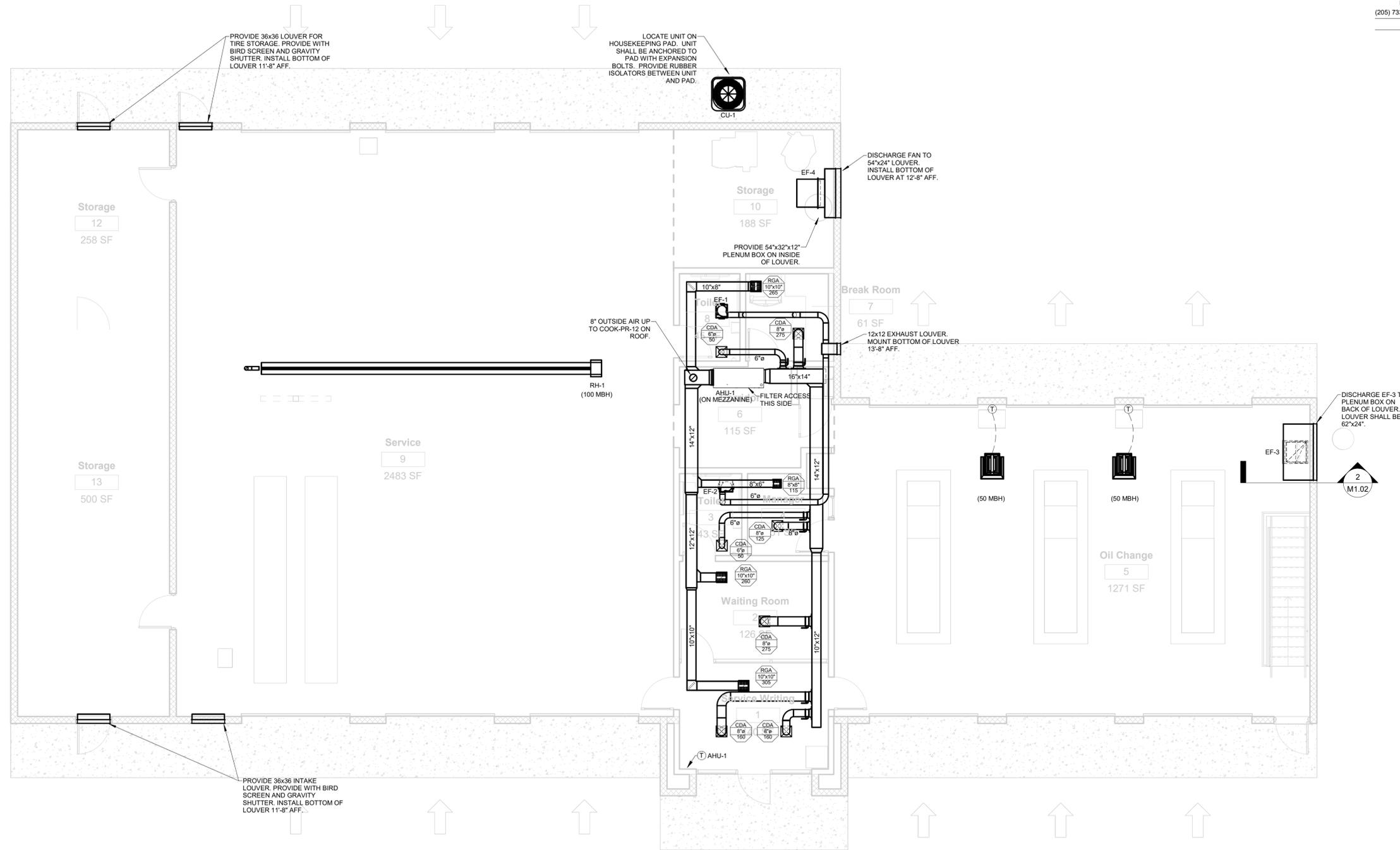
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2111 Parkway Office Circle, Suite 125
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10/24/24



MAIN FLOOR PLAN
MECHANICAL
3/16" = 1'-0"
NORTH

GENERAL NOTES:

- VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL WORK IS CRITICAL TO DUCTWORK INSTALLATION.
- PROVIDE NECESSARY OFFSETS IN PIPING, ELECTRICAL CONDUIT, AND DUCTWORK AS REQUIRED TO ACCOMMODATE NEW WORK. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS NOR CHANGES IN DUCTWORK ELEVATIONS NECESSARY FOR COMPLETE INSTALLATION.
- COORDINATE CEILING AIR DEVICE LOCATIONS WITH LIGHTING PLAN AND ARCHITECT'S REFLECTED CEILING PLAN.
- DUCTWORK SHALL BE RUN TIGHT TO STRUCTURE. AVOID CROSSING OVER LIGHTS AND OTHER DUCTS DUE TO TIGHT CLEARANCES.
- LOUVERS SHALL BE RUSKIN HZ700 OR APPROVED EQUAL. PROVIDE UNIT WITH BIRDSCREEN AND MILL ALUMINUM FINISH. COORDINATE EXACT HEIGHT AND COLOR OF LOUVER WITH ARCHITECT PRIOR TO ORDERING.
- MOUNT TEMPERATURE CONTROLS 48" ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.
- SPILL CONDENSATE FROM AHUS INTO NEAREST FLOOR DRAIN.
- PROVIDE ENGRAVED PLASTIC LABEL AT TERMINATION OF EACH AUXILIARY CONDENSATE DRAIN LINE READING AS FOLLOWS:
"AHU-## AUXILIARY DRAIN LINE."
"NOTIFY MAINTENANCE PERSONNEL WHEN WATER IS FLOWING"
- CONNECT CONDENSATE DRAIN PIPING TO AIR HANDLING UNITS IN ACCORDANCE WITH DETAILS.
- OUTSIDE AIR VENTILATION INTAKES FOR OIL CHANGE AND SERVICE AREAS WILL BE PROVIDED BY OPEN ROLL-UP DOORS. DOORS SHALL BE OPEN WHILE VENTILATION SYSTEM IS ENABLED.

FINAL

No.	Description	Date

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Mechanical Floor Plan

Project number	24052
Date	10/24/2024
Drawn by	CA
Checked by	JB

M1.01

Scale As indicated

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida



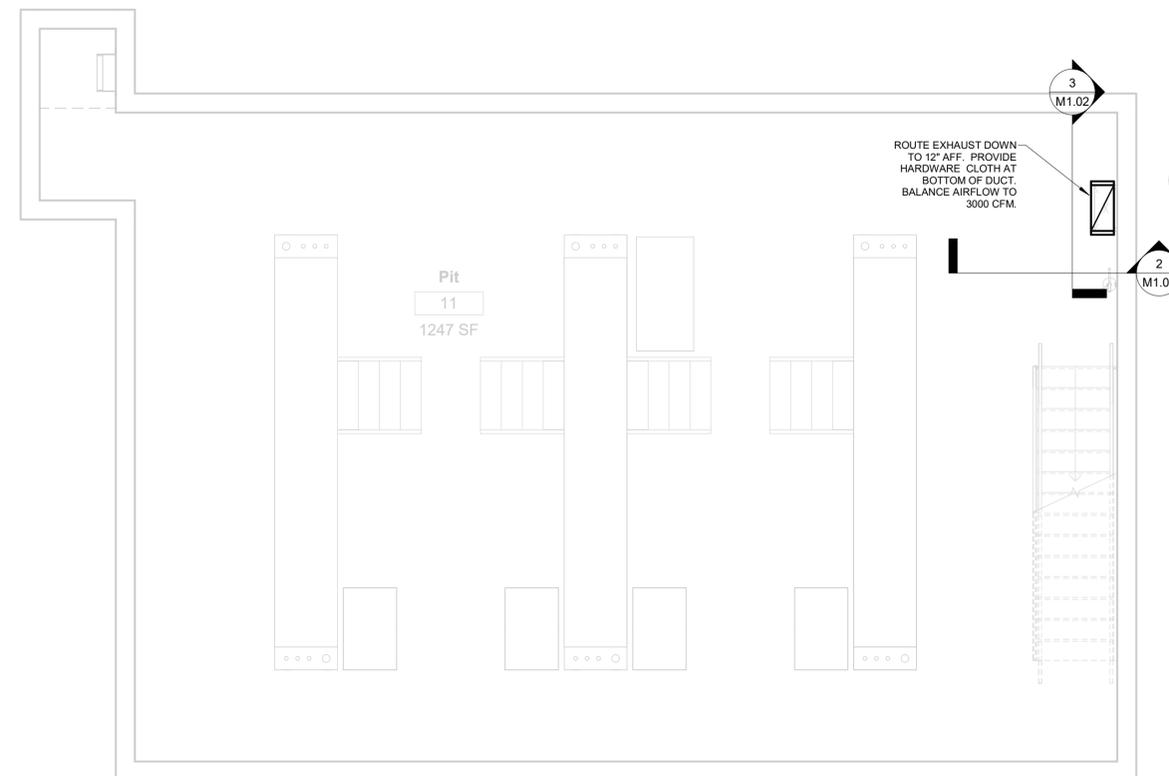
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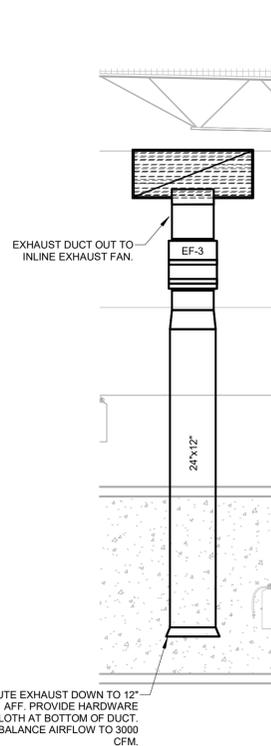
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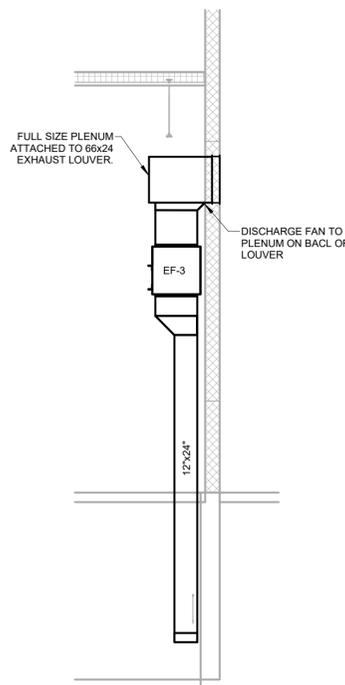
10/24/24



**PIT FLOOR PLAN
 MECHANICAL**
 NORTH 1/4" = 1'-0"



3 Section 2
 M1.02 1/4" = 1'-0"



2 Section Through Pit Exhaust1
 M1.02 1/4" = 1'-0"

GENERAL NOTES:

- 1 VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- 2 SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL WORK IS CRITICAL TO DUCTWORK INSTALLATION.
- 3 PROVIDE NECESSARY OFFSETS IN PIPING, ELECTRICAL CONDUIT, AND DUCTWORK AS REQUIRED TO ACCOMMODATE NEW WORK. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS NOR CHANGES IN DUCTWORK ELEVATIONS NECESSARY FOR COMPLETE INSTALLATION.
- 4 COORDINATE CEILING AIR DEVICE LOCATIONS WITH LIGHTING PLAN AND ARCHITECT'S REFLECTED CEILING PLAN.
- 5 DUCTWORK SHALL BE RUN TIGHT TO STRUCTURE. AVOID CROSSING OVER LIGHTS AND OTHER DUCTS DUE TO TIGHT CLEARANCES.
- 6 LOUVERS SHALL BE RUSKIN HZ700 OR APPROVED EQUAL. PROVIDE UNIT WITH BIRDSCREEN AND MILL ALUMINUM FINISH. COORDINATE EXACT HEIGHT AND COLOR OF LOUVER WITH ARCHITECT PRIOR TO ORDERING.
- 7 MOUNT TEMPERATURE CONTROLS 48" ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.
- 8 SPILL CONDENSATE FROM AHUS INTO NEAREST FLOOR DRAIN.
- 9 PROVIDE ENGRAVED PLASTIC LABEL AT TERMINATION OF EACH AUXILIARY CONDENSATE DRAIN LINE READING AS FOLLOWS:
 "AHU-##-AUXILIARY DRAIN LINE."
 "NOTIFY MAINTENANCE PERSONNEL WHEN WATER IS FLOWING"
- 10 CONNECT CONDENSATE DRAIN PIPING TO AHU IN ACCORDANCE WITH DETAILS.

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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**Partial Mechanical
 Floor Plans - Pit
 and Platform**

Project number 24052
 Date 10/24/2024

Drawn by CA
 Checked by JB

M1.02

Scale As indicated



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 Birmingham, AL 35244
 (205) 733-6912 FAX: (205) 733-6913
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10/24/24



 MECHANICAL ROOF PLAN
 3/16" = 1'-0"
 NORTH

GENERAL NOTES:
 ① VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

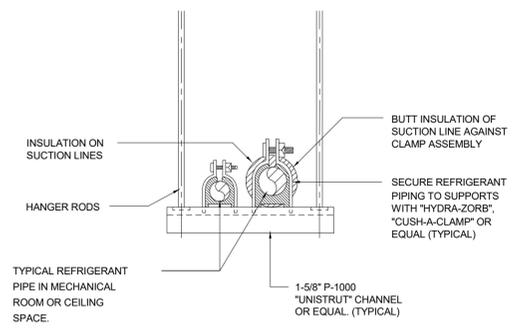
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Mechanical Roof Plan

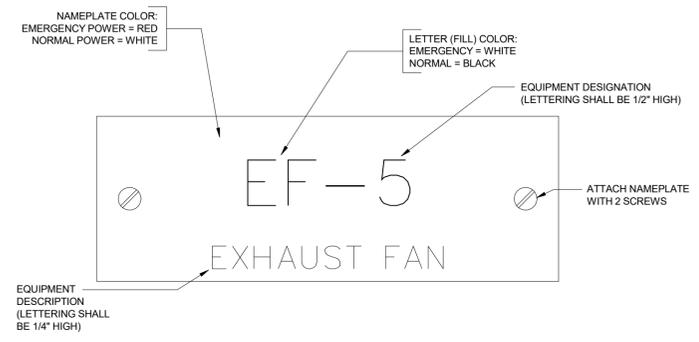
Project number	24052
Date	10/24/2024
Drawn by	CRA
Checked by	JAB
M1.03	
Scale	As indicated



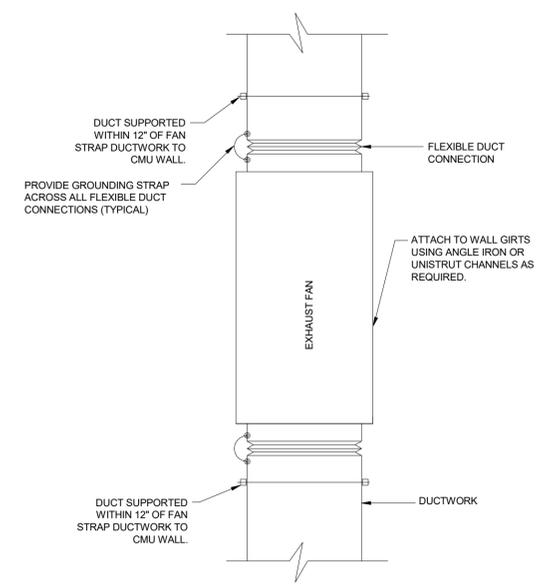
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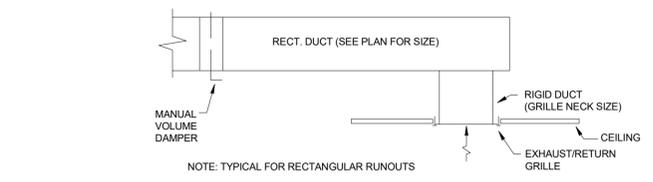
7 REFRIGERANT PIPING SUPPORT DETAIL
 TYPICAL FOR PIPING SUSPENDED FROM STRUCTURE
 NO SCALE



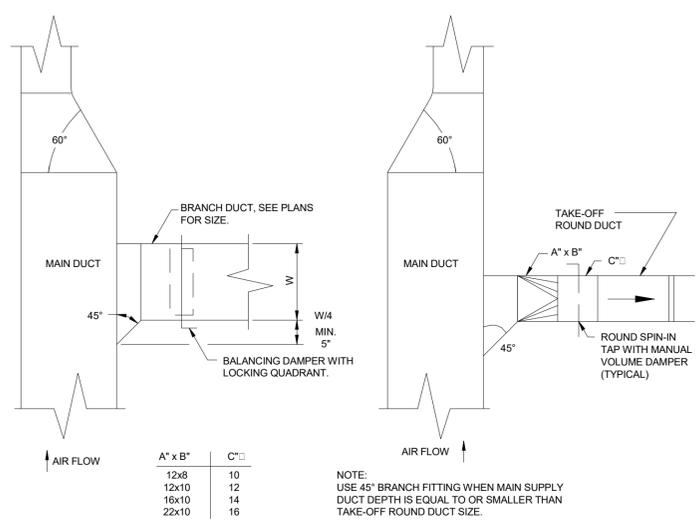
8 MECHANICAL EQUIPMENT NAMEPLATE DETAIL
 NO SCALE



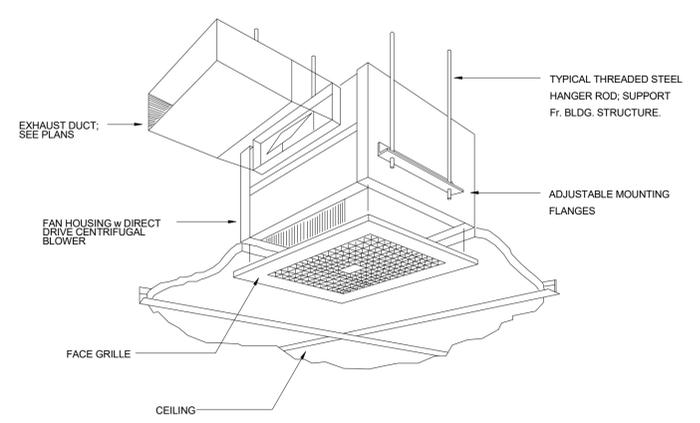
9 INLINE EXHAUST FAN DETAIL
 NO SCALE



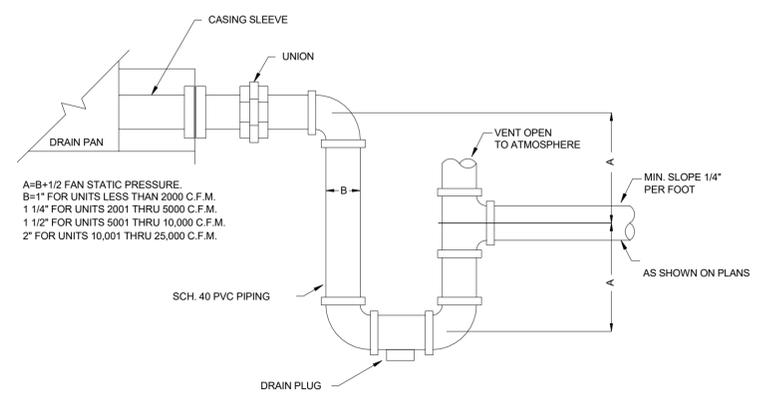
4 TYPICAL RETURN AND EXHAUST RUN-OUT DETAIL
 NO SCALE



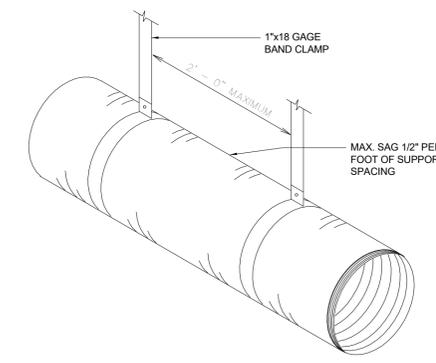
5 TYPICAL DUCT TAKEOFF DETAIL
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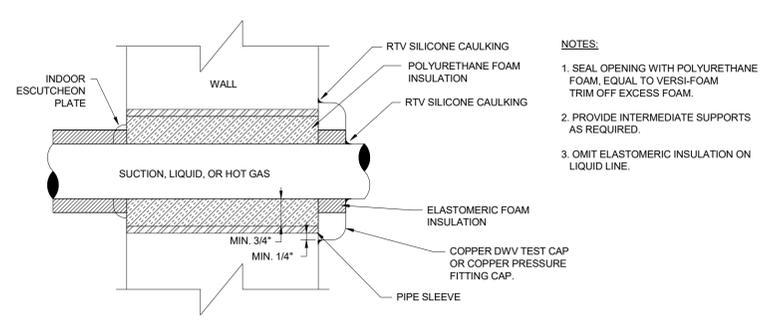
6 EXHAUST FAN INSTALLATION DETAIL (CEILING)
 NO SCALE



1 CONDENSATE DRAIN TRAP DETAIL
 NO SCALE



2 FLEXIBLE DUCT SUPPORT DETAIL
 NO SCALE



3 REFRIGERANT LINE - WALL PENETRATION DETAIL
 NO SCALE

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

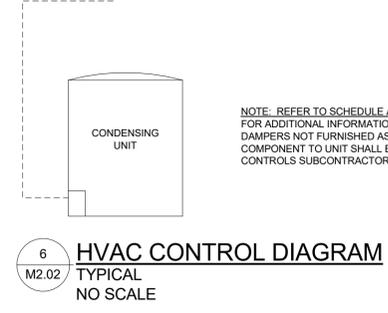
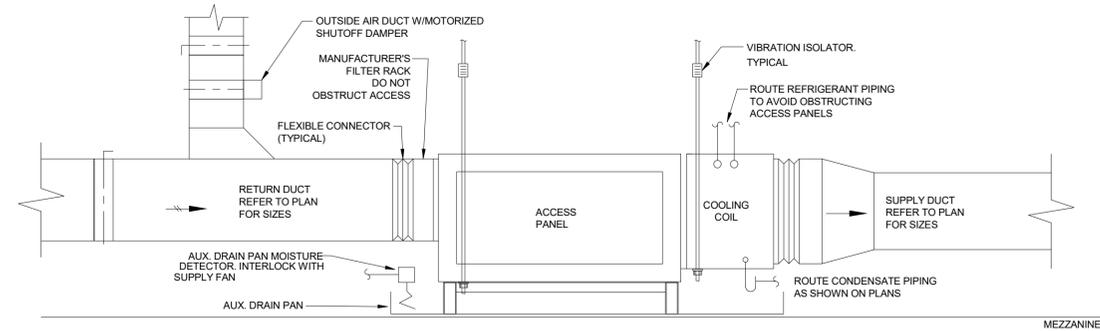
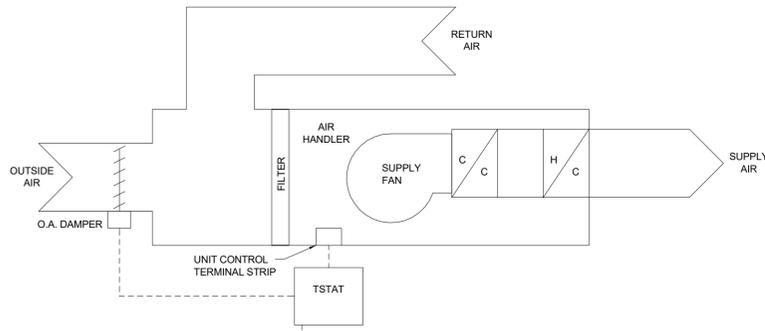
FINAL

No.	Description	Date

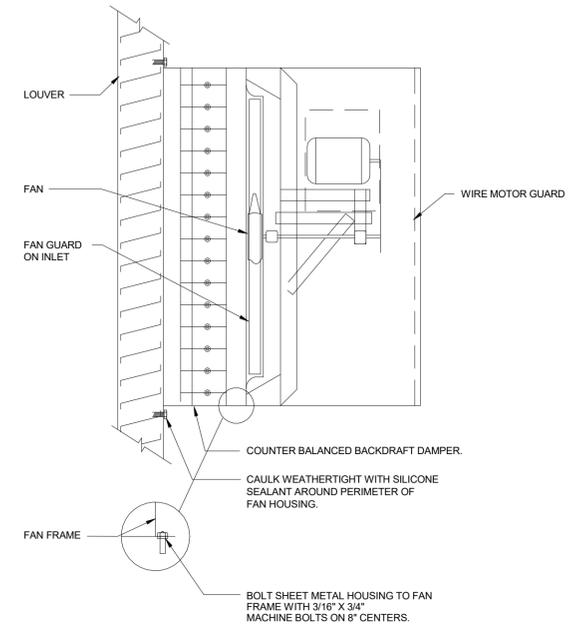
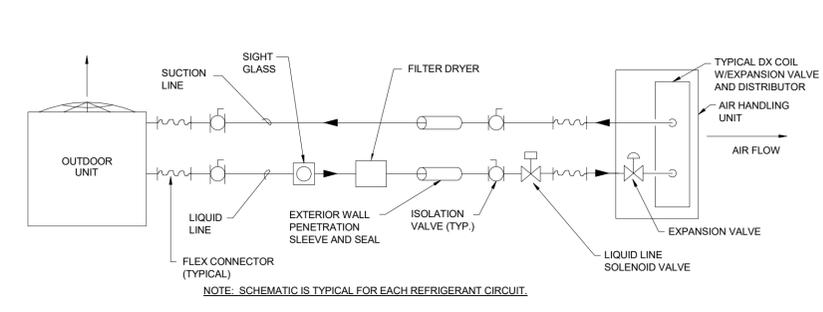
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Mechanical Details

Project number	24052
Date	10/24/2024
Drawn by	CA
Checked by	JB
M2.01	
Scale	12" = 1'-0"

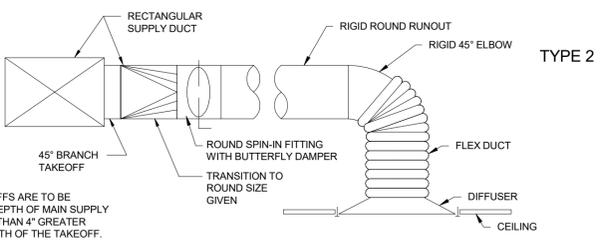
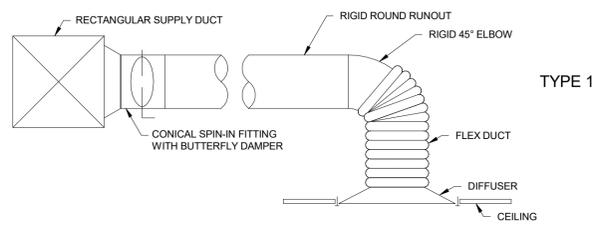


3 INDOOR HEAT PUMP UNIT DETAIL
NO SCALE



4 REFRIGERANT PIPING DETAIL
NO SCALE

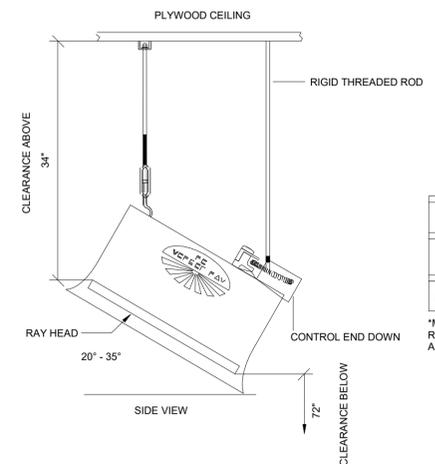
1 WALL EXHAUST FAN OR SUPPLY DETAIL
NO SCALE



DISTANCE TO COMBUSTIBLES					
MODEL NO.	# OF SIDE SHIELDS	MOUNTING ANGLE	SIDES	TOP	BELOW
DX3L-30	2	0°	16"	6"	66"

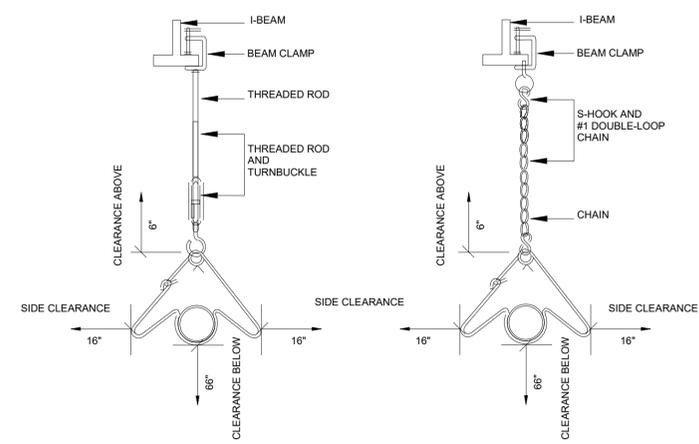
*MAINTAIN PER MANUFACTURER'S INSTALLATION REQUIREMENTS. DISTANCES MEASURED ABOVE/BELOW RAY HEAD SURFACE.

7 TYPICAL DIFFUSER RUN-OUT DETAIL
NO SCALE

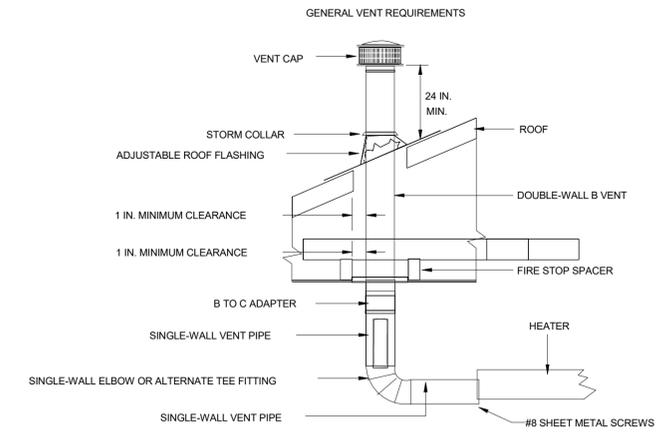


DISTANCE TO COMBUSTIBLES					
MODEL NO.	SIDES	BACK	TOP	BELOW/ FRONT	
DR 50	30	18	34	72	

*MAINTAIN PER MANUFACTURER'S INSTALLATION REQUIREMENTS. DISTANCES MEASURED ABOVE/BELOW RAY HEAD SURFACE.



5 RADIANT HEATER HANGER DETAIL
NO SCALE



2 HEATER VENTING DETAIL
NO SCALE

8 RADIANT HEATER MOUNTING DETAIL
NO SCALE

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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Mechanical Details

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PLUMBING LEGEND, SYMBOLS AND ABBREVIATIONS

	DOMESTIC COLD WATER		BALL VALVE	ABV	ABOVE
	DOMESTIC HOT WATER		VALVE IN VERTICAL	AFF	ABOVE FINISHED FLOOR
	DOMESTIC HOT WATER RETURN		CAP ON END OF PIPE	INV	INVERT
	SANITARY VENT		CLEANOUT - FLOOR TYPE	BFF	BELOW FINISHED FLOOR
	SANITARY WASTE		CLEANOUT - WALL TYPE	CW	COLD WATER
	P-TRAP		PIPE TURNING DOWN	DN	DOWN
	PIPE TURNING UP		TEE DOWN	WS	WASTE STACK
	TEE UP		TIE NEW INTO EXISTING	AC	ABOVE CEILING
	P-1		WATER HAMMER ARRESTOR	WHA	WATER HAMMER ARRESTOR
	RISER NUMBER		BELOW FINISHED GRADE	BFG	BELOW FINISHED GRADE
	WATER HAMMER ARRESTOR		THERMOSTATIC MIXING VALVE	TMV	THERMOSTATIC MIXING VALVE
	PLUG TYPE CLEANOUT		TRAP PRIMER	TP	TRAP PRIMER
	BALANCING VALVE		DOWNSPOUT	DS	DOWNSPOUT
	CHECK VALVE		UNDER GROUND	UG	UNDER GROUND
	GATE VALVE				
	REDUCED PRESSURE ZONE BFP				
	THERMOSTATIC MIXING VALVE				
	FLOOR SINK				
	FLOOR DRAIN				
	ROOF DRAIN/OVERFLOW DRAIN				
	FOOD SERVICE EQUIPMENT				

PLUMBING FIXTURE CONNECTION SCHEDULE

EQUIPMENT NO.	DESCRIPTION	HOT WATER	COLD WATER	WASTE	VENT	REMARKS
WC-1	WATER CLOSET, ADA COMPLIANT	--	1/2"	4"	2"	PRESSURE ASSIST TANK TYPE
EW-1	EYEWASH	1/2"	1/2"	2"	1-1/2"	PROVIDE WITH MIXING VALVE
EW-1	ELECTRIC WATER COOLER	--	1/2"	2"	1-1/2"	WALL MOUNT ADA WITH BOTTLE FILLER
LAV-1	LAVATORY, ADA COMPLIANT	1/2"	1/2"	1-1/2"	1-1/2"	WALL MOUNTED, PROVIDE TRAP WRAP AND MIXING VALVE
SK-1	SERVICE SINK	1/2"	1/2"	2"	1-1/2"	ROUTE TO INTERCEPTOR
WH-1	WALL HYDRANT	--	1/2"	--	--	
HD-1	HUB DRAIN	--	--	2"	1-1/2"	PROVIDE TRAP GUARD

ELECTRIC WATER HEATER SCHEDULE

EQUIPMENT NO.	MANUFACTURER AND MODEL NO.	SERVICE	EFF (%)	ENTERING WATER TEMP (°F)	LEAVING WATER TEMP (°F)	RECOVERY RATE (GPH)	STORAGE CAPACITY (GAL)	TANK DIMENSIONS		ELECTRICAL			REMARKS
								HEIGHT (INCHES)	DIAMETER (INCHES)	HEATING ELEMENTS	VOLTS/PH/Hz	WATTAGE	
EWH-1	A.O. SMITH ECS-30X	BATHROOMS/EYEWASH	--	60	120	21	30	3'-3"	1'-8"	4.5 KW	1	208 / 1 / 60	

RECIRCULATION PUMP SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	SERVICE	TYPE	FLOW (GPM)	HEAD (FT.)	RPM	ELECTRICAL			REMARKS
							HP	DISCONNECT	VOLTS/PH./HZ.	
REC-1	TACO 2400-10S	HOT WATER RETURN	INLINE	2	10	3450	1/10	BY DIV. 16	120/1/60	1)

REMARKS:
 1) PROVIDE AQUASTAT AND TIMER. INSTALL IN ACCORDANCE WITH IECC REQUIREMENTS.
 2) PUMP SHALL BE STAINLESS STEEL BODY FOR DOMESTIC USE.

GREASE INTERCEPTOR SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	FLOW RATE (GPM)	LIQUID HOLDING CAPACITY (GAL)	CONNECTION SIZES		UNIT DIMENSIONS			REMARKS
				INLET (IN.)	OUTLET (IN.)	LENGTH (IN.)	WIDTH (IN.)	DEPTH (IN.)	
OS-1	STRIEM OS-25	25	21	3	3	2'-3"	1'-11"	1'-3"	1)

REMARKS:
 1) PROVIDE EXTENSION TO MATCH GRADE.

WASTE FLOW CALCULATION SUMMARY

	GALLONS PER DAY (GPD)	# OF PEOPLE/ CARS	GPD
PER EMPLOYEE	8	8	64
PER CAR SERVED	8	45	360
REMARKS: 1) NO CARS WASHED ON SITE.		BUILDING TOTAL (GPD)	424

SANITARY SYSTEM SUMMARY

TOTAL LOAD (FIXTURE UNITS)	GPM
12.5	14

WATER METER SUMMARY

TOTAL LOAD (FIXTURE UNITS)	GPM
16	18



Pinnacle
ENGINEERING, INC.
 Engineering & Design Consultants
 2111 Parkway Office Circle, Suite 125
 Birmingham, AL 35244
 (205) 733-6912 FAX: (205) 733-6913
 Job No. 24261



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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Plumbing Legend, Abbreviations, and Schedules

Project number	24052
Date	10/24/2024
Drawn by	CA
Checked by	JB

P0.01

Scale 12" = 1'-0"

SECTION 15011 - PLUMBING GENERAL

- A. PROVIDE EQUIPMENT, LABOR, MATERIAL, ETC., REQUIRED TO MAKE A COMPLETE WORKING INSTALLATION.
- B. INSTALL THE WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND THE STANDARDS AND CODES (LATEST EDITION) THAT APPLY TO THIS WORK. IN THE EVENT OF A CONFLICT, INSTALL WORK IN ACCORDANCE WITH THE MOST STRINGENT CODE REQUIREMENTS DETERMINED BY THE ENGINEER.
- C. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS INCLUDING: BUILDING PERMITS, HEALTH DEPARTMENT PERMITS AND SEWER TAP PERMITS. DELIVER TO ENGINEER CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES.
- D. ALL EQUIPMENT AND METHOD SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICES AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- E. DISCONNECT, REMOVE AND ADDITIONAL PLUMBING SERVICES LOCATED ON OR CROSSING THROUGH CONTRACT LIMITS, ABOVE OR BELOW GRADE, OBSTRUCTING CONSTRUCTION OF PROJECT OR CONFLICTING WITH COMPLETED PROJECT OR ANY APPLICABLE CODES.
- F. PROVIDE CUTTING OF PAVEMENT, SIDEWALKS, DRIVEWAYS, ETC., EXCAVATING, TRENCHING, SHORING AND DE-WATERING, PRELIMINARY MATERIAL AND PERFORM BACKFILLING.
- G. RESTORE SITE TO ORIGINAL CONDITION OR NEW FINAL GRADES. PROVIDE PAVING, CONCRETE, SEED, OR SOD.
- H. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.
- I. DRAWINGS ARE DRAWN TO A SMALL SCALE AND ARE DIAGRAMMATIC ONLY. THE DRAWINGS INDICATE SIZE AND GENERAL ARRANGEMENT OF EQUIPMENT. DO NOT SCALE DRAWINGS FOR EXACT LOCATIONS. FIELD MEASUREMENTS TAKE PRECEDENCE.
- J. PROVIDE NECESSARY OFFSETS, ELBOWS AND FITTINGS AS REQUIRED TO AVOID CONFLICT WITH EQUIPMENT OF OTHER DIVISIONS AND TO OBTAIN PROPER HEADROOM AND CLEAR PASSAGEWAYS. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- K. WORK UNDER THIS DIVISION SHALL BE FIRST CLASS WITH EMPHASIS ON NEATNESS AND WORKMANSHIP. INSTALL WORK USING COMPETENT MECHANICS, UNDER SUPERVISION OF FOREMAN, ALL DULY CERTIFIED BY LOCAL AUTHORITIES.
- L. INSTALLATION SUBJECT TO ENGINEER'S OBSERVATION, FINAL APPROVAL, AND ACCEPTANCE. ENGINEER MAY REJECT UNSUITABLE WORK.
- M. ALL MATERIALS SHALL BE NEW. ALL MATERIALS AND EQUIPMENT FOR WHICH A UL STANDARD, AN AGA APPROVAL, AN AWWA STANDARD, FM LISTING OR ASME REQUIREMENTS IS ESTABLISHED, SHALL BE SO APPROVED AND LABELED OR STAMPED.
- N. THE DRAWINGS ARE BASED ON THE USE OF PRODUCTS SPECIFIED AND LISTED FIRST. IF ANY REVISION IN PIPING, CONDUIT WORK, FOUNDATIONS, ANCHOR BOLTS, CONNECTIONS, ETC., IS REQUIRED BY OTHER NAMED PRODUCTS OR APPROVED SUBSTITUTIONS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE SUCH REVISIONS AT NO ADDITIONAL CHARGE TO THE OWNER.
- O. SUBMIT SIX (6) ORIGINAL COPIES OF COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT FURNISHED UNDER DIVISION 15 OF SPECIFICATIONS TO ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL BEAR THE STAMP OF APPROVAL OF THE CONTRACTOR AS EVIDENCE THAT THE DRAWINGS HAVE BEEN CHECKED BY HIM. DRAWING SUBMITTALS WITHOUT THIS STAMP OF APPROVAL WILL NOT BE CONSIDERED AND WILL BE RETURNED FOR PROPER RESUBMISSION.
- P. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS AND SIZES OF EQUIPMENT. INFORM ENGINEER IN WRITING OF EQUIPMENT DIMENSIONS FROM THE SHOWN.
- Q. PROVIDE MAINTENANCE AND OPERATING MANUALS BOUND IN 8-1/2" X 11" HARDBACK, THREE-POST BINDERS. MANUALS SHALL CONTAIN WRITTEN INSTRUCTIONS FOR EACH SYSTEM, SHOP DRAWINGS, SCHEMATIC DRAWINGS, EQUIPMENT CATALOG CUTS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S WARRANTIES, AND VALVE TAG LIST.
- R. PROVIDE AS-BUILT PRINTS AT THE COMPLETION OF JOB. KEEP ONE SET OF PRINTS ON JOB AND RECORD DAY TO DAY CHANGES TO CONTRACT DRAWINGS WITH RED PENCIL. INDICATE ACTUAL LOCATION OF PIPING, VALVES, AND EQUIPMENT. TURN OVER PRINTS TO ENGINEER AT FINAL OBSERVATION.
- S. FURNISH ENGINEER WARRANTY, STATING THAT IF WORKMANSHIP AND/OR MATERIALS EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN ONE (1) YEAR AFTER FINAL ACCEPTANCE, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED.

SECTION 15051 - BASIC MATERIALS AND METHODS

- A. ACCESS PANELS:
 1. ACCESS PANELS SHALL HAVE WELDED STEEL FRAME, ONE PIECE DOORS, AND SELF LATCHING DOOR LOCKS. LOCKS SHALL BE SCREW DRIVER OPERATED WITH CASE HARDENED STEEL CAM. PANELS SHALL BE MILCOR, CESCO, KARP OR EQUAL.
 2. PROVIDE ACCESS PANELS IN WALLS AND CEILINGS AS NEEDED TO ALLOW ACCESS TO VALVES, EQUIPMENT, SHOCK ABSORBERS, TRAP PRIMERS, ETC. AND WHERE NOTED.
- B. FIRESTOPPING AND SOUNDSTOPPING:
 1. PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED TO THE RATED FIRE RESISTANCE EQUAL TO THE WALL. INSTALLATION SHALL BE DONE BY A QUALIFIED INSTALLER APPROVED BY THE MANUFACTURER.
 2. PROVIDE SOUND PROOFING THROUGH NON-RATED WALLS.
- C. PIPING SEALS:
 1. PROVIDE MODULAR, RESILIENT SEALS AROUND PIPES PENETRATING ALL EXTERIOR WALLS, AND FLOORS BELOW GRADE. PIPING SEALS SHALL BE THUNDERLINE CORP. "LINK SEAL" LS SERIES.
- D. CUTTING AND PATCHING:
 1. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING. CUT WALLS, FLOORS, CEILINGS, PARTITIONS, ETC., REQUIRED FOR THE INSTALLATION OF THIS WORK IN A NEAT AND CAREFUL MANNER. CORE DRILL FOR HOLES AND OTHER OPENINGS THROUGH FLOORS AND WALLS. SAWCUT LARGER OPENINGS. CUTTING SHALL BE KEPT TO A MINIMUM.
 2. REPLACE OR REPAIR DUCTWORK, CONDUIT, PIPING, ETC., THAT IS CUT. PATCH AROUND OPENING CUT BY THIS CONTRACTOR OR PROVIDED BY OTHERS FOR HIM. PATCHING SHALL BE DONE BY AN APPROVED QUALIFIED CONTRACTOR, BUT SHALL BE PAID FOR BY THIS CONTRACTOR. FINISHED PATCHING SHALL RETAIN FIRE AND SMOKE RATINGS OF THE ASSEMBLY AND SHALL MATCH SURROUNDING FINISH.
- E. ANCHORS:
 1. MOUNT ALL EQUIPMENT, BRACKETS, HANGERS, ANCHORS, ETC. TO SAFELY RESIST THE VIBRATION OR THRUST FORCES AND SUPPORT THE UNIT'S WEIGHT.
 2. FLOOR MOUNTED ROTATING OR VIBRATING EQUIPMENT SHALL BE ANCHORED TO THE FLOOR USING GROUDED-IN-PLACE OR CAST-IN-PLACE ANCHOR BOLTS WITH THREE INCH HOOK AND SLEEVE. ANCHOR BOLTS SHALL BE OF THE SIZE RECOMMENDED BY THE MANUFACTURER. FLOOR MOUNTED STATIC ITEMS, WALL AND CEILING MOUNTED EQUIPMENT BRACKET AND HANGERS SHALL BE INSTALLED USING DRILLED ANCHORS (OR CAST IN PLACE INSERTS). ANCHORS SHALL BE PHILLIPS DRILL COMPANY "RED HEAD" OR MULTI-SET II. SIZE ANCHORS (AND INSERTS) FOR FOUR TIMES THE APPLIED LOAD. BOLTS USED OUTDOORS OR IN A WET ENVIRONMENT SHALL BE HOT DIP GALVANIZED.
- A. PIPE IDENTIFICATION:
 1. IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI-A13.1. PIPE MARKERS SHALL BE SETONS WEATHER-CODE OR EQUAL.
 2. PROVIDE PIPE MARKERS AND DIRECTIONAL ARROWS ON PIPES AT BOTH SIDES OF PARTITIONS AND FLOORS SLABS. AT BRANCH LINE TAKE-OFFS, AT VALVES, AT INTERMEDIATE INTERVALS NOT IN EXCESS OF 20 FT. AND AT CONNECTIONS TO EQUIPMENT.
 3. TAPE COLOR BAND IDENTIFYING MARKERS AND ARROWS ON EACH PIPE, BOTH INSULATED AND BARE PIPES. PIPE MARKERS AND ARROWS SHALL BE LOCATED WHERE READILY VISIBLE AND ON LOWER QUADRANTS OF OVERHEAD PIPES.
- B. VALVE TAG AND CHART:
 1. VALVE TAGS SHALL BE SETON M4506. BLACK FILLED LETTERS WITH BRASS JACK CHAIN. ONE VALVE NUMBER SHALL BE STAMPED ON EACH TAG. IDENTIFY EACH VALVE TAG FOR THE UTILITY IT SERVES, SUCH AS "CW" FOR COLD WATER, "HW" FOR HOT WATER, ETC. VALVE CHARTS SHALL BE SETON. ATTACH A NUMBERED VALVE TAG TO EACH VALVE.
 2. PROVIDE A TYPE WRITTEN CHART IN FRAME UNDER GLASS COVER, GIVING THE FULL LIST OF ALL VALVES INSTALLED UNDER THIS CONTRACT. CHART SHALL LIST VALVE NUMBER, TYPE OF UTILITY, AND LOCATION. MOUNT CHART WHERE DIRECTED BY OWNER. PROVIDE ONE ADDITIONAL COPY TO OWNER.
- A. EQUIPMENT IDENTIFICATION:
 1. IDENTIFY EACH PIECE OF EQUIPMENT WITH A 1/8 INCH THICK ENGRAVED MELAMINE PLASTIC LAMINATE NAMEPLATE. LETTERS SHALL BE 1/2 INCH HIGH STANDARD STYLE. NAMES, ABBREVIATIONS, AND NUMBERING SHALL AGREE WITH THE CORRESPONDING EQUIPMENT DESIGNATIONS SHOWN ON THE DRAWINGS. USE BLACK LETTERS CUT IN A WHITE BACKGROUND FOR ALL EQUIPMENT ON STANDARD ELECTRICAL POWER.
 2. FASTEN NAMEPLATES TO EQUIPMENT IN A CONSPICUOUS LOCATION USING SELF-TAPPING STAINLESS STEEL. EXCEPT USE CONTACT EPOXY ADHESIVE WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.
- B. PIPE SLEEVES:
 1. PROVIDE PIPE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE OR BELOW CEILINGS. PROVIDE PIPE SLEEVES IN NEW WALLS AND FLOORS AS THE WORK PROGRESSES. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER.
 2. SIZE PIPE SLEEVES TO ALLOW CONTINUOUS INSULATION, BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN PIPE. SLEEVES IN WALLS SHALL BE FLUSH WITH WALL. SLEEVES IN FLOORS SHALL EXTEND 3/4 INCHES ABOVE FLOOR AND BE FLUSH WITH STRUCTURE BELOW.
 3. SLEEVES IN CONCRETE WALLS, FLOORS OR MASONRY SHALL BE SCH 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD OR PLASTER WALLS SHALL BE 14 GAUGE, ROLLED GALVANIZED SHEET METAL TACK WELDED ON THE LONGITUDINAL SEAM.
 4. PROVIDE PLATES AROUND PIPES EXTENDING INTO EXPOSED AREAS WHERE THEY PASS THROUGH WALLS, FLOORS AND CEILINGS. SIZE PLATES TO COMPLETELY COVER PIPE SLEEVES. PLATES SHALL BE BEATON AND CADWELL, KEENEY OR GRINNELL. NICKEL PLATED STEEL, SPLIT PLATES WITH SET SCREW. CONCRETE FLOOR PLATE SHALL BE GRINNELL FIGURE 400.
- C. FLASHING:
 1. PROVIDE FLASHING AT PIPING AND DUCT PENETRATIONS THROUGH ROOF AND ROOF MOUNTED STRUCTURES FURNISHED UNDER THIS DIVISION. FLASH IN ACCORDANCE WITH ROOFING MANUFACTURERS DETAILS. FLASHING MATERIALS SHALL BE IN ACCORDANCE WITH THE ROOFING MANUFACTURERS SYSTEM.
 2. PROVIDE FLASHING AT PIPES PASSING THROUGH FLOORS WITH WATERPROOF MEMBRANE. FLASHING SHALL BE IN ACCORDANCE WITH WATERPROOFING MANUFACTURERS DETAILS.

SECTION 15261 - PLUMBING INSULATION

- A. GENERAL:
 1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATINGS AS TESTED BY ASTM E 84, UL 723, OR NFPA 255 NOT EXCEEDING A FLAME SPREAD OF 25 OR SMOKE DEVELOPED OF 50.
 2. SUBMITTALS SHALL USE PAGES FROM MIDWEST INSULATION CONTRACTORS ASSOCIATION -- "COMMERCIAL AND INDUSTRIAL INSULATION STANDARDS" WHICH WILL BE APPLIED.
 3. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES, EXCEPT WHERE FIRESTOP OR FIRESEALING MATERIALS ARE REQUIRED.
 4. INSULATE ITEMS MOUNTED IN PIPING WITH THE SAME THICKNESS OF INSULATION AS SPECIFIED FOR PIPING.
 5. REPAIR INSULATION DAMAGED BY WORK UNDER THIS CONTRACT TO MATCH EXISTING WORK OR REPLACE DAMAGED PORTION WITH INSULATION SPECIFIED FOR NEW WORK.
 6. DOMESTIC WATER PIPING:
 1. INSULATION SHALL BE 850 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE OR KNAUF. ROUTED OR MOLDED FITTING INSULATION SHALL BE HAMFAB.
 2. INSULATION SHALL HAVE FACTORY-APPLIED, REINFORCED, FLAME RETARDANT, VAPOR BARRIER JACKET EQUAL TO OWENS-CORNING ASJ WITH SELF-SEALING LAP. BUTT JOINTS SHALL BE TAPED WITH FIELD-APPLIED ASJ TAPE 3 IN. WIDE.
 3. INSULATION THICKNESSES SHALL BE IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE FOR PIPE SIZES NOTED ON PLAN.
 4. ALL FITTINGS AND VALVES SHALL BE INSULATED WITH PREFORMED FIBER GLASS FITTINGS OR MITERED SECTIONS OF PIPE INSULATION. INSULATION SHALL BE OF EQUAL THICKNESS TO THE ADJACENT PIPE INSULATION.
 5. METAL SHIELDS SHALL BE INSTALLED BETWEEN HANGERS OR SUPPORTS AND THE PIPING INSULATION. RIGID INSULATION INSERTS SHALL BE INSTALLED AS REQUIRED BETWEEN THE PIPE AND THE INSULATION SHIELDS. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJACENT INSULATION AND SHALL BE VAPOR SEALED AS REQUIRED.
 7. ELASTOMERIC CLOSED CELL INSULATION:
 1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LAQUER ENAMEL.
 2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENSATE PIPING, AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPLICANCES SUBJECT TO SWEATING.
 3. PIPING FINISHES:
 1. METAL JACKETING SHALL BE, SMOOTH .016 IN. THICK, TYPE T 3003 ALUMINUM WITH LAMINATED MOISTURE BARRIER. JACKETING SHALL BE CHILDERS, ALUMINUM ROLL JACKETING WITH POLYKRAFT MOISTURE BARRIER. COVER THE FOLLOWING INSULATED SYSTEMS WITH METAL JACKETING: PIPING INSTALLED OUTDOORS AND EXPOSED PIPING INDOORS WITHIN 8 FT. OF FINISHED FLOOR. METAL FITTING COVERS SHALL BE TWO PIECE ALUMINUM. COVERS SHALL BE ELL-JAC.
 2. CONCEALED PIPING FINISH COVERING SHALL BE THE ALL SERVICE JACKET. FITTINGS SHALL BE COVERED BY WRAPPING THE FITTING WITH FIBER REINFORCED TAPE, WITH A 5 PERCENT OVERLAP. FITTINGS COVERS SHALL BE ONE PIECE 20 MIL PVC. COVERS SHALL BE CEEL-TITE 550 PVC-UVR BY CEEL-CO OR EQUALS.

SECTION 15410 - PLUMBING PIPING

- A. THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL WORK NECESSARY FOR A COMPLETE INSTALLATION OF SANITARY WASTE PIPING, STORM PIPING AND DOMESTIC WATER PIPING INSIDE THE BUILDING TO 5 FEET OUTSIDE THE BUILDING. SUBMIT SCHEDULE OF PIPE AND FITTINGS FOR EACH SERVICE.
- B. DOMESTIC WATER PIPING: WATER PIPING WITHIN THE BUILDING SHALL BE COPPER TUBE, TYPE "L" HARD TEMPER, ASTM B-88. PIPING UNDER GROUND SHALL BE COPPER TUBE, TYPE "K" SOFT TEMPER, ASTM B-88. FITTINGS SHALL BE WROUGHT COPPER, SOLDER TYPE, ASTM B-75, ANSI B16.22. SOLDER UNIONS SHALL BE WROT COPPER, WITH COPPER GROUND JOINT. ASTM B75, ANSI B16.22. DI-ELECTRIC, EPSO, 250 LB. WOG. SOLDER METAL SHALL CONFORM TO ASTM B32. LEAD-FREE.
- C. STORM, SANITARY WASTE, AND VENT PIPING: ABOVE GROUND: SCHEDULE 40 PVC-DWV ASTM D-2685 USING SOLVENT CEMENT ASTM D02565. HORIZONTAL PIPING FOR FIXTURE ROUGH-INS MAY BE DWV COPPER, ASTM B-306. BELOW GROUND: SCHEDULE 40 PVC-DWV ASTM D-2685 USING SOLVENT CEMENT ASTM D-2564.
- D. STORM, SANITARY WASTE AND VENT FITTINGS: ABOVE GROUND: 1/20 HUB CAST IRON SOIL PIPE FITTINGS WITH COUPLING ASSEMBLY CISPI STANDARD 310.) SCHEDULE 40 PVC-DWV, ASTM D-2855 USING SOLVENT CEMENT ASTM D-2564. BELOW GROUND: SCHEDULE 40 PVC-DWV, ASTM D-2855 USING SOLVENT CEMENT ASTM D-2564.
- E. BALL VALVES: VALVES SHALL BE NIBCO T-585-70, FULL PORT BALL TYPE WITH BRONZE BODY, CHROME PLATED BALL AND BRONZE THREADED ENDS, 600 PSI WOG OR NIBCO S-585-70 IN COPPER LINES. HAMMOND, CRANE, APOLLO, MILWAUKEE, OR APPROVED EQUAL.
- F. ALL PIPING SHALL BE ROUTED TO CONSERVE BUILDING SPACE, BE COORDINATED WITH ITEMS INSTALLED BY OTHER TRADES AND NOT INTERFERE WITH ACCESS TO OR OPERATION OF THE FACILITY.
- G. PROVIDE ROOF FLASHINGS FOR PIPE PENETRATIONS THROUGH ROOF, TO BE INSTALLED BY ROOFING CONTRACTOR.
- H. WATER PIPING WITHIN BUILDING SHALL BE SIZE INDICATED ON PLANS AND RISERS. IN THE EVENT NO SIZE IS SHOWN, PIPE SIZE OR SIZE REQUIRED BY THE PLUMBING CODE. PIPING SHALL BE SLOPED TOWARD A SYSTEM DRAIN AND TOWARD OUTLETS, TO PROVIDE FOR SYSTEM DRAIN-DOWN. IF INSTALLED NEAR EXTERIOR WALLS, PIPING SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION. INSTALL PIPING TO PREVENT DIRECT CONTACT BETWEEN FERROUS AND NON-FERROUS MATERIALS. ALLOW FLEXIBILITY FOR EXPANSION IN PIPING.
- I. DOMESTIC WATER PIPING SYSTEM SHALL BE TESTED WITH POTABLE WATER AT A PRESSURE OF 125 PSIG OR 25 PSIG ABOVE DESIGN WORKING PRESSURE, WHICHEVER IS GREATER FOR 12 HOURS. TEST SHALL BE CONDUCTED WITH PLUMBING INSPECTOR UNLESS APPROVED OTHERWISE IN WRITING.
- J. WATER DISTRIBUTION PIPING SHALL BE DISINFECTED PRIOR TO OCCUPANCY OR SYSTEM START-UP WITH A CHLORINE SOLUTION 50 PPM. ALLOW SYSTEM TO STAND FOR SIX HOURS MINIMUM, THEN EXERCISE ALL VALVES TO ENSURE TREATMENT OF ALL BRANCHES AND COMPONENTS. SYSTEM SHALL BE FLUSHED WITH POTABLE WATER AFTER DISINFECTION AND PRIOR TO PLACEMENT INTO SERVICE.
- K. STORM, SANITARY WASTE AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH WATER TEST AS SPECIFIED IN THE INTERNATIONAL PLUMBING CODE. IN ADDITION TO ANY TESTS REQUIRED BY THE LOCAL PLUMBING OFFICIAL. (10 FEET OF HEAD WITH NO APPARENT LEAKS. HOLD FOR 30 MINUTES MINIMUM), FLUSH ALL GRAVITY PIPING INCLUDING FLOOR DRAINS AND ROOF DRAINS PRIOR TO TURNING OVER TO THE OWNER.
- L. ALL PIPE SHALL BE CUT SQUARE. REAM PIPE AND TUBE ENDS AND REMOVE BURRS. CLEAN THE ENDS OF PIPES TO REMOVE OIL, GREASE AND OXIDES. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.
- M. ALL SOLDERED PIPING AND EQUIPMENT CONNECTIONS SHALL BE PROPERLY PREPARED IN ACCORDANCE WITH GOOD PIPING PRACTICE. APPLY A THIN LAYER OF FLUX TO ONLY THE MALE TUBING. ROTATE INTO THE FITTING WITH ONE OR TWO REVOLUTIONS.
- N. DOMESTIC WATER PIPING: ROUTE PIPING IN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE, AND MAINTAIN GRADIENT. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. PROVIDE DRAIN VALVES AT LOW POINTS IN SYSTEMS. TEST WATER PIPING BEFORE BEING INSULATED OR CONCEALED IN WALLS OR CEILINGS.
- O. STORM, SANITARY WASTE, AND VENT PIPING: HORIZONTAL SOIL, WASTE AND DRAINAGE LINES WITHIN BUILDING SHALL HAVE A MINIMUM UNIFORM SLOPE OF 1/8 INCH PER FOOT ON 3 INCH AND LARGER, AND 1/4 INCH PER FOOT ON LINES 2 INCH AND SMALLER. TURNS IN SANITARY, SOIL, AND DRAIN PIPING SHALL BE MADE USING 45 DEGREE ELBOWS, WYES, QUARTER, EIGHTH, SIXTEENTH BENDS, OR OTHER BENDS APPROVED BY THE PLUMBING CODE. DO NOT USE SANITARY TEES OR CROSSES EXCEPT WHERE DISCHARGING FROM HORIZONTAL TO VERTICAL. MAKE CHANGES IN PIPE SIZES WITH REDUCING FITTINGS AND RECESSED REDUCERS. DO NOT REDUCE LINE SIZE IN DIRECTION OF FLOW. PROVIDE CLEANOUTS IN ALL HORIZONTAL TURNS IN WASTE PIPING GREATER THAN 45 DEGREES. PROVIDE DEEP SEAL TRAPS ON ALL FLOOR DRAINS, AND TRAP PRIMERS/SEAL WHERE REQUIRED BY CODE OR AS INDICATED ON DRAWINGS. INDIRECT WASTE LINES DUMPING INTO FLOOR OR HUB DRAINS SHALL MAINTAIN A 2-INCH AIR GAP BETWEEN THE END OF THE WASTE LINE AND THE RIM OF THE FLOOR OR HUB DRAIN.

SECTION 15416 - GAS PIPING SYSTEMS

- A. PROVIDE COMPLETE INSTALLATION OF GAS PIPING FROM THE "POINT OF DELIVERY" UP TO AND INCLUDING CONNECTION TO ALL GAS-FIRED EQUIPMENT. CONNECT EQUIPMENT ITEMS FURNISHED UNDER OTHER SECTIONS OF SPECIFICATIONS. TEST IN ACCORDANCE WITH A.G.A., STANDARD GAS CODE, N.F.P.A. 54, AND APPLICABLE STATE AND LOCAL CODES.
- B. ROUTE GAS SERVICE ENTRANCE PIPING INTO BUILDING TO AVOID INTERFERENCE AND DAMAGE. PROVIDE MANUAL SHUTOFF VALVE, GAS COCK AND GAUGE. VALVES SHALL BE LABELED.
- C. PROVIDE ACCESS PANELS FOR VALVES AND OTHER ITEMS REQUIRING MAINTENANCE IN ENCLOSED SPACES. AVOID INSTALLING GAS APPURTENANCES IN ENCLOSED SPACES WHERE POSSIBLE. INSTALL IN ENCLOSED SPACES ONLY AS ALLOWED BY APPLICABLE CODES.
- D. SUBMIT MANUFACTURER'S LITERATURE ON ALL MATERIALS AND EQUIPMENT INCLUDING: PIPE, PIPE COATING, ANODES, VALVES, FLEXIBLE CONNECTORS, FITTINGS, REGULATORS, RELIEF VALVES, GAUGES, GAS SERVICE:
 1. COORDINATE INSTALLATION OF GAS SERVICE LINE WITH LOCAL GAS COMPANY. PAY ALL FEES.
 2. PROVIDE 12 INCH ELEVATED METER MOUNTING PADS ON TOP OF A 4 INCH THICK CONCRETE PAD FOR SUPPORT OF GAS METER AND PIPING.
 3. PROVIDE (TWO) 8 INCH DIAMETER PIPE BOLLARDS FOR GAS METER PROTECTION. BOLLARDS SHALL BE SIX FEET LONG (3 FEET BELOW GRADE), MOUNTED IN A 24 INCH DIAMETER HOLE, FILLED WITH 3,000 PSI CONCRETE.
- F. INTERIOR PIPING: CONNECT TO ENTERING LINE AND DISTRIBUTE GAS TO EQUIPMENT ITEMS REQUIRING GAS AND AS INDICATED. PERFORM WORK IN ACCORD WITH APPLICABLE A.G.A., N.F.P.A. 54, STATE AND LOCAL CODES. INSTALL GAS STOP VALVES AND DRIP LEGS AT EACH EQUIPMENT ITEM. PIPING SHALL BE ADEQUATELY DRAINED WITH A MINIMUM SLOPE OF 1/4 INCH PER 15 FEET AND DRIP LEGS (FULL SIZE OF PIPE) INSTALLED AT ADDITIONAL POINTS WHERE CONDENSATE MAY COLLECT. INSTALL PRESSURE REDUCING VALVES AS REQUIRED TO PROVIDE PRESSURE WITHIN EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- G. EXTERIOR PIPING: EXTERIOR PIPING SHALL BE SCHEDULE 40 CARBON STEEL. PIPING 2 INCH AND SMALLER MAY USE THREADED FITTINGS. PIPING 2 1/2 INCH AND LARGER SHALL USE WELDED FITTINGS AND FLANGED VALVES. EXTERIOR PIPING SHALL BE COATED WITH AN ALKYL ENAMEL PRIMER (MINIMUM DRY THICKNESS 3 MILS). EXTERIOR PIPING SHALL BE PROTECTED FROM CORROSION. PROVIDE COATED PIPING AND UNDERGROUND PIPING:
 1. UNDERGROUND PIPING SHALL BE CARBON STEEL - A53A106-WELDED OR POLYETHYLENE. UNDERGROUND STEEL PIPING SHALL HAVE AT LEAST 18 INCH OF PROPER BACKFILL COVER AND BE PROTECTED FROM CORROSION. UNDERGROUND PIPING SHALL BE PROTECTED FROM CORROSION. PROVIDE COATED PIPING AND FITTINGS. REPAIR DAMAGED COATING AT SELCTS. INSTALL SACRIFICIAL ANODES ON STEEL PIPING INTERVALS NOT EXCEEDING 100 FT.
 2. WHERE PIPES PENETRATE BASEMENT WALLS AND FOUNDATIONS INSTALL THUNDERLINE LINK SEAL.
 3. GAS LINES ROUTED UNDER A BUILDING SHALL BE STEEL AND SHALL BE ENCASED IN A SCH 40 OUTER CONDUIT (AT LEAST 3 PIPE SIZES LARGER THAN THE GAS LINE). CONDUIT SHALL BE SEAL WELDED TO THE GAS PIPE INSIDE THE BUILDING. CONDUIT SHALL BE VENTED TO OUTDOORS. CONDUIT SHALL BE PROTECTED FROM CORROSION SIMILARLY TO UNDERGROUND PIPING.
- I. PIPE/TUBING:
 1. STEEL PIPE: ASTM A53 GRADE A OR B, TYPE F, ERW OR SEAMLESS. SCHEDULE 40.
 2. ASTM A106 SEAMLESS, SCHEDULE 40.
 3. TUBING (STEEL) ASTM A539.
 4. PLASTIC PIPE ASTM D2513 POLYETHYLENE. DRISCO PIPE 6500 OR PRIOR APPROVED EQUAL.
- J. FITTINGS:
 1. WELDED (STEEL): WELDING FITTINGS SHALL BE CARBON STEEL BUTT WELDING TYPE CONFORMING TO ASTM-234. ELBOWS SHALL BE LONG RADIUS TYPE. WELDING TEES SHALL BE USED ON BRANCH CONNECTIONS EQUAL TO OR GREATER THAN 2 THE DIAMETER OF THE MAIN RUN. FITTINGS SHALL BE LADISH, TUBE-TURN OR WELDBOND. CARBON STEEL REINFORCED BRANCH, WELDING FITTINGS UP TO 3 INCHES, BUT NOT GREATER THAN 2 THE DIAMETER OF THE MAIN RUN MAY BE USED. FITTINGS SHALL BE BONNEY FORGE OR PHOENIX FORGING.
 2. THREADED (MALLEABLE, IRON): SCREWED FITTINGS SHALL BE MALLEABLE IRON ASTM A-197 CLASS 150 CONFORMING TO ANSI B16.3. DIMENSIONS CONFORMING TO FEDERAL SPEC WW-P-521. FITTINGS SHALL BE GRINNELL, FLAGG OR STOCKHAM.
 3. HEAT FUSION/COMPRESSION (POLYETHYLENE): SOCKET TYPE FUSION SHALL MEET THE REQUIREMENTS OF ASTM 2683. FITTINGS SHALL BE LISTED AND MARKED ASTM D2513. BUTT TYPE FUSION FITTING SHALL MEET THE REQUIREMENTS OF ASTM D361.
- K. UNIONS (DIELECTRIC): CLASS 250 MALLEABLE, SCREWED ASTM A-197.
- L. VALVES:
 1. 1 INCH AND SMALLER: BALL VALVE - CLASS 125 BRASS FULL PART, 2 PIECE BODY, CHROME PLATED BALL, BLOWOUT PROOF STEAM, THE SEATS.
 2. 2 INCHES AND SMALLER: PLUG COCK - CLASS 125 CAST IRON, SCREWED, FULL PORT AGA LISTED, ANSI B16.33 HOMESTEAD FIGURE 601.
 3. 2 1/2 INCHES AND LARGER: PLUG VALVE - CLASS 125 FLANGED CAST IRON ASTM A126 CONFORMING TO ANSI B16.1.
- M. PIPE COATING: X-TRU COAT OR PRIOR APPROVED EQUAL INCLUDING JOINTS AND FITTINGS.
- N. PRESSURE REGULATORS: CAST IRON OR ALUMINUM BODY AND SPRING CASE WITH STAINLESS STEEL VALVE STEAM, SEAT RING AND VALVE PLUG, PLATED STEEL SPRINGS, NEOPRENE DIAPHRAGM AND GASKETS AND TFE DISC. REGULATING VALVES SHALL BE SIZED FOR THE FLOW INDICATED AND FOR INLET AND OUTLET PRESSURES INDICATED. OUTLET PRESSURE SHALL BE MAINTAINED UNDER THE DESIGN FLOW CONDITION AND AT NO FLOW. REGULATING VALVES TWO PSI AND BELOW SHALL HAVE LEAK LIMITING DEVICES. REGULATING VALVES OVER TWO PSI SHALL BE VENTED FULL SIZE TO OUTSIDE OF THE BUILDING. OTHER REGULATING VALVES REQUIRING ACCESS TO THE ATMOSPHERE SHALL BE EQUIPPED WITH VENT PIPING LEADING TO OUTSIDE. PROVIDE A PRESSURE RELIEF VALVE IF THE REGULATOR CONNECTION SIZE EXCEEDS TWO INCHES. REGULATING VALVES SHALL BE FISHER, MAXITROL, OR PRIOR APPROVED EQUAL MEETING ANSI Z21.18.
- O. PRESSURE GAGE: FOR MEDIMUM PRESSURE GAS; 0-5 PSI RANGE. FOR LOW PRESSURE GAS; 0-30 INCH W.C. RANGE. USE LOW PRESSURE TYPE 2-1/2 INCH DIA. PRESSURE GAGE WITH APPROPRIATE RANGE, OCI MODEL CO 34, TRETRICE, WERKLER OR APPROVED EQUAL.



Engineering & Design Consultants
2111 Parkway Office Circle, Suite 125
Birmingham, AL 35244
(205) 733-6912 FAX: (205) 733-6913
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10/24/24

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stark, Florida

FINAL		
No.	Description	Date

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Plumbing Specifications	
Project number	24052
Date	10/24/2024
Drawn by	CA
Checked by	JB
<h1>P0.02</h1>	
Scale	12" = 1'-0"



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10/24/24

SECTION 15430 - PLUMBING SPECIALTIES

- A. THIS SPECIFICATION DESCRIBES THE REQUIREMENTS FOR LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION OF PLUMBING SPECIALTIES INCLUDED AS PART OF THE BUILDING PLUMBING SYSTEM.
- B. MANUFACTURER'S LITERATURE INDICATING MODEL NUMBERS AND OPTIONS SHALL BE SUBMITTED FOR ALL FIXTURES AND EQUIPMENT. FORMAT SHALL INCLUDE A SCHEDULE OF THE SPECIALTIES SUBMITTED AND INCLUDE IDENTIFICATION NUMBER OF EACH ITEM, SUCH AS "FD-1 FLOOR DRAIN". A LIST OF EACH COMPONENT, ACCESSORY, AND OPTION OF THE ITEM BEING SUBMITTED. THIS SCHEDULE MUST BE INCLUDED IN THE FRONT OF THE SUBMITTAL PAGE.
- C. CLEANOUTS SHALL CONSIST OF A COATED CAST IRON BODY WITH THREADED TOP WITH SPIGOT OR NO-HUB CONNECTION AND GASKETED BRONZE GLOBE PLUG WITH COUNTERSUNK SLOT. HEAD SHALL BE ADJUSTABLE IN HEIGHT; PROVIDE NON-SKID COVERS FOR FLOOR CLEANOUTS. PROVIDE THREAD SHIELD TO PROTECT ADJUSTMENT THREADS FROM CONCRETE AS REQUIRED. CLEANOUTS SHALL BE INSTALLED IN HORIZONTAL RUNS AT SPACING OF NO MORE THAN 75 FEET. INSTALL CLEANOUTS AT THE BASE OF EVERY SOIL AND WASTE STACK, AND AT EACH 90 DEGREE CHANGE IN DIRECTION. INSTALL CLEANOUTS WHICH ARE NOT EASILY ACCESSIBLE UP THROUGH FLOOR OR WALL AND PROVIDE APPLICABLE COVERS. INSTALL CLEANOUTS TO ALLOW AT LEAST 18" FOR RODDING.
- D. WATER HAMMER ARRESTORS SHALL BE CONSTRUCTED OF A STAINLESS STEEL OR COPPER SHELL, STAINLESS STEEL OR ELASTOMER BELLOWS, WITH PRECHARGE OF AIR, NITROGEN, OR ARGON. ARRESTERS SHALL CONFORM TO ASSE STD. 1010, AND SHALL BE ZURN "SHOKTROL", JOSAM "ABSORBOTRON", WADE "SHOCKSTOP", OR PRECISION PLUMBING PRODUCTS "SHOCK ARRESTOR". UNIT SHALL BE SIZED IN ACCORDANCE WITH TO PDI STANDARDS. WATER HAMMER ARRESTORS SHALL BE SIZED TO ACTUAL PIPE SIZE AND INSTALLED AS NEAR THE SHOCK SOURCE AS PRACTICAL. INSTALL TO ALLOW UNOBSTRUCTED PATH FROM SHOCK SOURCE TO ARRESTOR.
- E. BALANCING VALVES (DOMESTIC HOT WATER RETURN): VALVES SHALL BE BELL AND GOSSETT OR SERIES CIRCUIT SETTER, PRESETTABLE BALANCE VALVE, VARIABLE ORIFICE FLOW METER AND POSITIVE SHUT-OFF SERVICE VALVE. EQUIPMENT WITH CAPPED READOUT VALVES FITTED WITH INTERNAL CHECK VALVES. 1/4 INCH NPT TAPPED AND PLUGGED DRAIN PORT. BRONZE BODY/BRASS BALL CONSTRUCTION WITH GLASS AND CARBON FILLED SEAT RINGS. SOLDER CONNECTIONS. VALVES TO HAVE DIFFERENTIAL PRESSURE READ-OUT PORTS ACROSS VALVE SEAT AREA. FURNISH WITH PREFORMED INSULATION TO PERMIT ACCESS FOR BALANCE AND READ-OUT. TACO IS AN APPROVED EQUAL.
- F. PRESSURE REDUCING VALVES: VALVES SHALL BE EQUAL TO WATTS SERIES USB-6G BRONZE BODY SINGLE SEATED WITH COMPOSITION RUBBER AND STAINLESS STEEL SPRING. DIRECT ACTING WITH STRAINER ON INLET SIDE, INTEGRAL BY-PASS CHECK VALVE, GAUGE, AND THREADED ENDS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- G. TRAP GUARD SEALS: PROVIDE AN ELASTOMERIC, NORMALLY CLOSED TRAP GUARD DEVICE TO PREVENT EVAPORATION OF THE TRAP SEAL AND TO PROTECT AGAINST SEWER GASES FROM BACKING UP INTO HABITABLE AREAS. DEVICE SHALL OPEN WITH FLUID AND ALLOWS LIQUID DRAINAGE TO FLOW THROUGH INTO THE BUILDING DRAIN. TRAP SEAL SHALL BE TRAP GUARD BY PRO-VENT SYSTEMS OR APPROVED EQUAL.
- H. FLOOR DRAINS (FD-1): DRAIN SHALL INCLUDE COATED CAST IRON BODY WITH BOTTOM OUTLET, 1/2" TRAP PRIMER CONNECTION, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH TYPE "B" ROUND POLISHED NICKEL-BRONZE LIGHT DUTY STRAINER TOP WITH SQUARE HEELPROOF OPENINGS AND SECURED GRATE. DRAIN SHALL BE ZURN Z-551-PH OR EQUAL BY JAY R. SMITH, WADE, OR JOSAM. PROVIDE 3 FT. SQ. 6 MIL BUTYL MEMBRANE, AT EACH FLOOR DRAIN. CLAMP MEMBRANE. MEMBRANE SHALL BE RECESSED IN THE FLOOR SLAB WITH TOPPING POURED OVER IT. DRAINS INSTALLED IN ELEVATED BUILDING FLOORS SHALL BE SEALED IN SUCH A MANNER AS TO PREVENT LEAKAGE OF WATER AROUND TRAP AND BODY TO CEILING BELOW.
- FLOOR DRAIN (FD-2): DRAIN SHALL INCLUDE SUR-SET BUCKET, 9" DIAMETER MEDIUM DUTY CAST IRON GRATE, COATED CAST IRON BODY, 1/2" TRAP PRIMER CONNECTION, BOTTOM OUTLET, SEEPAGE PAN, AND COMBINATION MEMBRANE CLAMP. DRAIN SHALL BE ZURN Z-551-PH OR EQUAL BY JAY R. SMITH, WADE, OR JOSAM. PROVIDE 3 FT. SQ. 6 MIL BUTYL MEMBRANE, AT EACH FLOOR DRAIN. CLAMP MEMBRANE. MEMBRANE SHALL BE RECESSED IN THE FLOOR SLAB WITH TOPPING POURED OVER IT. DRAINS INSTALLED IN ELEVATED BUILDING FLOORS SHALL BE SEALED IN SUCH A MANNER AS TO PREVENT LEAKAGE OF WATER AROUND TRAP AND BODY TO CEILING BELOW.
- J. ROOF DRAINS (RD): DRAIN SHALL CONSIST OF COATED CAST IRON BODY WITH NON-PUNCTURING FLUSHING CLAMP WITH INTEGRAL GRAVEL STOP AND DECK CLAMP. DRAIN SHALL HAVE AN ADJUSTABLE EXTENSION TO PLACE FLASHING CLAMP ABOVE INSULATION WHILE BODY RESTS ON THE ROOF STRUCTURE. PROVIDE WITH ALUMINUM ROOF DOME. PROVIDE 1710 EXPANSION JOINT IF PIPING IS NOT OFFSET BELOW THE ROOF. DRAIN SHALL BE JAY R. SMITH 1015Y-R-C-AD OR EQUAL BY WADE, JOSAM, OR ZURN. ROOF DRAINS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COORDINATE THE WORK WITH ROOF DECK AND ROOFING CONTRACTOR TO INSURE PROPER AND TIMELY INSTALLATION.
- K. OVERFLOW DRAINS (OD): DRAIN SHALL CONSIST OF COATED CAST IRON BODY WITH NON-PUNCTURING FLASHING CLAMP, TWO (2) INCH WATER DAM, AND DECK CLAMP. PROVIDE ALUMINUM ROOF DOME. PROVIDE 1710 EXPANSION JOINT IF PIPING IS NOT OFFSET BELOW ROOF. DRAIN SHALL BE J.R. SMITH 1080Y-R-C-AD OR EQUAL BY WADE, JOSAM, OR ZURN. OVERFLOW DRAINS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COORDINATE THE WORK WITH ROOF DECK AND ROOFING CONTRACTOR TO INSURE PROPER AND TIMELY INSTALLATION.
- L. DOWNSPOUT NOZZLES: WALL MOUNTED OUTLET NOZZLE FOR STORM DRAINAGE, PLAIN BRONZE BODY, DECORATION FACE OF WALL AND FLANGE, WITH SCREEN AND THREADED CONNECTOR. UNITS SHALL BE JAY R SMITH 1770-BS OR EQUAL BY ZURN, WADE, OR JOSAM.
- M. HUB DRAIN (HD): DRAIN SHALL INCLUDE CAST IRON DEEP SEAL "P" TRAP WITH INDIRECT WASTE FUNNEL INLET AND SIDE OUTLET THREADED AND WITH 1/2 INCH THREADED FLUSH CONNECTION. DRAIN SHALL BE JOSAM 8921-051 OR EQUAL BY ZURN, JAY R. SMITH, OR WADE.
- N. REDUCED PRESSURE ZONE BACKFLOW PREVENTER (ASSE 1015): BACKFLOW PREVENTER SHALL INCLUDE NPT BODY CONNECTIONS, QUARTER TURN, FULL PORT, RESILIENT SEATED BRONZE BALL VALVE, AND STRAINER. UNIT SHALL BE WATTS SERIES 909 QT OR EQUAL BY WILKINS, OR CONBRACO. BACKFLOW PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH PER MANUFACTURER'S INSTRUCTIONS. AFTER INSTALLATION, BUT BEFORE SYSTEM IS PUT INTO SERVICE, TEST BACKFLOW PREVENTER FOR FUNCTIONALITY WITH TEST KIT AS RECOMMENDED BY MANUFACTURER. PIPE DISCHARGE FROM BACKFLOW PREVENTER VENT WITH CONNECTION-SIZE COPPER TUBING TO NEAREST FLOOR DRAIN. ENSURE AIR GAP IS PROVIDED IN RELIEF LINE EITHER BY AIR GAP FITTING OR ELEVATED DISCHARGE ABOVE DRAINS. BACKFLOW PREVENTER PIPING SHALL BE INSTALLED WITH UNIONS FOR REMOVAL.
- O. WALL HYDRANTS (WH-1): WALL HYDRANT SHALL BE NICKEL BRONZE PLATED, INTEGRAL VACUUM BREAKER, 3/4 INCH HOSE THREAD, KEY OPERATOR, NON-FREEZE TYPE, HOUSED IN A RECESSED STAINLESS STEEL BOX WITH HINGED LOCKING COVER. HYDRANT SHALL BE JAY R. SMITH 5509 QT OR EQUAL BY WADE, JOSAM OR ZURN. INSTALL WALL HYDRANTS AS INDICATED ON DRAWINGS, MINIMUM HEIGHT 18" A.F.F. UNLESS OTHERWISE INDICATED.
- P. HOSE BIBB (HB-1): CHROME PLATED, 1/2 INCH HOSE THREAD OUTLET, LOCK SHIELD CAP WITH INTEGRAL VACUUM BREAKER. CHICAGO FAUCET NO. 952 OR T&S BRASS.
- Q. OIL SEPARATOR: STRIEM HIGH EFFICIENCY OIL/WATER SEPARATOR MODEL OS-25 SHALL BE LIFETIME GUARANTEED AND MADE IN THE USA. SEPARATOR SHALL BE CERTIFIED TO IAPMO IGC 325 AND CARRY A UPC LISTING. SEPARATOR SHALL BE CONSTRUCTED OF POLYETHYLENE. SEPARATOR SHALL BE MANUFACTURED FOR ABOVE- OR BELOW-GRADE INSTALLATION. FIELD ADJUSTABLE RISER SYSTEM IS AVAILABLE AS AN OPTION TO BRING MANHOLE COVER TO GRADE. SEPARATOR FLOW RATE SHALL BE 25 GPM. SEPARATOR LIQUID HOLDING CAPACITY SHALL BE 21 GALLONS AND OIL CAPACITY SHALL BE 5.25 GALLONS. SOLIDS CAPACITY SHALL BE 6 GALLONS. COVER SHALL PROVIDE WATER/GAS-TIGHT SEAL AND HAVE A MAXIMUM 450 LBS. LOAD CAPACITY WHEN UNIT IS INSTALLED ABOVE-GRADE, AND 2,500 LBS. WHEN BURIED WITH SR16 RISER.

SECTION 15440 - PLUMBING FIXTURES

- A. THIS SPECIFICATION DESCRIBES THE REQUIREMENTS FOR PLUMBING FIXTURES AND THEIR INSTALLATION. SUBMITTALS SHALL INCLUDE MANUFACTURER'S DATA SHEETS AND DIMENSIONAL INFORMATION ON ALL FIXTURES AND ACCESSORIES. FORMAT SHALL INCLUDE A SCHEDULE OF THE FIXTURES SUBMITTED AND INCLUDE IDENTIFICATION NUMBER OF EACH ITEM, SUCH AS "P-1 WATER CLOSET", AND LIST OF EACH COMPONENT AND ACCESSORY OF THE FIXTURE, INCLUDING MANUFACTURER'S MODEL NUMBER. THIS SCHEDULE MUST BE INCLUDED IN THE FRONT OF THE SUBMITTAL BOOKLET.
- C. VITREOUS WARE SHALL BE WHITE, REGULAR SECTION, OF WEIGHT REQUIRED, FREE FROM CRACKS, FLAWS, BLISTERS, CRAZES OR OTHER DEFECTS. PROVIDE WITH MOUNTING BRACKETS FOR WALL MOUNTED FIXTURES UNLESS FLOOR CARRIERS ARE INDICATED.
- D. STAINLESS STEEL SHALL HAVE MACHINE GROUND FINISH. DECKS AND SINK COMPARTMENT SIDES SHALL BE BUFFED. EXPOSED SURFACES SHALL HAVE NO. 4 SATIN FINISH. INTERIOR SURFACES SHALL BE DEGRADED. EXPOSED METAL PARTS SHALL BE CHROMIUM PLATED AND PROTECTED DURING CONSTRUCTION BY A COAT OF GREASE.
- E. WATER CLOSET AND URINAL CARRIERS SHALL HAVE TAPERED THREAD FACE PLATE, PLASTIC COUPLING WITH TEST CAP, AND NEOPRENE RUBBER GASKET. LAVATORY, SINK AND URINAL CARRIERS SHALL HAVE RECTANGULAR STRUCTURAL STEEL UPRIGHTS. CARRIERS SHALL HAVE NECESSARY ACCESSORIES FOR PROPER INSTALLATION. CARRIERS SHALL BE ACCORDING TO ANSI A112.6.1M.
- F. WATER CLOSETS AND URINALS SHALL HAVE BOLT CAPS.
- G. SEATS SHALL BE WHITE, SOLID PLASTIC, WITH INTERNAL CHECK AND MOLDED STAINLESS STEEL HINGE WITHOUT VISIBLE METAL PARTS, EXCEPT AS HEREINAFTER SPECIFIED.
- H. CHROMIUM PLATED TRAPS SHALL BE BRASS WITH CHROMIUM PLATED NIPPLE TO WALL AND ESCUTCHEON.
- I. FITTINGS AND ACCESSORIES SPECIFIED DESIGNATE TYPE ONLY. PROVIDE MODIFICATIONS TO MAKE FITTINGS WORK PROPERLY WITH FIXTURE AND PIPING. PROVIDE NECESSARY TAILPIECE AND SHANKS.
- J. INSTALL EYEWASH STATION WITHIN 10 FEET OF HAZARD AREA, COMPLETELY UNOBSTRUCTED FROM VIEW OR ACCESS. ANCHOR TO FLOOR IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. PROVIDE AND INSTALL STRAINER AT DOMESTIC WATER INLET TO STATION. PROVIDE AND INSTALL ON WALL ABOVE STATION. A PLASTIC ENGRAVED SIGN READING "EMERGENCY USE ONLY", WHITE LETTERS ON RED BACKGROUND. PROVIDE MINIMUM 5 GALLON CONTAINER AND PROVIDE TIMED FLOW TEST FOR RED EYEWASHES AND EMERGENCY SHOWERS. SUBMIT REPORT TO ARCHITECT OR ENGINEER PRIOR TO FINAL INSPECTION.
- K. FIXTURES
- WC-1 WATER CLOSET (17-1/2" HIGH, FLOOR MOUNT, TANK TYPE):
 1. KOHLER K-3493 VITREOUS CHINA, 1.4 GALLON FLUSH, PRESSURE ASSISTED CLOSE COUPLED TANK WITH ELONGATED BOWL.
 2. KOHLER K-7637 3/8" POLISHED CHROME ANGLE SUPPLY WITH STOP.
 3. BENEKE T&S ELONGATED SELF-SUSTAINING WITH CHECK HINGES, OPEN FRONT, HEAVY DUTY SOLID PLASTIC SEAT.
- LAV-1 LAVATORY (ADA COMPLIANT, WALL HUNG):
 1. AMERICAN STANDARD DECLYN WALL-HUNG LAVATORY, VITREOUS CHINA, WITH OVER FLOW AND 4" FAUCET CENTERS, DRILLED FOR CONCEALED ARM CARRIER.
 2. ZURN Z-7443-VP SINGLE CONTROL FAUCET, LEVER HANDLE, 4" CENTER MOUNT, 1-1/4" GRID STRAINER.
 3. MCGUIRE 170 1/2" X 3/8" SWEAT LAVATORY SUPPLIES WITH WHEEL HANDLE STOPS.
 4. MCGUIRE 8902, 1-1/4 INCH X 1-1/2 INCH P-TRAP WITH ESCUTCHEON; ZURN GH, 1-1/4" OFFSET HANDICAP CUP DRAIN.
 5. TRAP AND SUPPLIES COVERED WITH TRAP WRAP EQUAL TO BROCHAR INDUSTRIES.
 6. ZURN Z-1231 LAVATORY CONCEALED ARM CARRIER.
- EW-1 EYE/FACE WASH (PEDESTAL MOUNT):
 1. STAINLESS STEEL BOWL WITH TWIN EYEWASH HEADS WITH FLIP TOP COVERS, CHROME PLATED WATER EYEWASH ASSEMBLY.
 2. INCLUDE UNIVERSAL EMERGENCY SIGN CONFORMING TO ANSI Z358.1.
 3. INCLUDE MIXING VALVE/TEMPERED WATER BLENDING SYSTEM.
 4. EQUAL TO GUARDIAN G1825. CONFORM TO ANSI Z358.1.
- EW-1 WATER COOLER (WALL MOUNT, BOTTLE FILLING STATION, ADA):
 1. ELKAY LZSTL8VSRSK. HANDS FREE, ADA COMPLIANT DUAL STATION WITH BOTTLE FILLING STATION.
 2. MCGUIRE 8902 P-TRAP WITH ESCUTCHEON.
 3. MCGUIRE 170 STOP AND SUPPLY.
- SK-1 LAUNDRY TUB (SINGLE COMPARTMENT):
 1. FIAT MODEL NO. FL-1 SINGLE MOLDED STONE LAUNDRY TUB WITH FREE DRAINING SOAP TRAY ON BACK LEDGE. INCLUDE FOUR ENAMEL ANGLE LEGS THAT SLIP INTO MOLDED SOCKETS. SELF-LEVELING LEGS WITH FLOOR ANCHORS.
 2. FIAT MODEL A-1 BRASS FAUCET WITH SWING SPOUT.
 3. MCGUIRE 170 1/2" X 3/8" SWEAT LAVATORY SUPPLIES WITH WHEEL HANDLE STOPS.
 4. MCGUIRE 170 TRAY PLUG WITH RUBBER STOPPER (1-1/2").
 5. MCGUIRE #8912 1-1/2" X 1-1/2", 17 GAUGE BRASS P-TRAP.
- CMVB COFFEE MAKE VALVE BOX:
 1. GUY GRAY MODEL BIM 875.
 2. 1/2" FIP x 1/4" O.D. OUTLET COMPRESSION ANGLE VALVE.
 3. BOX IS 16 GAUGE STEEL WITH EPOXY FINISH.
- L. ACCEPTABLE MANUFACTURERS: FIXTURES, VITREOUS CHINA - AMERICAN STANDARD, CRANE, ELJER, KOHLER. FIXTURES, STAINLESS STEEL - JUST, ELKAY. FLUSH VALVES - SLOAN, DELANEY, ZURN. TOILET SEATS - OLSONITE, SPERZEL, CHURCH, BENEKE, BEMIS. FAUCETS - T&S BRASS, SPEAKMAN, CHICAGO, SYMMONS, ELJER. TERRAZZO - FIAT, OUTLER, FLORESTONE, STERN-WILLIAMS TRIM, CHROMED BRASS - MCGUIRE. SANITARY DASH, BRIDGEPORT SHOWER MIXING VALVES - POWERS, LEONARD, LAWLER, SYMMONS, SPEAKMAN, ZURN. SHOWER HEADS - SYMMONS, SPEAKMAN, ZURN. ELECTRIC WATER COOLERS - ELKAY, HALSEY TAYLOR, SUNROCK, OASIS, HAWS. USE ONLY WATER COOLERS WHICH DO NOT USE CFC'S FOR REFRIGERATION. SCRUB SINKS - ELJER, AMERICAN STANDARD, KOHLER. CRANE CARRIERS - J. R. SMITH, JOSAM, ZURN, WADE. EMERGENCY EQUIPMENT - GUARDIAN, HAWS, WESTERN, SPEAKMAN.
- M. INSTALL PLUMBING FIXTURE LEVEL AND PLUMB, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S PUBLISHED LITERATURE, ROUGH-IN DRAWINGS, CODES REGULATIONS, AND REFERENCE STANDARDS. FASTEN PLUMBING FIXTURES SECURELY TO SUPPORTS OR BUILDING STRUCTURE. RIGIDLY SUPPORT WATER SUPPLIES BEHIND OR WITHIN WALL CONSTRUCTION. PROVIDE STOP VALVE IN THE WATER SUPPLY TO EACH FIXTURE IN AN ACCESSIBLE LOCATION. CONNECT WALL HUNG URINALS TO WASTE PIPING WITH RED BRASS NIPPLES. CONNECT FIXTURES TO WATER SUPPLY WITH COPPER OR BRASS (NO STEEL), EACH FIXTURE, FLOOR DRAIN AND PIECE OF EQUIPMENT REQUIRING CONNECTION TO DRAINAGE SYSTEM TO HAVE SEPARATE TRAPS INSTALLED AS CLOSE TO FIXTURE AS POSSIBLE. PROVIDE IRON OR STEEL BACKING FOR ALL WALL MOUNTED FIXTURES (OR WOOD BACKING ONLY IF BUILDING STRUCTURE IS WOOD). PROVIDE ESCUTCHEONS AT EACH WALL, FLOOR AND CEILING PENETRATION IN EXPOSED FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK. APPLY SCP3154 PRIMER AND GENERAL ELECTRIC CO.'S NO. 1702 SILICONE SANITARY SEALANT AROUND PLUMBING FIXTURES TO CONCEAL VOIDS AT WALL AND CONTACT POINTS OF FIXTURE AFTER WALLS HAVE BEEN PAINTED. APPLY SCP3154 PRIMER AND GENERAL ELECTRIC CO.'S SILPRUF SEALANT ON PLAIN CONCRETE WALLS.

SECTION 15450 - PLUMBING EQUIPMENT

- A. ELECTRIC WATER HEATERS:
 1. WATER HEATER SHALL COMPLY WITH UL 1453.
 2. STORAGE TANK CONSTRUCTION: ASME-CODE STEEL WITH 150 PSIG WORKING-PRESSURE RATING. STEEL JACKET WITH ENAMELED FINISH.
 3. TAPPINGS: FACTORY FABRICATED OF MATERIALS COMPATIBLE WITH TANK FOR PIPING CONNECTIONS, RELIEF VALVE, PRESSURE GAGE, THERMOMETER, DRAIN, ANODE RODS, AND CONTROLS AS REQUIRED. ATTACH TAPPINGS TO TANK SHELL BEFORE TESTING AND LABELING. TAPPINGS SHALL HAVE THREADED ENDS ACCORDING TO ASME B1.20.1. PIPE THREADS.
 4. INTERIOR FINISH: MATERIALS AND THICKNESSES COMPLYING WITH NSF 61, BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS. EXTEND FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.
 5. INSULATION: COMPLY WITH ASHRAE 90.1. SURROUND ENTIRE STORAGE TANK EXCEPT CONNECTIONS AND CONTROLS.
 6. HEATING ELEMENTS: ELECTRIC, SCREW-IN OR BOLT-ON, IMMERSION TYPE. STAGING AS NOTED IN SCHEDULE.
 7. TEMPERATURE CONTROL: ADJUSTABLE IMMERSION THERMOSTAT.
 8. SAFETY CONTROLS: AUTOMATIC, HIGH-TEMPERATURE-LIMIT AND LOW-WATER CUTOFF DEVICES OR SYSTEMS.
 9. DRAIN VALVE: ASSE 1005, CORROSION-RESISTANT METAL, FACTORY INSTALLED.
 10. ANODE RODS: FACTORY INSTALLED, MAGNESIUM.
 11. DIP TUBE: FACTORY INSTALLED. NOT REQUIRED IF COLD-WATER INLET IS NEAR BOTTOM OF STORAGE TANK.
 12. SPECIAL REQUIREMENT: NSF 5 CONSTRUCTION.
 13. ACCEPTABLE MANUFACTURERS ARE LOCHINVAR, A. O. SMITH, OR PRIOR APPROVAL EQUAL.
- B. THERMAL EXPANSION TANK (DOMESTIC WATER):
 1. PRE-CHARGED HYDRO-PNEUMATIC STEEL EXPANSION TANK, CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF ASME BOILER AND PRESSURE CODE, WITH ALL WELDS CONFORMING TO ASME SECTION IX. TANK MUST BE STAMPED WITH A MAXIMUM WORKING PRESSURE OF 125 PSI AND A MAXIMUM WORKING TEMPERATURE OF 200 DEGREES F. ALL INTERNAL WETTED PARTS MUST COMPLY WITH FDA REGULATIONS AND APPROVALS. AN INTERNAL BUTYL DIAPHRAGM WILL BE USED TO ISOLATE AIR FROM WATER. AMTROL OR APPROVED EQUAL AST SERIES.

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Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stark, Florida

FINAL

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Plumbing Specifications

Project number	24052
Date	10/24/2024
Drawn by	CA
Checked by	JB

P0.03
Scale 12" = 1'-0"



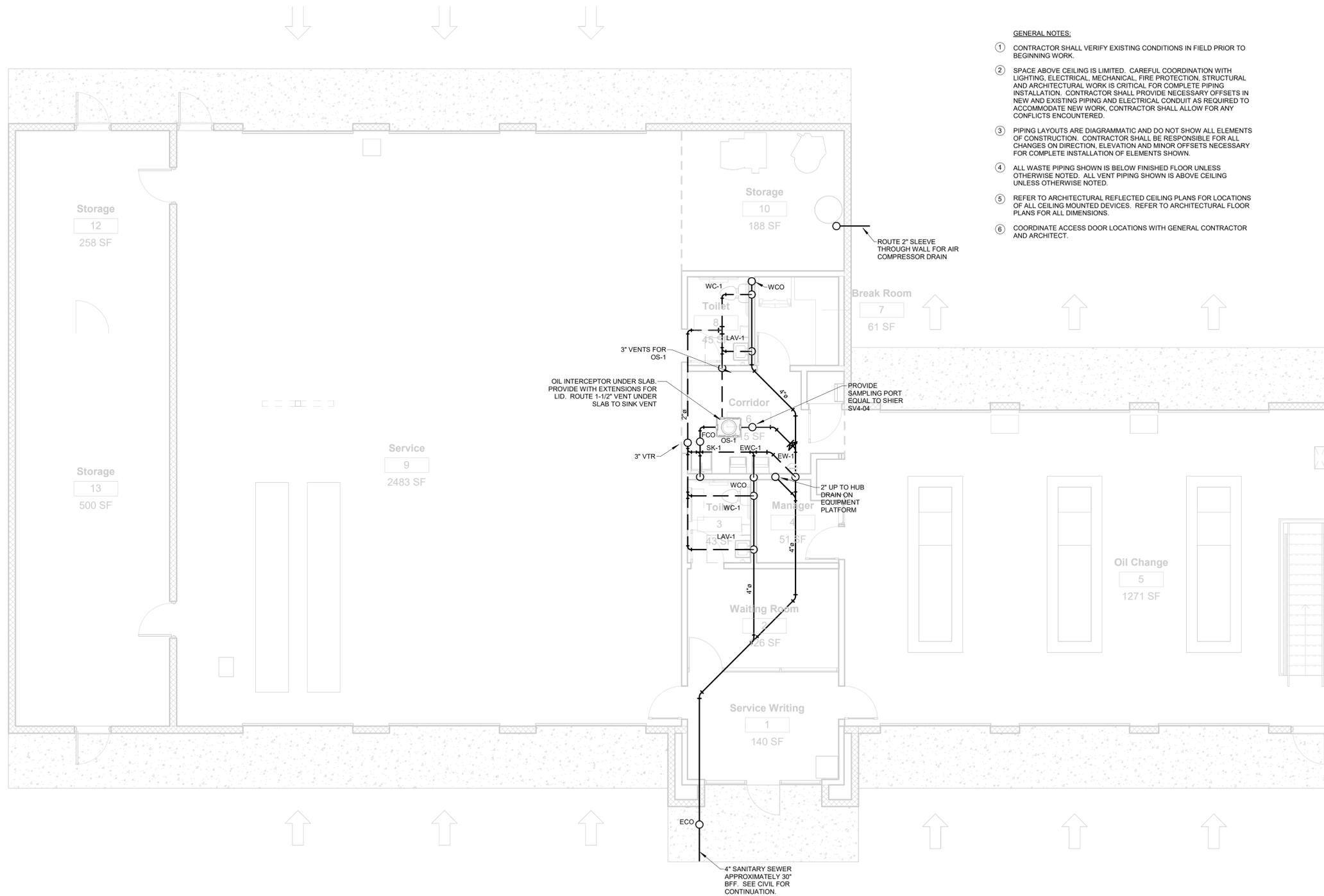
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- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
 - SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
 - PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
 - ALL WASTE PIPING SHOWN IS BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL VENT PIPING SHOWN IS ABOVE CEILING UNLESS OTHERWISE NOTED.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
 - COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

**MAIN FLOOR PLAN
 PLUMBING - GRAVITY**
 NORTH 3/16" = 1'-0"

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**Plumbing Floor
 Plan Gravity**

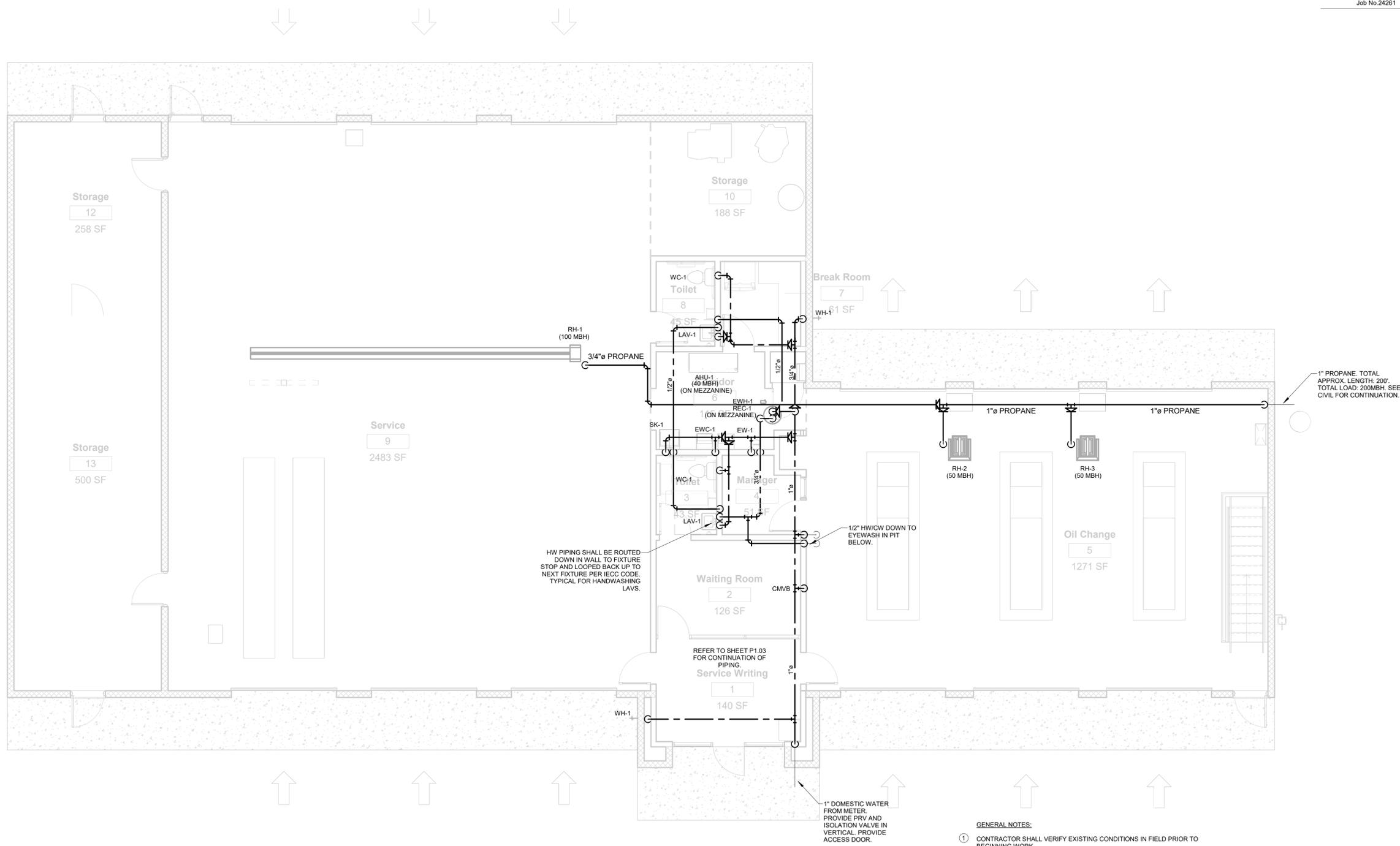
Project number	24052
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P1.01
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HW PIPING SHALL BE ROUTED DOWN IN WALL TO FIXTURE STOP AND LOOPED BACK UP TO NEXT FIXTURE PER IBCO CODE. TYPICAL FOR HANDWASHING LAVS.

1" PROPANE, TOTAL APPROX. LENGTH: 200' TOTAL LOAD: 200MBH. SEE CIVIL FOR CONTINUATION.

1" DOMESTIC WATER FROM METER. PROVIDE PRV AND ISOLATION VALVE IN VERTICAL. PROVIDE ACCESS DOOR.

MAIN FLOOR PLAN
 PLUMBING - PRESSURE
 3/16" = 1'-0"

- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
 - SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
 - PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
 - ALL PRESSURE PIPING SHOWN IS ABOVE THE CEILING UNLESS OTHERWISE NOTED. CONCEALED PIPING SHALL BE PEX OR COPPER. EXPOSED PIPING IN PUBLIC SPACES SHALL BE COPPER.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
 - COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

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Plumbing Floor Plan Pressure	
Project number	24052
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Scale	As indicated



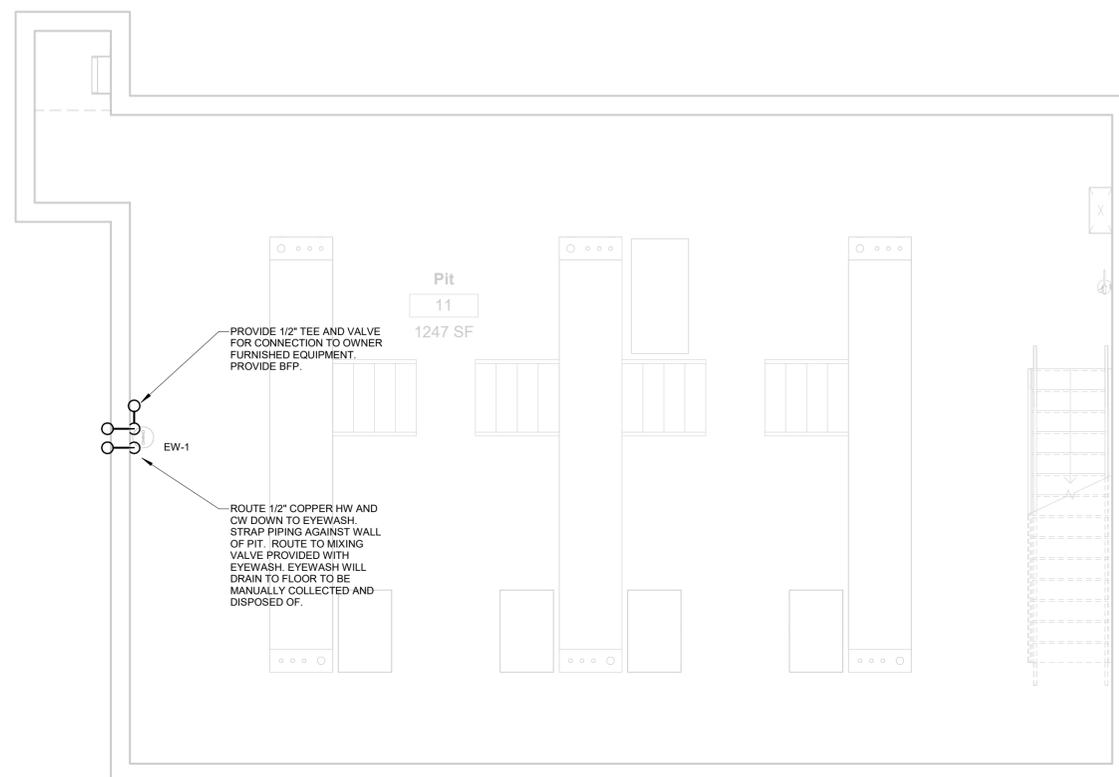
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PIT FLOOR PLAN PLUMBING
 1/4" = 1'-0"

GENERAL NOTES:

- ① CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- ② SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
- ③ PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
- ④ ALL PRESSURE PIPING SHOWN IS ABOVE THE CEILING UNLESS OTHERWISE NOTED. ALL TRAP PRIMER LINES AND HOT WATER RETURN LINES SHALL BE 1/2" UNLESS OTHERWISE NOTED.
- ⑤ REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
- ⑥ COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

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Partial Plumbing Floor Plans - Pit and Platform

Project number 24052
 Date 10/24/2024
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P1.03

Scale As indicated



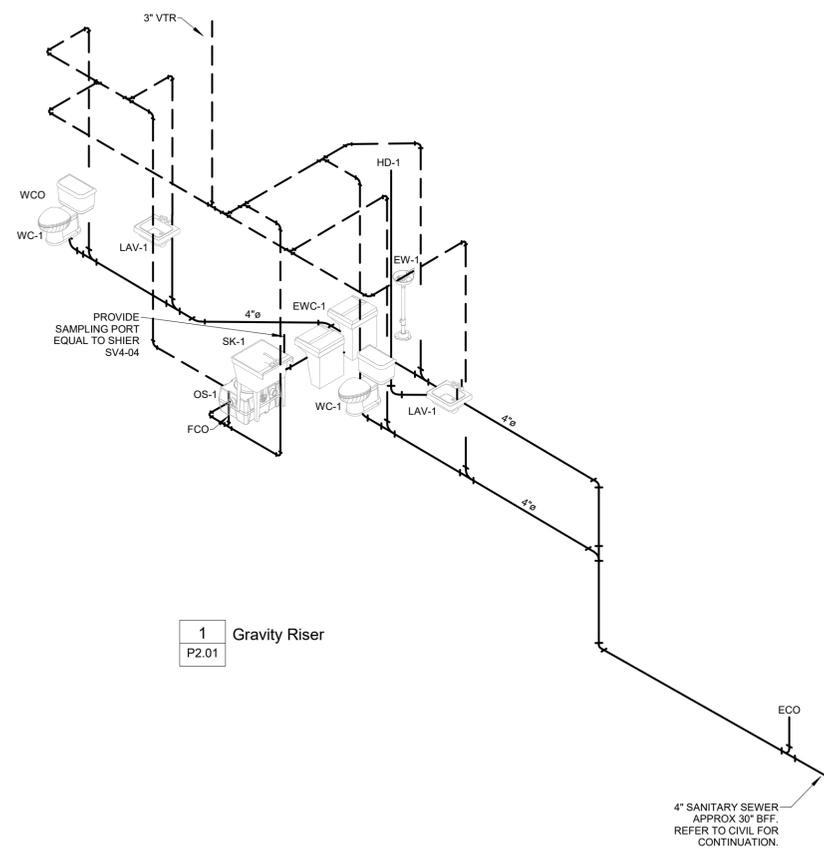
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1 Gravity Riser
 P2.01

ECO
 4" SANITARY SEWER
 APPROX 30' BFF.
 REFER TO CIVIL FOR
 CONTINUATION.

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Plumbing Riser - Gravity

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P2.01

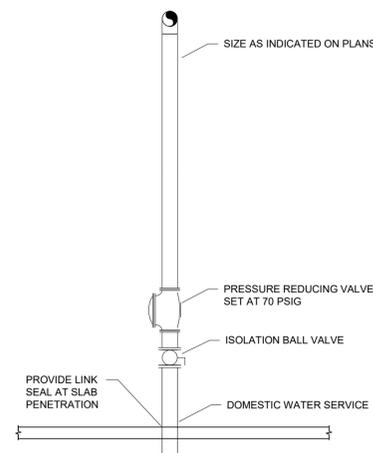
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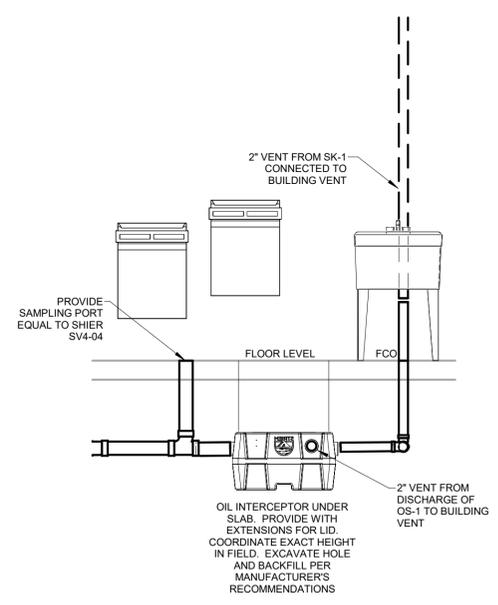
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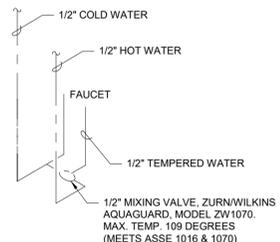
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5 DOMESTIC WATER ENTRANCE DETAIL
 P2.02 NO SCALE

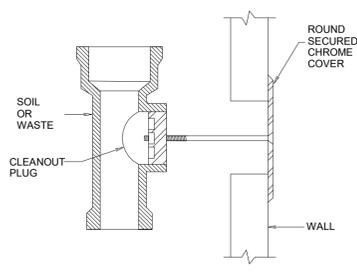


6 OIL INTERCEPTOR DETAIL
 P2.03 1/2" = 1'-0"

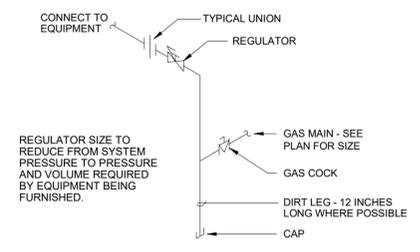


SINGLE

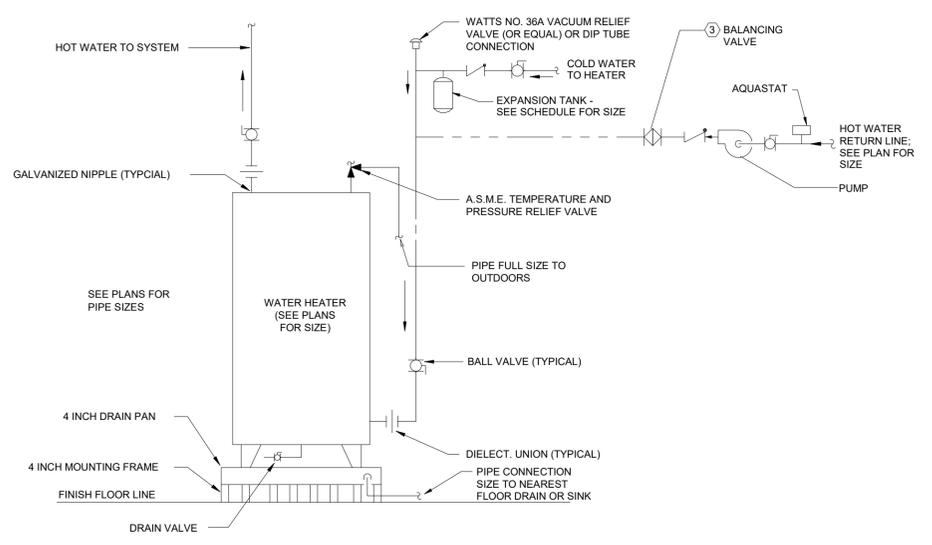
3 TYPICAL LAVATORY MIXING VALVE
 P2.02 SCALE: NONE



4 WALL CLEANOUT
 P2.02 NO SCALE



1 TYPICAL GAS CONNECTION
 P2.02 NO SCALE



2 ELECTRIC WATER HEATER (FLOOR MOUNTED)
 P2.02 NO SCALE

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Plumbing Details	
Project number	24052
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P2.03	
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LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS			MTG. TYPE	MTG. HT.	REC. DEPTH	DESCRIPTION
			QUANTITY	WATTS	TYPE				
L1	MAXLITE	(2)VT-4850U-40, VT-CONKIT, VT-ENDBRKT	29	100	LED	P	15'5" AFF	-	CONTINUOUS RUN OF (2) 4' LONG LINEAR LED FIXTURES WITH ALUMINUM VAPOR TIGHT HOUSING, 7600 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. PROVIDE ALL REQUIRED ACCESSORIES FOR SUSPENDED MOUNTING. NOTE 1
	APPROVED EQUAL								
L2	MAXLITE	VT-4850U-40	20	50	LED	*	*	-	4' LONG LINEAR LED FIXTURE WITH ALUMINUM VAPOR TIGHT HOUSING, 5700 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. L2 FIXTURES IN PIT SHALL BE SURFACE MOUNTED TO THE CEILING. L2 FIXTURES IN BAYS SHALL BE SUSPENDED FROM CEILING AT 15'5" AFF. PROVIDE ALL REQUIRED ACCESSORIES FOR BOTH MOUNTING TYPES. SEE LIGHTING PLANS FOR LOCATIONS AND QUANTITIES. NOTE 1
	APPROVED EQUAL								
L3	MAXLITE	MLFP-24E27W-CS, ML24G4FK, ML24G4CHK	2	36	LED	LI	C	-	2X4 LAY-IN LED FLAT PANEL FIXTURE WITH SELECTABLE WATTAGE, SELECTABLE COLOR TEMPERATURE, 4000 LUMEN OUTPUT, DIMMABLE DRIVER, UNIVERSAL VOLTAGE, FLANGE KIT, HANGING CABLES AND POLYSTYRENE LENS.
	APPROVED EQUAL								
L3E	MAXLITE	MLFP-24E27W-CSEM, ML24G4FK, ML24G4CHK	6	36	LED	LI	C	-	2X4 LAY-IN LED FLAT PANEL FIXTURE WITH SELECTABLE WATTAGE, SELECTABLE COLOR TEMPERATURE, 4000 LUMEN OUTPUT, DIMMABLE DRIVER, UNIVERSAL VOLTAGE, FLANGE KIT, CABLE HANGERS, POLYSTYRENE LENS. AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								
L4	MAXLITE	M40U4W-CSBWCR, MVCL40-55W	5	38	LED	W	12' AFF	-	FIXED WALL MOUNTED LED FIXTURE WITH BLACK FINISH, DIE-CAST ALUMINUM HOUSING, SELECTABLE COLOR TEMPERATURE, 3512 LUMEN OUTPUT, WIDE DISTRIBUTION, ELECTRONIC DRIVER, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. NOTE 4.
	APPROVED EQUAL								
L4E	MAXLITE	M40U4W-CSBWCRO, MVCL40-55W	3	38	LED	W	12' AFF	-	FIXED WALL MOUNTED LED FIXTURE WITH BLACK FINISH, DIE-CAST ALUMINUM HOUSING, SELECTABLE COLOR TEMPERATURE, 3512 LUMEN OUTPUT, WIDE DISTRIBUTION, ELECTRONIC DRIVER, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. NOTE 4.
	APPROVED EQUAL								
L5	PROVIDED BY GENERAL CONTRACTOR		FURNISHED WITH UNIT			R	C	-	RECESSED LED DOWNLIGHT WITH 4000K COLOR TEMPERATURE, 3000 LUMEN OUTPUT, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. FIXTURES ARE PROVIDED BY GENERAL CONTRACTOR AS PART OF THE METAL AWNING SYSTEM.
	PROVIDED BY GENERAL CONTRACTOR								
	PROVIDED BY GENERAL CONTRACTOR								
S1	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	-	WALL MOUNTED LED SIGN LIGHTING FIXTURE. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
S2	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	-	WALL MOUNTED LED LIGHT FIXTURE. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
BL	LITHONIA	ELM6L	FURNISHED WITH UNIT			W	9' AFF	-	WALL MOUNTED TWO HEAD LED EMERGENCY FIXTURE WITH WHITE THERMOPLASTIC HOUSING, 1100 LUMEN OUTPUT, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								
W1	MAXLITE	LSV2U20WCSCR	1	30	LED	W	8' AFF	-	2' LONG LINEAR LED SURFACE MOUNTED FIXTURE WITH ALUMINUM VAPOR TIGHT HOUSING, SELECTABLE WATTAGE, 4000 LUMEN OUTPUT, 4000K SELECTABLE COLOR TEMPERATURE, UNIVERSAL VOLTAGE, MOTION SENSOR AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								
XL	MAXLITE	EX-GW	FURNISHED WITH UNIT			W	AD	-	WHITE THERMOPLASTIC LED EXIT SIGN WITH SINGLE FACE, GREEN LETTERS, UNIVERSAL MOUNTING, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								

ABBREVIATIONS: LI-LAY-IN C-CEILING LG-LENS GASKETING GMF-INTERNAL SLOW BLOW FUSE FL-FLUORESCENT MH-METAL HALIDE HO-HIGH OUTPUT
 AFF-ABOVE FINISH FLOOR P-PENDENT FC-FROM CEILING R-RECESSED AM-ABOVE MIRROR W-WALL AD-ABOVE DOOR
 S-SURFACE DTT-DOUBLE TWIN TUBE FLUORESCENT CA-CANOPIY TC-TOP OF METAL CANOPY AW-ABOVE WINDOW VA-VERIFY WITH ARCHITECT

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

- FIXTURE OUTLET BOX LOCATIONS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND APPROXIMATE IN LOCATION. EXACT POSITION OF THE OUTLET BOX SHALL DEPEND ON THE FIXTURE AND THE MOUNTING DETAIL.
- MOUNTING AND SUPPORT DETAILS FOR LIGHTING FIXTURES SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE THE FIXTURES ARE INSTALLED. NO COMBUSTIBLE MATERIALS SHALL BE USED.
- WET LOCATION FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION SO AS TO ENSURE THE PREVENTION OF MOISTURE FROM ENTERING THE FIXTURE. IN ADDITION, EACH CONDUIT ENTRY WILL BE SEALED BY USE OF AN APPROVED SWEDGE FITTING WITH A NEOPRENE SEAL, AS MANUFACTURED BY JOHN REMKE COMPANY OR APPROVED EQUAL.
- OUTLET BOXES SERVING WET LOCATION FIXTURE SHALL BE CODE SIZE, WITH A WATERTIGHT SOLID CAST TOP. CONDUIT ENTRIES SHALL BE THREADED.
- FIXTURE MOUNTING HEIGHTS IN SCHEDULE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.
- FOR LIGHTING PACKAGE PRICING, CONTACT THE FOLLOWING:

MIKE MCMAKEN
 REXEL ENERGY SOLUTIONS
 (M) 906-235-2979
 MIKE.MCMAKEN@REXELENERGY.COM

STEPHEN MITCHELL
 MAXLITE
 (M) 908-256-3115
 SMITCHELL@MAXLITE.COM

LIGHTING FIXTURE SCHEDULE NOTES:

- SEE MOUNTING DETAIL ON THIS SHEET FOR MORE INFORMATION.
- INSTALLED BY SIGN COMPANY.
- VERIFY MOUNTING HEIGHT WITH SIGN COMPANY BEFORE ROUGHING IN.
- FIXTURE SHALL BE MOUNTED SO THAT THE TOP OF THE FIXTURE IS AT 12' AFF TO ALIGN WITH BANDING ON EXTERIOR OF BUILDING.

GENERAL NOTES:

- VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL BEFORE ROUGHING IN LIGHT SWITCHES TO ENSURE PROPER SWITCH LOCATION. VERIFY ALL CASEWORK DETAILS TO ENSURE THAT ALL OUTLETS ABOVE CASEWORK ARE AT THE PROPER HEIGHT.
- SERVICE TO THE BUILDING SHALL BE 120/240 VOLTS, 1PHASE, 3WIRE.
- ALL CONDUIT SHALL BE RUN CONCEALED UNLESS SPECIFICALLY SHOWN EXPOSED, OR INSTALLED IN EXPOSED CEILING.
- THE CONTRACTOR SHALL CHECK ALL LIGHTING FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED BEFORE ROUGHING IN.
- THE CONTRACTOR SHALL WORK CLOSELY WITH THE GENERAL CONTRACTOR AND VERIFY EXACT TYPE OF EQUIPMENT TO BE INSTALLED AND THE DIMENSIONS WHICH MAY AFFECT THE EXACT PLACEMENT OF ELECTRICAL WORK.
- VERIFY THE EXACT LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGHING IN. LIKEWISE APPRAISE ALL TRADES OF THE LOCATIONS OF ELECTRICAL WORK THAT AFFECTS WALL THICKNESS, PLUMBING, MECHANICAL, ETC.
- ALL CONDUIT STUBBED OUT FOR FUTURE SHALL BE CAPPED AND HAVE LOCATION MARKED WITH A 2" SQUARE, PAINTED RED, WITH CONDUIT NAME AND SIZE SHOWN IN WHITE.
- ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE AN INSULATED GROUND WIRE PULLED IN THE CONDUIT WITH CURRENT CONDUCTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE GROUNDING CONDUCTOR SHALL BE SIZED ACCORDING TO TABLE 250-122 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE UNLESS INDICATED TO BE LARGER IN THE SPECIFICATIONS OR PLANS.
- DO ALL WORK IN COMPLIANCE WITH ALL APPLICABLE CODES, LAWS AND ORDINANCES, THE NATIONAL ELECTRICAL CODE (HEREINAFTER REFERRED TO AS "CODE" OR "NEC"), THE AMERICANS WITH DISABILITIES ACT, AND THE REGULATIONS OF THE LOCAL AUTHORITIES HAVING JURISDICTION AND, WHERE APPLICABLE, UTILITY COMPANIES. OBTAIN AND PAY FOR ANY AND ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES OF INSPECTIONS AND APPROVAL, AND THE LIKE, AND DELIVER SUCH CERTIFICATES TO THE OWNER.
- THE MAIN SERVICE SHALL HAVE THE GROUNDING CONDUCTOR (NEUTRAL) GROUND TO THE GROUNDING ELECTRODE SYSTEM AT THE SUPPLY SIDE OF THE SERVICE DISCONNECTING MEANS BY A GROUNDING ELECTRODE CONDUCTOR NOT SMALLER THAN THAT SHOWN IN TABLE 250-66 OF THE NEC. THE GROUNDING CONDUCTOR (NEUTRAL), THE GROUNDING ELECTRODE CONDUCTOR, AND THE EQUIPMENT GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE INSIDE THE SERVICE ENTRANCE EQUIPMENT.
- ALL CONDUCTORS SHALL BE COPPER, EXCEPT AS SHOWN ON DRAWINGS.
- MINIMUM CONDUCTOR SIZE SHALL BE #12.
- ALL CONDUIT INSTALLED INDOORS SHALL BE EMT, OTHERWISE SHALL BE IMC.
- SWITCH AND RECEPTACLE COVER PLATES SHALL BE STAINLESS STEEL.
- ALL DEVICES SHALL BE GRAY.
- ALL FUSES SHALL BE DUAL ELEMENT, TIME DELAY, RATED 100,000 AIC.
- ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
- ALL CONDUCTORS SHALL BE DUAL RATED THHN/THWN TYPE INSULATION.
- GUTTERS (WIREWAYS) SHALL BE SIZED AS SHOWN OR AS REQUIRED BY CODE. ALL GUTTERS SHALL HAVE HINGED COVERS WITH APPROVED FASTENING DEVICES & SHALL BE A STANDARD MANUFACTURED ITEM WITH U.L. LABEL. GUTTERS FROM AC DUCT MATERIAL ARE NOT ACCEPTABLE. GUTTERS SHALL BE AS MANUFACTURED BY HOFFMAN, SQUARE "D", B & C OR APPROVED EQUAL. GUTTER TAPS SHALL BE ILSCO TYPE GTA OF PTA WITH GTC OR PTC INSULATING COVERS.
- IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR, PRIOR TO BID, TO REAFFIRM WITH THE UTILITY COMPANIES INVOLVED, THAT THE LOCATION, ARRANGEMENT (AND THE POWER COMPANY: VOLTAGE, PHASE & METERING REQUIRED) AND CONNECTIONS AT THE UTILITY SERVICE ARE IN ACCORDANCE WITH THEIR REGULATIONS & REQUIREMENTS. IF THEIR REQUIREMENTS ARE AT A VARIANCE WITH THESE DRAWINGS & SPECIFICATIONS, THE CONTRACT PRICE SHALL INCLUDE ANY ADDITIONAL COST NECESSARY TO MEET THOSE REQUIREMENTS WITHOUT EXTRA COST TO THE OWNER AFTER A CONTRACT HAS BEEN ENTERED INTO.
- ON MANY PROJECTS, THE UTILITY COMPANY MAY LEVY CHARGES DUE TO LOCATION, SIZE OR TYPE OF SERVICE INVOLVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THESE CHARGES, UNLESS SUCH CHARGES ARE NOT AVAILABLE PRIOR TO BID & CONTRACTOR SO DOCUMENTS AT BID OPENING. SHOULD THE COST NOT BE AVAILABLE, PRIOR TO BID, THE CONTRACTOR SHALL SUBMIT A LETTER SO STATING WITH HIS BID.
- ARRANGE WITH UTILITY COMPANIES FOR SUCH SERVICE AS SHOWN OR HEREIN SPECIFIED & INSTALLATION OF METER WHERE SHOWN. FURNISH WITH SHOP DRAWINGS, A SIGNED DOCUMENT FROM UTILITY COMPANIES DESCRIBING THE LOCATION & TYPE OF SERVICES TO BE FURNISHED AND ANY REQUIREMENTS THEY MAY HAVE. THIS DOCUMENT SHALL BE SIGNED FOR EACH UTILITY COMPANY BY A PERSON RESPONSIBLE FOR GRANTING SUCH SERVICES.
- PAY ALL CHARGES (IF ANY) IN CONNECTION THEREWITH, INCLUDING PERMANENT METER DEPOSIT. METER DEPOSIT WILL BE REFUNDED TO THE CONTRACTOR AT TIME OF OWNER'S ACCEPTANCE.

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Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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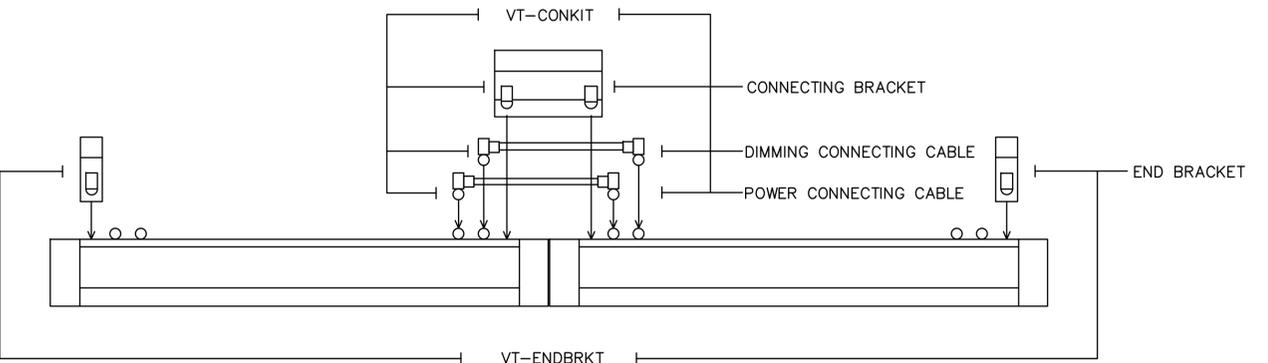
General Notes & Fixture Schedules

Project number 24052
 Date 10/24/2024

Drawn by TH
 Checked by GW

E100

Scale NO SCALE



DETAIL
FIXTURE "L1" MOUNTING
 NOT TO SCALE

GIDEON WAMAE, P.E.
 4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
 GWAMAE@GW-ENG.COM | 205.413.4112

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GRAPHICAL ELECTRICAL SYMBOLS

BRANCH CIRCUIT SYMBOLS		
	BRANCH CIRCUIT	HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD OR DEVICE NOTED. WIRE SIZE IS 2#12&1#12GRD-3/4"C.
	BRANCH CIRCUIT	CONCEALED IN CEILING OR WALL.
	BRANCH CIRCUIT	CONCEALED IN FLOOR.
	BRANCH CIRCUIT	EXISTING CONDUIT BARS DENOTE NEW CONDUCTORS.
	BRANCH CIRCUIT	EXPOSED.
	BRANCH CIRCUIT	RISER UP.
	BRANCH CIRCUIT	RISER DOWN.

BRANCH CIRCUIT NOTES		
	BRANCH CIRCUIT	3#12&1#12GRD-3/4"C
	BRANCH CIRCUIT	4#12&1#12GRD-3/4"C
	BRANCH CIRCUIT	2#10&1#10GRD-3/4"C
	BRANCH CIRCUIT	3#10&1#10GRD-3/4"C

SIZE CONDUIT PER NEC FOR GREATER NUMBER OF CONDUCTORS OR AS NOTED. THE NUMBER IN THE CIRCUIT INDICATES AWG WIRE SIZE AND THE HASHMARKS INDICATE THE NUMBER OF WIRES REQUIRED. EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NEC TABLE 250-122. THE NUMBER OF HASH MARKS DO NOT INCLUDE EQUIPMENT GROUNDING CONDUCTOR.

GENERAL SYMBOLS	
	JUNCTION BOX.
	WALL MOUNTED JUNCTION BOX.
	WALL MOUNTED JUNCTION BOX WITH FLEXIBLE CONNECTION TO EQUIPMENT.
	ONE GANG BOX WITH 3/4"C. STUB UP ABOVE ACCESSIBLE CEILING WITH COAXIAL CABLE AND TV JACKS.
	MANUAL MOTOR STARTER WITH THERMAL PROTECTION.
	SAFETY SWITCH, NON-FUSED.
	SAFETY SWITCH, FUSED.
	CIRCUIT BREAKER MOUNTED IN NEMA 1 ENCLOSURE UNLESS NOTED OTHERWISE
	LIGHTING PANEL AND/OR RECEPTACLE PANEL.
	POWER PANEL.
	TRANSFORMER.
	GROUND.

GENERAL ABBREVIATIONS	
H	MOUNTING HEIGHT ABOVE FINISHED FLOOR.
AF	ABOVE FINISHED FLOOR.
WP	WEATHER PROOF - NEMA 3R
RT	RAIN TIGHT - NEMA 4.
EP	EXPLOSION PROOF.
TP	TAMPER PROOF.
A	MOUNT ABOVE COUNTER.
BC	MOUNT BELOW COUNTER.
F	FLUSH MOUNTED.
SLD	SEE SINGLE LINE DIAGRAM.
GFI	GROUND FAULT INTERRUPTING.
C	CONDUIT.
EC	EMPTY CONDUIT.
GC	FLEXIBLE CONDUIT.
SFC	SEALTITE FLEXIBLE CONDUIT.
EMT	ELECTRICAL METALLIC TUBING.
IMC	INTERMEDIATE METALLIC CONDUIT.
RG	RIGID CONDUIT.
PVC	NONMETALLIC RIGID CONDUIT.
EX	EXISTING.
XR	EXISTING TO BE REMOVED
RL	EXISTING TO BE REMOVED AND RELOCATED.
RQ	EXISTING TO BE REMOVED. EXTEND CIRCUIT CONDUCTORS AS REQUIRED AND INSTALL FINISHED BLANK COVER.
RR	EXISTING TO BE REMOVED AND REPLACED WITH NEW.
RL'D	RELOCATED POSITION.
EM	EMERGENCY BATTERY PACK

LIGHTING FIXTURE & CONTROL SYMBOLS		
	CEILING OUTLET	FIXTURE TYPE "A" CIRCUIT #1.
	CEILING OUTLET	EXISTING.
	CEILING OUTLET	FLUORESCENT FIXTURE, SINGLE OR CONTINUOUS, LENGTHS AS SHOWN.
	CEILING OUTLET	FLUORESCENT STRIP.
	WALL OUTLET	BRACKET TYPE FIXTURE.
	WALL OUTLET	FLUORESCENT BRACKET TYPE FIXTURE.
	SWITCH OUTLET	A.C. TYPE, SINGLE POLE, 20A, 125/277V.
	SWITCH OUTLET	A.C. TYPE, THREE WAY, 20A, 125/277V.
	SWITCH OUTLET	A.C. TYPE, FOUR WAY, 20A, 125/277V.
	SWITCH OUTLET	180° DUAL TECH SENSOR LIGHTING MOTION DETECTOR, WALL MOUNTED. WATT STOPPER #DW-100.
	SWITCH OUTLET	LIGHTING MOTION DETECTOR POWER PACK. INSTALL ABOVE ACCESSIBLE CEILING.
	SWITCH OUTLET	LIGHTING MOTION DETECTOR, CEILING MOUNTED.

SWITCH OUTLET NOTES
"a" "b" ETC. FIXTURE CORRESPONDS TO A SWITCH DENOTED WITH THE SAME LOWER CASE LETTER.

EXIT LIGHT SYMBOLS	
	WALL OR CEILING MOUNTED, SINGLE FACE, NO ARROW.
	CEILING MOUNTED, DOUBLE FACE, LEFT OR RIGHT ARROWS.
	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT OR RIGHT ARROW.
	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT AND RIGHT ARROWS.
	CEILING MOUNTED, DOUBLE FACE, LEFT AND RIGHT ARROWS.

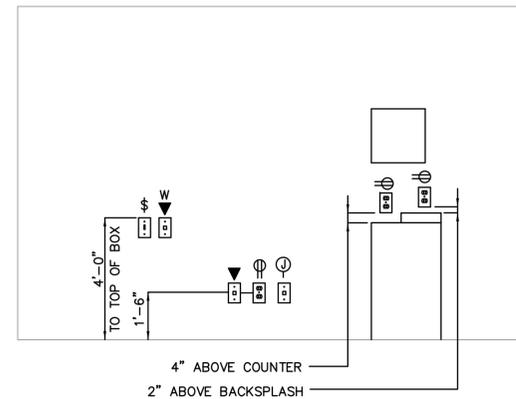
RECEPTACLE OUTLET SYMBOLS		
	WALL OUTLET	DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R.
	WALL OUTLET	DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R, SINGLE PLATE.
	WALL OUTLET	DUPLEX RECEPTACLE, 20A, 125V, NEMA 5-20R, GFCI, WEATHER-RESISTANT, WITH EXTRA DUTY IN-USE WEATHERPROOF COVER. HUBBELL CATALOG #GFR5362SGGY/WPBM.
	WALL OUTLET	SINGLE RECEPTACLE, 20A, 250V, 3WIRE, NEMA 6-20R.
	WALL OUTLET	SINGLE RECEPTACLE, 20A, 250V, 3WIRE, NEMA L6-20R.
	FLOOR OUTLET	FLUSH MOUNTED IN-GRADE WITH DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R, FOUR SPACES FOR KEYSTONE CONNECTORS, AND BRUSHED BRASS COVER LEGRAND RFB4E OR EQUAL.
	CEILING OUTLET	DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R.

RECEPTACLE OUTLET NOTES
"G" GROUND FAULT INTERRUPTER.
"GA" GROUND FAULT INTERRUPTER, MOUNTED ABOVE COUNTER.
"A" MOUNTED ABOVE COUNTER.
"BC" MOUNTED BELOW COUNTER.
"DF" FOR DRINKING FOUNTAIN.

VOICE/DATA OUTLET & CONDUIT SYMBOLS		
	VOICE/DATA OUTLET	WALL MOUNTED, WITH 3/4" CONDUIT HOMERUN TO NEAREST TELEPHONE CABINET OR BACKBOARD UNLESS NOTED OTHERWISE.
	VOICE/DATA OUTLET	TELEPHONE BACKBOARD - 3/4" PLYWOOD PAINTED WITH TWO COATS OF FIRE RETARDANT PAINT, 48"x96" HIGH, UNLESS SHOWN OTHERWISE.

VOICE/DATA OUTLET NOTES
"A" MOUNTED ABOVE COUNTER.
"BC" MOUNTED BELOW COUNTER.

- NOTES:
- INDICATED MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTERLINE OF OUTLET BOX, UNLESS OTHERWISE NOTED.
 - REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL REQUIREMENTS.
 - INSTALL OUTLETS THAT ARE IN CLOSE PROXIMITY ON THE SAME CENTERLINE.
 - MOUNTING HEIGHTS SHOWN HERE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.



DETAIL
TYPICAL MOUNTING
HEIGHTS
NOT TO SCALE

GIDEON WAMAE, P.E.

4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
GWAMAE@GW-ENG.COM | 205.413.4112

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Stark, Florida

FINAL

No.	Description	Date

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Symbol Legends
and Details

Project number 24052
Date 10/24/2024

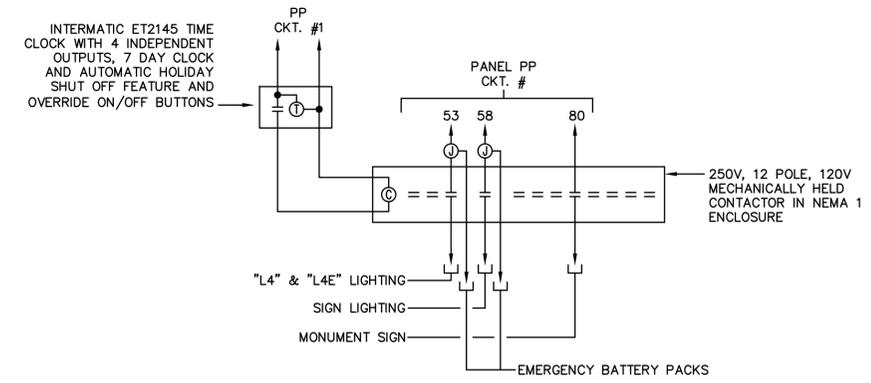
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Checked by GW

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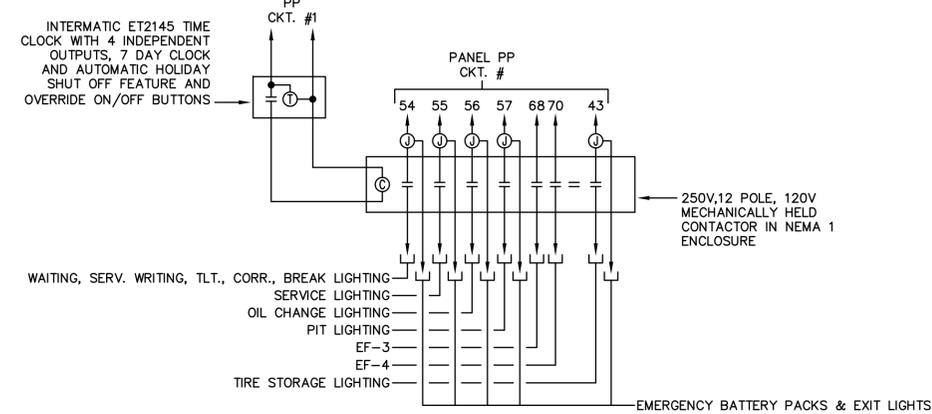
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DETAIL
ARC FLASH HAZARD WARNING LABEL
NOT TO SCALE

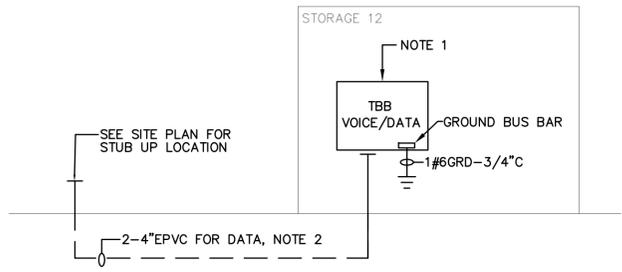


WIRING DIAGRAM
CONTACTOR C-2
NOT TO SCALE



WIRING DIAGRAM
CONTACTOR C-1
NOT TO SCALE

- NOTES:
- 48"x48" FREE STANDING TELEPHONE BACKBOARD. PROVIDE ACCESS AND WORK SPACE CLEARANCE AS REQUIRED BY LOCAL TELECOM UTILITY COMPANY.
 - CONDUIT ELBOWS SHALL BE SWEEPING WITH NO HARD ANGLES.



SINGLE LINE DIAGRAM
AUXILIARY
NOT TO SCALE

PANEL LOAD SUMMARY

Equipment	LIGHT	RCPT	OM	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT	RCPT	OM	Equipment
CONTACTOR C-1 & C-2			100	201	1	100		2	201				SPARE
OUTDOOR RECEPTACLE		200		201	3		800	4	201		600		SERVICE WRITING RECP.
WAITING ROOM RECP.		800		201	5	1600		6	201		800		MANAGER RECEPTACLE
TLT/CORR/BREAK RECP.		800		201	7		1000	8	201		200		BREAK RECEPTACLE
SERVICE RECEPTACLE		400		201	9	600		10	201		200		BREAK RECEPTACLE
SERVICE RECEPTACLE		400		201	11		600	12	201		200		BREAK FRIDGE RECEPTACLE
MANAGERS RECEPTACLE		400		201	13	800		14	201		400		SERVICE RECEPTACLE
SERVICE RECEPTACLE		400		201	15		400	16	201				SPARE
TIRE CHANGER		900		202	17	3900		18	30/2		3000		ALIGNMENT LIFT
		900			19		3900	20			3000		
10K LIFT		1440		202	21	2880		22	20/2		1440		10K LIFT
		1440			23		2880	24			1440		
10K LIFT		1440		202	25	2880		26	20/2		1440		10K LIFT
		1440			27		2880	28			1440		
12K LIFT		1440		202	29	2840		30	20/2		1200		WHEEL BALANCER
		1440			31		2840	32			1200		
AIR COMPRESSOR		3360		60/2	33	3560		34	20/1		200		EQUIPMENT PLATFORM RECP.
		3360			35		3760	36	20/1		400		SERVICE DESK RECEPT.
IRRIGATION CONTROLLER		200		201	37	200		38	20/1				SPARE
OIL CHANGE RECEPTACLE		600		201	39		1200	40	20/1		600		OIL CHANGE RECEPTACLE
PIT SUMP PUMP		200		201	41	400		42	20/1		200		OIL CHANGE DESK RECP.
Sub-Total		0	21560	100			19560	20060		0	17960	0	Sub-Total

TOTAL CONNECTED LOAD PER PHASE

LOAD TYPE	Phase A	Phase B
LIGHTING	0.00	0.00
RECEPTACLES	19480.00	20060.00
MOTORS/OTHER	100.00	0.00
TOTAL	19580.00	20060.00

TOTAL CONNECTED LIGHTING LOAD: 0.00 KVA
TOTAL CONNECTED RECEPTACLE LOAD: 35.52 KVA
TOTAL CONNECTED MOTOR/OTHER LOAD: 0.10 KVA
TOTAL CONNECTED LOAD: 35.62 KVA

PANEL LOAD SUMMARY

Equipment	LIGHT	RCPT	OM	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT	RCPT	OM	Equipment
STORAGE LIGHTING	800			201	43	1000		44	20/1		200		OIL CHANGE DESK RECP.
OIL CHANGE DESK RECP.		200		201	45		400	46	20/1		200		OIL CHANGE DESK RECP.
SPARE				201	47	0		48	20/1				SPARE
PIT RECEPTACLE		600		201	49		800	50	20/1		200		PIT RECEPTACLE
ELECTRIC DRAIN SYSTEM		400		201	51	800		52	20/1		400		TBB RECEPTACLE
EXTERIOR LIGHTING	150			201	53		470	54	20/1	320			EXTERIOR LIGHTING
EXTERIOR LIGHTING	1638			201	55	2366		56	20/1	728			OIL CHANGE LIGHTING
PIT LIGHTING	540			201	57		1890	58	20/1	1350			SIGN LIGHTING
SPARE	400			201	59	400		60	20/1				SPARE
FUTURE EV CHARGER				60/2	61		50	62	20/1		50		REC-1
SPARE					63	1680		64			1680		CU-1
SPARE	500			201	65		2180	66	25/2		1680		CU-1
SPARE					67	3906		68	20/1		1656		EF-3
SPARE					69		3906	70	20/1		1656		EF-4
RH-1 & RH-2		100		201	71	300		72	20/1		200		EXTERIOR RECEPTACLE
RH-1		100		201	73		7300	74	60/2		7200		AHU-1
DRINKING FOUNTAIN		200		201	75	7400		76			7200		
SPARE				201	77		400	78	20/1		400		LOT BELL
SPARE				201	79	100		80	20/1		100		MONUMENT SIGN
LIFT RECEPTACLE		600		201	81		600	82	20/1				SPARE
LIFT RECEPTACLE		600		201	83			84	20/1				SPARE
Sub-Total	4028	2600	4700				17952	17996		2388	1600	21222	Sub-Total

TOTAL CONNECTED LOAD PER PHASE

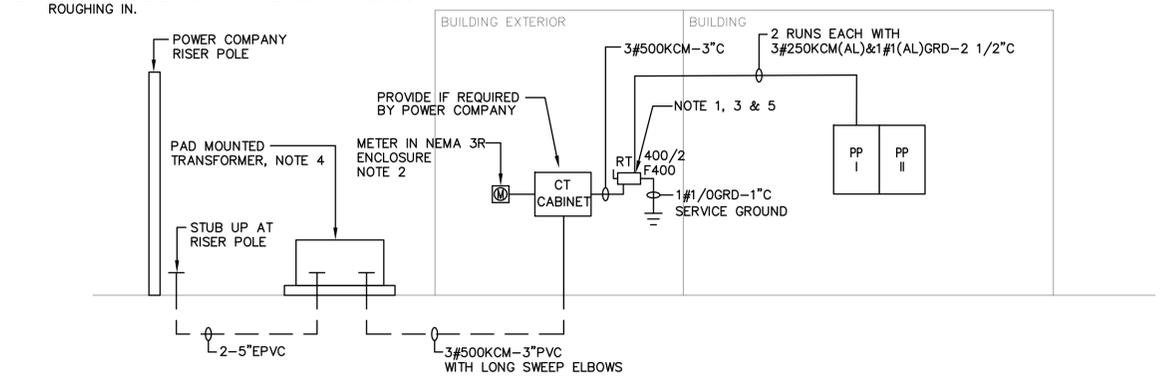
LOAD TYPE	Phase A	Phase B	DEMAND FACTOR	Phase A	Phase B	LARGEST PHASE DEMAND	NO. OF PHASES	DEMAND LOAD	TOTAL DEMAND LOAD	SUPPLY VOLTAGE	DEMAND AMPS	MINIMUM CCT AMPS
LIGHTING	3556.00	2856.00	1.25	4457.50	3575.00	4457.50	2	60.95	60.95	240.00	253.95	253.95
RECEPTACLES	20860.00	22260.00	*	12930.00	13630.00	12930.00	2	60.95	60.95	240.00	253.95	253.95
MOTORS/OTHER	13086.00	12936.00	1.00	13086.00	12936.00	13086.00	2	60.95	60.95	240.00	253.95	253.95
TOTAL	37512.00	39056.00		30473.50	30141.00	30473.50	2	60.95	60.95	240.00	253.95	253.95

EQUIPMENT ELECTRICAL REQUIREMENTS SCHEDULE

EQUIPMENT	LOCATION	KW	HP	AMP	CIRCUIT BREAKER	DISCONNECT SWITCH/FUSE	CONDUCTORS & CONDUIT	VOLTAGE	CONNECTION
(4) 10K LIFT	SERVICE 9	-	2	12.0	20/2	-	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
12K LIFT	SERVICE 9	-	2	12.0	20/2	-	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
AIR COMPRESSOR	STORAGE 10	-	5	28.0	60/2	60/2, F40	2#8&1#10GRD-3/4"C	240V,1Ø	HARDWIRED
TIRE CHANGER	STORAGE 10	-	-	6.0	20/2	30/2	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
WHEEL BALANCER	STORAGE 10	-	-	20.0	20/2	30/2	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
ALIGNMENT LIFT	SERVICE 9	-	-	26.0	30/2	30/2, F30	2#10&1#10GRD-3/4"C	240V,1Ø	HARDWIRED

- NOTES:
- CONTRACTOR SHALL COORDINATE REQUIREMENTS SHOWN HERE WITH OWNER BEFORE ROUGHING IN. PROVIDE ELECTRICAL PER OWNER EQUIPMENT VENDOR REQUIREMENTS.

- GENERAL NOTES:
- COORDINATE SERVICE SECONDARY FROM UTILITY TRANSFORMER TO METER WITH POWER COMPANY BEFORE BID AND PRICING. PROVIDE PER POWER COMPANY REQUIREMENTS.
 - EQUIPMENT WITH ALUMINUM FEEDERS SHALL BE PROVIDED WITH DUAL RATED TERMINALS.
 - PROVIDE 120/240V, 1Ø, 400A, UNDERGROUND SERVICE.
 - PROVIDE 2"x3" ENGRAVED LABEL WITH BLUE LETTERING INDICATING MAXIMUM AVAILABLE FAULT CURRENT AND DATE OF CALCULATION.
 - UTILITY PAD MOUNTED TRANSFORMER. FURNISH AND INSTALL CONCRETE PAD PER POWER COMPANY REQUIREMENTS. CONTACT UTILITY COMPANY FOR PAD SPECIFICATIONS AND REQUIRED TERMINATIONS AT TRANSFORMER BEFORE BID AND PRICING. INCLUDE COSTS IN BID. COORDINATE EXACT LOCATION OF TRANSFORMER, PROVIDE CLEARANCES AS REQUIRED BY POWER COMPANY.
 - SERVICE DISCONNECT SHALL BE MOUNTED SUCH THAT CENTER OF OPERATING HANDLE SHALL NOT BE LESS THAN 4' AND NOT MORE THAN 6'-7" ABOVE GRADE.



SINGLE LINE DIAGRAM
POWER
NOT TO SCALE

GIDEON WAMAE, P.E.
4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
GWAMAE@GW-ENG.COM | 205.413.4112



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

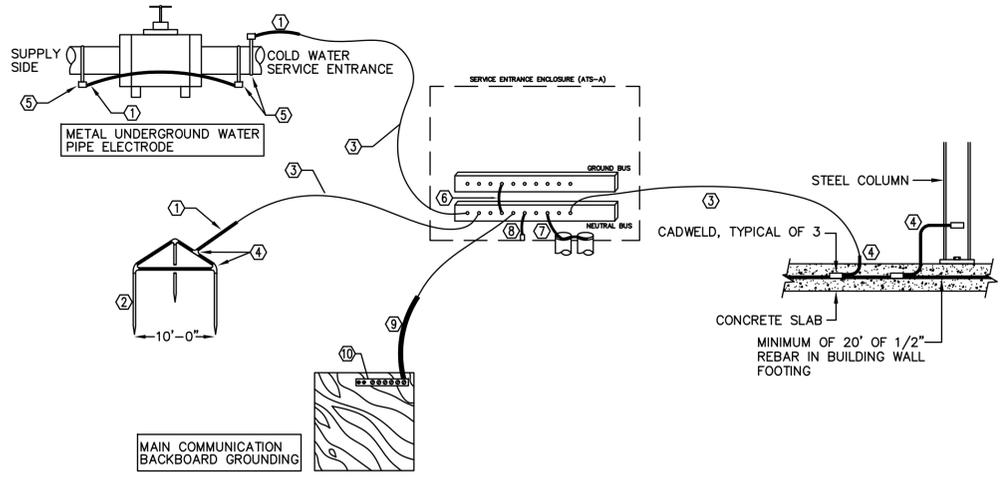
FINAL

No.	Description	Date

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Single Line Diagram & Panelboard Schedules

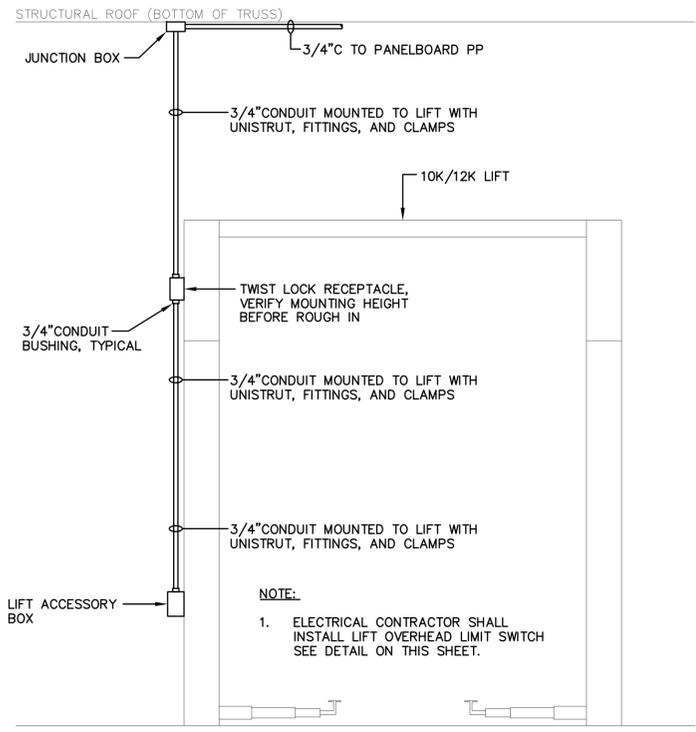
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Date	10/24/2024
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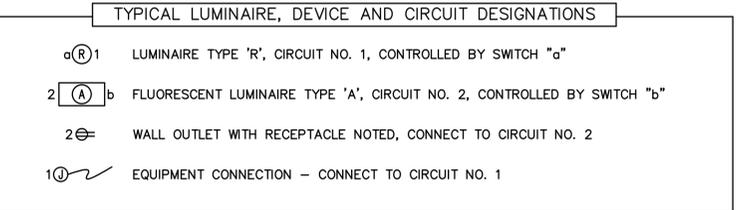
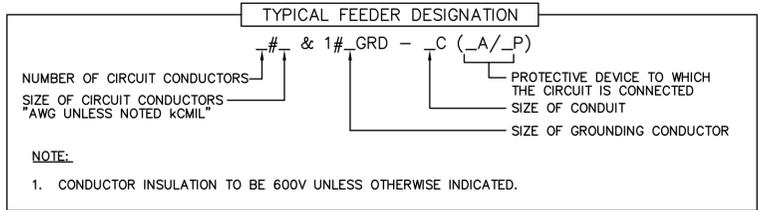
GROUNDING SYSTEM DETAIL
NOT TO SCALE

GROUNDING SYSTEM DETAIL – KEY NOTES

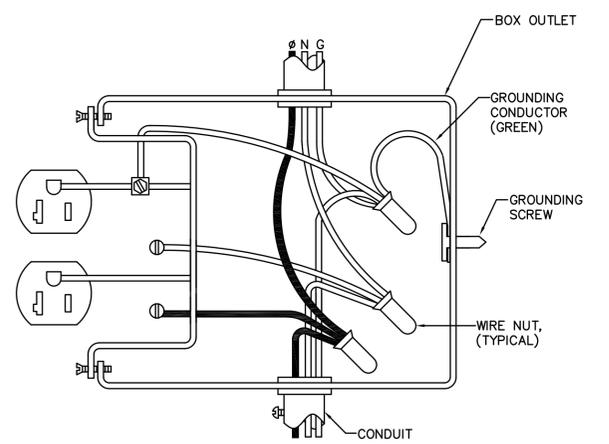
- ① 4/0 BARE GROUNDING ELCTRODE CONDUCTOR.
- ② 3/4"x10'-0" CLAD STEEL GROUND ROD, DRIVEN 24" BELOW GRADE, MINIMUM.
- ③ 4/0 BARE GROUNDING ELECTRODE CONDUCTOR IN 2"PVC-40.
- ④ EXOTHERMIC WELD CONNECTOR: TWO CABLES TO GROUND ROD, CADWELD #GT OR #GY CABLE TO CABLE TEE, CADWELD #TA ONE CABLE TO GROUND ROD, CADWELD #GR
- ⑤ CAST BRONZE, UL LISTED GROUND CLAMP, 0-Z/GEDNEY TYPE-G.
- ⑥ BONDING JUMPER, SIZED BY EQUIPMENT MANUFACTURER PER NEC 250-66.
- ⑦ BONDING JUMPER TO GROUNDING BUSHING. AND BONDING JUMPERS FROM CONDUIT TO CONDUIT. ALL CONDUIT CONNECTED TO THE SERVICE ENTRANCE ENCLOSURE SHALL BE BONDED, SIZED PER NEC 250.
- ⑧ MAIN BONDING JUMPER, SIZED BY MANUFACTURER PER 250-66.
- ⑨ 4/0 BARE BONDING JUMPER.
- ⑩ 6 CONDUCTOR GROUND BUS, COPPER OR ALUMINUM RATED, ILSCO #PDE.



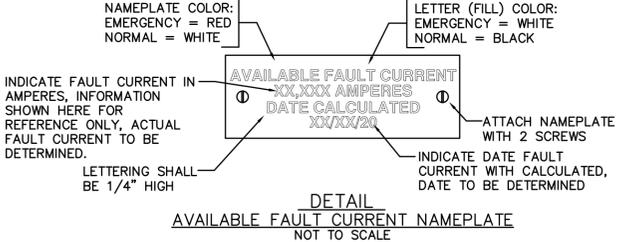
ELEVATION LIFT POWER DETAIL
NOT TO SCALE



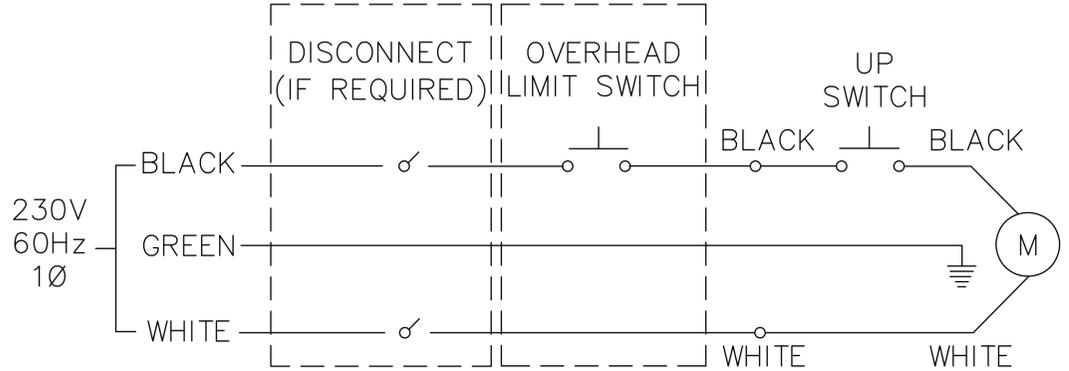
DETAIL WIRING DESIGNATION
NOT TO SCALE



DETAIL RECEPTACLE INSTALLATION
NOT TO SCALE

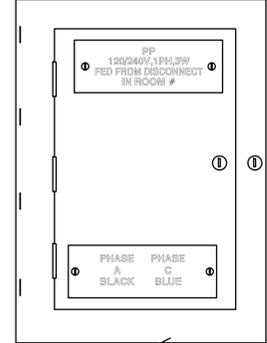


DETAIL AVAILABLE FAULT CURRENT NAMEPLATE
NOT TO SCALE

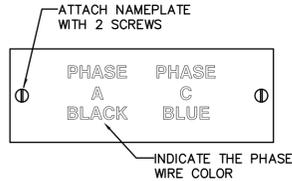


LIFT LIMIT SWITCH WIRING DETAIL
NOT TO SCALE

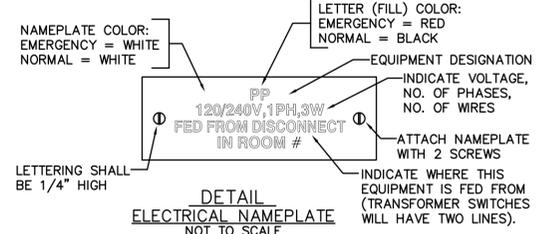
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DETAIL 120/240V PANELBOARD INSTALLATION & NAMEPLATE DETAIL
NOT TO SCALE



DETAIL 120/240V PANELBOARD ELECTRICAL NAMEPLATE
NOT TO SCALE



DETAIL ELECTRICAL NAMEPLATE
NOT TO SCALE



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

No.	Description	Date

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Details

Project number 24052
Date 10/24/2024

Drawn by TH
Checked by GW

E103

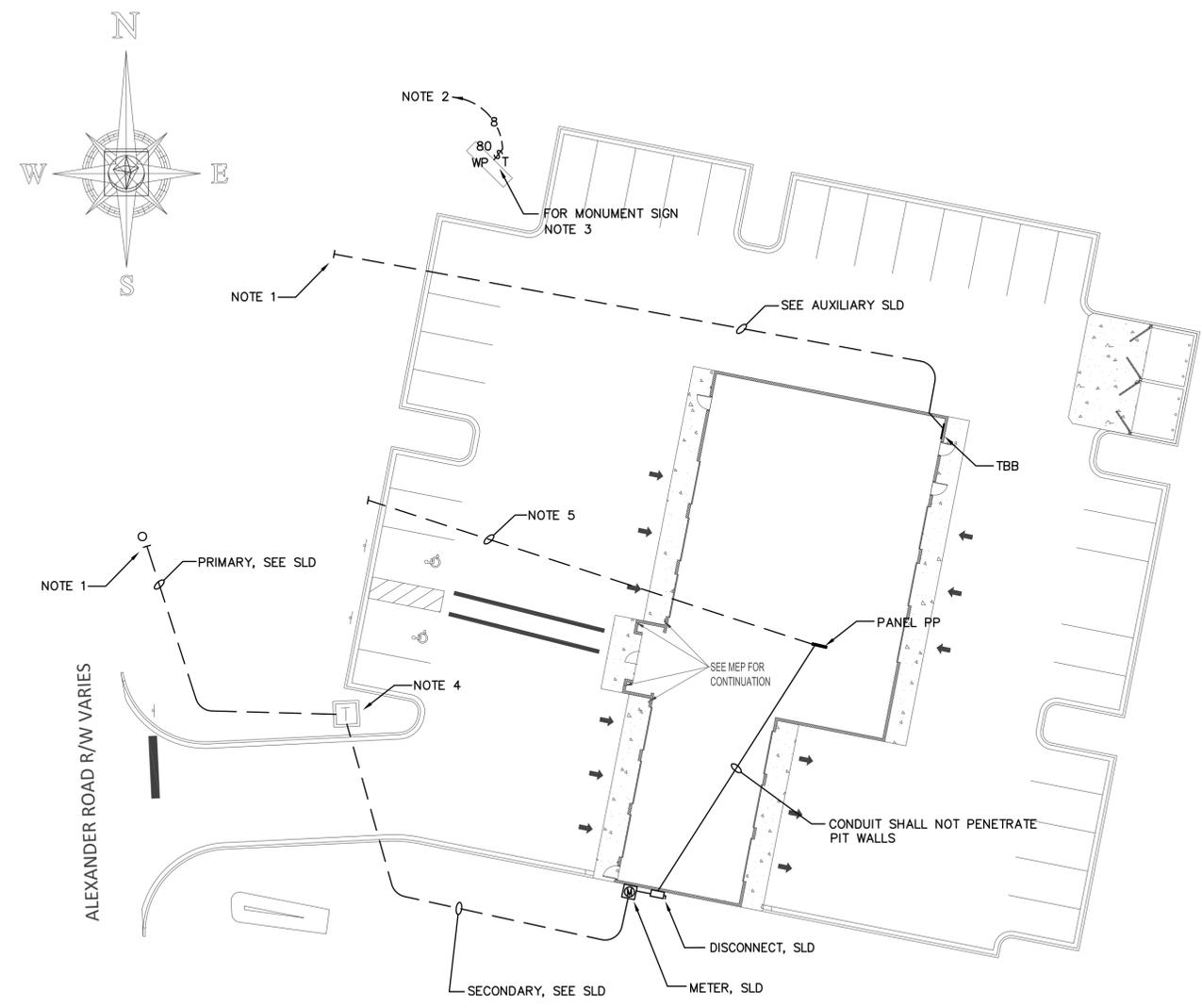
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4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
GWAMAE@GW-ENG.COM | 205-413-4112

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 Starke, Florida



- NOTES:**
1. VERIFY EXACT LOCATION OF STUB UP BEFORE ROUGH IN.
 2. HOMERUN TO PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2.
 3. LOCATION OF MONUMENT SIGN SHOWN HERE IS FOR REFERENCE ONLY. VERIFY EXACT LOCATION OF MONUMENT SIGN WITH CIVIL PRIOR TO ROUGH IN.
 4. UTILITY PAD MOUNTED TRANSFORMER. FURNISH AND INSTALL CONCRETE PAD PER POWER COMPANY REQUIREMENTS. CONTACT UTILITY COMPANY FOR PAD SPECIFICATIONS AND REQUIRED TERMINATIONS AT TRANSFORMER BEFORE BID AND PRICING. INCLUDE COST IN BID.
 5. PROVIDE 1-1" EMPTY CONDUIT, HOMERUN TO PANEL PP FOR FUTURE EV CHARGING STATION. VERIFY EXACT LOCATION OF STUB UP WITH ARCHITECT AND CIVIL PRIOR TO INSTALLATION.



ALEXANDER ROAD R/W VARIES

1 Site Plan - Electrical
 1" = 20'-0"

FINAL

No.	Description	Date

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Site Plan - Electrical

Project number	24052
Date	10/24/2024
Drawn by	TH
Checked by	GW
E104	
Scale	1" = 20'-0"

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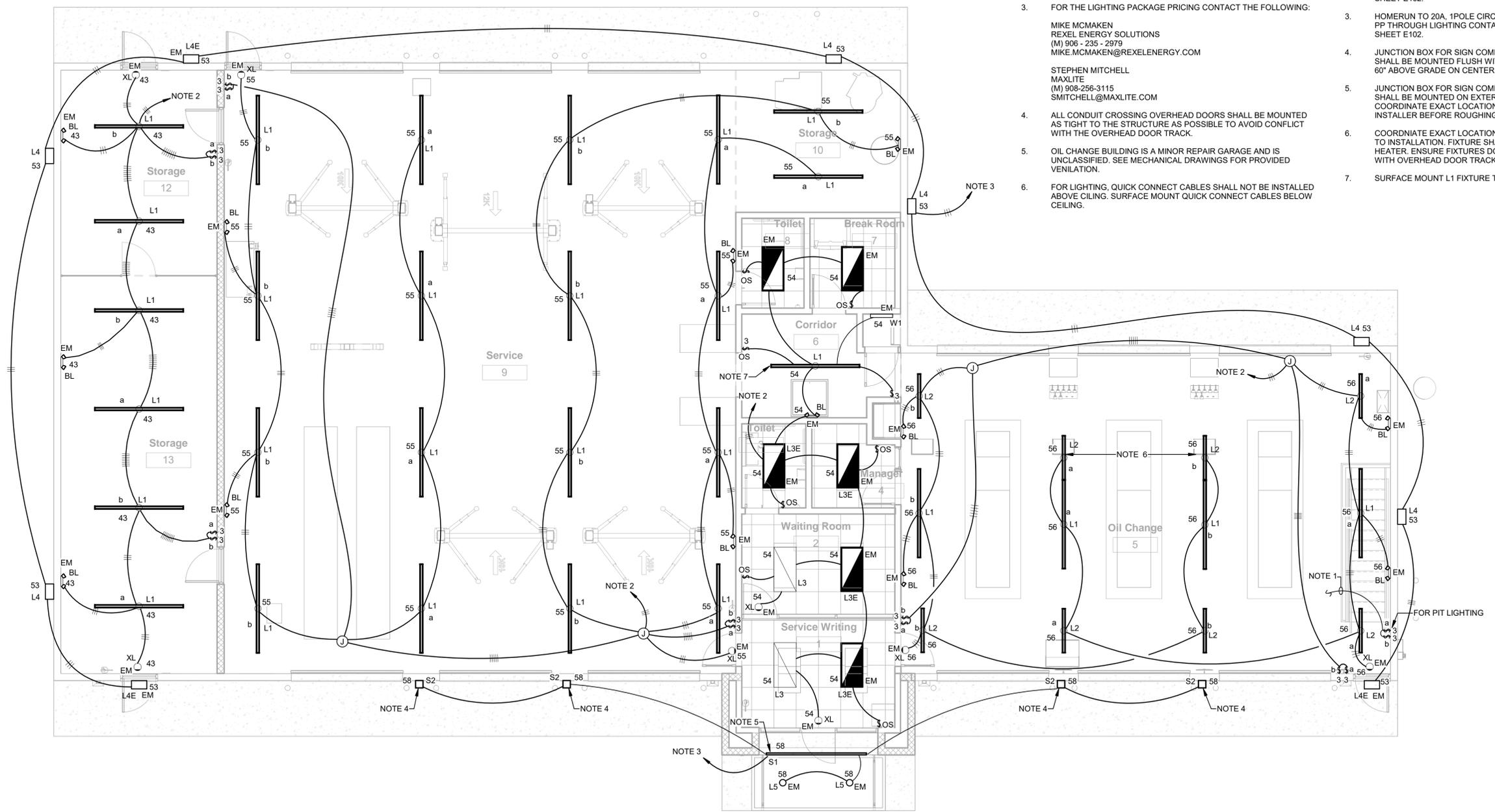
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- GENERAL NOTES:**
- CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.
 - ENSURE LIGHTING FIXTURES L1 AND L2 DO NOT CONFLICT WITH OVERHEAD DOORS.
 - FOR THE LIGHTING PACKAGE PRICING CONTACT THE FOLLOWING:
 MIKE MCMAKEN
 REXEL ENERGY SOLUTIONS
 (M) 906 - 235 - 2979
 MIKE.MCMAKEN@REXELENERGY.COM

 STEPHEN MITCHELL
 MAXLITE
 (M) 908-256-3115
 SMITCHELL@MAXLITE.COM
 - ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT TO THE STRUCTURE AS POSSIBLE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.
 - OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
 - FOR LIGHTING, QUICK CONNECT CABLES SHALL NOT BE INSTALLED ABOVE CILING. SURFACE MOUNT QUICK CONNECT CABLES BELOW CEILING.

- NOTES:**
- CONNECT TO PIT LIGHTING. SEE SHEET E201 FOR CONTINUATION.
 - HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE DETAIL ON SHEET E102.
 - HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2. SEE DETAIL ON SHEET E102.
 - JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED FLUSH WITH EXTERIOR FACE OF WALL AT 60" ABOVE GRADE ON CENTER.
 - JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED ON EXTERIOR FACE OF WALL AT 17' AFF. COORDINATE EXACT LOCATION WITH SIGN LIGHTING INSTALLER BEFORE ROUGHING IN.
 - COORDINATE EXACT LOCATION OF L2 LIGHT FIXTURES PRIOR TO INSTALLATION. FIXTURE SHALL NOT BE MOUNTED ABOVE HEATER. ENSURE FIXTURES DO NOT CONFLICT WITH OVERHEAD DOOR TRACK.
 - SURFACE MOUNT L1 FIXTURE TO CEILING IN THIS AREA.



1 Main Level Plan - Lighting
 3/16" = 1'-0"



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

FINAL

No.	Description	Date

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Main Level Plan - Lighting

Project number	24052
Date	10/24/2024
Drawn by	TH
Checked by	GW
E200	
Scale	3/16" = 1'-0"

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 4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
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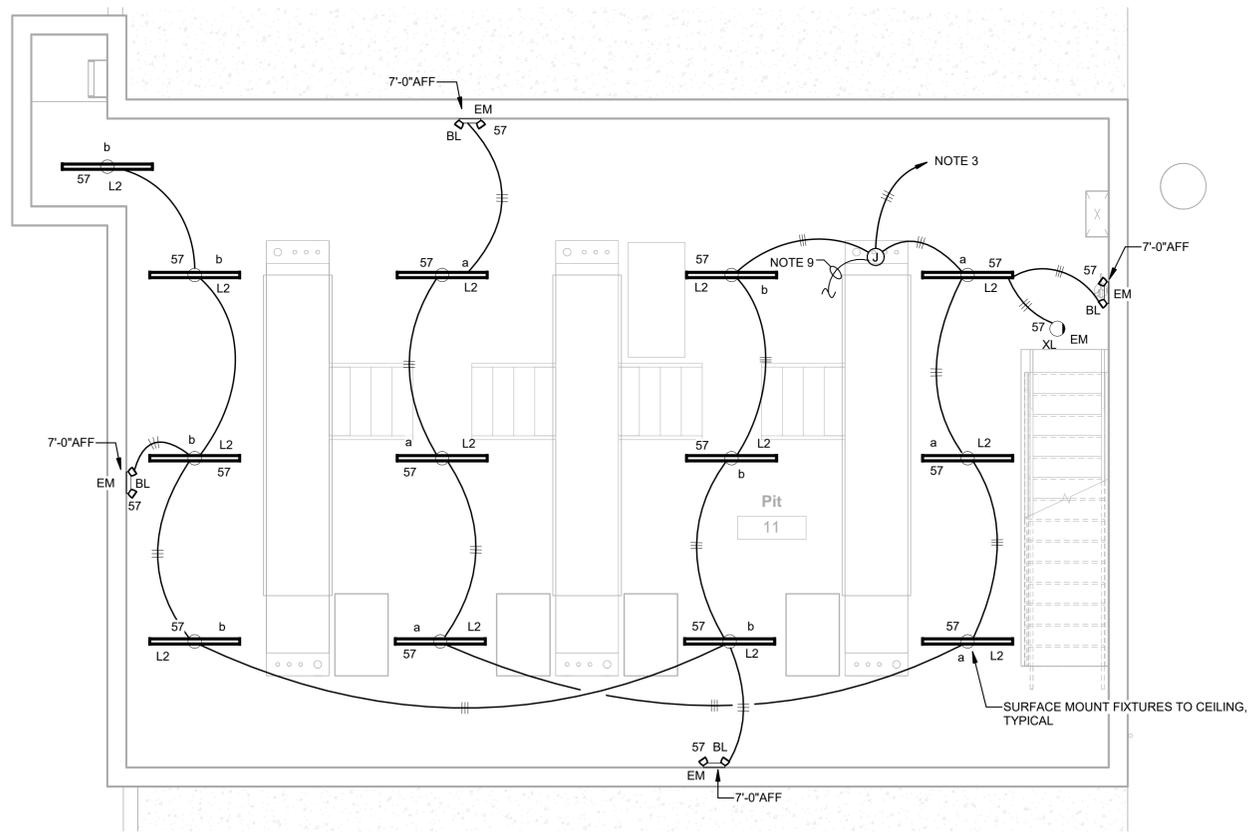


Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

- GENERAL NOTES:**
- CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.
 - FOR THE LIGHTING PACKAGE PRICING CONTACT THE FOLLOWING:
 MIKE MCMAKEN
 REXEL ENERGY SOLUTIONS
 (M) 906 - 235 - 2979
 MIKE.MCMAKEN@REXELENERGY.COM

 STEPHEN MITCHELL
 MAXLITE
 (M) 908-256-3115
 SMITCHELL@MAXLITE.COM
 - OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
 - ADJUST LIGHT FIXTURES AS NEEDED TO AVOID CONFLICT WITH STRUCTURAL STEEL.

- NOTES:**
- CONNECT TO LIGHT SWITCH ON FIRST FLOOR. SEE SHEET E200 FOR CONTINUATION.
 - HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1.



① Pit Level Plan - Lighting
 1/4" = 1'-0"



FINAL

No.	Description	Date

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Pit Level Plan - Lighting

Project number	24052
Date	10/24/2024
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E201	
Scale	1/4" = 1'-0"

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 Starke, Florida

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Main Level Plan - Power & Voice/Data

Project number	24052
Date	10/24/2024
Drawn by	TH
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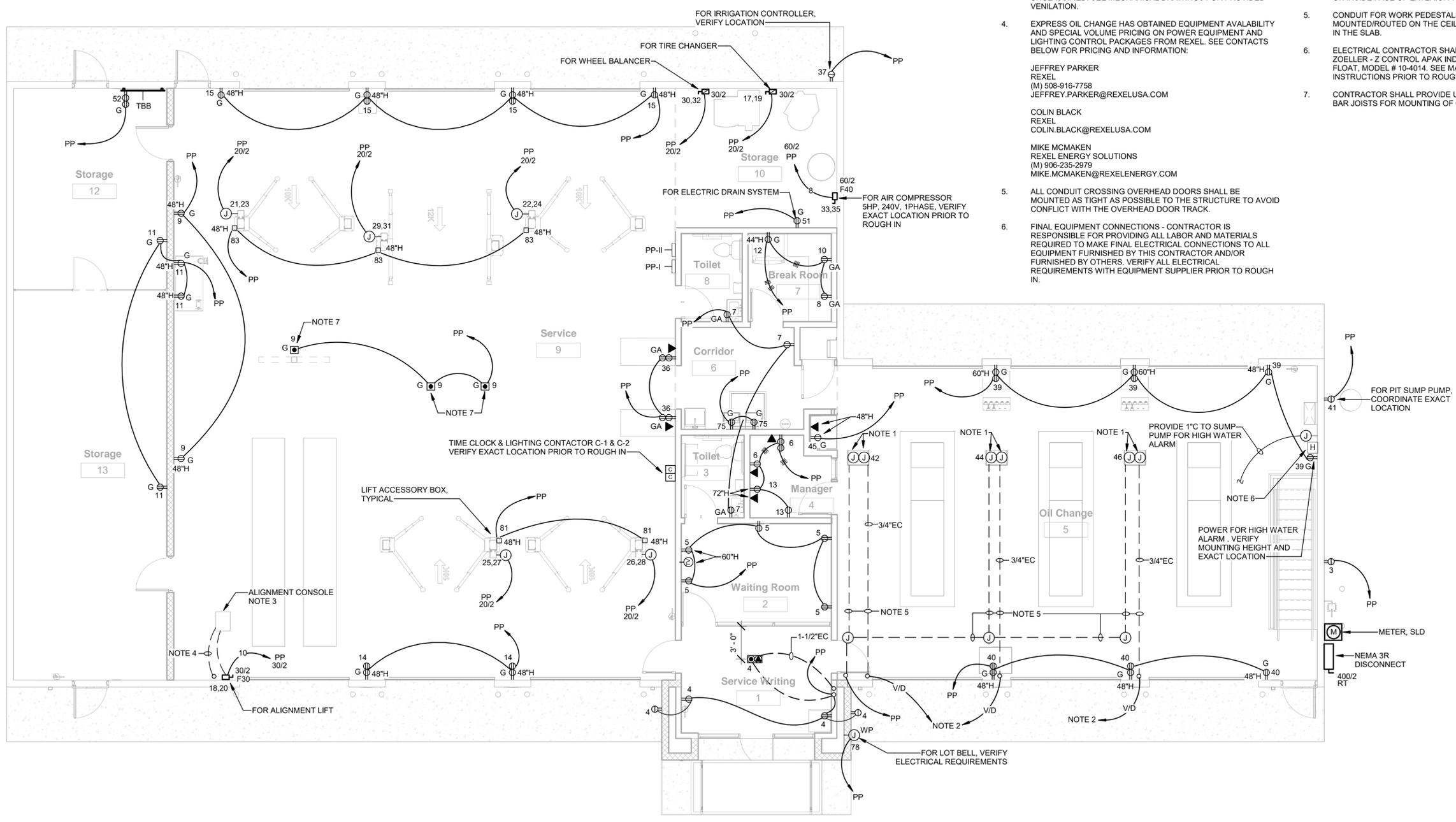
E300

Scale 3/16" = 1'-0"

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 4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
 GWAMAE@GW-ENG.COM | 205.413.4112

- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY/COORDINATE LOCATION OF ALL POWER & DATA OUTLETS FOR EQUIPMENT. OBTAIN OWNER'S APPROVAL BEFORE ROUGH IN. NO EXCEPTIONS. NO ADDITIONAL COMPENSATION SHALL BE AWARDED FOR ANY ADDITIONAL WORK REQUIRED TO RELOCATE OUTLETS DUE TO CONTRACTOR'S FAILURE TO COORDINATE WITH OWNER.
 - ALL HORIZONTAL CONDUIT RUNS SHALL BE A MINIMUM OF 8' ABOVE FINISHED FLOOR EXCEPT FOR DROPS. ENSURE CONDUIT DOES NOT CONFLICT WITH OVERHEAD DOOR.
 - OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
 - EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVAILABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:
 JEFFREY PARKER
 REXEL
 (M) 508-916-7758
 JEFFREY.PARKER@REXELUSA.COM
 COLIN BLACK
 REXEL
 COLIN.BLACK@REXELUSA.COM
 MIKE MCMAKEN
 REXEL ENERGY SOLUTIONS
 (M) 906-235-2979
 MIKE.MCMAKEN@REXELENERGY.COM
 - ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT AS POSSIBLE TO THE STRUCTURE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.
 - FINAL EQUIPMENT CONNECTIONS - CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS REQUIRED TO MAKE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY THIS CONTRACTOR AND/OR FURNISHED BY OTHERS. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN.

- NOTES:**
- 3/4" CONDUIT STUBBED UP 18" INTO WORK PEDESTAL BASE POST. PROVIDE FLEXIBLE CONDUIT INTO WORK PEDESTAL CABINET. COORDINATE OUTLET REQUIREMENTS PRIOR TO ROUGH IN.
 - HOMERUN 3/4" EC TO TELEPHONE BACKBOARD.
 - LOCATIONS SHOWN HERE ARE APPROXIMATE. FIELD COORDINATE EXACT LOCATION OF CONSOLE & CONDUIT WITH OWNER & ALIGNMENT LIFT SHOP DRAWINGS BEFORE ROUGH-IN.
 - PROVIDE 1 1/2" EMPTY CONDUIT FROM CONSOLE. STUBBED 8" UP ON INSIDE FACE OF EXTERIOR WALL.
 - CONDUIT FOR WORK PEDESTALS IN OIL CHANGE AREA SHALL BE MOUNTED/ROUTED ON THE CEILING OF THE PIT IN LIEU OF IN THE SLAB.
 - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ZOELLER - Z CONTROL APAK INDOOR ALARM WITH MECHANICAL FLOAT, MODEL # 10-4014. SEE MANUFACTURERS INSTALLATION INSTRUCTIONS PRIOR TO ROUGH IN. PROVIDE BATTERIES.
 - CONTRACTOR SHALL PROVIDE UNISTRUT SPANNING BETWEEN BAR JOISTS FOR MOUNTING OF CEILING RECEPTACLES.



1 Main Level Plan - Power & Voice/Data
 3/16" = 1'-0"



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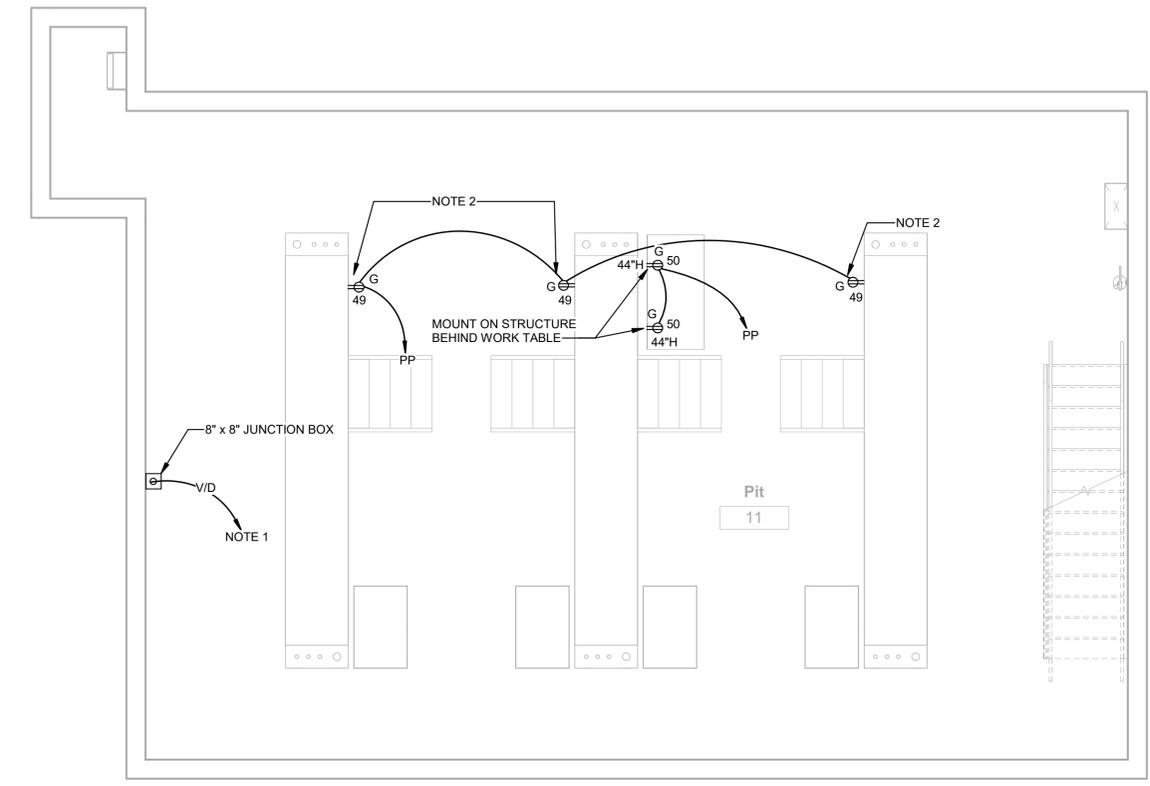


GENERAL NOTES:

- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
- EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVAILABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:
 JEFFREY PARKER
 REXEL
 (M) 508-916-7758
 JEFFREY.PARKER@REXELUSA.COM
 COLIN BLACK
 REXEL
 COLIN.BLACK@REXELUSA.COM
 MIKE MCMAKEN
 REXEL ENERGY SOLUTIONS
 (M) 906-235-2979
 MIKE.MCMAKEN@REXELENERGY.COM

NOTES:

- 2"EC HOMERUN TO TELEPHONE BACKBOARD ON EQUIPMENT PLATFORM.
- MOUNT RECEPTACLES ONTO STRUCTURAL COLUMN.



1 Pit Level Plan - Power & Voice/Data
 1/4" = 1'-0"



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

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No.	Description	Date

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Pit Level Plan - Power & Voice/Data

Project number	24052
Date	10/24/2024
Drawn by	TH
Checked by	GW
E301	
Scale	1/4" = 1'-0"

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 4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
 GWAMAE@GW-ENG.COM | 205.413.4112

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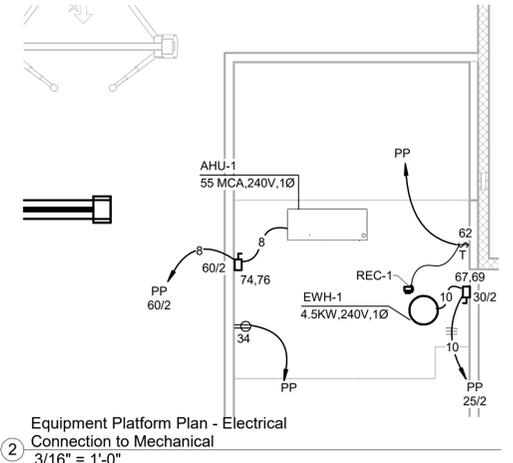
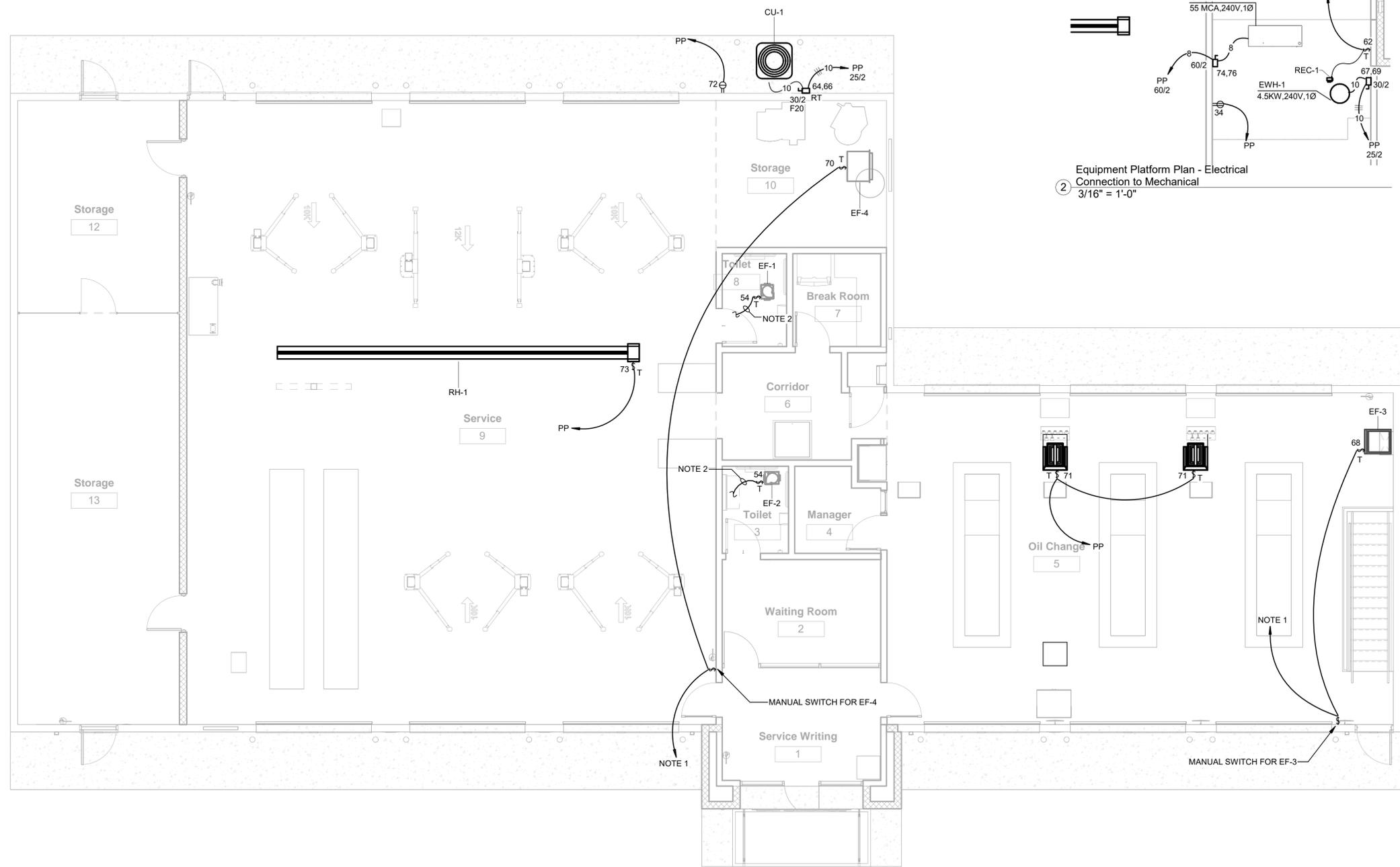


GENERAL NOTES:

- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.

NOTES:

- CONNECT TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE WIRING DIAGRAM ON SHEET E102 FOR MORE INFORMATION.
- CONNECT TO LIGHTING CIRCUIT AND CONTROLS IN THIS AREA.



1 Main Level Plan - Electrical Connection to Mechanical
 3/16" = 1'-0"



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4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
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Main Level Plan - Elec. Conn. to Mech.

Project number 24052
 Date 10/24/2024

Drawn by TH
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E400
 Scale 3/16" = 1'-0"

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GENERAL REQUIREMENTS

- A. Carefully examine General Conditions, other specification Sections, and other drawings (in addition to electrical), in order to be fully acquainted with their effect on electrical work.
- B. Do all work in compliance with laws and ordinances and local authorities having jurisdiction and, where applicable, utility companies. Obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like, and deliver such certificates to the Architect.
- C. Cooperate with other trades and contractors at job. Perform work in such manner and at such times as not to delay work of other trades. Complete all work as soon as the condition of the structure and installation of equipment will permit. Patch, in a satisfactory manner and by the proper craft, any work damaged by electrical work.
- D. All equipment (wiring devices, light fixtures, panelboards, disconnect switches, conductors, raceways, boxes, cabinets, circuit breakers, low voltage equipment, auxiliary systems, motors, machines, etc.) used for this project shall be tested by Underwriter's Laboratories, Inc and have "UL" nameplate.
- E. Coordinate placement of equipment above ceiling to facilitate proper clearance for serving of equipments.
- F. Take finish dimensions at the job site in preference to scale dimensions.
- G. Obtain from manufacturer's data on all equipment, the dimensions of which may affect electrical work. Use this data to coordinate proper service characteristics, entry locations, etc., and to ensure minimum clearances are maintained.
- H. The electrical contractor shall have had experience of at least the same size and scope as this project, on at least two other projects, within the last 5 years in order to be qualified to bid this project. This qualification shall also apply to his subcontractors.
- I. Workmen shall be experienced in their respective trade. Workmanship of installed work shall be first class and will be so judged by the Architect/Engineer. Substandard work shall be removed and replaced.
- J. The Bidders shall visit the site to thoroughly familiarize themselves with existing conditions prior to submitting their bid. No allowances will be made for lack of knowledge of existing conditions.
- K. Provide one Year warranty of conformance with drawings and specifications. In addition to the foregoing warranty, Contractor shall and does hereby warrant all materials and equipment furnished under this Division of the Specifications to be free from defects and to function or operate satisfactorily for one year after final acceptance of the work, and that any items not meeting this requirement will be made good by him without cost to owner, provided such defects or failures are not due to abuse, neglect, or lack of reasonable and ordinary maintenance.
- L. Unless otherwise specified, provide only new, standard first grade materials throughout, conforming to standards established by Underwriter's Laboratories, Inc., and so marked and labeled, together with manufacturer's brand or trademark. All equipment subject to approval of Architect/Engineer before installation. All like items shall be of one manufacture.
- M. Any equipment or materials shown on the drawings to be removed and reinstalled shall be cleaned and, if necessary repaired to like new condition prior to reinstallation.
- N. Where shown on the drawings or specified herein, furnish and install electrical equipment. Furnish all materials, hardware, equipment, labor and services required for the installation of complete and properly working installations as shown on the drawings and described herein.
- O. All work shall be executed in a workmanlike manner and shall present a neat and mechanical appearance upon completion. Care shall be exercised that all items are plumb, straight, level.
- P. Equipment grounding conductors shall be bonded at each enclosure and pole base. All equipment grounding conductors shall be connected to a common bus, bonded to the equipment enclosure.
- Q. An equipment grounding jumper shall be installed from the receptacle ground terminal to the outlet box.

CONDUITS

- A. Conduit: Rigid and IMC shall be galvanized outside and inside by hot dipping, EMT shall be Electro_Galvanized. Conduit shall be as manufactured by Republic, Wheatland, Triangle, Pittsburgh Standard, Youngstown, or Allied.
- B. Sealtight flexible metal conduit shall consist of flexible galvanized steel tubing with a liquidtight jacket of PVC. All flexible conduit shall have a copper bonding conductor wound into conduit body.
- C. Couplings and connectors on rigid and IMC shall be standard threaded type, galvanized outside and inside by hot dipping. Clamp type and threadless are not acceptable. Couplings and connectors, for rigid and IMC shall be as manufactured by Raco or Appleton.
- D. EMT connectors shall be steel, set screw unless required by code to be compression type, equipped with insulating throats. Connectors couplings shall be O-Z/Gedney 7000ST or 7000RST series, T & B 5123 - 5623 series, Midwest Electric series 1650, or equal series of Raco. Cast metal couplings will not be approved for any location.
- E. EMT couplings shall be steel, set screw unless required by code to be compression type. Couplings shall be O-Z/Gedney 6000S or 6000RS series, T & B 5120 - 5620 series, Midwest Electric series 660, or equal series of Raco. Cast metal connectors will not be approved for any location.
- F. Connectors rainlight; Meyers or approved equal.
- G. Bushings on rigid and IMC shall be threaded malleable iron with integral noncombustible insulator. Rigid and IMC bushings shall be O-Z/Gedney "IBC" series, T & B BIM series, Midwest Electric series 1031 - 1043 or equal by Penn Union. Grounding bushings shall be O-Z/Gedney "IBC-L" series, T & B 3870 - 3999 series, Midwest Electric GLL series or equal by Penn Union.
- H. Waterlight Flex Connectors: O-Z/Gedney, Raco, or Midwest Electric with insulating throat.
- I. EMT conduit with set screw shall be used for all branch circuits, power feeders, auxiliary, signaling and controls circuits in none hazardous dry locations for 2" and smaller. EMT may be used exposed where not subject to physical damage. EMT with compression fitting may be used in damp locations up to the 2" limit. Otherwise use rigid or intermediate hot dipped galvanized inside and out steel, threaded for screwed fitting only conduits unless specified on the drawings otherwise.
- J. Conduits shall be sized in accordance with the latest National Electrical Code except that conduits containing more than two conductors shall be sized based on 35% fill and 3/4" conduit shall contain no wire larger than #10 and no more than 6#12 or #4#10 wires. Conduit shall be sized larger than required above when so shown on the drawings or when required by local Code. Minimum size conduit shall be 3/4".
- K. Where conduit enters boxes, they shall be secured in place with approved insulating fittings.
- L. The use of running threads is absolutely prohibited. All conduit shall be jointed with approved conduit couplings. All couplings on IMC and rigid conduit shall be threaded.
- M. All conduits shall be supported within 3 feet of each coupling, fitting, outlet box, junction box, cabinet or equipment enclosure Conduit supports shall be independent of ducts, plumbing piping, ceiling supports, etc. Conduits shall not be supported by junction boxes, pull boxes, fixtures, etc.
- N. All exposed conduit threads, metal supports, etc., exposed to the elements or exterior of building shall be painted with rust preventive paint.

CONDUCTORS

- A. Conductors for general use, sized #10 and smaller, shall be solid copper. Conductors #8 and larger, and any size to motors or vibrating equipment shall be stranded copper.
- B. All conductor insulation shall be 600 volt THHN/THWN.
- C. Wire connections, #10 and smaller connections shall be made with insulated wire connectors with steel spring connector threads. Wire connectors shall be "Twister" Wire-Nut series as manufactured by Ideal Industries, Inc. or approved equal.
- D. On wire larger than #10, shall be made with approved solderless connectors and covered with Scotch #33 electrical tape so that the insulation is equal to conductor insulation.
- E. Connection of stranded conductors, #8 and larger, to bus bars in switchboards, panelboards, equipment enclosures, junction boxes, etc. shall be made with individual lugs, size as required by conductor, bolted to bus bar with full size bolts and nuts with lock washers.
- F. Conductors and conduits shall be continuous between outlets.
- G. No conductor shall be pulled until conduit is cleaned of all foreign matter.
- H. Where installed in panelboards, cabinets, wireways, switches and equipment wire and cable shall be neatly formed and tied.
- I. Conductors sized #10 AWG and below shall have permanently colored insulation. Conductors sized #8 AWG and above shall be color coded by either permanently colored insulation or by means of colored tape applied to the conductor within 12" of each termination and in each enclosure, junction box, etc.

JUNCTION BOXES

- A. Shall be standard type, with knockouts, made of hot dipped galvanized steel. Steel City, Raco, Appleton, or Bowers.
- B. Ceiling outlet boxes shall be 4" octagon 1-1/2" deep or larger as required due to number of wires.
- C. Boxes shall be provided with approved 3/8" fixture studs when required to support stem mounted light fixtures.
- D. Except when located in exposed concrete block, switch and receptacle boxes shall be 4" square with trim ring for single gang installation. Appropriate gang boxes shall be used for mounting ganged switches.
- E. When installed in exposed concrete block, switch and receptacle boxes shall be square type designed for exposed block installation.
- F. Outlet boxes shall be securely fastened to structural members and shall not be supported by dry wall, gypsum board, plaster, etc. The device or plate installed in conjunction with the outlet box shall not be used for support. There shall be no more knockouts opened in any outlet box than are required. Boxes shall be sealed during construction.
- G. Under no circumstances shall through-the-wall boxes be used. Back to back boxes shall be staggered at least 3 inches, except in fire rated partitions, in which case, back to back boxes shall be staggered at least 24 inches.
- H. Outlet boxes two gangs and wider shall not be supported by attachment clips or any means which supports the boxes from less than two opposite sides of the box. Such outlet boxes in stud walls shall be supported securely by support members spanning between studs.
- I. Outlet boxes installed in fire rated partitions shall be boxed in with wall board or other suitable fire rated material as required to maintain or restore the fire rating of the assembly.

WIRING DEVICES

- A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
 - 1. Cooper Wiring Devices: a division of Cooper Industries, Inc. (Cooper).
 - 2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
 - 3. Leviton Mfg. Company Inc. (Leviton).
 - 4. Pass & Seymour/LeGrand; Wiring Devices & Accessories (Pass & Seymour).
- B. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.

- 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 5351 (single), 5352 (duplex).
 - b. Hubbell; HBL5351 (single), CR5352 (duplex).
 - c. Leviton; 5891 (single), 5352 (duplex).
 - d. Pass & Seymour; 5381 (single), 5352 (duplex).

- C. Duplex GFCI Convenience Receptacles, 125 V, 20 A:
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; GF20.
 - b. Pass & Seymour; 2084.

- A. Switches, 120/277 V, 20 A:
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way).
 - b. Hubbell; CS1221 (single pole), CS1222 (two pole), CS1223 (three way), CS1224 (four way).
 - c. Leviton; 1221-2 (single pole), 1222-2 (two pole), 1223-2 (three way), 1224-2 (four way).
 - d. Pass & Seymour; 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way), 20AC4 (four way).

- B. Single and combination plate types to match corresponding wiring devices.
 - 1. Plate-Securing Screws: Metal with head color to match plate finish.
 - 2. Material for Finished Spaces: stainless steel 302 **0.04-inch- (1-mm)** thick.
 - 3. Material for Unfinished Spaces: Galvanized steel.
 - 4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet locations."

- F. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, extra duty, die-cast aluminum with lockable in-use cover.
- G. Color: Wiring device catalog numbers in Section Text do not designate device color.
 - 1. Wiring Devices Connected to Normal Power System: Gray unless otherwise indicated or required by NFPA 70 or device listing.
 - 2. Wiring Devices Connected to Emergency Power System: Red.
- H. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.

- I. Coordination with Other Trades:
 - 1. Take steps to insure that devices and their boxes are protected.. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
 - 2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
 - 3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
 - 4. Install wiring devices after all wall preparation, including painting, is complete.

- J. Conductors:
 - 1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
 - 2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
 - 3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
 - 4. Existing Conductors:
 - a. Cut back and pigtail, or replace all damaged conductors.
 - b. Straighten conductors that remain and remove corrosion and foreign matter.
 - c. Pigtailing existing conductors is permitted provided the outlet box is large enough.

- K. Device Installation:
 - 1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
 - 2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
 - 3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
 - 4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
 - 5. When there is a choice, use slide wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
 - 6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
 - 7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
 - 8. Tighten unused terminal screws on the device.
 - 9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

- L. Receptacle Orientation:
 - 10. Install ground pin of vertically mounted receptacles up, and on horizontally mounted receptacles to the right.
 - 11. Install hospital-grade receptacles in patient-care areas with the ground pin or neutral blade at the top.

- M. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

- N. Dimmers:
 - 1. Install dimmers within terms of their listing.
 - 2. Verify that dimmers used for fan speed control are listed for that application.
 - 3. Install unshared neutral conductors on line and load side of dimmers according to manufacturers' device listing conditions in the written instructions.

- O. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

- P. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

PANELBOARDS

- A. Product Data: For each type of panelboard, switching and overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
- B. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.
 - 1. Comply with NEMA PB 1 including handling requirements.
- D. Comply with NFPA 70.
- E. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
- F. Enclosures: Flush-and surface-mounted cabinets as shown on drawings.
 - 1. Rated for environmental conditions at installed location.
 - a. Outdoor Locations: NEMA 250, Type 4X (stainless steel).
 - b. Indoor location NEMA 1 with hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
 - 2. Finishes:
 - a. Back Boxes: Stainless Steel.
 - 3. Directory Card: Inside panelboard door, mounted in transparent card holder.

- G. Phase, Neutral, and Ground Buses:
 - 1. Material: Hard-drawn copper, 98 percent conductivity.
 - 2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

- H. Future Devices: Mounting brackets, bus connections, filter plates, and necessary appurtenances required for future installation of devices.

- I. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. See drawings for rating.

- J. Manufacturers: Subject to compliance with requirements, provide products by either; Eaton, General Electric Company; Siemens, and Square D.

- K. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers; plug-in circuit breakers where individual positive-locking device requires mechanical release for removal. Branch circuit breakers shall be HACR type. Molded-Case Circuit Breaker (MCCB); Comply with UL 489, with interrupting capacity to meet available fault currents.

- L. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.

- M. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

- N. Proceed with installation only after unsatisfactory conditions have been corrected.

- O. Install panelboards and accessories according to NEMA PB 1.1.

- P. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

- Q. Install filler plates in unused spaces.

- R. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

TEMPORARY POWER

- A. The electrical contractor shall provide temporary electrical wiring for construction. The temporary service shall be single phase, three wire, 120/240 volts fused at main disconnect. All receptacles on this temporary service shall be protected by ground fault interruptible circuit breakers.

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GIDEON WAMAE ON THE DATE ADJACENT TO THE SEAL.

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Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Starke, Florida

FINAL

No.	Description	Date

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Specifications

Project number	24052
Date	10/24/2024

Drawn by	TH
Checked by	GW

E500

Scale	NO SCALE
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GIDEON WAMAE, P.E.

4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
GWAMAE@GW-ENG.COM | 205.413.4112

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Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Starke, Florida

COMcheck Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information
 Energy Code: 2020 Florida - 7th Edition
 Project Title: Express Oil Change & Tire Engineers - Starke, FL
 Project Type: New Construction

Construction Site: Starke, Florida
 Owner/Agent: Express Oil Change & Tire Engineers, Birmingham, Alabama
 Designer/Contractor: Taylor Higginbotham, GW Engineering, Birmingham, Alabama

Additional Efficiency Package(s)
 Credits: 1.0 Required, 1.0 Proposed
 Reduced Lighting Power, 1.0 credit

A	B	C	D
Area Category	Floor Area (ft ²)	Allowed Watts / ft ²	Allowed Watts
1-Automotive Facility	6652	0.64	4251
Total Allowed Watts =			4251

A	B	C	D	E
Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps/ Fixture	# of Fixture	Fixture Watt.	(C X D)
1-Automotive Facility				
LED- L1: Other	1	29	100	2900
LED- L2: Other	1	21	50	1050
LED- L3/L3E: Other	1	8	36	288
Total Proposed Watts =				4238

Interior Lighting PASSES: Design 0.3% better than code

Interior Lighting Compliance Statement
 Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2020 Florida - 7th Edition requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Taylor Higginbotham
 Name - Title: Taylor Higginbotham
 Signature: Taylor Higginbotham
 Date: 10/24/2024

Project Title: Express Oil Change & Tire Engineers - Starke, FL
 Data Filename: Report date: 10/24/24
 Page 1 of 6

COMcheck Software Version COMcheckWeb
Exterior Lighting Compliance Certificate

Project Information
 Energy Code: 2020 Florida - 7th Edition
 Project Title: Express Oil Change & Tire Engineers - Starke, FL
 Project Type: New Construction
 Exterior Lighting Zone: 2 (Neighborhood business district (LZ2))

Construction Site: Starke, Florida
 Owner/Agent: Express Oil Change & Tire Engineers, Birmingham, Alabama
 Designer/Contractor: Taylor Higginbotham, GW Engineering, Birmingham, Alabama

A	B	C	D	E
Area/Surface Category	Quantity	Allowed Watts /	Tradable Wattage	Allowed Watts (B X C)
Pedestrian and vehicular entrances and exits	15 ft of	14	Yes	210
Illuminated area of facade wall or surface	1700 ft ²	0.07	No	128
Total Tradable Watts (a) =				210
Total Allowed Watts =				338
Total Allowed Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
 (b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

A	B	C	D	E
Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps/ Fixture	# of Fixture	Fixture Watt.	(C X D)
Pedestrian and vehicular entrances and exits (15 ft of door width): Tradable Wattage				
LED- L4E/L5: Other	1	5	38	190
Illuminated area of facade wall or surface (1700 ft ²): Non-tradable Wattage				
LED- L4: Other	1	5	38	190
Total Tradable Proposed Watts =				190

Exterior Lighting PASSES: Design 65% better than code

Exterior Lighting Compliance Statement
 Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2020 Florida - 7th Edition requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Taylor Higginbotham
 Name - Title: Taylor Higginbotham
 Signature: Taylor Higginbotham
 Date: 10/24/2024

Project Title: Express Oil Change & Tire Engineers - Starke, FL
 Data Filename: Report date: 10/24/24
 Page 2 of 6

FINAL

No.	Description	Date

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COMcheck

Project number: 24052
 Date: 10/24/2024
 Drawn by: TH
 Checked by: GW

E600

Scale: NO SCALE

GIDEON WAMAE, P.E.
 4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
 GWAMAE@GW-ENG.COM | 205.413.4112

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