EXPRESS OIL CHANGE

BATON ROUGE, LA

EXPRESS OIL CHANGE & TIRE ENGINEERS

SECTIONS 85 & 87, TOWNSHIP 7 SOUTH - RANGE 1 EAST, GREENSBURG LAND DISTRICT

UTILITY AND GOVERNING AUTHORITIES CONTACT LIST:

ARCHITECT
AHO ARCHITECTS, LLC
1855 DATA DRIVE
SUITE 150
HOOVER, AL 35244
Contact: MRS. APRIL R. CAIN
Telephone: (205) 983-6000
e-mail: ACAIN@AHOARCH.COM

GEOTECH
TERRACON
2822 O'NEAL LANE BUILDING B
BATON ROUGE, LA 70816
Contact: JOHN M. VOELKER, P.E.
Telephone: (225) 344-6052

CHIEF BUILDING OFFICIAL
CITY OF BATON ROUGE/PARISH OF EBR
300 N. 10TH STREET
BATON ROUGE, LA 70802
Contact: BILL POUSSON JR.
Telephone: (225) 389-3205
email: BPOUSSON@BRLA.GOV

PERMIT & INSPECTION DIVISION
CITY OF BATON ROUGE/PARISH OF EBR
300 N. 10TH STREET
BATON ROUGE, LA 70802
Contact: BILL POUSSON JR.
Telephone: (225) 389-3205
email: BPOUSSON@BRLA.GOV

STATE HIGHWAY
LADOTD DISTRICT 61
8100 AIRLINE HIGHWAY
BATON ROUGE, LA 70802
Contact: CEDRIC LACOUR
Telephone: (225) 231-4164
email: CEDRIC.LACOUR@LA.GOV

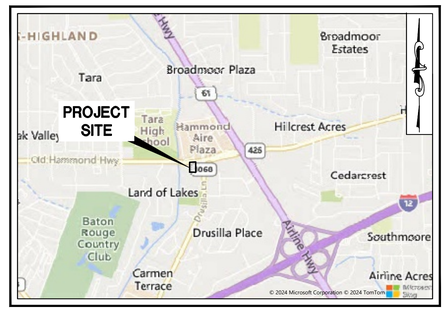
WATER
THE BATON ROUGE WATER COMPANY
8755 GOODWOOD BLVD.
BATON ROUGE, LA 70806
Contact: MARGIE SWANSON
Telephone: (225) 231-0304
email: MARGIES@BATONROUGEWATER.COM

SEWER
CITY OF BATON ROUGE/PARISH OF EBR
1100 LAUREL ST.
BATON ROUGE, LA 70802
Contact: ADAM SMITH
Telephone: (225) 389-5623
email: AMSMITH@BRLA.GOV

ELECTRIC
ENTERGY
5755 CHOCTAW DRIVE
BATON ROUGE, LA 70805
CONTACT: JONTEL MURPHY
Telephone: (318) 792-5344
email: JMURPH9@ENTERGY.COM

TELEPHONE:
AT&T
5550 S. SHERWOOD FOREST BLVD. ROOM 231
BATON ROUGE, LA 70816
Contact: BRANDY
Telephone: (225) 506-3696
e-mail: BJ0182@ATT.COM

GAS
ENTERGY GAS
5755 CHOCTAW DRIVE
BATON ROUGE, LA 70805
Contact: QUINTON
Telephone: (225) 247-8673



SITE LOCATION MAP
SCALE: 1" = 2000'

DDG PROJECT # 24-1316

SHEET INDEX

1. C-0.....COVER SHEET
2. 1-1.....SURVEY PLAT
3. D-1.....DEMO PLAN
4. ES-1.....EROSION CONTROL PLAN
5. ES-2.....EROSION CONTROL DETAILS
6. ES-3.....EROSION CONTROL DETAILS
7. C-1.....SITE PLAN
8. C-2.....GRADING PLAN
9. C-3.....UTILITY PLAN
10. C-4.....DETAILS
11. C-5.....DETAILS
12. C-6.....DETAILS
13. C-7.....DETAILS

PROJECT NOTES:

1. THIS PROJECT IS BEING CONSTRUCTED WITHIN THE BOUNDARIES OF EAST BATON ROUGE PARISH.
2. THE CONTRACTOR SHALL ENSURE THAT ALL GOVERNMENTAL REQUIRED INSPECTIONS, ALONG WITH THOSE REQUIRED BY PRIVATE UTILITIES, ARE PERFORMED PRIOR TO TURNING THE BUILDING OVER TO EXPRESS OIL CHANGE & TIRE ENGINEERS.
3. THE SITEWORK FOR THIS PROJECT SHALL MEET OR EXCEED SITEWORK RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT PREPARED BY TERRACON DATED JULY 3, 2024 AND/OR THE SITEWORK SPECIFICATIONS FOR EAST BATON ROUGE, WHICHEVER IS MORE STRINGENT.

DEVELOPER

JUSTIN DUCK
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1880 SOUTHPARK DRIVE
BIRMINGHAM, AL 35244
(205)-600-6924
JUSTIN.DUCK@EXPRESSOIL.COM

EXPRESS OIL - BATON ROUGE
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BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
985.249.6180

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 40746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO. 24-1316
PERMIT
10/31/2024

CHECKED WRK
DRAWN BY ZPP

SHEET
C-0

Z:\2024\24-1316\CIVIL\CAD\23-1316 C-0 COVER SHEET.DWG

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NOTE:
MEASURED BEARINGS BASED ON GRID NORTH, LOUISIANA STATE PLANE SOUTH ZONE (1702) NAD83 AS DERIVED FROM THE LSU C4G RTK NETWORK (2024.65)

N

CURVE TABLE			
CURVE #	ARC LENGTH	RADIUS	CHORD BEARING AND DISTANCE
C1	41.73' (M) 20.80' (R1)	2717.40' (M) 2717.40' (R1)	N86°12'34"E \ 41.73' (M) N86°48'50"E \ 41.60' (R1)
C2	101.96' (M) 102.18' (R1)	2717.40' (M) 2717.40' (R1)	N85°24'34"E \ 101.96' (M) N85°12'53"E \ 102.16' (R1)

LINE TABLE		
LINE #	BEARING	LENGTH
L1	S84°53'32"E (M) S84°56'39"E (R1)	4.26' (M) 4.23' (R1)
L2	S79°35'59"E (M) S79°29'22"E (R1)	27.30' (M) 27.23' (R1)

LEGEND

- CATCH BASIN
- DRAIN INLET
- ELEVATION POINT
- FOUND PROPERTY CORNER
- POWER POLE
- RIGHT OF WAY MONUMENT
- SEWER CLEANOUT
- SEWER MANHOLE
- TREE
- BUILDING LINE
- FLOOD ZONE LINE
- GROUND CONTOUR LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SECTION LINE
- SERVITUDE LINE
- TREE DRIP LINE
- CONCRETE

ELEVATION NOTE:
ELEVATIONS SHOWN ARE NAVD 1988 (GEOID 18) AS DERIVED FROM GPS OBSERVATIONS USING THE LSU C4G NETWORK (2024.65).

SITE BENCHMARK A: 60D NAIL ON THE EAST SIDE OF A POWER POLE ±13 FEET SOUTH OF THE SOUTHERLY EDGE OF LA HWY 426 (OLD HAMMOND HWY) AND ±243 FEET WEST OF A 30 FEET TALL METAL I BEAM. (SEE DRAWING FOR LOCATION)

ELEVATION: 40.17'

SITE BENCHMARK B: 60D NAIL ON THE SOUTH SIDE OF A POWER POLE ±100 FEET NORTH OF THE SOUTH EDGE OF LA HWY 426 (OLD HAMMOND HWY) AND ±15 FEET WEST OF THE CENTER OF A CONCRETE ENTRANCE OF HAMMOND AIR PLAZA. (SEE DRAWING FOR LOCATION)

ELEVATION: 41.95'

REFERENCE:
1) MAP SHOWING RESUBDIVISION OF LOTS A-1-A-1-A & D-1-B-1 SINGLETARY PLACE INTO LOTS A-1-A-1-A-1 & D-1-B-1-A SINGLETARY PLACE, BY ACADIA LAND SURVEY, LLC, DATED 08/01/2024, RECORDED 08/07/2024, ORIGINAL 159 BUNDLE 13326.

FLOOD ZONE NOTE:
SURVEYOR HAS CONSULTED THE FEMA FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR THIS LOCATION AND FOUND THAT THE SUBJECT PROPERTY IS PARTIALLY IN A SPECIAL FLOOD HAZARD AREA:
FLOOD ZONE: "AE" & "X" (SHADED)

BASE FLOOD ELEVATION: AE: 38' & "X" SHADED: NOT INDICATED

COMMUNITY PANEL NO. 22033C0265F

MAP REVISED: 06/19/2012

(CONTACT EAST BATON ROUGE PARISH FOR ADDITIONAL ELEVATION REQUIREMENTS.)

UTILITY LOCATIONS:
UTILITIES SHOWN HAVE BEEN LOCATED FROM VISIBLE UTILITY FEATURES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES, EXCEPT FOR ABOVE GROUND VISIBLE UTILITY FEATURES. NO EXCAVATIONS WERE MADE DURING THE PROCESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.

THE SERVITUDES AND RESTRICTIONS SHOWN HEREON ARE LIMITED TO THOSE SET FORTH IN THE INFORMATION PROVIDED TO US. THERE IS NO REPRESENTATION MADE BY THIS SURVEYOR THAT ALL APPLICABLE SERVITUDES AND RESTRICTIONS ARE SHOWN. TITLE WAS NOT RESEARCHED IN PREPARATION OF THIS SURVEY.

THIS SURVEY SHOWS THE TOPOGRAPHY OF THE SUBJECT AREA BASED ON THE TECHNIQUES AND ELEVATION DATUM IDENTIFIED ABOVE.

I CERTIFY THAT THIS PLAT REPRESENTS AN ACTUAL GROUND SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND IT DOES CONFORM TO THE REQUIREMENTS OF THE CURRENT LOUISIANA STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS FOR A CLASS "B" SURVEY.

DATE OF SURVEY: 09/03/2024

Olivia A. Mitchell

OLIVIA A. MITCHELL, P.L.S.: LA REG 5348
REGISTERED PROFESSIONAL LAND SURVEYOR
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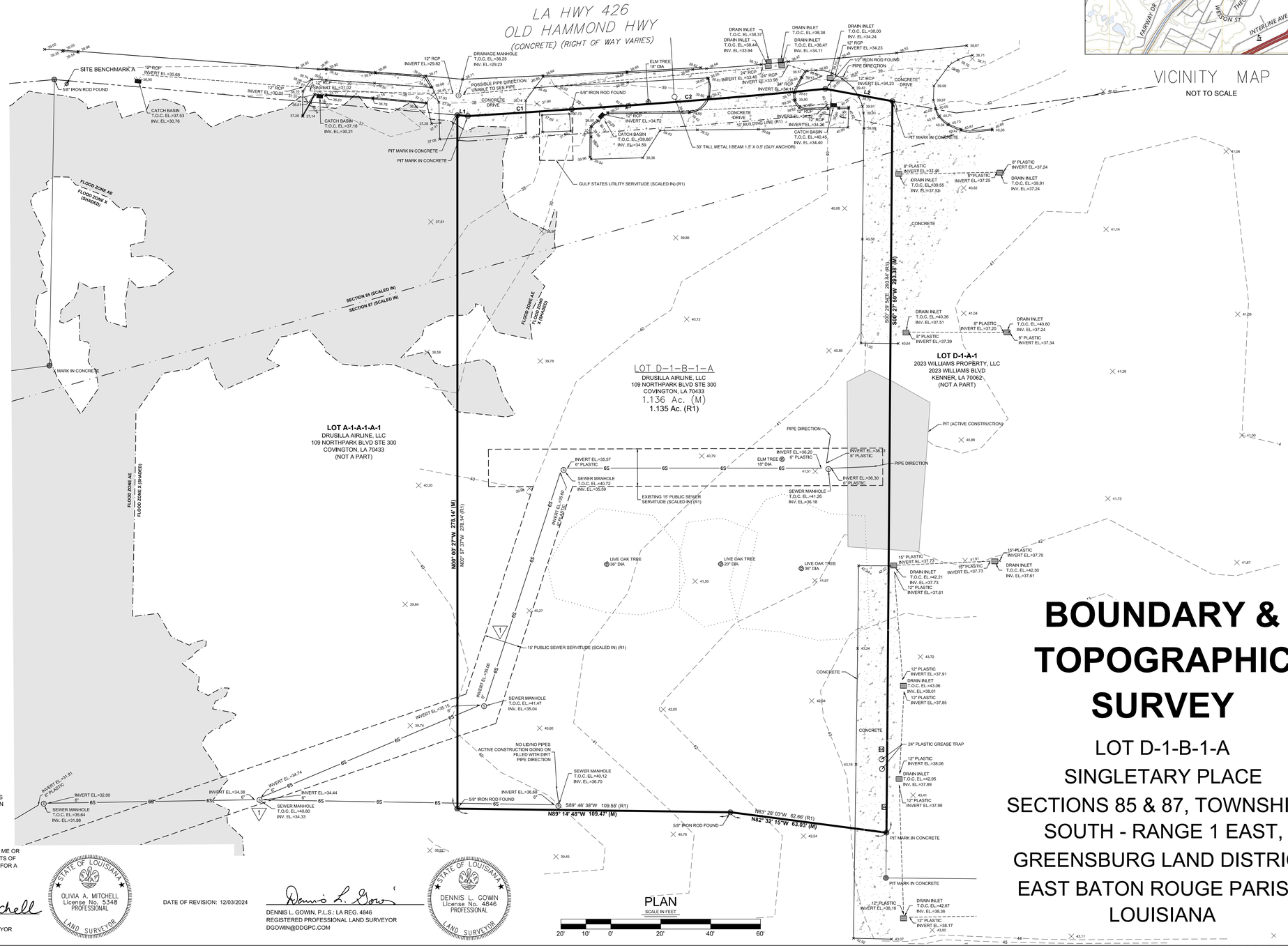
STATE OF LOUISIANA — OLIVIA A. MITCHELL — License No. 5348 PROFESSIONAL — LAND SURVEYOR

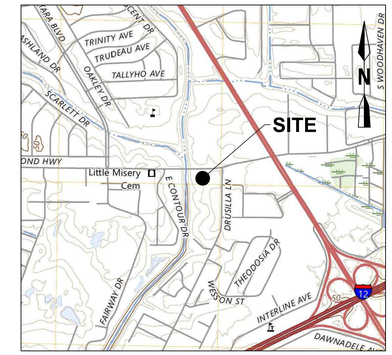
DATE OF REVISION: 12/03/2024

Dennis L. Gowin

DENNIS L. GOWIN, P.L.S.: LA REG. 4846
REGISTERED PROFESSIONAL LAND SURVEYOR
DGOWIN@DDGPC.COM

STATE OF LOUISIANA — DENNIS L. GOWIN — License No. 4846 PROFESSIONAL — LAND SURVEYOR





VICINITY MAP
NOT TO SCALE

BOUNDARY & TOPOGRAPHIC SURVEY

LOT D-1-B-1-A
SINGLETARY PLACE
SECTIONS 85 & 87, TOWNSHIP 7 SOUTH - RANGE 1 EAST,
GREENSBURG LAND DISTRICT
EAST BATON ROUGE PARISH, LOUISIANA

BOUNDARY & TOPOGRAPHIC SURVEY
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARISH
EXPRESS OIL CHANGE & TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA
985.249.6180
SURVEY

PROJECT NO.	24-1316
24-1316_BT_10302024-REV1.DWG	
09/12/2024	
1 ADDED SEWER LINE AND MANHOLES 12/03/2024	RPB
CHECKED	OAM
DRAWN BY	MER

SHEET NAME
1-1

S:\24-000\24-1316 EXPRESS OIL CHANGE 7 TIRE ENGINEERS\DWG\24-1316_BT_10302024-REV1.DWG

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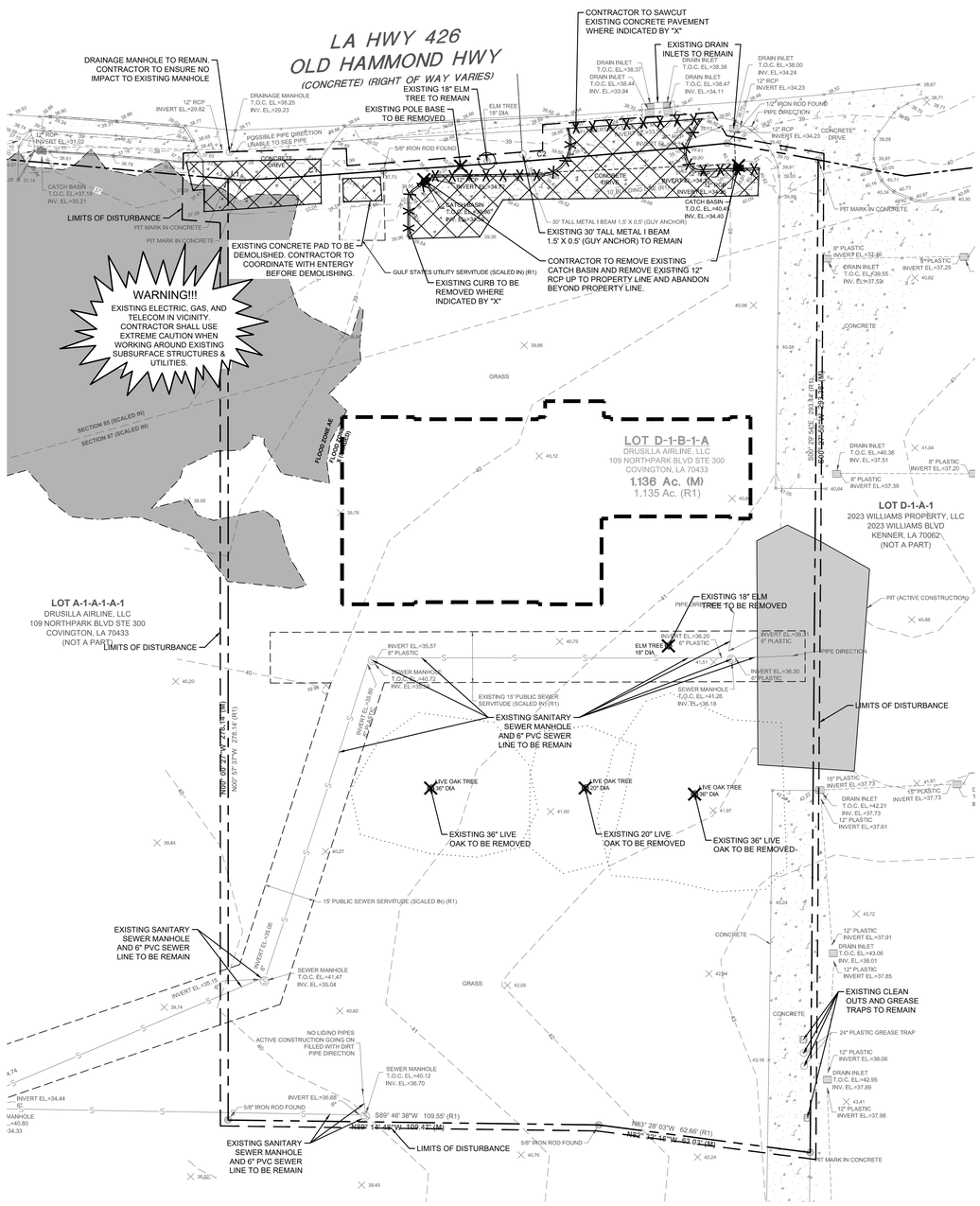

LEGEND - EXISTING

- CATCH BASIN
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LEGEND - NEW IMPROVEMENTS

- LIMITS OF DISTURBANCE
- EXISTING PAVEMENT & CURB AND GUTTER TO BE REMOVED (EXTENTS OF PAVEMENT REMOVAL TO BE VERIFIED BY CONTRACTOR AS DICTATED BY FIELD CONDITIONS)
- EXISTING CURB TO BE REMOVED
- EXISTING DRAINAGE PIPE TO BE REMOVED
- EXISTING CATCH BASIN/DROP INLET TO BE REMOVED
- EXISTING TREE TO BE REMOVED (REMOVAL INCLUDES STUMP AND ROOTS)
- LIMITS OF BUILDING
- TEMPORARY TREE PROTECTION FENCE

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DISCONNECTION OF UTILITY SERVICES TO THE EXISTING BUILDINGS AND ACCESSORY STRUCTURES PRIOR TO DEMOLITION OF THE BUILDINGS.
2. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE DISCONNECTION, REMOVAL, &/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY TO DETERMINE IF PORTIONS OF UTILITY WORK WILL BE PERFORMED BY THE UTILITY COMPANY'S FORCES & ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR UTILITY DISCONNECTION, REMOVALS/RELOCATIONS, AND PAYING ASSOCIATED FEES & CHARGES UNLESS OTHERWISE NOTED IN THE PLANS.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION & REMOVAL OF ALL BUILDINGS, STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC, TO FACILITATE THE CONSTRUCTION OF IMPROVEMENTS SHOWN ON THE REMAINING CONSTRUCTION DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS INVOLVED WITH DEMOLITION ACTIVITIES AND IS RESPONSIBLE FOR REMOVING & DISPOSAL OF THE DEBRIS IN AN APPROVED, LAWFUL MANNER. THE CONTRACTOR MAY NOT STORE DEMOLISHED MATERIAL ONSITE UNLESS APPROVED IN WRITING BY THE OWNER.
4. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO THE EXISTING ADJACENT PROPERTIES AT ALL TIMES. IF UTILITY REMOVAL &/OR RELOCATION WILL AFFECT AN ADJACENT PROPERTY OWNER, THE CONTRACTOR SHALL COORDINATE WITH AFFECTED PARTIES & UTILITY COMPANIES PRIOR TO THE RELOCATION &/OR REMOVAL OF UTILITIES. UTILITY SERVICE SHALL NOT BE INTERRUPTED WITHOUT WRITTEN APPROVAL FROM THE AFFECTED END USER.
5. ALL AREAS WHERE PAVEMENT, STRUCTURE SLABS, FOUNDATIONS, UTILITIES, CONDUITS, UTILITY STRUCTURES, AND FACILITIES HAVE BEEN REMOVED SHALL BE BACKFILLED WITH COMPACTED SELECT BACKFILL MATERIAL. SELECT FILL MATERIAL SHALL BE PLACED & COMPACTED PER THE REQUIREMENTS OF SITE PREPARATION NOTES, APPLICABLE SPECIFICATIONS & THE OWNERS GEOTECHNICAL ENGINEER.
6. EXISTING MANHOLES, DRAINAGE STRUCTURES & VALVE BOXES TO REMAIN IN PLACE SHALL BE ADJUSTED TO FINAL GRADES.
7. PRIOR TO ANY WORK ONSITE, THE CONTRACTOR SHALL CONTACT THE LOUISIANA ONE CALL SYSTEM AT 1-800-272-3020 OR 811. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY REMOVALS.
8. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY.
9. ANY DAMAGE TO EXISTING IMPROVEMENTS TO REMAIN SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. REPLACEMENT AND REPAIRS MADE SHALL BE EQUAL TO OR BETTER THAN EXISTING.
10. THE CONTRACTOR SHALL CONTACT THE OWNER AT LEAST 72-HOURS PRIOR TO BEGINNING OF DEMOLITION OPERATIONS TO ENSURE ALL SALVAGEABLE MATERIAL DESIRED BY THE OWNER IS REMOVED FROM THE SITE.
11. PRIOR TO BEGINNING DEMOLITION, CONTRACTOR SHALL LOCATE AND MARK LIMITS OF CONSTRUCTION. NO CONSTRUCTION ACTIVITIES SHALL TAKE PLACE OUTSIDE OF THOSE LIMITS.
12. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING ON SITE WITH ALL UTILITY COMPANIES IMMEDIATELY AFTER CONTRACT AWARD TO COORDINATE SCHEDULE FOR UTILITY REMOVAL AND RELOCATION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE COMPLETE SCOPE OF THE DEMOLITION PROGRAM.
14. CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE IF ANY ITEMS BE SALVAGED OR REMOVED BY OTHERS PRIOR TO DEMOLITION.
15. ADEQUATE EROSION CONTROL DEVICES MUST BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES UNLESS OTHERWISE NOTED IN THE PLANS OR APPROVED IN WRITING BY THE ENGINEER.
16. PRIOR TO THE START OF DEMOLITION AND CONSTRUCTION ACTIVITIES THE CONTRACTOR MUST CALL 811 AND THE LOCAL UTILITY PROVIDERS TO HAVE ALL UTILITIES MARKED WITHIN THE PROJECT AREA. AFTER UTILITIES ARE MARKED, THE CONTRACTOR SHALL PERFORM A PLAN IN HAND WALK THRU OF THE ENTIRE PROJECT AREA AND SHALL CONTACT THE CIVIL ENGINEER IMMEDIATELY IF THERE ARE ANY DEVIATIONS IN THE LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS AND/OR THE PRESENCE OF UTILITIES THAT ARE NOT SHOWN IN THE PLANS.

NOTE:
THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

811 Know what's **below**. **Call** before you dig.

DEMOLITION PLAN

HORIZONTAL SCALE IN FEET
20' 10' 0 20' 40' 60'

N

EXPRESS OIL - BATON ROUGE

9340 OLD HAMMOND HWY
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DDG
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985.249.6180

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 46746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO. 24-1316
PERMIT
10/31/2024

CHECKED WRK
DRAWN BY ZPP

SHEET
D-1

Z:\2024\24-1316\CIVIL\CAD\24-1316 D-1 DEMO PLAN.DWG

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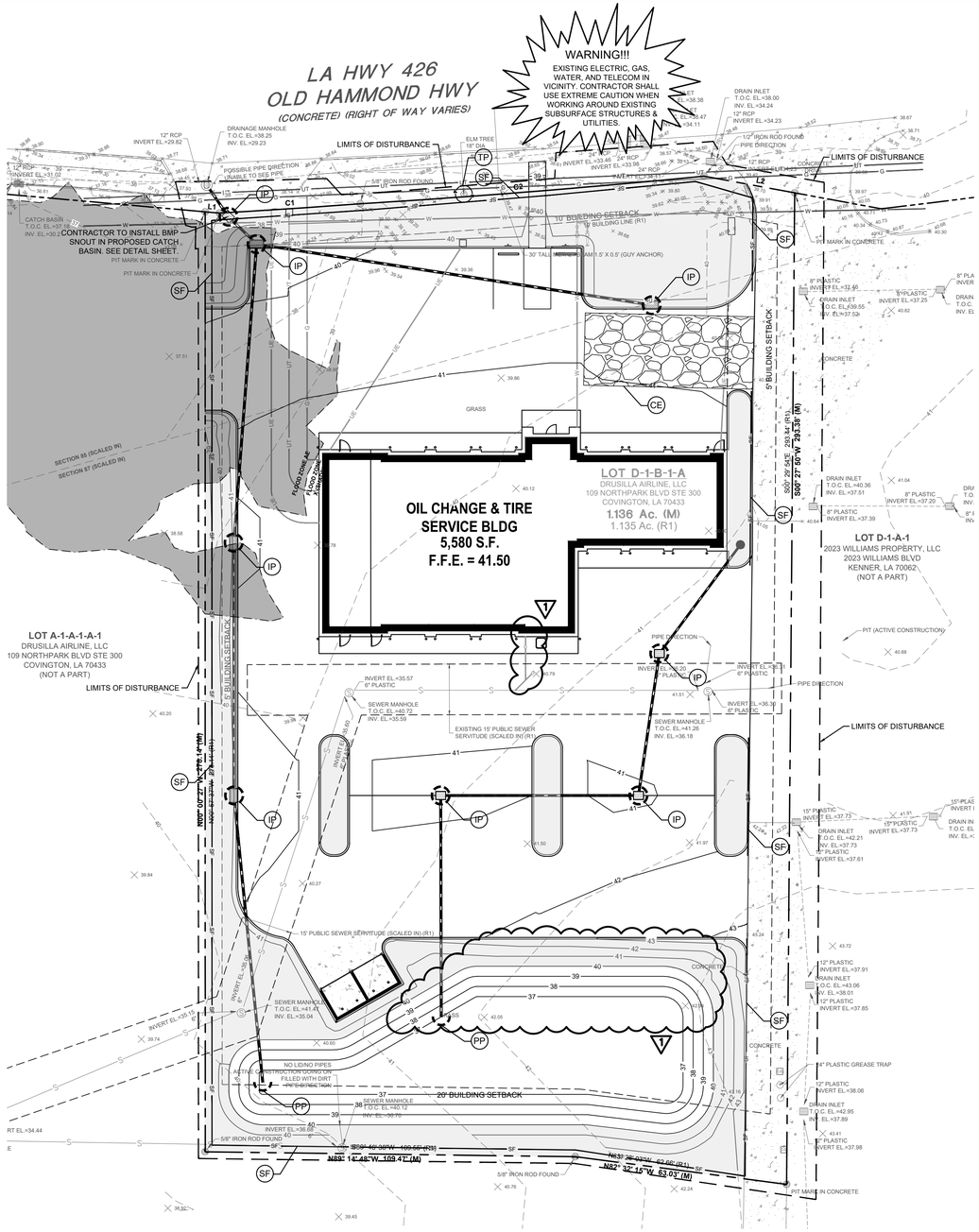

LEGEND - EXISTING

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LEGEND - NEW IMPROVEMENTS

- SF — SILT FENCE
- CE — TEMPORARY STONE CONSTRUCTION EXIT
- PR — PERMANENT RIP-RAP
- PP — OPEN PIPE PROTECTION
- IP — INLET PROTECTION
- TP — TREE PROTECTION FENCING
- LIMITS OF DISTURBANCE
- TEMPORARY SEEDING (HYDROMULCH) (SLOPES 3:1 OR GREATER SHALL BE SODDED)
- S — DIRECTION OF OVERLAND FLOW
- 17 — PROPOSED CONTOUR
- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED STORM DRAINAGE

REFERENCE SHEET ES-2 FOR DETAILS ON EROSION CONTROL MEASURES.

ACREAGE SUMMARY

TOTAL PROJECT AREA	+/- 1.14 ACRES
DISTURBED AREA	+/- 1.06 ACRES
UNDISTURBED AREA	+/- 0.08 ACRES

EROSION CONTROL NOTES:

1. SEDIMENT & EROSION CONTROL FACILITIES & STORM DRAINAGE FACILITIES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN EROSION CONTROL FACILITIES DURING THE ENTIRE CONSTRUCTION PERIOD. FACILITIES ARE NOT TO BE REMOVED UNTIL COMPLETION OF THE PROJECT.
3. ADDITIONAL DEVICES MAY BE REQUIRED AS DEEMED NECESSARY BY GOVERNING AUTHORITIES.
4. SILT FENCES SHALL BE CLEANED OR REPLACED WHEN SILT BUILDS UP TO 1' FROM THE BOTTOM OF THE FENCE.
5. EROSION CONTROL MEASURES ARE TO BE INSPECTED WEEKLY & AFTER EACH RAINFALL & REPAIRED AS NECESSARY.
6. ALL GRADED AREAS SHALL BE STABILIZED WITH A PERMANENT FAST GROWING COVER &/OR MULCH UPON COMPLETION OF GRADING OPERATIONS. COMPLETION OF GRADING OPERATIONS DOES NOT MEAN AT THE END OF THE PROJECT. AS SOON AS FINAL GRADES ARE ESTABLISHED IN AN UNPAVED AREA, THE CONTRACTOR SHALL STABILIZE WITH A TEMPORARY GRASS OR PERMANENT SOD. IF A TEMPORARY GRASS IS APPLIED, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO APPLY A PERMANENT SEED OR SOD AT THE PROPER TIME OF YEAR.
7. FILL SLOPES SHOULD BE PLANTED AS SOON AS AN AREA OF THE SITE IS BROUGHT TO FINAL GRADE. SURFACE RUNOFF SHALL BE INTERCEPTED AT THE TOP OF TEMPORARY & PERMANENT SLOPES DURING CONSTRUCTION SO THAT WATER IS NOT ALLOWED TO FLOW OVER THE SLOPE FACE.
8. THE GENERAL CONTRACTOR & THE GRADING CONTRACTOR SHALL REVIEW THEIR GRADING SEQUENCE TO INSURE THAT THE LEAST AMOUNT OF LAND POSSIBLE AT ANY ONE TIME IS DISTURBED WITHOUT PERMANENT STABILIZATION.
9. CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCES PRIOR TO ANY EARTHWORK OPERATIONS.
10. CONTRACTOR SHALL MAINTAIN SILT FENCES FOR THE DURATION OF THE PROJECT UNTIL ACCEPTED BY THE OWNER AT NO EXPENSE TO OWNER.
11. CONTRACTOR SHALL INSPECT ON A DAILY BASIS FOR NEEDED REMOVAL OF ANY ACCUMULATED SILTS, DEBRIS, OR REPAIR OF DAMAGED SILT FENCE AT NO ADDITIONAL EXPENSE TO OWNER.
12. PRIOR TO CONSTRUCTION, THE EROSION & SEDIMENT CONTROL MEASURES SHOWN HEREON SHALL BE IN PLACE. CLEARING & GRUBBING OPERATIONS WILL BE ENGAGED IN ONLY AS NECESSARY TO ALLOW THE PLACEMENT OF EROSION & SEDIMENT CONTROL MEASURES AS SHOWN HEREON UNTIL ALL SUCH MEASURES ARE IN PLACE.
13. LAND DISTURBING ACTIVITIES WILL BE KEPT TO A MINIMUM & WILL NOT EXTEND BEYOND THE LIMITS SHOWN.
14. SEDIMENT & EROSION CONTROL MEASURES WILL BE INSPECTED ON A DAILY BASIS & WILL BE REPAIRED, ADJUSTED & MAINTAINED AS NEEDED OR REQUIRED BY GOVERNING AGENCIES AT NO ADDITIONAL EXPENSE TO THE OWNER TO PROVIDE EROSION & SEDIMENT CONTROL FOR THE DURATION OF CONSTRUCTION & UNTIL ALL DISTURBED AREAS ARE STABILIZED.
15. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE "PRIME CONTRACTOR CERTIFICATION" & "THE MONTHLY INSPECTION REPORT & CERTIFICATION FORM FOR EROSION & SEDIMENT CONTROLS" LOCATED IN THE SITEWORK SPECIFICATIONS & SUBMITTING THE FORMS TO THE OFFICE OF POLLUTION CONTROL.
16. THE CONTRACTOR SHALL ALSO CONSTRUCT THE SILT FENCING AS SHOWN AT THE PERIMETER OF THE SITE PLAN PRIOR TO LAND CLEARING ACTIVITIES.
17. ALL EROSION CONTROL MEASURES EXCEPT THE REQUIRED RIP RAP ARE TEMPORARY DEVICES. THESE TEMPORARY DEVICES SHALL BE REMOVED PRIOR TO COMPLETION OF CONSTRUCTION ONCE STABILIZATION OF ALL GRASSED AREAS ARE COMPLETE.

BMP MAINTENANCE EROSION NOTES:

ALL MEASURES STATED ON THIS SITE MAP, & IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION & SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, & REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES & BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, & RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING & STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING & STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONAL AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS &/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
TEMPORARY CONSTRUCTION EXITS																		
TEMPORARY CONTROL MEASURES																		
SEDIMENT CONTROL BASINS																		
STRIP & STOCKPILE TOPSOIL																		
ROUGH GRADE																		
STORM FACILITIES																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FOUNDATION / BUILDING CONSTRUCTION																		
FINISH GRADING																		
LANDSCAPING / SEED / FINAL STABILIZATION																		

1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

NOTE:
THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

811 Know what's **below**. **Call** before you dig.

EROSION CONTROL PLAN

HORIZONTAL SCALE IN FEET
20' 10' 0 20' 40' 60'

N

EXPRESS OIL - BATON ROUGE

9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
9 8 5 . 2 4 9 . 6 1 8 0

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 46746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

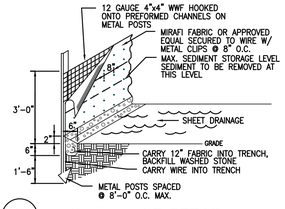
PROJECT NO.	24-1316
PERMIT	
10/31/2024	
1 12/11/24	CPS
CHECKED	WRK
DRAWN BY	ZPP

SHEET

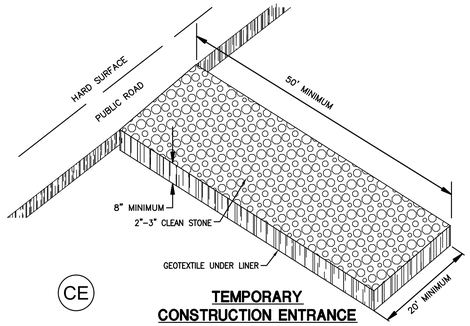
ES-1

© 2022 DUPLANTIS DESIGN GROUP, P.C.

Z:\2024\24-1316\CIVIL\CAD\24-1316 ES-1 EROSION PLAN.DWG



SF **SILT FENCE DETAIL**
N.T.S.



CE **TEMPORARY CONSTRUCTION ENTRANCE**
N.T.S.

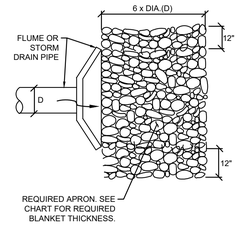
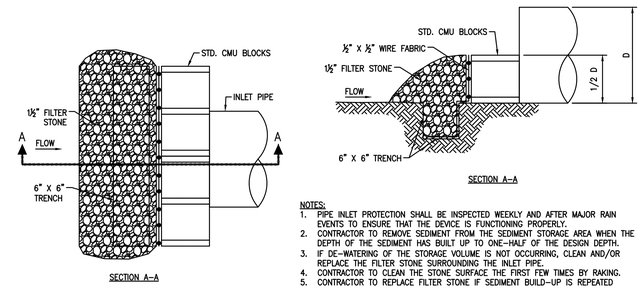


TABLE 5.11 GRADATION OF RIPRAP ROCK

NSA NUMBER	SIZE IN INCHES				
	MAX.	AVG. (1) D 50	MIN. (2)	(MIN.) BLANKET THICKNESS	FILTER STONE NSA NO. (3)
R-1	1.50	.75	(NO. 8)	2.25"	FS-1
R-2	3	1.50	1	4.5"	FS-1
R-3	6	3	2	9"	FS-2
R-4	12	6	3	18"	FS-2
R-5	18	9	5	27"	FS-2
R-6	24	12	7	36"	FS-3
R-7	30	15	12	45"	FS-3
R-8	48	24	15	72"	FS-3

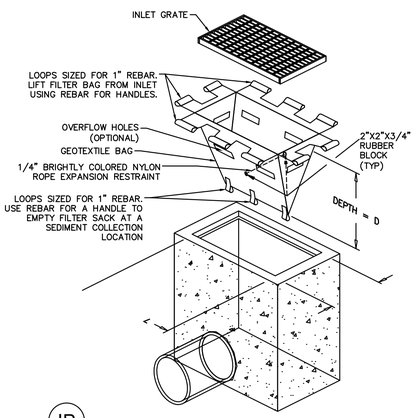
1. "AVERAGE SIZE" IS THAT SIZE EXCEEDED BY AT LEAST 50% OF THE TOTAL WEIGHT OF THE TONNAGE SHIPPED: i.e., 50% OF THE TONNAGE SHALL CONSIST OF PIECES LARGER THAN THE "AVERAGE" SIZE (NORMALLY HALF THE SPECIFIED NOMINAL TOP SIZE).
2. PIECES SMALLER THAN THE MINIMUM SIZE SHOWN SHALL NOT EXCEED 15% OF THE TONNAGE SHIPPED.
3. RIP-RAP SHALL BE GROUTED WITH A NON-SHRINKING GROUT.

PR **PERMANENT RIPRAP DETAIL**
N.T.S.



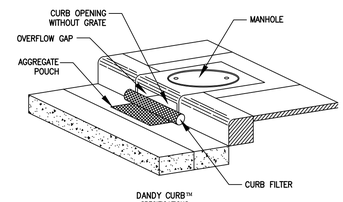
NOTES:
1. PIPE INLET PROTECTION SHALL BE INSPECTED WEEKLY AND AFTER MAJOR RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY.
2. CONTRACTOR TO REMOVE SEDIMENT FROM THE SEDIMENT STORAGE AREA WHEN THE DEPTH OF THE SEDIMENT HAS BUILT UP TO ONE-HALF OF THE DESIGN DEPTH.
3. IF DE-WATERING OF THE STORAGE VOLUME IS NOT OCCURRING, CLEAN AND/OR REPLACE THE FILTER STONE SURROUNDING THE INLET PIPE.
4. CONTRACTOR TO CLEAN THE STONE SURFACE THE FIRST FEW TIMES BY RAKING.
5. CONTRACTOR TO REPLACE FILTER STONE IF SEDIMENT BUILD-UP IS REPEATED

PP ***STORM PIPE OUTLET PROTECTION FOR 30" AND SMALLER***
N.T.S.



IP **ISOMETRIC VIEW**

INLET PROTECTION - PAVED AREAS
N.T.S.



IP

DANDY CURB™ SPECIFICATIONS

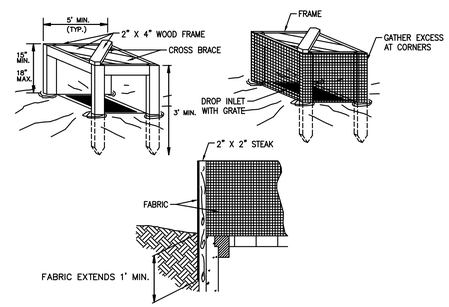
NOTE: THE DANDY CURB™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

DANDY CURB™ (SAFETY ORANGE)

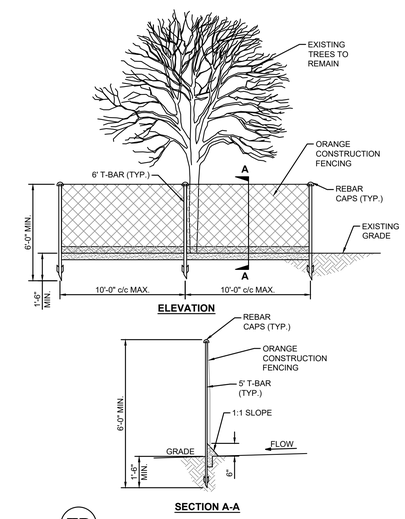
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m^2(gal/min/ft^2)	5907 (145)
Permittivity	ASTM D 4491	Sec^{-1}	2.1

*Note: All Dandy Curbs™ can be ordered with our optional oil absorbents

CURB INLET PROTECTION
N.T.S.



IP **SILT FENCE INLET PROTECTION- UNPAVED AREAS**
N.T.S.



TP **TEMPORARY TREE PROTECTION FENCING**
N.T.S.

1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN
2. GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. AN OIL ABSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1
MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

FILTER SACKS (GRATED INLETS)
N.T.S.
DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

EROSION CONTROL DETAILS

EXPRESS OIL - BATON ROUGE
9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
985.249.6180

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 45746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO. 24-1316
PERMIT
10/31/2024

CHECKED WRK
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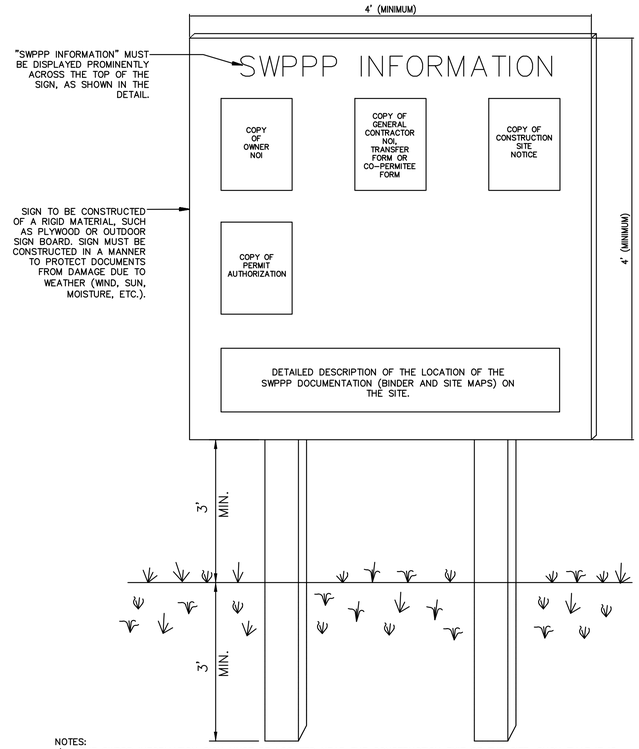


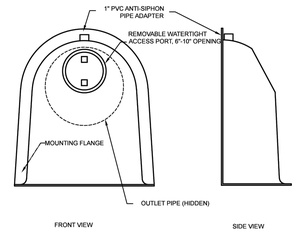
NOTES:

1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.
2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-OF-TERMINATION (NOT) IS FILED FOR THE PERMIT.
3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.
4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.
5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.

SWPPP INFORMATION SIGN

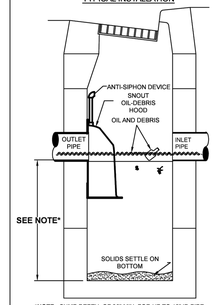
N.T.S.

CONFIGURATION DETAIL



HEAVY DUTY SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



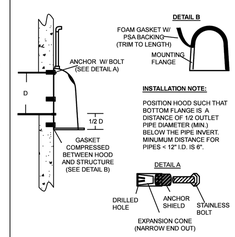
*NOTE- SUMP DEPTH OF 36" MIN. FOR UP TO 12" ID PIPE OUTLET. FOR PIPES 15" ID AND ABOVE SUMP DEPTH OF 2.5 TO 3 TIMES PIPE ID RECOMMENDED (E.G. 9 DEEP for 24" PIPE)

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 434-0277
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE LABELED "HEAVY DUTY" AND CONSTRUCTED OF A GLASS RESIN COMPOSITE WITH 1708 BIAXIAL FABRIC REINFORCEMENT AND ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.140" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
    INSTALLATION KIT SHALL INCLUDE:
    A. INSTALLATION INSTRUCTIONS
    B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
    C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
    D. 3/8" STAINLESS STEEL BOLTS
    E. ANCHOR SHIELDS

US Patent # 6126817, 7951294, 7857966, 8512556
Canada Patent # 2285146, 2690156, 2690156 others pending

INSTALLATION DETAIL



INSTALLATION NOTE:

POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HEAVY DUTY HOOD
SPECIFICATION FORCATCH BASINS
AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
HEAVY DUTY OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/15	NONE
	DRAWING NUMBER SP-SNHD	

EROSION CONTROL DETAILS

EXPRESS OIL - BATON ROUGE

9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

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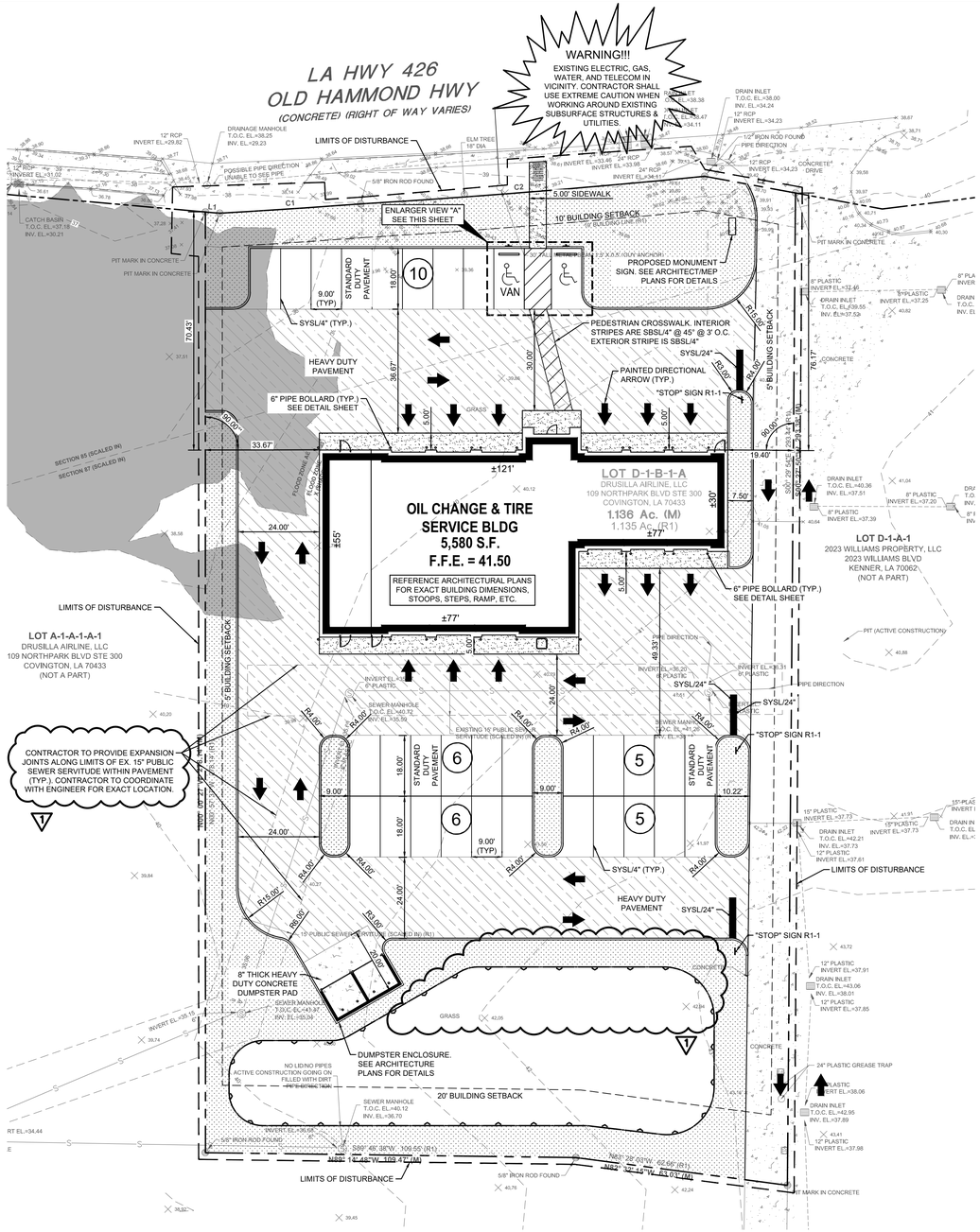


GEND - EXISTING

- CATCH BASIN
- DRAIN INLET
- ELEVATION POINT
- FOUND PROPERTY CORNER
- POWER POLE
- RIGHT OF WAY MONUMENT
- SEWER CLEANOUT
- SEWER MANHOLE
- TREE
- BUILDING LINE
- FLOOD ZONE LINE
- GROUND CONTOUR LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SECTION LINE
- SERVITUDE LINE
- TREE DRIP LINE
- CONCRETE

LEGEND - NEW IMPROVEMENTS

- SIDEWALK
- HEAVY DUTY CONCRETE DUMPSTER PAD
- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- GRASS/LANDSCAPE AREA
- FLOOD ZONE AE
- RIP RAP
- BUILDING
- CURB & GUTTER
- PARKING SPACES (10)
- DIRECTIONAL ARROWS
- LIMITS OF DISTURBANCE
- BOLLARD
- "STOP" SIGN

LEGEND - STRIPING

SWSL/4" - SINGLE WHITE SOLID LINE / 4" WIDE
DYSL/4" - DOUBLE YELLOW SOLID LINE / 4" WIDE EACH
SYSL/4" - SINGLE YELLOW SOLID LINE / 4" WIDE
SWDL/4" - SINGLE WHITE DASHED LINE / 4" WIDE
SBSL/4" - SINGLE BLUE SOLID LINE / 4" WIDE
SWSL/24" - SINGLE WHITE SOLID LINE / 24" WIDE
SWSL/8" - SINGLE WHITE SOLID LINE / 8" WIDE

AREA ANALYSIS

LOT D-1-B-1-A	±1.136 ACRES

SITE ANALYSIS

BUILDING	±5,580 S.F.
REQUIRED PARKING	27 SPACES
PROVIDED PARKING	32 SPACES
RATIO	5.73 / 1000 S.F.

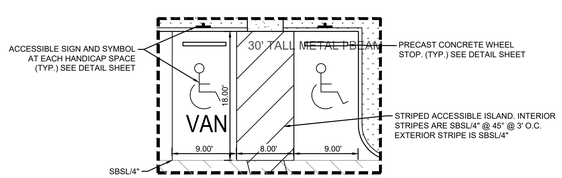
NOTE: EAST BATON ROUGE PARKING REQUIREMENTS: 3 SPACES PER BAY (3 X 9 = 27 SPACES)

SITE PLAN NOTES:

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS & DIMENSIONS OF BUILDING, ARCHITECTURE, SIDEWALKS, EXIT PORCHES, RAMPS, TRUCK DOCKS, & EXACT BUILDING UTILITY SERVICE ENTRANCE LOCATIONS AT THE BUILDING.
2. ALL UNSURFACED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH, OR SOD, & WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED AS INDICATED ON THE LANDSCAPING PLAN.
3. PROPERTY & TOPOGRAPHIC SURVEY WAS PREPARED ON 12/03/2024 BY DDG.
4. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING BENCHMARK.
5. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL FROM THE POWER & TELEPHONE COMPANIES FOR LOCATION & HEIGHT OF MONUMENT SIGN BEFORE CONDUIT & WIRING IS INSTALLED TO ENSURE PROPER CLEARANCES ARE MET.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO ALL EXISTING UTILITIES, STORM DRAINAGE, SIGNS, ETC. AS REQUIRED FOR WIDENING OF ALL ROADWAYS. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS & SHALL BE APPROVED BY SUCH.
7. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES THE CONTRACTOR MUST CALL 811 AND THE LOCAL UTILITY PROVIDERS TO HAVE ALL UTILITIES MARKED WITHIN THE PROJECT AREA. AFTER UTILITIES ARE MARKED, THE CONTRACTOR SHALL PERFORM A PLAN IN HAND WALK THRU OF THE ENTIRE PROJECT AREA AND SHALL CONTACT THE CIVIL ENGINEER IMMEDIATELY IF THERE ARE ANY DEVIATIONS IN THE LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS AND/OR THE PRESENCE OF UTILITIES THAT ARE NOT SHOWN IN THE PLANS .
8. CONTRACTOR SHALL REFER TO ARCHITECT'S PLANS & SPECIFICATIONS FOR ENTRY LOCATION OF ALL WATER, SEWER SERVICE, ELECTRICAL, TELEPHONE & GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS & ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO THE LOCATION & TIE-INS/CONNECTIONS TO THEIR FACILITIES.
9. ALL DIMENSIONS SHOWN TO BUILDING ARE TO OUTSIDE FACE OF BUILDING.
10. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS & SLABS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT BY TERRACON PROJECT NO. EH245089 DATED JULY 3, 2024.
11. ALL NECESSARY PERMITS & APPROVALS FROM AGENCIES GOVERNING THE CONSTRUCTION OF THIS WORK SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL AREAS INDICATED TO REMAIN UNDISTURBED OR TO REMAIN AS BUFFERS AND ALL PROPERTY MARKERS. CONTRACTOR SHALL REPLACE ALL PINS ELIMINATED OR DAMAGED DURING CONSTRUCTION.
13. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OR DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC., REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
14. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL UNDERGROUND UTILITIES WITH HIS WORK. ALL UNDERGROUND UTILITIES (WATER, SANITARY SEWER, STORM SEWER, ELECTRICAL CONDUIT, IRRIGATION SYSTEMS, & ANY OTHER MISC. UTILITIES) SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF BASE COURSE MATERIAL, & THE PLACEMENT OF ANY APPROPRIATE SOIL STABILIZATION TECHNIQUE.
15. CONTRACTOR SHALL MATCH EXISTING PAVEMENT IN GRADE & ALIGNMENT.
16. ALL WORK SHOWN SHALL BE DONE IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS.
17. ALL STRIPING LOCATED ON SITE SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES LATEST EDITION UNLESS OTHERWISE NOTED. STRIPING IMPROVEMENTS LOCATED WITHIN THE ROAD RIGHT OF WAY SHALL COMPLY WITH THE REQUIREMENTS OF THE JURISDICTION.
18. ANY WORK IN THE RIGHT OF WAY SHALL BE PERFORMED IN ACCORDANCE WITH LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT'S STANDARD DRAWINGS & SPECIFICATIONS.
19. CONTRACTOR SHALL REMOVE PAVEMENT & CONCRETE IN ACCORDANCE WITH LOUISIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
20. THE PROPERTIES SHOWN HEREIN LIE WITHIN ZONE AE (ELEVATION = 38') AND X (SHADED), ACCORDING TO FLOOD AREAS OF INSURANCE RATE MAPS PUBLISHED BY F.E.M.A. COMMUNITY PANEL NO. 22033C0265F DATED 06/19/2012.

SITE LAYOUT NOTES:

1. SITE AREA = +/- 1.136 ACRES.
2. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. ALL RADII ARE 5 FEET UNLESS NOTED OTHERWISE.
4. SEE DRAWING C-4 THROUGH C-7 FOR DETAILS.



ENLARGED VIEW "A"
SCALE: 1" = 10'

NOTE:

CONTRACTOR SHALL PROVIDE FREEZE PROTECTION FOR ANY SECTION OF THE FIRE OR DOMESTIC WATERLINES THAT IS LOCATED ABOVE GROUND (SUCH AS BUT NOT LIMITED TO THE ABOVE GROUND BACKFLOW PREVENTERS) BY THE USE OF HEAT TRACING. THE FREEZE PROTECTION SYSTEM SHALL INCLUDE HEAT TRACE WIRE (PENTAIR RAYCHEM 5XL1-CR), POWER CONNECTION AND END SEAL (PENTAIR RAYCHEM RAYCLIC-PC), RAYCHEM 1PT CONTROLLER (PENTAIR DIGITRACE C910-485), TEMPERATURE SENSOR (PENTAIR DIGITRACE RTD10CS AND RTD-200), ELECTRIC-TRACER LABELS (PENTAIR RAYCHEM ETL), GLASS TAPE (PENTAIR RAYCHEM GT-66), 1" THICK CLOSED CELL ELASTOMERIC FOAM INSULATION (AP/ARMAFLEX) WITH 520 ADHESIVE (ARMAFLEX), AND 0.016 THICK ALUMINUM JACKET OR AN APPROVED FREEZE PROTECTION SYSTEM EQUAL THAT'S ACCEPTABLE BY THE SFM.

NOTE:

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

811 Know what's **below.** **Call** before you dig.

SITE PLAN

HORIZONTAL SCALE IN FEET
20' 10' 0 20' 40' 60'

N

EXPRESS OIL - BATON ROUGE

9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
985.249.6180

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 46746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO.	24-1316
PERMIT	
10/31/2024	
1 12/11/24	CPS
CHECKED	WRK
DRAWN BY	ZPP

SHEET
C-1

Z:\2024\24-1316\CIVIL\CAD\24-1316 C-1 SITE PLAN.DWG

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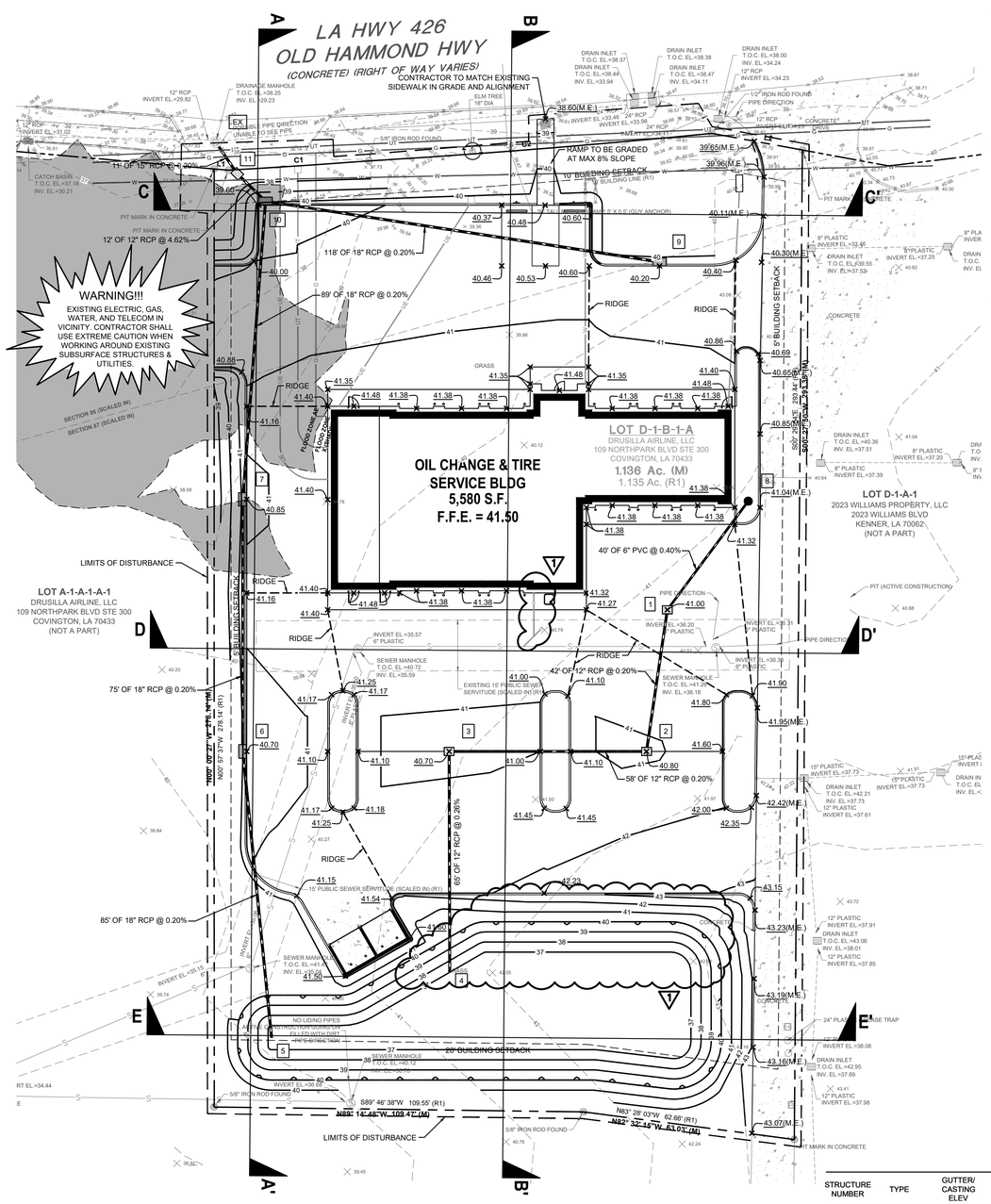

SITE PREPARATION NOTES:

1. SITE PREPARATION
PRIOR TO PLACING FILL, THE EXISTING DEBRIS, VEGETATION, TOPSOIL, ROOT MATS, AND LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIAL SHOULD BE REMOVED. COMPLETE STRIPPING OF THE TOPSOIL SHOULD BE PERFORMED IN THE PROPOSED BUILDING AND PARKING/DRIVEWAY AREAS. TOPSOIL MEASUREMENTS WERE MADE AT THE BORING LOCATIONS; HOWEVER, STRIPPING DEPTHS BETWEEN OUR BORING LOCATIONS AND ACROSS THE SITE COULD VARY CONSIDERABLY. AS SUCH WE RECOMMEND ACTUAL STRIPPING DEPTHS BE EVALUATED BY A REPRESENTATIVE OF TERRACON DURING CONSTRUCTION TO AID IN PREVENTING REMOVAL OF EXCESS MATERIAL. EVIDENCE OF DEBRIS WAS OBSERVED ON THE PREVIOUSLY DEVELOPED/CLEARED SITE. ADDITIONAL DEBRIS, BURIED FOUNDATIONS, OLD FILLS OR UNDERGROUND FACILITIES (SUCH AS SEPTIC TANKS, UTILITIES) COULD BE ENCOUNTERED DURING CONSTRUCTION CLEARING AND SHOULD BE FURTHER INVESTIGATED. SUCH FEATURES SHOULD BE REMOVED, AND THE EXCAVATION THOROUGHLY CLEANED PRIOR TO BACKFILL PLACEMENT AND COMPACTION.
2. SUBGRADE PREPARATION
AFTER STRIPPING THE SITE, MOISTURE CONDITIONING SHOULD BE PERFORMED IN STRUCTURAL AREAS IN THE TOP 2 FEET. THESE SOILS SHOULD MOISTURE CONDITIONED, COMPACTED IN LIFTS WITH DENSITY TESTING. WHERE FAT CLAY SOILS ARE ENCOUNTERED THEY SHOULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL. AREAS NOT MOISTURE CONDITIONED, THE SUBGRADE SHOULD BE PROOFROLLED WITH AN ADEQUATELY LOADED RUBBER TIRE VEHICLE SUCH AS A PARTIALLY-LOADED TANDEM-AXLE DUMP TRUCK OR LOADED SCRAPER. THE VEHICLE SHOULD WEIGH BETWEEN 15 AND 20 TONS (TOTAL VEHICLE WEIGHT). THE PROOFROLLING SHOULD BE PERFORMED UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER OR REPRESENTATIVE. AREAS EXCESSIVELY DEFLECTING UNDER THE PROOFROLL SHOULD BE DELINEATED AND SUBSEQUENTLY ADDRESSED BY THE GEOTECHNICAL ENGINEER. IF UNSTABLE SUBGRADE IS ENCOUNTERED AFTER INITIAL TOPSOIL STRIPPING, MITIGATION SHOULD BE PERFORMED AS DESCRIBED IN THE **SOIL STABILIZATION** SECTION. UNSTABLE, ISOLATED AREAS COULD EITHER BE REMOVED OR MODIFIED BY TREATING WITH LIME OR CEMENT AS SPECIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. EXCESSIVELY WET OR DRY MATERIAL SHOULD EITHER BE REMOVED OR MOISTURE CONDITIONED AND RECOMPACTED.
3. SOIL STABILIZATION
CONSTRUCTION PERFORMED DURING WET SEASONS MAY REQUIRE STABILIZATION . METHODS OF SUBGRADE IMPROVEMENT, AS DESCRIBED BELOW, COULD INCLUDE SCARIFICATION, DRYING AND RECOMPACTION, CHEMICAL STABILIZATION OR REMOVAL OF UNSTABLE MATERIALS AND REPLACEMENT WITH STRUCTURAL FILL. THE APPROPRIATE METHOD OF IMPROVEMENT, IF REQUIRED, W OULD BE DEPENDENT ON FACTORS SUCH AS SCHEDULE, WEATHER, AVAILABILITY AND COSTS OF MATERIALS, THE SIZE OF AREA TO BE STABILIZED, AND THE NATURE OF THE INSTABILITY. MORE DETAILED RECOMMENDATIONS CAN BE PROVIDED DURING CONSTRUCTION AS THE NEED FOR SUBGRADE STABILIZATION OCCURS. PERFORMING SITE GRADING OPERATIONS DURING WARM SEASONS AND DRY PERIODS WOULD HELP REDUCE THE AMOUNT OF SUBGRADE STABILIZATION REQUIRED. IF THE EXPOSED SUBGRADE IS UNSTABLE DURING PROOFROLLING OPERATIONS, IT COULD BE STABILIZED USING ONE OF THE METHODS OUTLINED BELOW **SCARIFICATION AND RECOMPACTION** - IT MAY BE FEASIBLE TO SCARIFY, DRY, AND RECOMPACT THE EXPOSED LEAN CLAY SOILS IN UNSTABLE AREAS THAT WERE OBSERVED DURING PROOFROLLING. THE UPPER MAXIMUM 12 INCHES OF NATIVE SUBGRADE SHOULD BE PROCESSED BY FREQUENT WINDROWING WITH A DOZER OR PLOWING WITH A SET OF HEAVY DUTY DISC HARROWS FOR AT LEAST THREE WORKING DAYS TO ACHIEVE STABLE CONDITIONS FOR FILL PLACEMENT BEFORE CONSIDERATION OF OTHER MITIGATION APPROACHES. THE WINDROWING AND DRYING EFFORT SHOULD BE PERFORMED DURING A PERIOD WITH AT LEAST TWO DAYS FORECASTED TO BE DRY. THE PROCESSED AREAS SHOULD BE SEALED WITH THE DOZER AT THE END OF THE DAY IN CASE OF OVERNIGHT RAIN. STABILIZING SUBGRADES BY DRYING LIKELY WOULD NOT BE ACHIEVABLE IF THE THICKNESS OF THE UNSTABLE SOIL IS GREATER THAN ABOUT 1 TO 2 FEET, IF THE UNSTABLE SOIL IS AT GROUNDWATER LEVELS, OR IF CONSTRUCTION IS PERFORMED DURING A PERIOD OF WET OR COOL WEATHER WHEN DRYING IS DIFFICULT.
- **CHEMICAL TREATMENT** - FOR HIGHER PLASTICITY OR WET, UNSTABLE SURFICIAL SOILS, IT MAY BE PRUDENT TO CONSIDER SPECIFYING CHEMICAL TREATMENT OF CRITICAL PROJECT ACCESS ROADS, BUILDING PADS AND CONSTRUCTION LAYDOWN AREAS AS PART OF THE CONSTRUCTION PACKAGE TO REDUCE POTENTIAL WEATHER-RELATED DELAYS. FOR THE TYPICAL NEAR SURFACE LEAN CLAY SOILS AT THIS SITE, TREATMENT OF THE SUBGRADE WITH MINIMUM 3% QUICK LIME OR 6% HYDRATED LIME BY VOLUME TO A DEPTH OF 12 INCHES SHOULD PROVIDE FOR A MORE WEATHER RESISTANT SUBGRADE OF THESE CRITICAL AREAS DURING THE CONSTRUCTION PHASE. THE HAZARDS OF AIRBORNE PARTICLES DURING MIXING BLOWING ACROSS THE SITE OR ONTO ADJACENT PROPERTY SHOULD BE CONSIDERED. ADDITIONAL TESTING COULD BE NEEDED TO DEVELOP SPECIFIC RECOMMENDATIONS ON DETERMINING THE MOST SUITABLE STABILIZING AGENT AND OPTIMUM AMOUNTS REQUIRED TO IMPROVE SUBGRADE STABILITY BY BLENDING WITH THE SITE SOILS.
- **UNDERCUT AND REPLACEMENT -** SMALL SOFT AREAS, DEBRIS OR DEBRIS DUMP PITS COULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL. IF EXCAVATION TO REMOVE WEAK SOILS BECOMES EXCESSIVE (MORE THAN 4-5 FEET) IN PAVEMENT AREAS, PLACEMENT OF A HIGH PERFORMANCE WOVEN GEOTEXTILE FABRIC (MIRAFI RS380I WOVEN FABRIC, OR EQUIVALENT) IS RECOMMENDED TO ASSIST IN BRIDGING OVER AREAS OF SOFT SUBGRADE. THE GEOTEXTILE SHOULD BE PLACED WITH A MINIMUM OVERLAP OF 24 INCHES AT ALL JOINTS WITH THE OVERLAP PLACED IN THE INTENDED DIRECTION OF FILL PLACEMENT. THE FILL SHOULD BE SPREAD ONTO THE GEOTEXTILE WITH A SMALL DOZER TO LIMIT THE DISTURBANCE OF UNDERLYING CLAY SOIL. A CLEAN SAND (MAXIMUM 10% PASSING THE NO. 200 SIEVE) IS RECOMMENDED FOR THE INITIAL MINIMUM 3 FEET OF FILL PLACEMENT TO FACILITATE COMPACTION AND DEWATERING EFFORTS. A LEAN CLAY FILL CAN BE USED TO CAP OUT THE FILL PLACEMENT. THE INITIAL LIFT OF FILL MATERIAL SHOULD BE PLACED AND COMPACTED TO ACHIEVE AT LEAST 92 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. SOME SLIGHT PUMPING MAY BE OBSERVED IN THIS INITIAL LIFT. SUBSEQUENT LIFTS OF FILL MATERIAL SHOULD BE PLACED AS RECOMMENDED IN THE COMPACTION REQUIREMENTS TABLE. FURTHER EVALUATION OF THE NEED AND RECOMMENDATIONS FOR SUBGRADE STABILIZATION CAN BE PROVIDED DURING CONSTRUCTION AS THE GEOTECHNICAL CONDITIONS ARE EXPOSED.

EXISTING STORAGE BELOW BFE (38')	PROPOSED STORAGE BELOW BFE (38')
17.412 CU. YD.	127.231 CU. YD.

4. FILL MATERIAL TYPES
FILL REQUIRED TO ACHIEVE DESIGN GRADE SHOULD BE CLASSIFIED AS STRUCTURAL FILL AND GENERAL FILL. STRUCTURAL FILL IS MATERIAL USED BELOW, OR WITHIN 10 FEET OF STRUCTURES, PAVEMENTS OR CONSTRUCTED SLOPES AND OTHER STRUCTURAL AREAS. GENERAL FILL IS MATERIAL USED TO ACHIEVE GRADE OUTSIDE OF THESE AREAS, SUCH AS LANDSCAPED AREAS. **REUSE OF ON-SITE SOIL:** EXCAVATED ON-SITE LEAN CLAY SOIL MAY BE SELECTIVELY REUSED AS STRUCTURAL FILL BELOW FOUNDATIONS, PAVEMENTS AND LANDSCAPING AREAS. EXCAVATED ON-SITE FAT CLAY SOIL IS NOT SUITABLE FOR REUSE AS STRUCTURAL FILL WITHOUT LIME TREATMENT DUE TO DIFFICULT COMPACTION CHARACTERISTICS, STABILITY ISSUES AT HIGHER MOISTURES AND SHR INK/SWELL POTENTIAL. IT CAN BE USED AS BACKFILL IN THE LANDSCAPE AREAS WITHOUT LIME TREATMENT. CH SOILS SHOULD NOT BE USED WITHIN 3 FEET OF FINISHED GRADE IN BUILDING AREAS AND 1 FOOT BELOW FINISHED GRADE IN OTHER STRUCTURAL FILL AREAS. MATERIAL PROPERTY REQUIREMENTS FOR ON-SITE LEAN CLAY SOIL FOR USE AS GENERAL FILL AND STRUCTURAL FILL ARE NOTED IN THE TABLE BELOW.

Property	General Fill	Structural Fill
Composition	Free of deleterious material	Free of deleterious material
Sand content	Not limited	Maximum 25% retained on No. 200 sieve
Plasticity	Liquid Limit less than 50, Plasticity index greater than 10 and less than 30	
Geotechnical Layer Expected to be Suitable [1]	2, 3	2 (after moisture conditioning) or 3

1. BASED ON SUBSURFACE EXPLORATION. ACTUAL MATERIAL SUITABILITY SHOULD BE DETERMINED IN THE FIELD AT TIME OF CONSTRUCTION.

IMPORTED FILL MATERIALS: IMPORTED FILL MATERIALS SHOULD MEET THE FOLLOWING MATERIAL PROPERTY REQUIREMENTS. REGARDLESS OF ITS SOURCE, COMPACTED FILL SHOULD CONSIST OF APPROVED MATERIALS THAT ARE FREE OF ORGANIC MATTER AND DEBRIS.

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
Low Plasticity Soil	CL, SC	Liquid Limit less than 45, Plasticity index greater than 10 and less than 25
Imported Sand	SP, SP-SM	Less than 15% Passing No. 200 sieve
Soil Type [1]	**USCS Classification**	**Acceptable Parameters (for Structural Fill)**
Aggregate Base	GP, GM	LADOTD No. 610 Crushed Limestone or similarly graded crushed recycled concrete. [2]

1. STRUCTURAL AND GENERAL FILL SHOULD CONSIST OF APPROVED MATERIALS FREE OF ORGANIC MATTER AND DEBRIS. A SAMPLE OF EACH MATERIAL TYPE SHOULD BE SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR EVALUATION PRIOR TO USE ON THIS SITE. ADDITIONAL GEOTECHNICAL CONSULTATION SHOULD BE PROVIDED PRIOR TO USE OF UNIFORMLY GRADED GRAVEL ON THE SITE.
2. MATERIALS SHOULD MEET THE REQUIREMENTS OF LSSRB SECTION 1033.03.

5. FILL PLACEMENT COMPACTION REQUIREMENTS
STRUCTURAL AND GENERAL FILL SHOULD MEET THE FOLLOWING COMPACTION REQUIREMENTS.

Item	Structural Fill	General Fill
Maximum Lift Thickness	9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used. 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used.	Same as structural fill
Minimum Compaction Requirements [1,2,3]	95% of max. below foundations, floor slabs, and finished pavement subgrade. 100% of maximum dry density for aggregate base beneath pavement.	92% of max.
Water Content Range [1]	Low plasticity cohesive: 0% to +3% of optimum High plasticity cohesive: 0 to +4% of optimum Granular; 0% to +3% of optimum	As required to achieve min. compaction requirements.

1. MAXIMUM DENSITY AND OPTIMUM WATER CONTENT AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D 698).
2. HIGH PLASTICITY COHESIVE FILL SHOULD NOT BE COMPACTED TO MORE THAN 100% OF STANDARD PROCTOR MAXIMUM DRY DENSITY.
3. IF THE GRANULAR MATERIAL IS A COARSE SAND OR GRAVEL, OR OF A UNIFORM SIZE, OR HAS A LOW FINES CONTENT, COMPACTION COMPARISON TO RELATIVE DENSITY MAY BE MORE APPROPRIATE. IN THIS CASE, GRANULAR MATERIALS SHOULD BE COMPACTED TO AT LEAST 70% RELATIVE DENSITY (ASTM D 4253 AND D 4254). MATERIALS NOT AMENABLE TO DENSITY TESTING SHOULD BE PLACED, COMPACTED AND CONDITIONED AT WORKABLE MOISTURE LEVELS TO A STABLE CONDITION OBSERVED WITHOUT PUMPING WHEN PROOFROLLING BY THE GEOTECHNICAL ENGINEER OR REPRESENTATIVE.

6. UTILITY TRENCH BACKFILL
ANY SOFT OR UNSUITABLE MATERIALS ENCOUNTERED AT THE BOTTOM OF UTILITY TRENCH EXCAVATIONS SHOULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL OR BEDDING MATERIAL IN ACCORDANCE WITH LADOTD OR LOCAL PUBLIC WORKS SPECIFICATIONS FOR THE UTILITY TO BE SUPPORTED. THIS RECOMMENDATION IS PARTICULARLY APPLICABLE TO UTILITY WORK REQUIRING GRADE CONTROL AND/OR IN AREAS WHERE SUBSEQUENT GRADE RAISING COULD CAUSE SETTLEMENT IN THE SUBGRADE SUPPORTING THE UTILITY. TRENCH EXCAVATION SHOULD NOT BE CONDUCTED BELOW A DOWNWARD 1:1 PROJECTION FROM EXISTING FOUNDATIONS WITHOUT ENGINEERING REVIEW OF SHORING REQUIREMENTS AND GEOTECHNICAL OBSERVATION DURING CONSTRUCTION.ON-SITE MATERIALS ARE CONSIDERED SUITABLE FOR BACKFILL COVER OF UTILITY AND PIPE TRENCHES, PROVIDED THE MATERIAL IS FREE OF ORGANIC MATTER AND DELETERIOUS SUBSTANCES. TRENCH BACKFILL SHOULD BE MECHANICALLY PLACED AND COMPACTED AS DISCUSSED EARLIER IN THIS REPORT. COMPACTION OF INITIAL LIFTS SHOULD BE ACCOMPLISHED WITH HAND -OPERATED TAMPERS OR OTHER LIGHTWEIGHT COMPACTORS. WHERE TRENCHES ARE PLACED BENEATH SLABS OR FOOTINGS, THE BACKFILL SHOULD SATISFY THE GRADATION AND EXPANSION INDEX REQUIREMENTS OF STRUCTURAL FILL DISCUSSED IN THIS REPORT. FLOODING OR JETTING FOR PLACEMENT AND COMPACTION OF BACKFILL IS NOT RECOMMENDED.

GRADING NOTES:

1. TOPOGRAPHIC INFORMATION WAS TAKEN FROM THE TOPOGRAPHIC SURVEY INCLUDED AS PART OF THESE CONSTRUCTION DOCUMENTS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THE CONTRACTOR SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR & SUBMIT IT TO THE OWNER FOR REVIEW AND APPROVAL.
2. EXISTING AND/OR PROPOSED GRADE CONTOURS ARE SHOWN AT ONE FOOT (1') INTERVALS.
3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION &/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES & WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE REQUIRED IMPROVEMENTS SHOWN ON THE PLANS.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES & NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
5. CONTRACTOR SHALL VERIFY HORIZONTAL & VERTICAL LOCATION OF ALL EXISTING STORM SEWER STRUCTURES, PIPES, & ALL UTILITIES PRIOR TO CONSTRUCTION. PRIOR TO ORDERING STORM DRAIN STRUCTURES, THE CONTRACTOR SHALL VERIFY THE INVERT OF THE EXISTING STORM DRAIN SYSTEM AT THE TIE IN POINT(S) AND NOTIFY THE CIVIL ENGINEER OF ANY DEVIATION TO WHAT IS SHOWN ON THE PLANS.
6. CLEARING & GRUBBING LIMITS SHALL INCLUDE ALL AREAS DISTURBED BY GRADING OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UNDISTURBED AREAS, ALL PROPERTY CORNERS & REPLACING ALL PROPERTY CORNER MARKERS ELIMINATED OR DAMAGED DURING CONSTRUCTION.
7. THE EARTHWORK FOR ALL PAVEMENT AREAS OUTSIDE OF THE BUILDING FOUNDATIONS & SLABS SHALL BE IN ACCORDANCE WITH THE SITE PREPARATION NOTES.
8. THE EARTHWORK FOR THE BUILDING FOUNDATION AND UP TO 5' BEYOND SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT NO. EH245089 PREPARED BY TERRACON, DATED JULY 3, 2024.
9. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARD OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION & TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, & OTHER MEANS OF PROTECTION, THIS TO INCLUDE BUT NOT LIMITED TO, ACCESS & EGRESS FROM ALL EXCAVATION & TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
10. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING VERTICAL CONTROL INCLUDING THE SETTING OF CONSTRUCTION BENCHMARKS.
11. DUE TO CONTINUAL CHANGES TO FLOOD MAPS THE CONTRACTOR SHALL CONTACT THE PERMIT AUTHORITY PRIOR TO THE START OF CONSTRUCTION AND CONFIRM THE NEED (OR LACK OF) FOR AN ELEVATION CERTIFICATE AND SHALL NOTIFY THE OWNER AND CIVIL ENGINEER IF THE MINIMUM REQUIRED FINISH FLOOR ELEVATION OF THE BUILDING IS HIGHER THAN WHAT IS SHOWN ON THE PLANS.
12. ADEQUATE DRAINAGE MEASURES MUST BE ESTABLISHED, MAINTAINED, AND TEMPORARILY ADJUSTED AS NEEDED THROUGHOUT CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES AND PREVENT ACCUMULATION OF SURFACE WATER. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SUBGRADE CONDITIONS AND PROTECTING THE CONDITION OF PREVIOUSLY PERFORMED EARTHWORK.
13. DEWATERING: GROUNDWATER LEVELS CAN FLUCTUATE DEPENDING ON TIME OF YEAR. THE CONTRACTOR SHALL INCLUDE PROVISIONS IN THEIR BASE BID FOR WATER CONTROL DURING CONSTRUCTION INCLUDING (BUT NOT LIMITED TO) DEEP EXCAVATIONS, DEMOLITION, PROOF ROLLING ACTIVITIES, FOUNDATION/FOOTING WORK, PLACEMENT OF FILL, AND INSTALLATION OF SUB-SURFACE IMPROVEMENTS.
15. GEOTECHNICAL REPORT NO. EH245089 PREPARED BY TERRACON IS CONSIDERED A PART OF THIS DOCUMENT. THE CONTRACTOR MUST REVIEW IT FOR CONSTRUCTION REQUIREMENTS. IF DIFFERENCES ARE NOTED BETWEEN THESE PLANS AND THE GEOTECHNICAL REPORT, REQUIREMENTS OUTLINED IN THE GEOTECHNICAL REPORT WILL GOVERN. THE CONTRACTOR MUST CONTACT THE OWNER, CIVIL ENGINEER AND GEOTECHNICAL ENGINEERING FIRM AND INFORM THE OF ALL DISCREPANCIES AND PLAN MODIFICATIONS.

STORM DRAINAGE NOTES:

1. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE SEALED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
2. ALL PIPES & STRUCTURES ON STREET RIGHT-OF-WAY SHALL BE PER LOUISIANA DEPARTMENT OF TRANSPORTATION STANDARDS & SPECIFICATIONS.
3. REFERENCE DETAIL SHEETS FOR CONSTRUCTION DETAILS.

PIPE NOTES:

IN THE DRAINAGE CHART, THE "PIPE TYPE" COLUMN DEFINES THE SIZE & MATERIAL TYPE OF THE PIPE. WHERE A SPECIFIC PIPE TYPE IS CALLED FOR, THAT SPECIFIC PIPE TYPE MUST BE UTILIZED. WHERE AN ASTERISK (*) IS SPECIFIED ,THE CONTRACTOR MAY UTILIZE ANY ONE OF THE PIPE TYPES LISTED BELOW. THE #'S LISTED REFER TO THE FOLLOWING PIPE TYPES:

1. REINFORCED CONCRETE PIPE (RCP/RCPA)
2. ADS HIGH PERFORMANCE POLYPROPYLENE (PP) PIPE (ADS HP STORM)
3. POLYVINYL CHLORIDE PIPE (PVC)

NOTES:
1. ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND THE LATEST EDITION OF THE LOUISIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. WHERE DISCREPANC EXISTS BETWEEN SPECIFICATIONS, THE MORE STRINGENT SHALL BE ADHERED TO.
2. THE CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS ON ALL RUNS OF PIPE THAT DO NOT UTILIZE CONCRETE PIPE. BUOYANCY CALCULATIONS SHALL BE PREPARED, SIGNED, & SEALED BY A REGISTERED ENGINEER, SHALL REPRESENT ACTUAL FIELD CONDITIONS, & SHALL DEMONSTRATE THAT THE PIPE UTILIZED WILL NOT BECOME BUOYANT UNDER ANY CONDITIONS. THE CONTRACTOR MAY ELECT TO PROVIDE A RESTRAINING SYSTEM, DESIGNED BY A REGISTERED ENGINEER, ADEQUATE TO RESIST BUOYANT FORCES WHERE NECESSARY.

STRUCTURE TYPES:

DRAINAGE STRUCTURES SHALL BE PRECAST OR CAST-IN-PLACE CONCRETE IN ACCORDANCE WITH DOTD REQUIREMENTS AS FOLLOWS:
AREA INLETS CB-01 (PIPE SIZE 36" & SMALLER)
CB-02 (PIPES LARGER THAN 36")
MANHOLES RCB-11 MOD.
MANHOLES FLUMES SEE DETAIL SHEET
ALL INLET FRAMES & GRATES SHALL BE VULCAN FOUNDRY CORP. CATALOG #V-4863 OR EQUAL.

LEGEND - EXISTING

- CATCH BASIN
- DRAIN INLET
- ELEVATION POINT
- FOUND PROPERTY CORNER
- POWER POLE
- RIGHT OF WAY MONUMENT
- SEWER CLEANOUT
- SEWER MANHOLE
- TREE
- BUILDING LINE
- FLOOD ZONE LINE
- GROUND CONTOUR LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SECTION LINE
- SERVITUDE LINE
- TREE DRIP LINE
- CONCRETE

LEGEND - NEW IMPROVEMENTS

- SUBSURFACE DRAINAGE
- AREA INLET
- CURB INLET
- CONTOUR (12)
- SWALE
- SPOT ELEVATION (× 12.00)
- SPOT ELEVATION (MATCH EXISTING) (× 12.00 M.E.)
- SLOPE (–S–)
- STRUCTURE NUMBER (#)
- PERMANENT RIP RAP

STRUCTURE TABLE

STRUCTURE NUMBER	TYPE	GUTTER/ CASTING ELEV	INVERT IN	ELEVATION OUT	PIPE LENGTH	PIPE TYPE	PIPE SLOPE
1 1-2	AREA INLET	41.00	37.37 (8)	37.37 (2)	42'	12" RCP	0.20%
2 2-3	AREA INLET	40.80	37.29 (1)	37.29 (3)	58'	12" RCP	0.20%
3 3-4	AREA INLET	40.70	37.17 (2)	37.17 (4)	65'	12" RCP	0.26%
4	OPEN PIPE		37.00 (3)				
5 5-6	OPEN PIPE			36.50 (6)	85'	18" RCP	0.20%
6 6-7	CURB INLET	40.70	36.33 (5)	36.33 (7)	75'	18" RCP	0.20%
7 7-10	CURB INLET	40.85	36.18 (6)	36.18 (10)	89'	18" RCP	0.20%
8 8-1	MANHOLE	41.25		37.53 (1)	40'	6" PVC	0.40%
9 9-10	CURB INLET	40.20		36.76 (10)	118'	18" RCP	0.20%
10 10-11	CURB INLET	39.60	36.00 (7) 36.52 (9)	36.52 (11)	12'	12" RCP	4.62%
11 11-EX	AREA INLET	37.75	35.98 (10)	32.98 (EX)	11'	15" RCP	0.20%
EX	MANHOLE	38.12	32.96 (11)				

NOTE: REFER TO SEE C-2.1 FOR GRADING CROSS SECTIONS

NOTE:
THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

811 Know what's **below**. **Call** before you dig.

GRADING PLAN

HORIZONTAL SCALE IN FEET
20' 10' 0 20' 40' 60'

N

EXPRESS OIL - BATON ROUGE

9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
9 8 5 . 2 4 9 . 6 1 8 0

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 40746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO. 24-1316
PERMIT
10/31/2024
▽ 12/11/24 CPS

CHECKED WRK
DRAWN BY ZPP

SHEET
C-2

Z:\2024\24-1316\CIVIL\CAD\24-1316 C-2 GRADING PLAN.DWG

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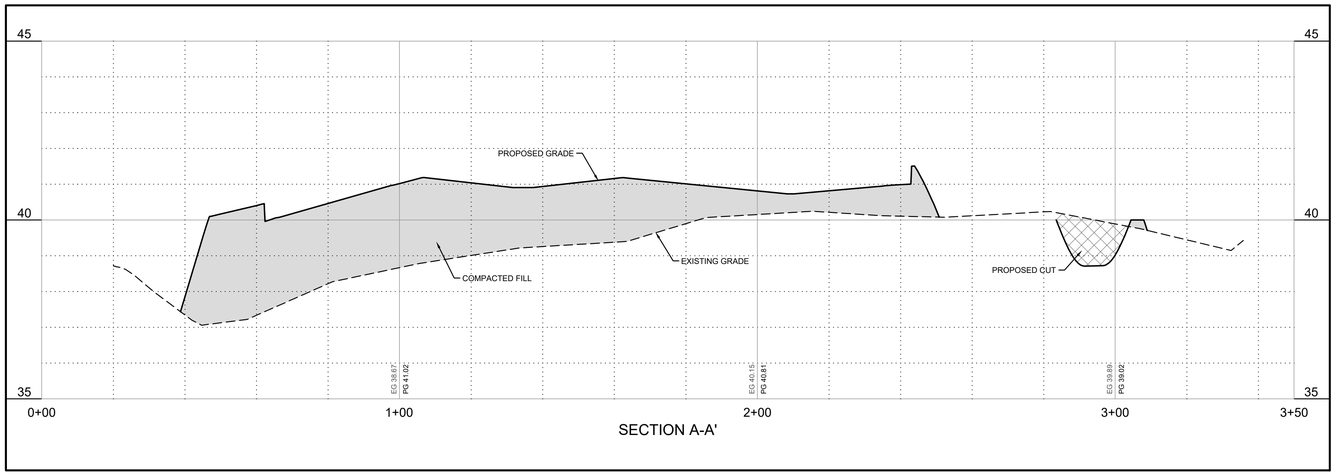
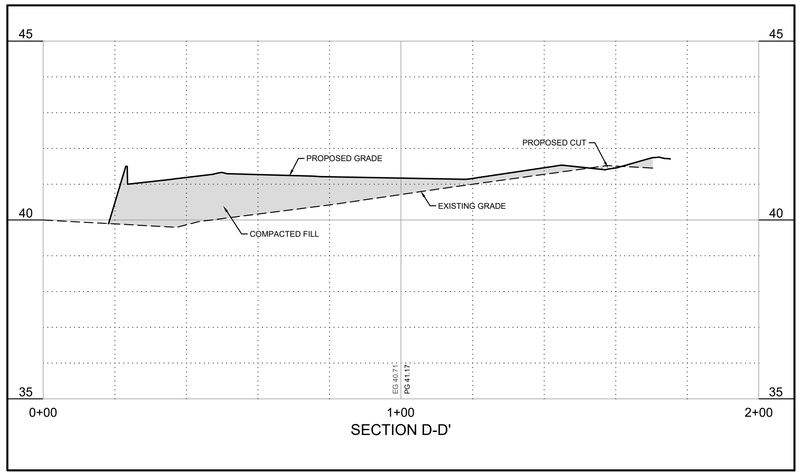
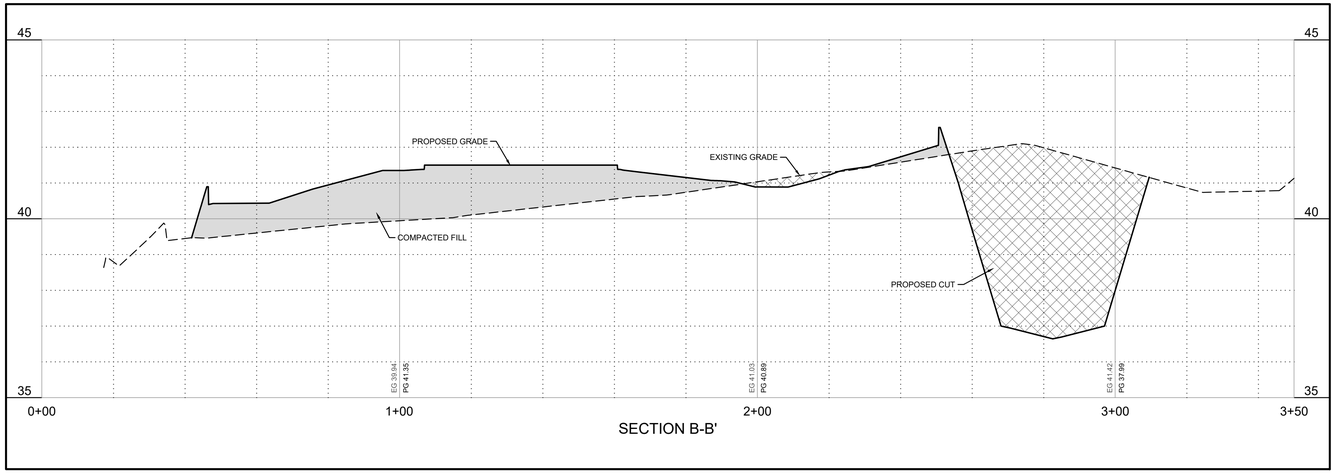


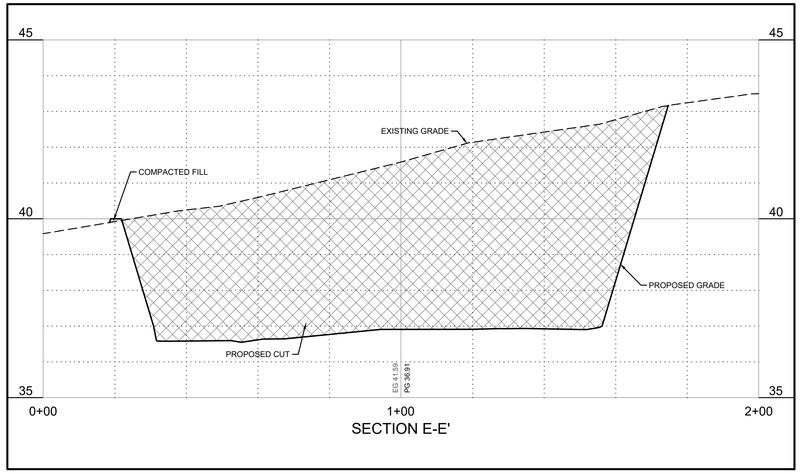
SECTION A-A'



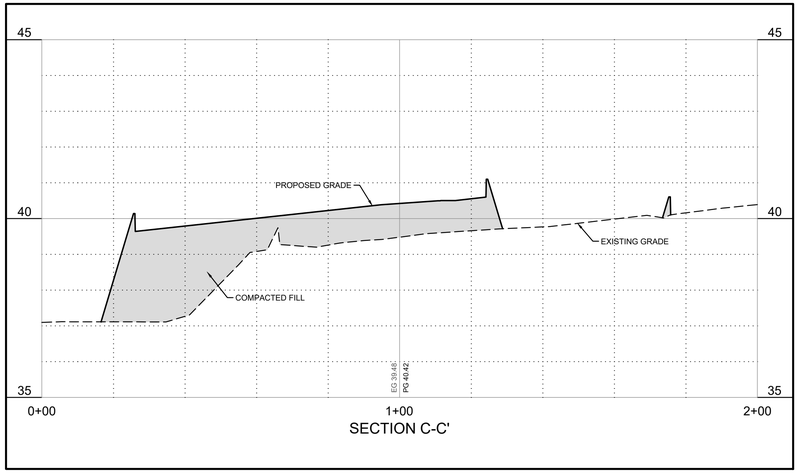
SECTION D-D'



SECTION B-B'



SECTION E-E'



SECTION C-C'

GRADING CROSS SECTIONS

HORIZONTAL SCALE IN FEET

20' 10' 0 20' 40' 60'

VERTICAL SCALE IN FEET

2' 1' 0 2' 4' 6'

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EXPRESS OIL CHANGE AND TIRE ENGINEERS

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STATE OF LOUISIANA
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12/11/2024

PROJECT NO. 24-1316

PERMIT
10/31/2024

1	12/10/24	CPS

CHECKED WRK
DRAWN BY ZPP

SHEET

C-2.1

Z:\2024\24-1316\CIVIL\CAD\24-1316 C-2 GRADING PLAN.DWG

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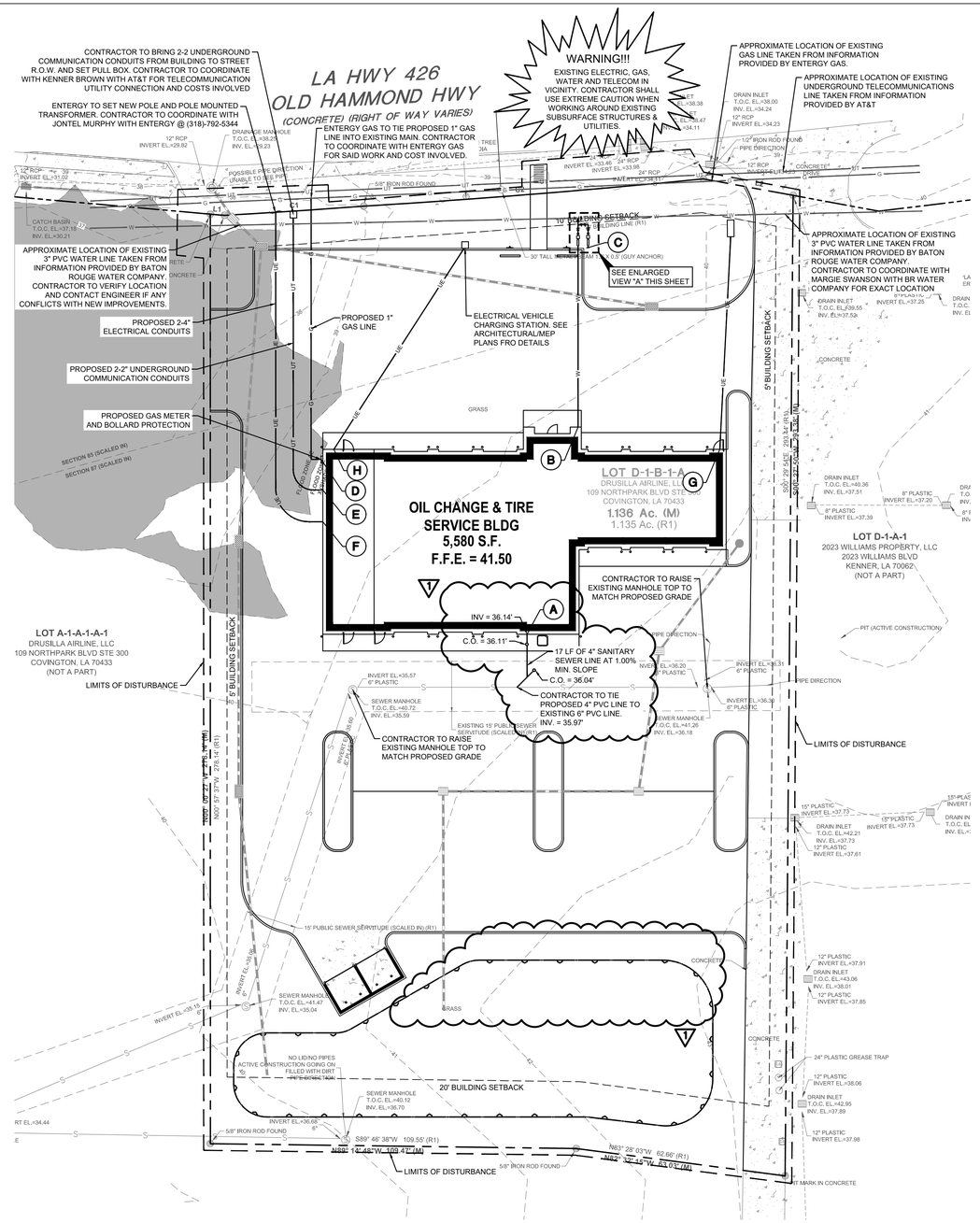
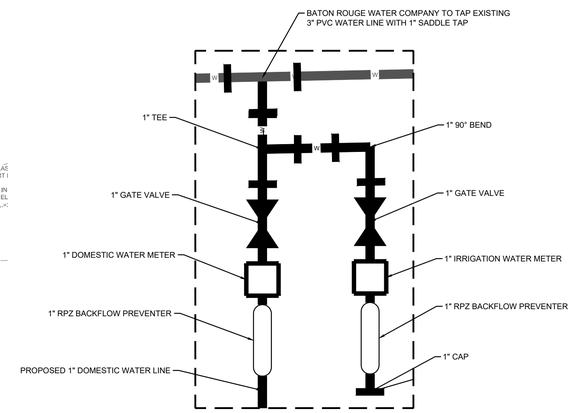


LEGEND - EXISTING

- CATCH BASIN
- DRAIN INLET
- ELEVATION POINT
- FOUND PROPERTY CORNER
- POWER POLE
- RIGHT OF WAY MONUMENT
- SEWER CLEANOUT
- SEWER MANHOLE
- TREE
- BUILDING LINE
- FLOOD ZONE LINE
- GROUND CONTOUR LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SECTION LINE
- SERVITUDE LINE
- TREE DRIP LINE
- CONCRETE

LEGEND - NEW IMPROVEMENTS

- 1" DOMESTIC WATERLINE — DW
- 1" IRRIGATION WATERLINE — W
- 4" SANITARY SEWERLINE — S
- UNDERGROUND ELECTRIC — UE
- UNDERGROUND TELEPHONE — UT
- GASLINE — G
- WATER VALVE
- WATER METER
- BACKFLOW PREVENTER
- TRANSFORMER PAD — T
- CLEANOUT — C.O.
- GAS METER



ENLARGED VIEW "A"

N.T.S.

UTILITY NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES & NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION &/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES &, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. CONTRACTOR SHALL VERIFY HORIZONTAL & VERTICAL LOCATION OF ALL EXISTING STORM SEWER STRUCTURES, PIPES, & ALL UTILITIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO REMOVE OR RELOCATE WHEN APPLICABLE, ALL EXISTING BUILDINGS, FOUNDATIONS, EASEMENTS, & CONNECTING IMPROVEMENTS, DRAIN PIPES, SANITARY SEWER PIPE, POWER POLES & GUY WIRES, WATER METERS & WATER LINES, WELLS, SIDEWALKS, SIGN POLES, UNDERGROUND GAS, SEPTIC TANKS, & ASPHALT, SHOWN & NOT SHOWN, WITHIN CONSTRUCTION LIMITS & WHERE NEEDED, TO ALLOW FOR FILL MATERIAL, UNLESS OTHERWISE DENOTED, TO BE REMOVED AS UNCLASSIFIED EXCAVATION.
5. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
6. CONTRACTOR SHALL REFER TO ARCHITECTS PLANS & SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC & FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE, & CABLE T.V. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS & ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH CITY UTILITY REQUIREMENTS AS TO LOCATIONS & SCHEDULING FOR TIE-INS/CONNECTIONS PRIOR TO CONNECTING EXISTING FACILITIES.
7. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL PLANS, POWER COMPANY, & TELEPHONE COMPANY FOR ACTUAL ROUTING OF POWER & TELEPHONE SERVICE TO BUILDING.
8. CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES & BE CONSTRUCTED TO SAME.
9. SEE SPECIFICATIONS & DETAIL SHEETS FOR BACKFILLING & COMPACTION REQUIREMENTS ON UTILITY TRENCHES.
10. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARD OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION & TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, & OTHER MEANS OF PROTECTION. THIS TO INCLUDE BUT NOT LIMITED TO, ACCESS & EGRESS FROM ALL EXCAVATION & TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
11. CONTRACTOR SHALL COORDINATE WITH OTHER UTILITIES TO ASSURE PROPER DEPTH & PREVENT ANY CONFLICT OF UTILITIES.
12. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER & SEWER LINE IS TEN (10) FEET. OR MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER & SEWER LINE IS EIGHTEEN (18) INCHES.
13. CONTRACTOR SHALL GROUT AROUND ALL PIPE ENTRANCES TO SANITARY SEWER MANHOLES WITH NON-SHRINKING GROUT TO ASSURE CONNECTION IS WATER TIGHT.
14. CONTRACTOR SHALL ON ALL UTILITIES, COORDINATE INSPECTION WITH THE APPROPRIATE AUTHORITIES PRIOR TO COVERING TRENCHES AT INSTALLATION.
15. CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES & REQUIREMENTS. THE CONTRACTOR SHALL CONDUCT ALL REQUIRED TESTS TO THE SATISFACTION OF THE RESPECTIVE UTILITY COMPANIES & OWNERS INSPECTING AUTHORITIES.
16. SITE CONTRACTOR TO COORDINATE PROPOSED RECONNECTION OF ALL UTILITIES WITH ARCHITECTURAL PLANS AS WELL AS UTILITY COMPANIES & BUILDING CONTRACTOR.
17. ALL NECESSARY INSPECTIONS &/OR CERTIFICATIONS REQUIRED BY CODES &/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION & THE FINAL CONNECTION OF SERVICES.

TELEPHONE NOTES:

1. ALL PHONE LINE LOCATIONS ARE APPROXIMATE AND SHOWN FOR COORDINATION PURPOSES ONLY. REFERENCE MEP PLANS FOR ALL BUILDING SERVICE CONNECTIONS.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE 2-2" PVC CONDUIT INCLUDING TRENCHING BEDDING, PULL WIRE, AND BACKFILLING.
3. THE MINIMUM COVER OVER TELEPHONE CONDUIT SHALL BE 24".
4. CONTRACTOR TO CONTACT TELEPHONE COMPANY AT LEAST 3 WEEKS PRIOR TO CONSTRUCTION.

POWER NOTES:

1. REFERENCE ARCHITECT'S PLANS FOR ALL BUILDING SERVICE CONNECTIONS.
2. ALL PRIMARY & SECONDARY SERVICE LOCATIONS ARE APPROXIMATE & ARE SHOWN FOR COORDINATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ENTERGY, TO DETERMINE EXACT LOCATION & RESPONSIBILITIES INCLUDING COST.

WATER NOTES:

1. ALL WORK SHALL BE DONE TO THE CITY OF BATON ROUGE WATER COMPANY'S STANDARD SPECIFICATIONS.
2. REFERENCE ARCHITECT'S PLANS FOR ALL BUILDING FIRE SERVICE & DOMESTIC SERVICE CONNECTION LOCATIONS.
3. CONTRACTOR SHALL CONSTRUCT WATER SERVICES AS SHOWN, & CONSTRUCT METERS, PITS, & INSTALL CHECK VALVE.
4. ALL DOMESTIC LEADS TO BUILDING SHALL END AT THE FACE OF BUILDING WALL, UNLESS NOTED, & SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END (FOR OTHERS TO REMOVE & EXTEND AS NECESSARY).
5. ALL VERTICAL BENDS ON WATER MAIN SHALL BE RESTRAINED WITH A MECHANICAL JOINT FITTING SUPPLIED WITH THE RETAINER GLANDS. ANY JOINTS 25 FEET OR LESS FROM EITHER SIDE OF VERTICAL BEND SHALL BE RESTRAINED WITH A RETAINER GLAND.
6. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
7. ALL VALVES SHALL BE INSTALLED IN A CAST IRON VALVE BOX WITH COVER.
8. THRUST BLOCKS SHALL BE PROVIDED AT ALL HORIZONTAL BENDS, TEES, & FIRE HYDRANTS. SEE DETAIL.
9. THE MINIMUM COVER ON WATER MAINS SHALL BE 3 FEET.
10. PIPE SIZES 3" & SMALLER SHALL BE PVC. FITTINGS SHALL BE BRASS. SEE DETAIL SHEET.
11. PIPE SIZES 4" & LARGER SHALL BE PVC C-900 WATER PIPE. ALL FITTINGS 4" & LARGER SHALL BE CAST IRON CONFORMING TO ANSI & AWWA STANDARD SPECIFICATIONS.
12. GATE VALVES 3/4" THROUGH 3" SHALL BE BRONZE WEDGE TYPE GATE VALVE. VALVES SHALL HAVE NON-RISING STEM WITH SOLID TEE HEAD OPERATING NUT UNLESS NOTED OTHERWISE.
13. GATE VALVES 4" & LARGER SHALL BE CAST IRON GATE VALVE WITH PARALLEL DOUBLE DISC. VALVES SHALL HAVE MECHANICAL JOINT ENDS & NON-RISING STEM WITH SQUARE OPERATING NUT.
14. CONTRACTOR TO CONTACT MARGIE SWANSON @ (225)231-0304 WITH THE BATON ROUGE WATER COMPANY PRIOR TO CONSTRUCTION.

SANITARY SEWER NOTES:

1. ALL WORK SHALL BE DONE TO THE CITY OF BATON ROUGE STANDARD SPECIFICATIONS.
2. REFERENCE ARCHITECT'S PLANS FOR ALL BUILDING SERVICE CONNECTIONS.
3. CONTRACTOR SHALL PAY ALL FEES & CHARGES PERTINENT TO SANITARY SEWER CONSTRUCTION & SHALL COORDINATE WITH CITY OF BATON ROUGE PRIOR TO COMMENCING WITH CONSTRUCTION.
4. ALL STUB-OUTS & WYE LATERALS SHALL BE PLUGGED WITH A STANDARD TYPE PLUG.
5. SANITARY SEWER PIPE OF DIFFERENT MATERIAL SHALL BE JOINED BY A RUBBER SLEEVE WITH STAINLESS STEEL COUPLING, MADE FOR TRANSITIONS FROM ONE MATERIAL TO ANOTHER.
6. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR TO CENTERLINE OF MANHOLE.
7. THE SANITARY SEWER PIPE MATERIAL SHALL BE PVC, SDR 35, SEWER PIPE UNLESS OTHERWISE NOTED ON PLAN.

UTILITY LEGEND

(A) 4" SANITARY SEWER LINE AT MINIMUM 1.00% SLOPE. CONTRACTOR TO COORDINATE WITH JACOB WITH CITY OF BATON ROUGE/PARISH OF EAST BATON ROUGE @ (225)389-5623 FOR SAID WORK AND COSTS INVOLVED. REFER TO MEP PLANS FOR EXACT ENTRY LOCATION AND ELEVATION.

(B) 1.0" DOMESTIC WATERLINE WITH 1.0" WATER METER AND RPZ BACKFLOW PREVENTER. BATON ROUGE WATER COMPANY TO TAP EXISTING 3" PVC WATERLINE WITH 1" PVC WATERLINE AND FURNISH AND INSTALL METER. CONTRACTOR TO PURCHASE AND SET RPZ BACKFLOW PREVENTER, AND IS RESPONSIBLE FOR ALL WORK FROM THE METER TO THE BUILDING. CONTRACTOR TO COORDINATE WITH MARGIE SWANSON WITH THE BATON ROUGE WATER COMPANY @ (225)231-0304 FOR SAID WORK AND COST INVOLVED. REFER TO PLUMBING PLANS FOR EXACT ENTRY LOCATION. INSULATE ALL EXPOSED PIPES ABOVE GROUND.

(C) 1.0" IRRIGATION WATER LINE WITH 1.0" METER AND RPZ BACKFLOW PREVENTER. BATON ROUGE WATER COMPANY TO TIE PROPOSED 1" IRRIGATION WATERLINE TO EXISTING 3" PVC WATERLINE AND FURNISH AND INSTALL METER. CONTRACTOR TO PURCHASE AND SET RPZ BACKFLOW PREVENTER, AND IS RESPONSIBLE FOR ALL WORK PAST THE METER. CONTRACTOR TO COORDINATE WITH MARGIE SWANSON WITH THE BATON ROUGE WATER COMPANY @ (225)231-0304 FOR SAID WORK AND COST INVOLVED. CONTRACTOR TO REFER TO IRRIGATION PLANS FOR CONTINUATION.

(D) GAS SERVICE TO BE PREPARED BY ENTERGY GAS. CONTRACTOR SHALL COORDINATE WITH ENTERGY GAS FOR SAID WORK AND COSTS INVOLVED. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION.

(E) UNDERGROUND TELEPHONE/DATA SERVICE. CONTRACTOR TO INSTALL (2) 2" CONDUIT FROM RIGHT-OF-WAY TO BUILDING INCLUDING TRENCHING, BEDDING, BACKFILL, AND PULL STRINGS. COORDINATE WITH AT&T (KENNER BROWN @ (225)353-3056) AT LEAST 3 WEEK PRIOR TO CONSTRUCTION FOR SAID WORK AND COST INVOLVED. REFER TO ELECTRICAL PLANS FOR EXACT ENTRY LOCATION.

(F) UNDERGROUND ELECTRICAL SERVICE TO BE PROVIDED BY ENTERGY. CONTRACTOR SHALL COORDINATE WITH JONTEL MURPHY WITH ENTERGY FOR SAID WORK AND COST INVOLVED. ENTERGY SHALL BE RESPONSIBLE FOR INSTALLING POLE MOUNTED TRANSFORMER, CONDUITS, PULLING PRIMARY WIRE TO POLE MOUNTED TRANSFORMER, AND PULLING SECONDARY FROM TRANSFORMER TO METER POINT. CONTRACTOR SHALL SET THE METER AND EXTEND UNDERGROUND ELECTRIC FROM METER TO BUILDING.

(G) 2" PVC SIGN CONDUIT. CONTRACTOR TO FURNISH AND INSTALL CONDUITS, PULL WIRES, TRENCHING, BEDDING, AND BACKFILLING FROM BUILDING TO PROPOSED SIGN LOCATION. STUB UP CONDUITS 18" ABOVE GROUND AND CAP. REFERENCE ELECTRICAL PLANS FOR EXACT ENTRY LOCATION.

(H) 3" PVC ELECTRIC VEHICLE CONDUIT. CONTRACTOR TO FURNISH AND INSTALL CONDUITS, PULL WIRES, TRENCHING, BEDDING, AND BACKFILLING FROM BUILDING TO PROPOSED SIGN LOCATION. STUB UP CONDUITS 18" ABOVE GROUND AND CAP. REFERENCE ELECTRICAL PLANS FOR EXACT ENTRY LOCATION.

NOTE:

CONTRACTOR SHALL PROVIDE FREEZE PROTECTION FOR ANY SECTION OF THE FIRE OR DOMESTIC WATERLINES THAT IS LOCATED ABOVE GROUND (SUCH AS BUT NOT LIMITED TO THE ABOVE GROUND BACKFLOW PREVENTERS) BY THE USE OF HEAT TRACING. THE FREEZE PROTECTION SYSTEM SHALL INCLUDE HEAT TRACE WIRE (PENTAIR RAYCHEM 5XL1-CR), POWER CONNECTION AND END SEAL (PENTAIR RAYCHEM RAYCLIC-PC), RAYCHEM 1PT CONTROLLER (PENTAIR DIGITRACE C910-485), TEMPERATURE SENSOR (PENTAIR DIGITRACE RTD10CS AND RTD-200), ELECTRIC-TRACER LABELS (PENTAIR RAYCHEM ETL), GLASS TAPE (PENTAIR RAYCHEM GT-66), 1" THICK CLOSED CELL ELASTOMERIC FOAM INSULATION (AP/ARMAFLEX) WITH 520 ADHESIVE (ARMAFLEX), AND 0.016 THICK ALUMINUM JACKET OR AN APPROVED FREEZE PROTECTION SYSTEM EQUAL THAT'S ACCEPTABLE BY THE SFM.

NOTE:

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

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UTILITY PLAN

HORIZONTAL SCALE IN FEET

20' 10' 0 20' 40' 60'

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CHECKED WRK
DRAWN BY ZPP

SHEET
C-3

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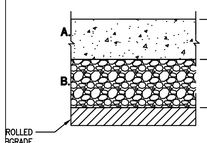
STANDARD DUTY CONCRETE PAVEMENT



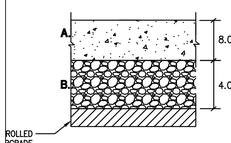
A. 6.0" PORTLAND CEMENT CONCRETE (4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS) PER LSSRB 2016: SECTION 601.

B. 4.0" OF AGGREGATE BASE, LADOTD NO. 610 CRUSHED LIMESTONE OR SIMILARLY GRADED CRUSHED RECYCLED CONCRETE. MATERIALS SHOULD MEET THE REQUIREMENTS OF LSSRB SECTION 1033.03.

NOTES:
1) A WOVEN GEOTEXTILE CONSISTING OF MIRAFI 600X OR EQUIVALENT SHOULD BE PLACED OVER ANY SOFT SUBGRADE IN THE PARKING AREAS TO IMPROVE SOFT SOIL SUBGRADE CONDITIONS.
2) SUBGRADE SOILS SHALL BE PREPARED PER THE "SUBGRADE PREPERATION" SECTION OF THE SITE PREPERATION NOTES FOUND ON SHEET C-2 OR WITHIN THE GEOTECHNICAL REPORT NO. EH245089 BY TERRACON. THE ACTUAL STRIPPING AND UNDERCUTTING DEPTH SHALL BE DETERMINED BY A REPRESENTAIVVE OF THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.
3) ALL FILL SHALL BE PREPARED PER THE "FILL MATERIAL TYPES" AND "FILL PLACEMENT AND COMPACTION REQUIREMENTS" SECTION OF THE SITE PREPERATION NOTES FOUND ON SHEET C-2 OR WITHIN THE GEOTECHNICAL REPORT NO. EH245089 BY TERRACON.
4) ALL SUBGRADE, BASE & PAVEMENT CONSTRUCTION OPERATIONS SHOULD MEET MINIMUM REQUIREMENTS OF THE LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT.
5) CONTROL JOINT SPACING SHALL BE A MAXIMUM OF 15 FEET IN EACH DIRECTION. IF SAWCUT, CONTROL JOINTS SHOULD BE CUT WITHIN 6 TO 12 HOURS OF CONCRETE PLACEMENT.
6) EXPANSION JOINT SPACING SHALL BE A MAXIMUM OF 75 FT.
7) REINFORCING STEEL AND DOWELS AT EXPANSION JOINTS SHALL BE ½ INCH BARS, 18 INCHES IN LENGTH, WITH ONE END TREATED TO SLIP, SPACED AT 18 INCHES ON CENTERS IN EACH DIRECTION AT EACH JOINT.
8) JOINTS SHALL BE FILLED WITH A PAVEMENT JOINT SEALING MATERIAL THAT MEETS THE REQUIREMENTS OF ASTM D3405 OR D1190.

STANDARD DUTY CONCRETE PAVEMENT
N.T.S.

HEAVY DUTY CONCRETE PAVEMENT

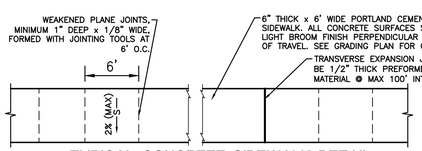


A. 8.0" PORTLAND CEMENT CONCRETE (4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS), PER LSSRB 2016: SECTION 601

B. 4.0" OF AGGREGATE BASE, LADOTD NO. 610 CRUSHED LIMESTONE OR SIMILARLY GRADED CRUSHED RECYCLED CONCRETE. MATERIALS SHOULD MEET THE REQUIREMENTS OF LSSRB SECTION 1033.03.

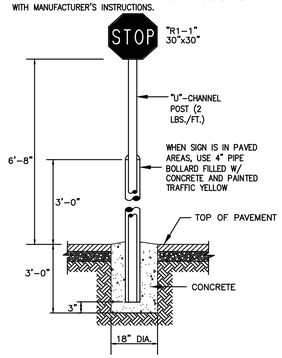
NOTES:
1) A WOVEN GEOTEXTILE CONSISTING OF MIRAFI 600X OR EQUIVALENT SHOULD BE PLACED OVER ANY SOFT SUBGRADE IN THE PARKING AREAS TO IMPROVE SOFT SOIL SUBGRADE CONDITIONS.
2) SUBGRADE SOILS SHALL BE PREPARED PER THE "SUBGRADE PREPERATION" SECTION OF THE SITE PREPERATION NOTES FOUND ON SHEET C-2 OR WITHIN THE GEOTECHNICAL REPORT NO. EH245089 BY TERRACON. THE ACTUAL STRIPPING AND UNDERCUTTING DEPTH SHALL BE DETERMINED BY A REPRESENTAIVVE OF THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.
3) ALL FILL SHALL BE PREPARED PER THE "FILL MATERIAL TYPES" AND "FILL PLACEMENT AND COMPACTION REQUIREMENTS" SECTION OF THE SITE PREPERATION NOTES FOUND ON SHEET C-2 OR WITHIN THE GEOTECHNICAL REPORT NO. EH245089 BY TERRACON.
4) ALL SUBGRADE, BASE & PAVEMENT CONSTRUCTION OPERATIONS SHOULD MEET MINIMUM REQUIREMENTS OF THE LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT.
5) CONTROL JOINT SPACING SHALL BE A MAXIMUM OF 15 FEET IN EACH DIRECTION. IF SAWCUT, CONTROL JOINTS SHOULD BE CUT WITHIN 6 TO 12 HOURS OF CONCRETE PLACEMENT.
6) EXPANSION JOINT SPACING SHALL BE A MAXIMUM OF 75 FT.
7) REINFORCING STEEL AND DOWELS AT EXPANSION JOINTS SHALL BE ½ INCH BARS, 18 INCHES IN LENGTH, WITH ONE END TREATED TO SLIP, SPACED AT 18 INCHES ON CENTERS IN EACH DIRECTION AT EACH JOINT.
8) JOINTS SHALL BE FILLED WITH A PAVEMENT JOINT SEALING MATERIAL THAT MEETS THE REQUIREMENTS OF ASTM D3405 OR D1190.

HEAVY DUTY CONCRETE PAVEMENT
N.T.S.

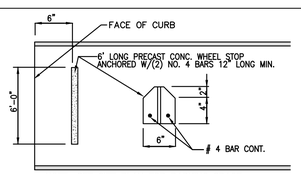


TYPICAL CONCRETE SIDEWALK DETAIL
N.T.S.

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

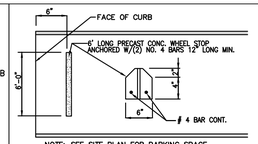


STOP SIGN W/ PIPE BOLLARD
N.T.S.



NOTE: SEE SITE PLAN FOR PARKING SPACE SIZE AND FOR WHEEL STOP LOCATIONS. PAINT WHEEL STOPS OSHA YELLOW

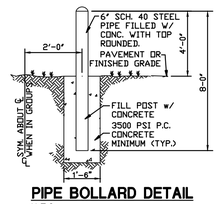
CONCRETE WHEEL STOP
N.T.S.



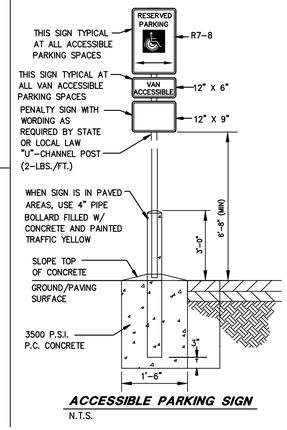
NOTE: SEE SITE PLAN FOR PARKING SPACE SIZE AND FOR WHEEL STOP LOCATIONS. PAINT WHEEL STOPS OSHA YELLOW

CONCRETE WHEEL STOP
N.T.S.

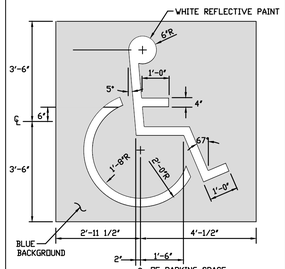
NOTES:
1. ALL PIPES SHALL BE PAINTED TRAFFIC YELLOW
2. REFER TO ARCHITECTURAL PLANS FOR BOLLARD LOCATIONS ADJACENT TO THE BUILDING.



PIPE BOLLARD DETAIL
N.T.S.



ACCESSIBLE PARKING SIGN
N.T.S.



ACCESSIBLE SYMBOL
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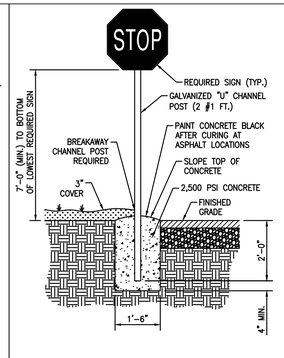
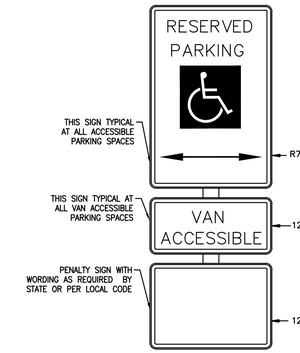
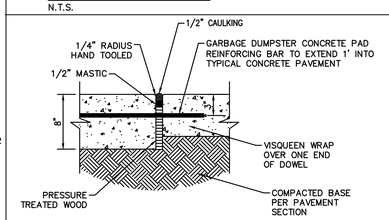


STANDARD SIGN POST DETAIL

N.T.S	OWNED BY: DDG	REVISED: 04-15-09



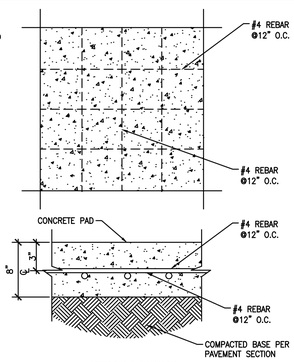
ACCESSIBLE PARKING SIGN
N.T.S.



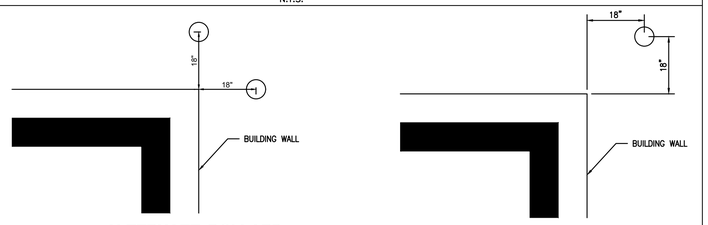
EXPANSION JOINT

NOTES:
1. REFER TO SITE PLAN FOR LOCATION OF GARBAGE DUMPSTER CONCRETE PAD.
2. CONCRETE IN FRONT OF DUMPSTER ENCLOSURE IS TO BE 8" THICK. SEE SITE PLAN FOR LOCATIONS.
3. TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT INTERVALS THAT WILL PROVIDE A SLAB SIZE THAT DOES NOT EXCEED 15' BY 15'.
4. A MINIMUM OF 2" OF COVER SHALL BE PROVIDED FOR ALL REBAR AT LOCATIONS WHERE SLAB DOES NOT CONNECT TO CONCRETE PAVEMENT.

HEAVY DUTY CONCRETE DUMPSTER PAD DETAIL
N.T.S.

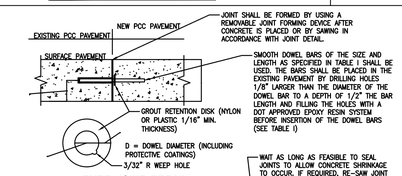


REBAR LAYOUT



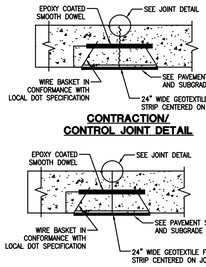
ALTERNATE BOLLARD PLACEMENT DETAIL
N.T.S.

TYPICAL BOLLARD PLACEMENT DETAIL
N.T.S.



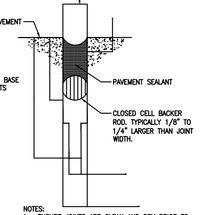
BUTT JOINT DETAIL

WAIT AS LONG AS FEASIBLE TO SEAL JOINTS TO ALLOW CONCRETE SHRINKAGE TO OCCUR. IF REQUIRED, RE-SAW JOINT IMMEDIATELY PRIOR TO INSTALLING SEALANT TO ACHIEVE A 3/8" JOINT WIDTH. ENSURE JOINT IS CLEAN, DRY AND SIDES PREPARED PER MANUFACTURER'S RECOMMENDATIONS.



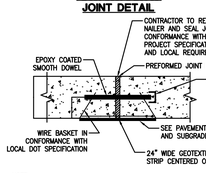
CONTRACTION/ CONTROL JOINT DETAIL

CONSTRUCTION JOINT DETAIL



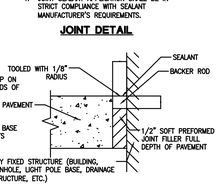
NOTES:
1. ENSURE JOINTS ARE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE JOINT SEALANT.
2. INSTALL CLOSED CELL BACKER ROD AFTER JOINTS HAVE BEEN CLEANED AND DRIED IN ACCORDANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.
3. INSTALL BACKER ROD AT CONSISTENT AND UNIFORM DEPTH.
4. JOINT SEALANT APPLICATION SHALL BE IN STRICT COMPLIANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.

JOINT DETAIL



NOTE:
EXPANSION JOINTS TO BE PLACED AT ALL RADIUS POINTS, OR MAXIMUM 75' O.C. SPACING.

EXPANSION JOINT DETAIL



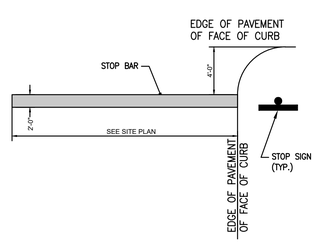
ISOLATION JOINT AT STRUCTURES

TABLE 1

PAVEMENT THICKNESS	SMOOTH DOWEL BARS			MINIMUM JOINT DEPTH
" T " (IN)	SIZE Ø (IN)	LENGTH (IN)	SPACING (IN)	" D " (IN)
5"	1/2"	12"	18"	1 1/2"
6"	3/4"	14"	12"	1 3/4"
7"	1"	16"	12"	2"
8"	1 1/4"	18"	12"	3"
9"	1 1/4"	18"	12"	3"
10"	1 1/4"	18"	12"	3 1/4"

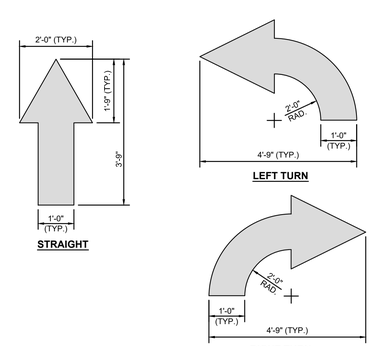
NOTES:
1. JOINTS SHALL BE SAWCUT AS SOON AS THE CONCRETE HAS REACHED SUFFICIENT STRENGTH TO SUPPORT THE SAWING EQUIPMENT AND TEARING OF CONCRETE DOES NOT OCCUR.
2. GEOTEXTILE FABRIC SHALL BE CONSTRUCTED OF NON-WOVEN POLYPROPYLENE FIBERS RESISTANT TO CHEMICAL ATTACK, MILDEW, AND ROT. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A GEOTEXTILE MATERIAL SUBMITTAL FOR APPROVAL.
3. CONSTRUCT EXPANSION, WEAKENED PLANE CONTROL (CONTRACTION), AND CONSTRUCTION JOINTS STRAIGHT WITH FACE PERPENDICULAR TO CONCRETE SURFACE.
4. CONSTRUCT CONTROL JOINTS FOR DEPTH EQUAL TO AT LEAST 1/4 OF THE CONCRETE THICKNESS AS FOLLOWS:
   A. FORM TOOLED JOINTS IN FRESH CONCRETE BY GROOVING TOP WITH RECOMMENDED TOOL AND FINISHING EDGE WITH JOINTER.
   B. FORM SAWED JOINTS USING POWERED SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND RIMMED BLADES. CUT JOINTS INTO HARDENED CONCRETE AS SOON AS SURFACE WILL NOT BE TORN, ABRADED, OR OTHERWISE DAMAGED BY CUTTING ACTION.
5. CONSTRUCTION JOINTS: PLACE CONSTRUCTION JOINTS AT END OF PLACEMENTS AND AT LOCATIONS WHERE PLACEMENTS OPERATIONS ARE STOPPED FOR PERIOD OF MORE THAN 1/2 HOUR, EXCEPT WHERE SUCH PLACEMENTS TERMINATE AT EXPANSION JOINTS. CONSTRUCT JOINTS IN ACCORDANCE WITH DETAILS.
6. EXPANSION JOINTS: LOCATE EXPANSION JOINTS AT MAXIMUM OF 75'-0" ON CENTERS, MAXIMUM EACH WAY UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS. PROVIDE PRE-MOLDED JOINT FILLER FOR EXPANSION JOINTS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, SIDEWALKS, AND OTHER FIXED OBJECTS.
7. BUTT JOINTS: FOR JOINTS AGAINST EXISTING PAVEMENT, PLACE DOWELS OF THE SIZE INDICATED IN TABLE 1 INTO HOLES DRILLED INTO CENTER OF EXISTING SLAB. EPOXY DOWELS INTO HOLES WITH APPROVED EPOXY COMPOUND. PLACE DOWELS PRIOR TO CONCRETE PLACEMENT FOR NEW CONCRETE. DOWEL SPACING TO BE AS INDICATED IN TABLE 1. SAW JOINTS AND FILL WITH JOINT SEALER.
8. JOINT FILLERS: EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT, AND NOT LESS THAN 1/2-INCH OR MORE THAN 1-INCH BELOW FINISHED SURFACE WHERE JOINT SEALER IS INDICATED. FURNISH JOINT FILLERS IN 1 PIECE LENGTHS FOR FULL WIDTH BEING PLACED, WHEREVER POSSIBLE. WHERE MORE THAN 1 LENGTH IS REQUIRED LACE OR CLIP JOINT FILLER SECTIONS TOGETHER.
9. JOINT SEALANTS: JOINTS SHALL BE SEALED WITH APPROVED EXTERIOR PAVEMENT JOINT SEALANTS AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
10. DOWELS SHALL NOT BE PLACED CLOSER THAN 12" TO A JOINT INTERSECTION.

CONCRETE JOINT DETAILS
N.T.S.



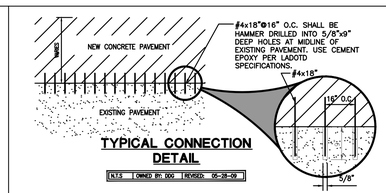
NOTES:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. BAR TO BE PAINTED REFLECTIVE WHITE.
3. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE STANDARD ALPHABETS FOR HIGHWAY SIGN AND PAVEMENT MARKINGS.

STOP BAR DETAIL
N.T.S.



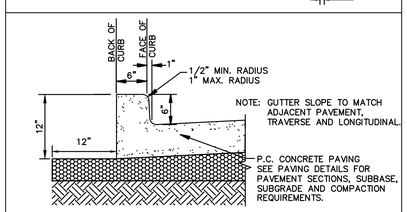
NOTES:
1. ALL TRAFFIC FLOW ARROWS TO BE SOLID YELLOW REFLECTIVE TRAFFIC PAINT.
2. NEW PAVEMENT SURFACES SHALL BE ALLOWED TO CURE AT LEAST 30 DAYS BEFORE APPLICATION OF MARKING MATERIALS.
3. INSTALL PAVEMENT MARKINGS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS & PROJECT SPECIFICATIONS.

INTERNAL TRAFFIC FLOW ARROW DETAIL

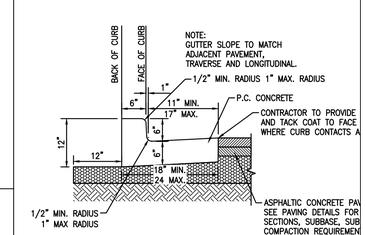


TYPICAL CONNECTION DETAIL

N.T.S	OWNED BY: DDG	REVISED: 05-28-09



TYPE "B" CURB & GUTTER
(FOR USE EXCLUSIVELY WITH CONCRETE PAVEMENT)
N.T.S.



TYPE "A" CONCRETE CURB AND GUTTER
N.T.S.

DETAILS

EXPRESS OIL - BATON ROUGE
9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
985.249.6180

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 46746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO.	24-1316
PERMIT	
10/31/2024	
CHECKED	WRK
DRAWN BY	ZPP

SHEET
C-4

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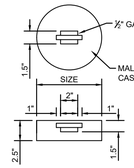
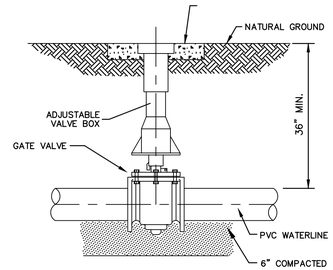
Z:\2024\24-1316\CIVIL\CAD\24-1316 C-4 DETAILS.DWG



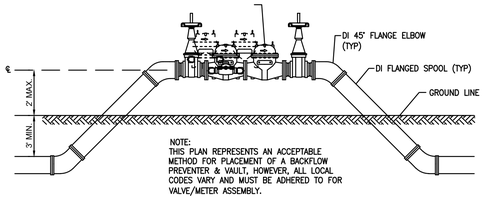
CLEANOUT PLUG DETAIL

N.T.S.



TYPICAL VALVE w/ VALVE BOX INSTALLATION

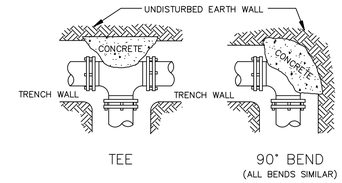
N.T.S.



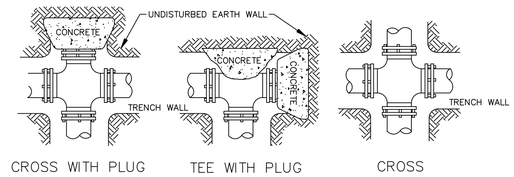
ABOVE GROUND BACKFLOW PREVENTER

N.T.S.

REFER TO UTILITY SHEET C-3 FOR FREEZE PROTECTION LOCATION AND NOTES.



HORIZONTAL THRUST BLOCKING				
(BLOCKING HEIGHT GREATER THAN PIPE O.D.) (BLOCKING WIDTH BETWEEN 1 & 2 TIMES HEIGHT)				
REQUIRED SQ. FT. OF UNDISTURBED EARTH WALL FOR REACTION BACKING				
TYPE OF FITTINGS				
PIPE SIZE	TEE & PLUG	BENDS		
		90°	45°	22½°
6	3.0	4.0	2.5	1.2
8	5.0	7.0	4.0	2.0
10	8.0	11.0	6.0	3.0
12	11.0	16.0	9.0	4.5

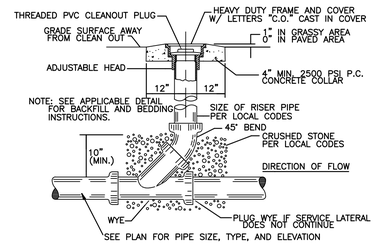


NOTES:

1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 200 P.S.I. AND SOIL BEARING PRESSURE OF 2000 lb./sq.ft. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 P.S.I.
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

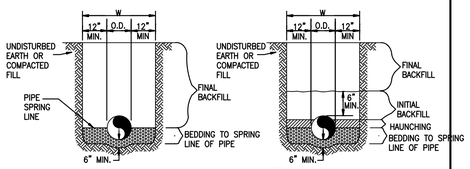
THRUST BLOCK DETAILS

N.T.S.



SANITARY SEWER CLEAN-OUT

N.T.S.



RIGID PIPE — *FLEXIBLE PIPE*

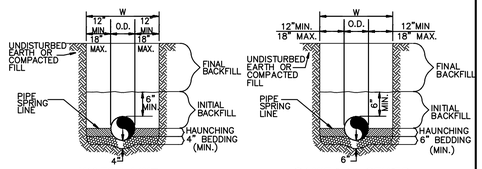
N.T.S.

GENERAL NOTES

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 95% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-LATEST EDITION
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.

STORM SEWER TRENCH AND BEDDING

N.T.S.



WATER LINE — *SANITARY SEWER*

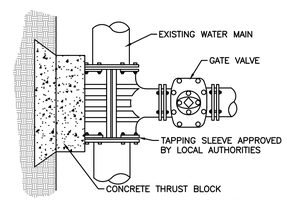
N.T.S.

GENERAL NOTES

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 95% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 95% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.

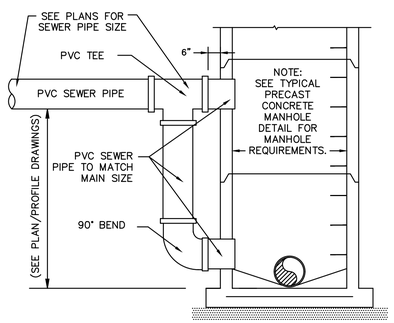
UTILITY TRENCH AND BEDDING

N.T.S.



TYPICAL TAPPING SLEEVE & VALVE

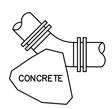
N.T.S.



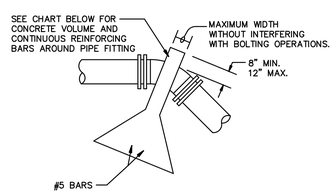
TYPICAL CONNECTION AT DROP MANHOLE

N.T.S.

CLASS	TYPE	SOIL GROUP SYMBOL D2487	DESCRIPTION
1A	MANUFACTURED AGGREGATES; OPEN-GRADED, CLEAN	NONE	ANGULAR,CRUSHED STONE OR ROCK, CRUSHED GRAVEL, BROKEN CORAL, CRUSHED SLAG, CINDERS OR SHELLS; LARGE VOID CONTENT, CONTAIN LITTLE OR NO FINES
1B	MANUFACTURED, PROCESSED AGGREGATES: DENSE-GRADED, CLEAN.	NONE	ANGULAR,CRUSHED STONE (OR OTHER CLASS 1A MATERIALS) AND STONE/SAND MIXTURES WITH GRADATIONS SELECTED TO MINIMIZE MIGRATION OF ADJACENT SOILS; CONTAIN LITTLE OR NO FINES (SEEX1.8)
II	COARSE-GRAINED SOILS CLEAN	GW	WELL-GRADED GRAVELS AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES
		GP	POORLY-GRADED GRAVELS AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES
		SW	WELL-GRADED SANDS AND GRAVELY SANDS; LITTLE OR NO FINES
		SP	POORLY-GRADED SANDS AND GRAVELY SANDS; LITTLE OR OR NO FINES
	COARSE-GRAINED SOILS BORDERLINE CLEAN TO W/ FINES	e.g. GW-GC, SP-SM	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH FINES
III	COARSE-GRAINED SOILS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
		SM	SILTY SANDS, SAND-SILT MIXTURES
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES
IV-A	FINE-GRAINED SOILS (INORGANIC)	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
IV-B	FINE-GRAINED SOILS (INORGANIC)	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.
V	ORGANIC SOILS	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
	HIGHLY ORGANIC	PT	PEAT AND OTHER HIGH ORGANIC SOILS.



DOWNWARD THRUST BLOCKING
(SEE HORIZONTAL BLOCKING DETAIL)
(ALL BENDS SIMILAR)



UPWARD THRUST BLOCKING

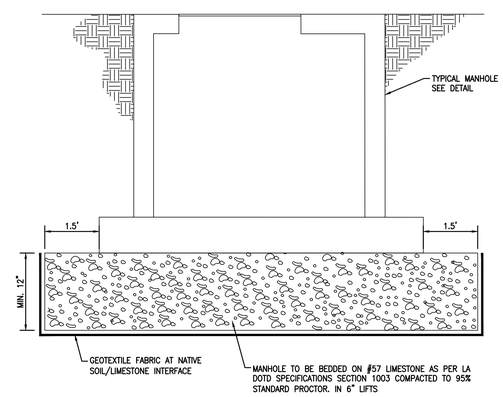
UPWARD THRUST BLOCKING												
(REQUIRED REINFORCING BARS & CUBIC YARDS OF P.C. CONCRETE												
PIPE SIZE	90° BEND			45° BEND			22½° BEND			11¼° BEND		
	CONC. C.Y.	REINF		CONC. C.Y.	REINF		CONC. C.Y.	REINF		CONC. C.Y.	REINF	
		QTY.	SIZE		QTY.	SIZE		QTY.	SIZE		QTY.	SIZE
6	1.9	4	5	1.2	4	5	0.6	4	5	0.3	4	5
8	3.3	4	5	1.9	4	5	1.0	4	5	0.6	4	5
10	5.3	6	5	2.9	4	5	1.4	4	5	0.7	4	5
12	7.6	6	5	4.3	6	5	2.2	4	5	1.2	4	5

NOTES:

1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 200 P.S.I. AND SOIL BEARING PRESSURE OF 2000 lb./sq.ft. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 P.S.I.
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

VERTICAL THRUST BLOCKING

N.T.S.



STORM AND SANITARY SEWER MANHOLE BEDDING DETAIL

N.T.S.

DETAILS

EXPRESS OIL - BATON ROUGE

9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
985.249.6180

STATE OF LOUISIANA
WILLIAM R. KROSP
License No. 46746
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12/11/2024

PROJECT NO. 24-1316

PERMIT
10/31/2024

CHECKED
DRAWN BY WRK ZPP

SHEET

C-5

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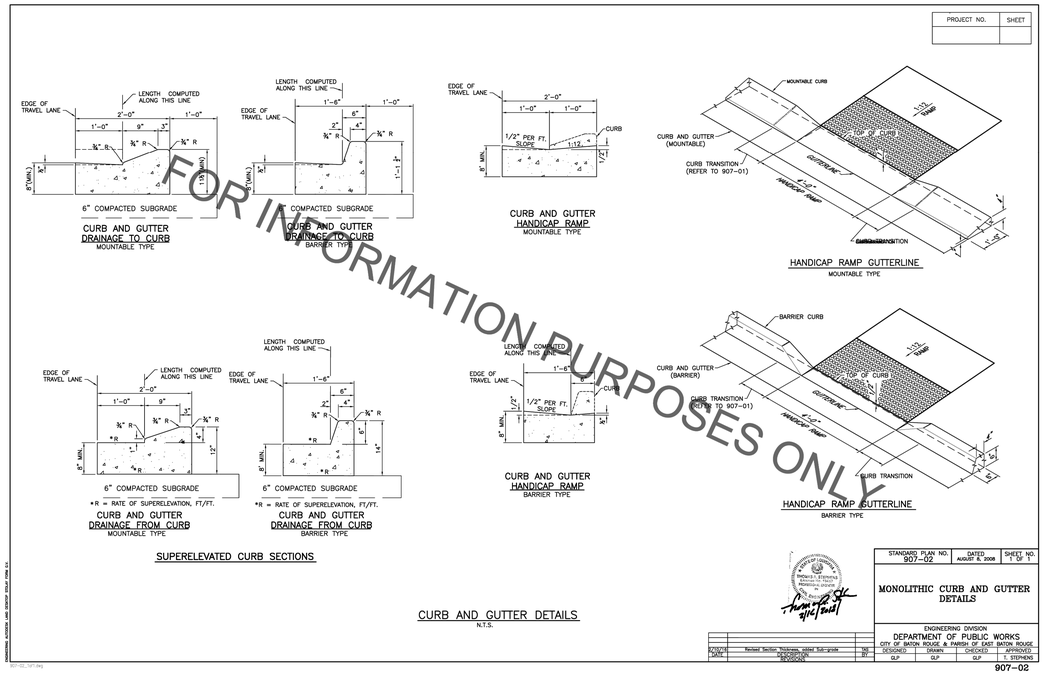

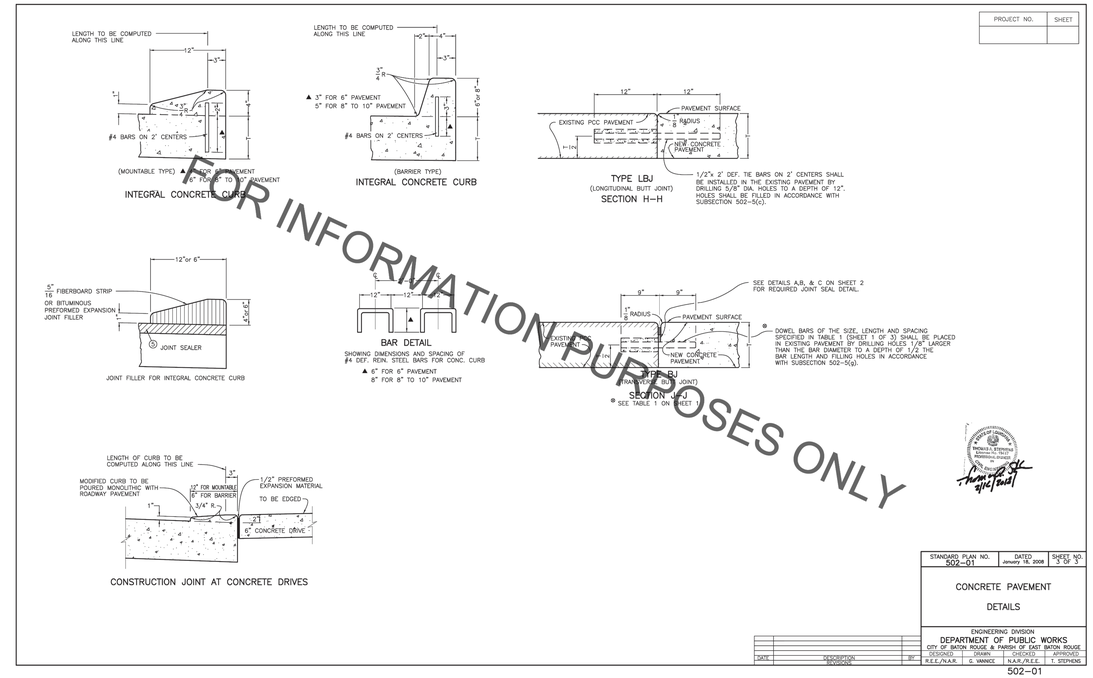

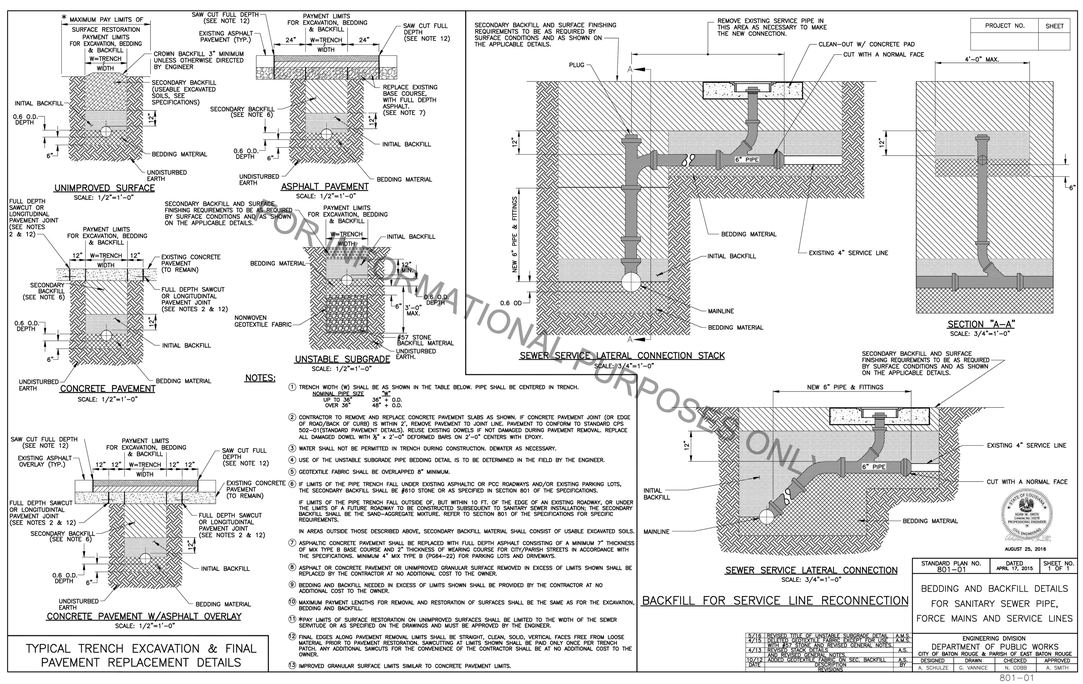

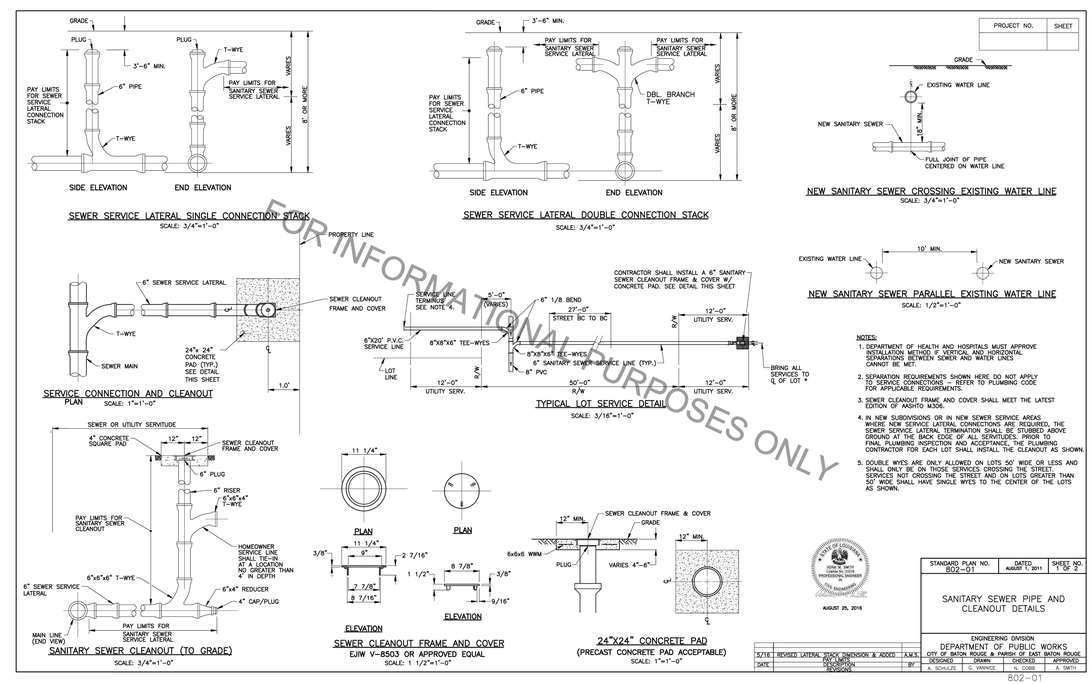

DETAILS

FOR INFORMATIONAL PURPOSES ONLY

EXPRESS OIL - BATON ROUGE
9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
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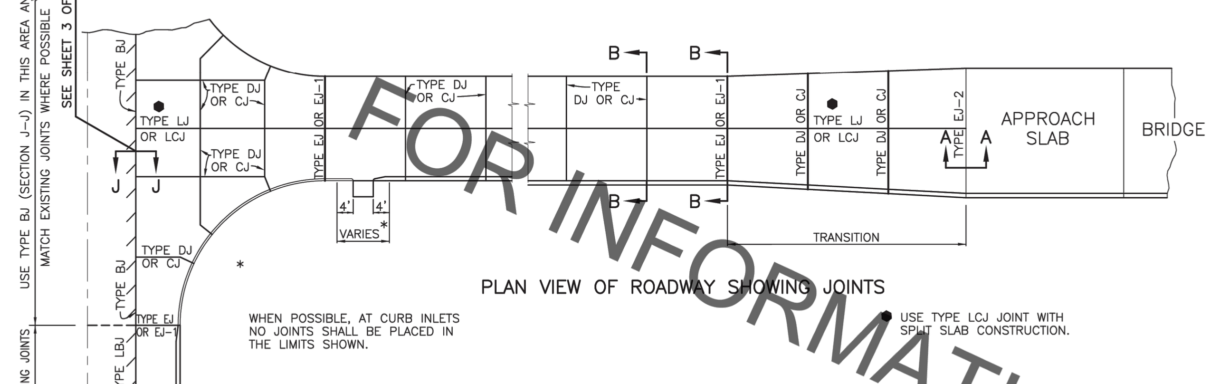
FOR INFORMATION PURPOSES ONLY

TABLE 1
(ALL DIMENSIONS ARE IN INCHES)

PAVEMENT THICKNESS "T"	DOWEL BARS ⊗ SIZE	LENGTH	SPACING	MINIMUM DEPTH OF JOINT ■ C.J. & D.J.	◪ L.J.
6	1	18	12	2	2
8	1 1/4	18	12	3	3
9	1 1/4	18	12	3	3 1/2
10	1 1/4	18	12	3 1/2	4

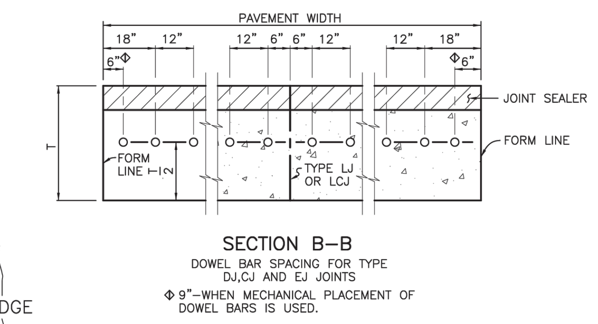
NOTES:
1. ALL JOINTS 10' MIN. SPACING 20' MAX. SPACING
2. MAXIMUM SPACING ON EJ OR EJ-1 WILL NOT EXCEED 500 FEET



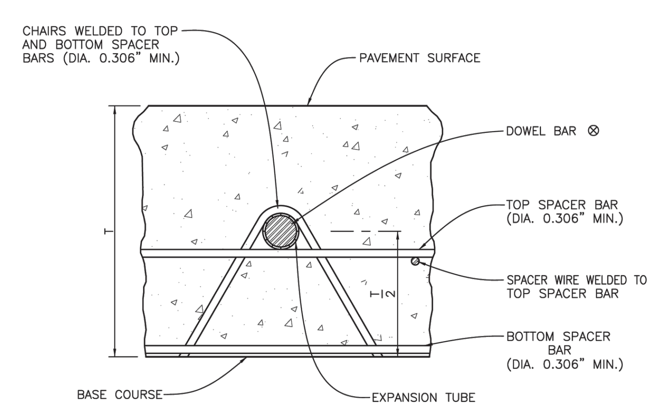
PLAN VIEW OF ROADWAY SHOWING JOINTS

WHEN POSSIBLE, AT CURB INLETS NO JOINTS SHALL BE PLACED IN THE LIMITS SHOWN.

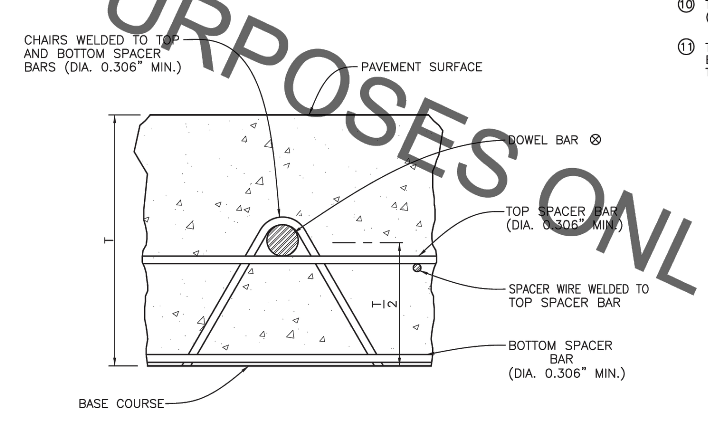
● USE TYPE LCJ JOINT WITH SPLIT SLAB CONSTRUCTION.



SECTION B-B
DOWEL BAR SPACING FOR TYPE DJ,CJ AND EJ JOINTS
Φ 9"-WHEN MECHANICAL PLACEMENT OF DOWEL BARS IS USED.



SECTION C-C
⊗ SEE TABLE 1



SECTION D-D
⊗ SEE TABLE 1

GENERAL NOTES

1. OUTSIDE PAVEMENT EDGES SHALL BE ROUNDED 1/4".
2. ON TYPE EJ JOINTS, EXPANSION TUBES AND STOPS SHALL BE PLACED ON ALTERNATE ENDS OF EACH DOWEL BARS. BARS SHALL BE SPOT WELDED ON ALTERNATE ENDS TO DOWEL BASKETS.
3. TYPE LJ JOINTS SHALL BE SAWED 1/8" WIDE AS SHOWN IN DETAIL "D" ON SHEET 2 TO THE DEPTH SHOWN IN TABLE 1. THEY SHALL BE CLEANED AND SEALED WITH A JOINT SEALER CONFORMING TO SUBSECTION 1007-2.
4. TYPE DJ AND CJ JOINTS SHALL BE TO THE DEPTH SHOWN IN TABLE 1. IF SAWED, THEY SHALL HAVE AN INITIAL CUT USING A 1/8" BLADE. OTHERWISE, JOINTS SHALL CONFORM TO DETAILS "B" AND "C" ON SHEET 2. THEY SHALL ALSO BE SAND BLASTED AND CLEANED PRIOR TO SEALING USING A JOINT SEALER CONFORMING TO SUBSECTION 1007-2.
5. TYPE DJ JOINTS MAY ALSO BE A COMBINATION JOINT FORMER/SEALER AS SHOWN IN DETAIL "A" ON SHEET 2 CONFORMING TO SUBSECTION 1007-4.
6. TYPE EJ JOINTS SHALL BE FORMED FULL DEPTH, USING A WOOD FILLER, EXCEPT FOR THE TOP 1/2" WHICH SHALL BE A JOINT SEALER CONFORMING TO SUBSECTION 1007-2. THE WOOD FILLER SHALL CONFORM TO SUBSECTION 1007-1(b).
7. IN LIEU OF DOWEL BASKET, APPROVED VIBRATORY PLACEMENT OF DOWEL BARS AND TIE BARS WILL BE PERMITTED. DOWEL BASKETS SHALL BE SIMILAR TO ONES SHOWN, OR APPROVED EQUALS.
8. INSTALL GEOTEXTILE FABRIC UNDER CJ, DJ AND EJ TYPE JOINTS WHEN CONCRETE IS PLACED ON UNSTABILIZED OR UNTREATED BASE COURSE WHEN DOWEL BARS ARE VIBRATED IN PLACE. THE GEOTEXTILE FABRIC SHALL BE ANCHORED TO BASE COURSE WITH PINS.
9. TRANSVERSE EXPANSION JOINTS SHALL NOT BE USED FOR CONSTRUCTION JOINTS.
10. TIE BARS SHALL NOT BE PLACED WITHIN 18" OF CONTRACTION (DUMMY) OR EXPANSION JOINTS.
11. TRANSVERSE EXPANSION JOINTS (TYPE EJ OR EJ-1) SHALL BE PLACED AT MAXIMUM 500-FOOT INTERVALS IN ADDITION TO BEING PLACED AT JUNCTIONS WITH OTHER CONCRETE PAVEMENTS.

THOMAS A. STEPHENS, License No. 19417, PROFESSIONAL ENGINEER IN CIVIL ENGINEERING — 3/16/2018

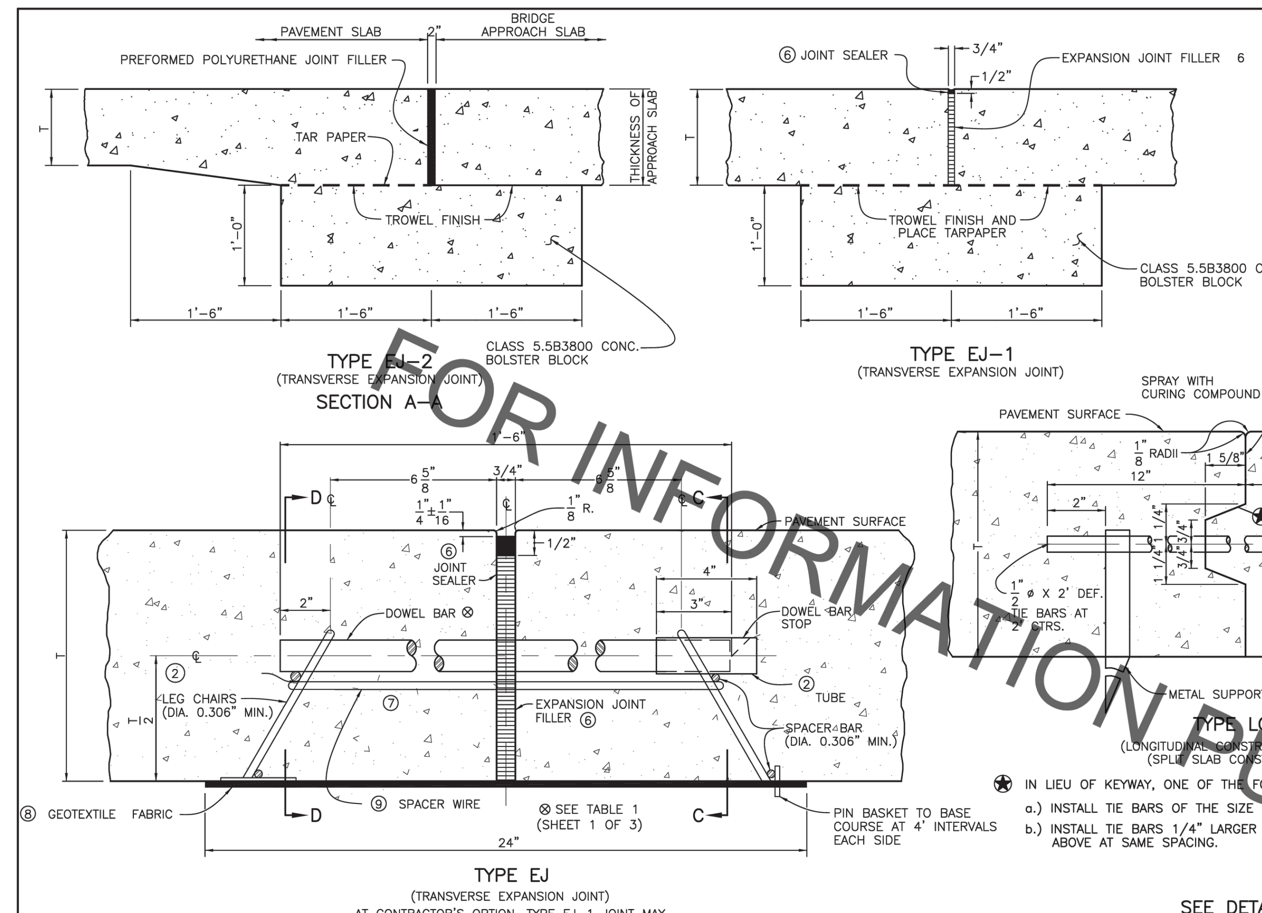
STANDARD PLAN NO.	DATED	SHEET NO.
502-01	January 18, 2008	1 OF 3

CONCRETE PAVEMENT DETAILS

ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE

DESIGNED	DRAWN	CHECKED	APPROVED
R.E.E./N.A.R.	G. VANNICE	N.A.R./R.E.E.	T. STEPHENS

502-01



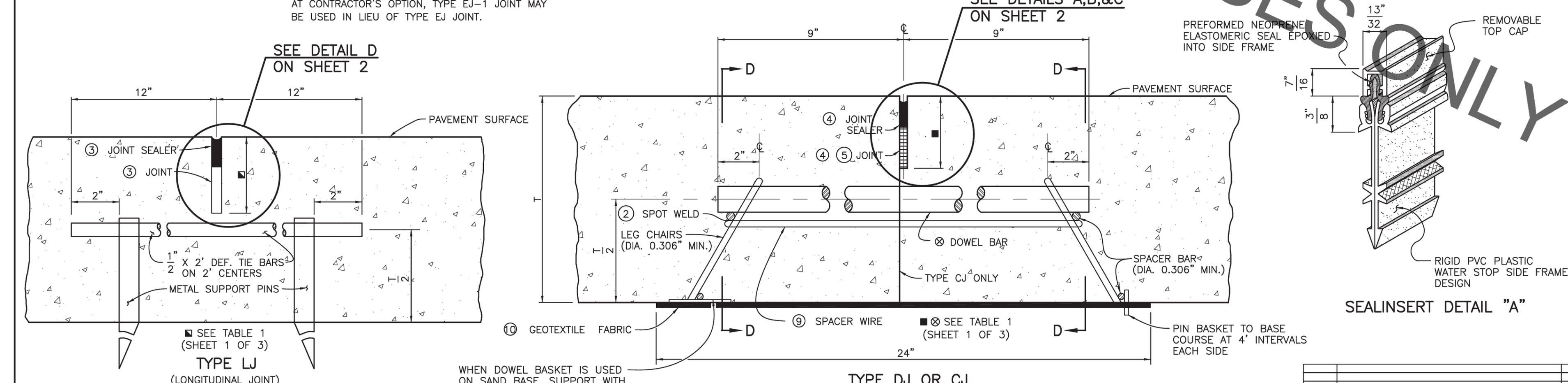
TYPE EJ-2 (TRANSVERSE EXPANSION JOINT) SECTION A-A

TYPE EJ-1 (TRANSVERSE EXPANSION JOINT)

TYPE EJ (TRANSVERSE EXPANSION JOINT)
AT CONTRACTOR'S OPTION, TYPE EJ-1 JOINT MAY BE USED IN LIEU OF TYPE EJ JOINT.

TYPE LCJ (LONGITUDINAL CONSTRUCTION JOINT) (SPLIT SLAB CONSTRUCTION)

★ IN LIEU OF KEYWAY, ONE OF THE FOLLOWING OPTIONS WILL BE ALLOWED:
a.) INSTALL TIE BARS OF THE SIZE SHOWN ABOVE AT 1/2 SPACING.
b.) INSTALL TIE BARS 1/4" LARGER THAN THE TIE BAR DIAMETER SHOWN ABOVE AT SAME SPACING.

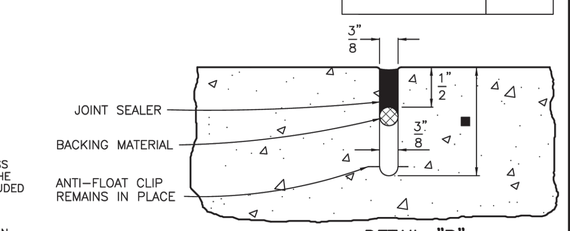


TYPE LJ (LONGITUDINAL JOINT)
(REQUIRED WHEN PAVEMENT WIDTH EXCEEDS 15')

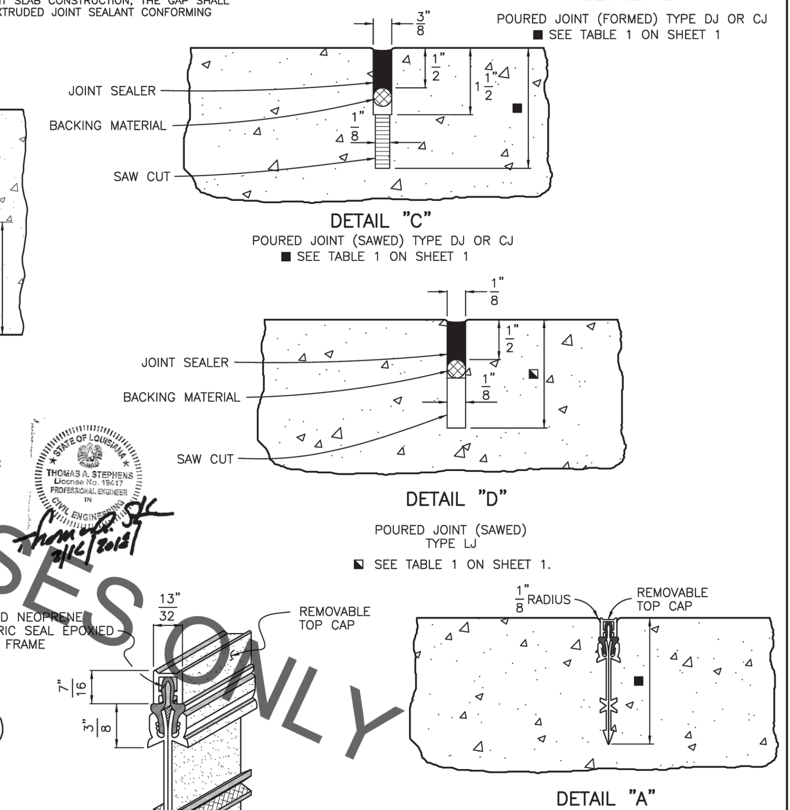
TYPE DJ OR CJ
(TRANSVERSE DUMMY JOINT OR CONSTRUCTION JOINT)

SEALINSERT DETAIL "A"

COMBINATION JOINT FORMER / SEALER NOTES:
1. AFTER PAVEMENT HAS BEEN FINISHED AND WHILE CONCRETE IS STILL PLASTIC, GROOVES SHALL BE CUT INTO PAVEMENT AT PROPER LOCATION AND DEPTH. INSTALL SEALINSERT FLUSH WITH FINISHED SURFACE.
2. IMMEDIATELY CONSOLIDATE CONCRETE ON BOTH SIDES OF SEALINSERT WITH AN APPROVED MECHANICAL VIBRATOR.
3. AFTER FINAL FINISH BUT BEFORE CONCRETE HAS TAKEN ITS INITIAL SET, JOINT EDGES SHALL BE ROUNDED TO RADIUS SHOWN.
4. TOP CAP SHALL REMAIN IN PLACE UNTIL FINAL CLEAN-UP HAS BEEN COMPLETED.
5. SEALINSERTS SHALL BE CUT AND INSTALLED TO BE CONTINUOUS ACROSS THE FULL WIDTH OF SLAB, UNLESS FIELD SPLICING IS APPROVED BY THE ENGINEER. FIELD SPLICES SHALL BE SEALED WITH A POURED OR EXTRUDED JOINT SEALANT CONFORMING TO SUBSECTION 1007-2.
6. AT THE INTERSECTION OF TYPE LJ AND DJ JOINTS USING A COMBINATION JOINT FORMER / SEALER OR SPLIT SLAB CONSTRUCTION, THE GAP SHALL BE FILLED WITH A POURED OR EXTRUDED JOINT SEALANT CONFORMING TO SUBSECTION 1007-2.



DETAIL "B"
POURED JOINT (FORMED) TYPE DJ OR CJ
■ SEE TABLE 1 ON SHEET 1



DETAIL "C"
POURED JOINT (SAWED) TYPE DJ OR CJ
■ SEE TABLE 1 ON SHEET 1

DETAIL "D"
POURED JOINT (SAWED) TYPE LJ
◪ SEE TABLE 1 ON SHEET 1.

DETAIL "A"
COMBINATION JOINT FORMER / SEALER
■ SEE TABLE 1 ON SHEET 1

STANDARD PLAN NO.	DATED	SHEET NO.
502-01	January 18, 2008	2 OF 3

CONCRETE PAVEMENT DETAILS

ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE

DESIGNED	DRAWN	CHECKED	APPROVED
R.E.E./N.A.R.	G. VANNICE	N.A.R./R.E.E.	T. STEPHENS

502-01

DETAILS

EXPRESS OIL - BATON ROUGE
9340 OLD HAMMOND HWY
BATON ROUGE, LA 70809
EXPRESS OIL CHANGE AND TIRE ENGINEERS

DDG
16564 E. BREWSTER ROAD | SUITE 101 COVINGTON, LA 70433
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STATE OF LOUISIANA
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CIVIL ENGINEERING
12/11/2024

PROJECT NO. 24-1316
PERMIT
10/31/2024

CHECKED WRK
DRAWN BY ZPP

SHEET
C-7

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

Timothy Aho, Architect

ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS

ASI NUMBER: **1**

PROJECT NUMBER: 24036

PROJECT: Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

DATE OF ISSUANCE: 1/9/2025

DESCRIPTION: **Revisions to Construction Documents**

1. Replace sheet G200 Architectural Specifications with revised sheet G200, dated 1/8/2025. The Roof Specialties section was updated to provide additional information for the roof scuppers and to add information for emergency roof scuppers.

2. Replace sheet A107 Roof Plan with revised sheet A107, dated 1/8/2025. The drawing was revised to add locations for emergency roof scuppers.

3. Replace sheet A200 Exterior Elevation – Front (North) with revised sheet A200, dated 1/8/2025. The drawing was revised to modify the roof scuppers and show emergency roof scuppers.

4. Replace sheet A304 Wall Sections and Details with revised sheet A304, dated 1/8/2025. Detail 2 was added to the sheet, and Keynote Schedule was added in response to 1st Round SCPDC Comments dated 11/21/2024.

Annakate Simmons

COPIES TO: Express Oil Change & Tire Engineers

SIGNED: _____
Anna Kate Simmons
Intern Interior Designer

EXPRESS OIL CHANGE & TIRE ENGINEERS

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

9340 OLD HAMMOND HIGHWAY
BATON ROUGE, LOUISIANA 70809

ATTENTION AUTHORITY HAVING JURISDICTION

Notice is hereby given that Timothy Aho, Architect, 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 Terracon, 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" acain@ahoarch.com or HYPERLINK "mailto: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

ARCHITECT

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

CIVIL ENGINEER

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16564 EAST BREWSTER ROAD, SUITE 101
COVINGTON, LOUISANA 70433
985-249-6180

STRUCTURAL ENGINEER

JOHN JONES, PE, SE
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

TIMOTHY AHO, ARCHITECT
www.ahoarch.com

TIMOTHY A. AHO REG. NO. 9271 STATE OF LOUISIANA REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Title Sheet

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

T100

Scale 12" = 1'-0"

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GENERAL PROJECT NOTES

1. 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.

2. All work shall comply with all applicable local, state, and national codes, rules, ordinances and regulations and authorities having jurisdiction.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. "Provide" shall mean to furnish and install, complete and ready for intended use.

9. Provide pressure treated wood where in contact with concrete or masonry.

10. The Contractor shall be responsible for all cutting, fitting, and patching that may be required to complete the work.

11. 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.

12. Provide all temporary services required to facilitate the work indicated, including but not limited to the following: power, lighting, heat, and water.

13. 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.

14. 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.

15. 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.

16. 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.

17. All wood blocking, trim, decking, etc. shall be decay-resistant treated, or as specified.

18. 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.

19. 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.

20. Bidders shall be responsible for obtaining a copy of the Geotech Report from the Owner.

21. The project may include some items that are delegated design. Bidders shall ensure these items are covered in their base bid.

22. 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 2021 International Energy Conservation Code:

C402.1.1 Low Energy Buildings and Greenhouses. The following low-energy buildings, or portions thereof, separated from the remainder of the building by building thermal envelope assemblies complying with this section, shall be exempt from the building thermal envelope provisions of Section C402:

1. 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.
2. 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 C403.13.1 allows radiant heating outside the building. Therefore, these areas shall be exempt from the building thermal envelope provisions of this code.

GENERAL ACCESSIBILITY NOTES

1. All door hardware shall be accessible type per section 404 of the 2017 ICC A117.1 / 2010 ADA Standards.
2. All walking surfaces shall have a maximum slope of 1:20 per section 405 of the 2017 ICC A117.1 / 2010 ADA Standards
3. All floor or ground surfaces shall be stable, firm, and slip resistant per section 302 of the 2017 ICC A117.1 / 2010 ADA Standards
4. Changes in level of 1/4" high maximum shall be permitted to be vertical per section 303 of the 2017 ICC A117.1 / 2010 ADA Standards
5. Provide maneuvering clearances at manual swinging doors per section 404 of the 2017 ICC A117.1 / 2010 ADA Standards
6. ADA mounting heights, dimensions, tolerances, etc. shall apply to all construction and the location of all fixtures, etc. unless specifically noted otherwise.

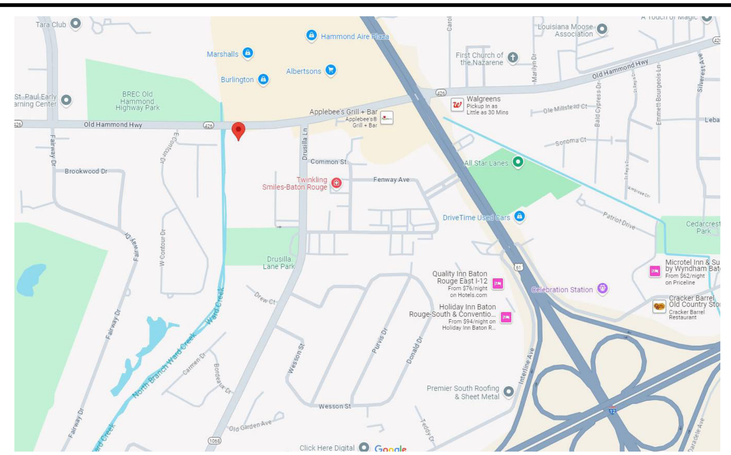
GENERAL INTERIOR NOTES

1. 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.
2. 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.
3. The Contractor shall provide all necessary blocking in walls for support of all equipment, shelving, accessories, grab bars, and other required elements.
4. Provide pressure treated wood where in contact with concrete or masonry.
5. Ease all edges on casework to prevent sharp corners.
6. Paint all HVAC wall grilles to match adjacent surface color unless otherwise noted or instructed by the Architect.
7. 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.
8. Provide thresholds where required. All shall be ADA compliant.
9. 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
9340 Old Hammond Hwy
Baton Rouge, LA 70809

NORTH

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G202	Architectural Specifications
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G301	EOC Standards - Interior
G400	Building COMCheck
LS100	Life Safety / Code Summary
LS101	Life Safety / Code Summary
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No.	Description	Date

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General Information

Project number	24036
Date	10/31/2024
Drawn by	ARC
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G100

Scale 12" = 1'-0"

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GENERAL NOTES

1. **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.**
2. **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.**
3. **PROVIDE MANUFACTURER'S STANDARD WARRANTY FOR ALL SPECIFIED PRODUCTS.**
4. **ALL EXTERIOR SIGNAGE AND SCONCES BY OTHERS.**
5. **ALL FURNITURE AND EQUIPMENT BY OTHERS. COORDINATE PLACEMENT WITH OWNER PRIOR TO ROUGHING IN REQUIRED UTILITIES.**
6. **ALL COMPARABLE PRODUCTS TO BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO BID.**
7. **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
1. Finish: Smooth and split-face
2. Min. Compressive Strength: See Structural
3. Density Classification: See Structural
4. Provide types, shapes and sizes as indicated
5. 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
1. Type: See Structural
2. Color: Argos Magnolia Dark at cmu.
3. 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
1. Type: Hot dipped galvanized, carbon steel (truss)
2. Size: 0.187" diameter
3. 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

1. BlockFlash

055000- Metal Fabrications

Products:

A. Concrete-filled Steel Pipe Bollards
1. Material: Schedule 40 steel pipe
2. Height: 3'-6"
3. Diameter: 4"
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
1. Steel Sheet Thickness: 0.067" minimum
2. Uniform Load: 100 lbf/sf
3. Concentrated Load: 300 lbf applied on an area of 4 sq. in.
4. Finish: Painted (See Finish Schedule)
5. Uniform and concentrated loads need not be assumed to act concurrently.
6. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.

B. Stair Tread Bar Ribbed Abrasive Nosing
1. Basis of Design: Nystrom Model V951
2. Extents: Install Nosing to the full length of steps
3. Color: Safety Yellow
4. Type: Short Nose, Aluminum Extruded Anchor

C. Stair Railings
1. Rails and Posts: 1 5/8" diameter
2. 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
1. Model F14S C1 Cotterman Fixed (Pit Ladder)
   a. Width: 20 inches
   b. 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
1. Rails and Posts: 1 1/2" diameter
2. Uniform Load: 50lbf/ft in any direction.
3. Concentrated Load: 200 lbf applied in any direction
4. Uniform and concentrated loads need not be assumed to act concurrently.
5. Type: F or S
6. Material: Schedule 40
7. Finish: Painted (See Finish Schedule)
8. Seismic Performance: See Structural

B. Infill of Guards
1. Concentrated Load: 50 lbf applied horizontally on an area of 1 SF.
2. 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)
1. Thoroughly Dried
2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
3. Of sizes, shapes, and lengths required.
4. Moisture content shall not exceed 19% at time of installation

B. Miscellaneous Lumber (e.g. Blocking, Furring, etc.)
1. Thoroughly Dried
2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
3. Of sizes, shapes, and lengths required.
4. Moisture content shall not exceed 19% at time of installation

C. Temporary Bracing, Shoring, etc. as required
1. Thoroughly Dried
2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
3. Of sizes, shapes, and lengths required.
4. Moisture content shall not exceed 19% at time of installation

D. Plywood decking (Equipment Platform)
1. Plywood Type: Exposure 1
2. Plywood Grade: BC
3. Thickness: As indicated on drawings
4. Square Edge
5. Class: C Fire Rating
6. Flame Spread Rating 76-200 / Smoke Developed Index <450

E. Plywood decking (Dumpster Roof)
1. Plywood Type: Exposure 1
2. Plywood Grade: BC
3. Thickness: As indicated on drawings
4. Square Edge

Note:
1. All plywood which has any edge or surface permanently exposed to the weather shall be of the exterior type.
2. 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
1. Composite plastic lumber
2. Solid shapes made from a mixture of cellulose fiber and polyethylene or polypropylene.
3. Surface Texture: Smooth.
4. Color: See Finish Schedule.
5. 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:

1. Kal-Lite
2. Crane Composites
3. 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:
A. Install per manufacturer's written standards.

Warranty:
A. 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 Repellant
1. ISO-Tek 8540
2. Color: Clear

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

Warranty:
Provide manufacturers' 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:

1. Johns Manville
2. CertainTeed

Products:

A. Kraft Faced (Vapor Retarder) Batt Insulation:
1. EcoTouch PINK Fiberglass Insulation
2. 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:
1. Griffolyn 10 Mil Green
2. Thickness: 10 mil
3. Max Perm Rating: 0.1 perm
4. 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
1. 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 (Standard)

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

1. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592.
   a. Wind Loads: See Structural.
   b. Other Design Loads: See Structural.
   c. Deflection Limits: See Structural.
2. 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:
   a. Test-Pressure Difference: 6.24 lbf/sq.ft.
3. 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:
   a. Test-Pressure Difference: 15 lbf/sq.ft.
4. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
   a. Uplift Rating: UL 90.
5. 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.
6. Material: Metallic coated steel
7. Nominal Thickness: 24 gauge
8. Finish: Two-coat fluoropolymer.
9. Color: See Finish Schedule (verify sample with Owner prior to ordering)
10. Panel Coverage: 16.5 inches
11. Panel Height: 1.5 inches
12. Slope: As indicated on roof plan

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.

1. ASTM D6878

B. Underlayment: 1/2" Securock Gypsum Fiber Cover Board

C. Polyisocyanurate Insulation

1. Thickness: R-25

D. Roof Walkways

1. VersaWeld Heat Weldable Walkway Rolls

   a. Color: White
   b. Thickness: 180 mils
   c. As an option, walkway rolls may be fully adhered to the membrane surface with QA Seam Tape/ TPO Primer.

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
1. 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 a polymer fabric.
2. Stainless steel: type 304, ASTM A240 Domestically sourced per DFARS 252.225-7008 and /or DFARS 252.225-7009
3. 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 (Standard)

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 (alum.): Match downspout color.

B. Downspouts (alum.):
1. Style: Smooth Box Downspout
2. Size: 3"x4"
3. Color: Match P-2

C. Downspout elbow - Match downspout color

D. Straps
1. Smooth Box Downspout Strap.
2. Color: Match Roof Color.

E. Thru-wall scupper- Match downspout color.
1.Size:
   a) Thru-wall scupper: 8" wide x 4" high
   b) Emergency thru-wall scupper: 4" wide x 4" high

1

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
1. Product: Creative Design Series - Creative Design Reveal Coping
2. 22 gauge w/ kynar finish
3. Color : To be selected from Manufacturer's Full Range of colors
4. Face & Back Dimension: 4 inches minimum (Dumpster)
5. Face Dimension: 12 inches minimum (Building)
6. 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 Tremco, or a comparable product by one of the following:

1. 3M Fire Protection Products
2. Owens Corning
3. Hilti, Inc.
4. 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:
1. Firestopping sealant, firesafing and material required to render all fire rated assemblies fire and smoke tight in accordance with applicable codes, ordinances and requirments.
2. 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:**
1. 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.
2. 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.
3. 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.
4. Provide firestop products that do not contain ethylene glycol.
5. 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.
6. 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

TIMOTHY AHO, ARCHITECT
www.ahoarch.com
TIMOTHY A. AHO REG. NO. 9217 STATE OF LOUISIANA REGISTERED ARCHITECT
1/8/2025

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date
1	ASI #1	1/8/2025

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Architectural Specifications

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

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Scale 12" = 1'-0"

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GENERAL NOTES

1. **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.**
2. **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.**
3. **PROVIDE MANUFACTURER'S STANDARD WARRANTY FOR ALL SPECIFIED PRODUCTS.**
4. **ALL EXTERIOR SIGNAGE AND SCONCES BY OTHERS.**
5. **ALL FURNITURE AND EQUIPMENT BY OTHERS. COORDINATE PLACEMENT WITH OWNER PRIOR TO ROUGHING IN REQUIRED UTILITIES.**
6. **ALL COMPARABLE PRODUCTS TO BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO BID.**
7. **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
1. Finish: Smooth and split-face
2. Min. Compressive Strength: See Structural
3. Density Classification: See Structural
4. Provide types, shapes and sizes as indicated
5. 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
1. Type: See Structural
2. Color: Argos Magnolia Dark at cmu.
3. 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
1. Type: Hot dipped galvanized, carbon steel (truss)
2. Size: 0.187" diameter
3. 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

1. BlockFlash

055000- Metal Fabrications

Products:

A. Concrete-filled Steel Pipe Bollards
1. Material: Schedule 40 steel pipe
2. Height: 3'-6"
3. Diameter: 4"
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
1. Steel Sheet Thickness: 0.067" minimum
2. Uniform Load: 100 lbf/sf
3. Concentrated Load: 300 lbf applied on an area of 4 sq. in.
4. Finish: Painted (See Finish Schedule)
5. Uniform and concentrated loads need not be assumed to act concurrently.
6. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.

B. Stair Tread Bar Ribbed Abrasive Nosing
1. Basis of Design: Nystrom Model V951
2. Extents: Install Nosing to the full length of steps
3. Color: Safety Yellow
4. Type: Short Nose, Aluminum Extruded Anchor

C. Stair Railings
1. Rails and Posts: 1 5/8" diameter
2. 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
1. Model F14S C1 Cotterman Fixed (Pit Ladder)
   a. Width: 20 inches
   b. 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
1. Rails and Posts: 1 1/2" diameter
2. Uniform Load: 50lbf/ft in any direction.
3. Concentrated Load: 200 lbf applied in any direction
4. Uniform and concentrated loads need not be assumed to act concurrently.
5. Type: F or S
6. Material: Schedule 40
7. Finish: Painted (See Finish Schedule)
8. Seismic Performance: See Structural

B. Infill of Guards
1. Concentrated Load: 50 lbf applied horizontally on an area of 1 SF.
2. 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)
1. Thoroughly Dried
2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
3. Of sizes, shapes, and lengths required.
4. Moisture content shall not exceed 19% at time of installation

B. Miscellaneous Lumber (e.g. Blocking, Furring, etc.)
1. Thoroughly Dried
2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
3. Of sizes, shapes, and lengths required.
4. Moisture content shall not exceed 19% at time of installation

C. Temporary Bracing, Shoring, etc. as required
1. Thoroughly Dried
2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
3. Of sizes, shapes, and lengths required.
4. Moisture content shall not exceed 19% at time of installation

D. Plywood decking (Equipment Platform)
1. Plywood Type: Exposure 1
2. Plywood Grade: BC
3. Thickness: As indicated on drawings
4. Square Edge
5. Class: C Fire Rating
6. Flame Spread Rating 76-200 / Smoke Developed Index <450

E. Plywood decking (Dumpster Roof)
1. Plywood Type: Exposure 1
2. Plywood Grade: BC
3. Thickness: As indicated on drawings
4. Square Edge

Note:
1. All plywood which has any edge or surface permanently exposed to the weather shall be of the exterior type.
2. 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
1. Composite plastic lumber
2. Solid shapes made from a mixture of cellulose fiber and polyethylene or polypropylene.
3. Surface Texture: Smooth.
4. Color: See Finish Schedule.
5. 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:

1. Kal-Lite
2. Crane Composites
3. 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:
A. Install per manufacturer's written standards.

Warranty:
A. 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 Repellant
1. ISO-Tek 8540
2. Color: Clear

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

Warranty:
Provide manufacturers' 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:

1. Johns Manville
2. CertainTeed

Products:

A. Kraft Faced (Vapor Retarder) Batt Insulation:
1. EcoTouch PINK Fiberglass Insulation
2. 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:
1. Griffolyn 10 Mil Green
2. Thickness: 10 mil
3. Max Perm Rating: 0.1 perm
4. 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
1. 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 (Standard)

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

1. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592.
   a. Wind Loads: See Structural.
   b. Other Design Loads: See Structural.
   c. Deflection Limits: See Structural.
2. 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:
   a. Test-Pressure Difference: 6.24 lbf/sq.ft.
3. 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:
   a. Test-Pressure Difference: 15 lbf/sq.ft.
4. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
   a. Uplift Rating: UL 90.
5. 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.
6. Material: Metallic coated steel
7. Nominal Thickness: 24 gauge
8. Finish: Two-coat fluoropolymer.
9. Color: See Finish Schedule (verify sample with Owner prior to ordering)
10. Panel Coverage: 16.5 inches
11. Panel Height: 1.5 inches
12. Slope: As indicated on roof plan

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.

1. ASTM D6878

B. Underlayment: 1/2" Securock Gypsum Fiber Cover Board

C. Polyisocyanurate Insulation

1. Thickness: R-25

D. Roof Walkways

1. VersaWeld Heat Weldable Walkway Rolls

   a. Color: White
   b. Thickness: 180 mils
   c. As an option, walkway rolls may be fully adhered to the membrane surface with QA Seam Tape/ TPO Primer.

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
1. 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 a polymer fabric.
2. Stainless steel: type 304, ASTM A240 Domestically sourced per DFARS 252.225-7008 and /or DFARS 252.225-7009
3. 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 (Standard)

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 (alum.): Match downspout color.

B. Downspouts (alum.):
1. Style: Smooth Box Downspout
2. Size: 3"x4"
3. Color: Match P-2

C. Downspout elbow - Match downspout color

D. Straps
1. Smooth Box Downspout Strap.
2. Color: Match Roof Color.

E. Thru-wall scupper- Match downspout color.

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
1. Product: Creative Design Series - Creative Design Reveal Coping
2. 22 gauge w/ kynar finish
3. Color : To be selected from Manufacturer's Full Range of colors
4. Face & Back Dimension: 4 inches minimum (Dumpster)
5. Face Dimension: 12 inches minimum (Building)
6. 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 Tremco, or a comparable product by one of the following:

1. 3M Fire Protection Products
2. Owens Corning
3. Hilti, Inc.
4. 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:
1. Firestopping sealant, firesafing and material required to render all fire rated assemblies fire and smoke tight in accordance with applicable codes, ordinances and requirments.
2. 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:**
1. 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.
2. 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.
3. 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.
4. Provide firestop products that do not contain ethylene glycol.
5. 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.
6. 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

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No.	Description	Date

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Architectural Specifications

VOID

Project number	24036
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078443 - Joint Firestopping (continued):

C. Installation:

1. Firstopping 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.
2. Firestopping materials shall completely fill all void spaces regardless of of geometric configuration and subject to tolerances established by the manufacturer.
3. 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 dampster in ducts and penetrations of fire resistance rated construction shall be furnished and installed in accordance with the requirements in Mechanical Sections.
4. 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:
   a. "Warning - Joint Firestopping - Do NOT Disturb. Notify Building Management of Any Damage."
   b. Contractor's name, address and phone number.
   c. Designation of applicable testing agency
   d. Date of Installation
   e. Manufacturer's name
   f. Installer's name

D. Warranty: Provide manufacturers' standard product warranty.

079200- Joint Sealants

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

1. BASF Building Systems
2. Pecora Corporation
3. Dow Corning Corp.

Products:

A. Silicone (for use around plumbing fixtures and around glazing):
   1. Spectrem 2
   2. Color: Clear

B. Urethane (for use at masonry, control joints, and rough openings)
   1. Dymonic 100
   2. Color: To match adjacent material color (color and paintable)

C. Joint Sealant Backing:
   1. Closed cell material with a surface skin or as approved by sealant manufacturer

Installation:
Install sealants and proper backing according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

079219- Acoustical Joint Sealants

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

Products:

A. Acoustical Joint Sealant
   1. USG Sheetrock Brand Acoustical Sealant

Installation:
Install sealants according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard warranty.

DIVISION 08 - OPENINGS

081113 - Hollow Metal Doors and Frames (Hurricane Zone)

Manufacturers:

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

1. Curries Company
2. Steelcraft
3. Or Approved equal

Products:

Materials

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

Hollow Metal Doors

A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.

B. Exterior Doors (Energy Efficient): Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A924 A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model, ANSI/SDI A250.4 for physical performance level, and HMMA 867 for door construction. (Florida Product Approval: FL #4553 / Texas Dept. of Insurance: TDI #DR-292)
   1. Design: Flush panel.
   2. Core Construction: Foamed in place polyurethane and steel stiffened laminated core with no stiffener face welds, in compliance with HMMA 867 "Laminated Core".
      a. Provide 22 gauge steel stiffeners at 6 inches on-center internally welded at 5" on-center to integral core assembly, foamed in place polyurethane core chemically bonded to all interior surfaces. No stiffener face welding is permitted.
      b. Thermal properties to rate at a fully operable minimum U-Factor 0.29 and R-Value 3.4, including insulated door, thermal-break frame and threshold.
      c. Kerf Type Frames: Thermal properties to rate at a fully operable minimum U-Factor 0.36 and R-Value 2.7, including insulated door, kerf type frame, and threshold.
   3. Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), Minimum 16 gauge (0.053 inch - 1.3-mm) thick steel, Model 2.
   4. Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).
   5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
   6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9".
   7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

081113 - Hollow Metal Doors and Frames (Hurricane Zone) (continued):

C. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level.

   1. Design: Flush panel.
   2. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
   3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
   4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
   5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

D. Interior Doors (Energy Efficient): Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A366 or 620. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
   1. Design: Flush panel.
   2. Core Construction: Steel stiffened laminated core with fiberglass filler with no stiffener face welds, in compliance with HMMA 867 "Laminated Core".
      a. Provide 22 gauge steel-stiffeners at 6 inches on-center internally welded at 5" on- center to integral core assembly, No stiffener face welding is permitted.
      b. Acoustical sound transmission rating shall be no less than STC 38 complying with ASTM E 90 and must be visible on factory applied labels.
   3. Level/Model: Level 2 and Physical Performance Level A (Heavy Duty), Minimum 18 gauge (0.042 inch - 1.1-mm) thick steel, Model 2.
   4. Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).
   5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
   6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9".
   7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

E. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
   1. Design: Flush panel.
      a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
   2. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
   3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
   4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
   5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

F. Manufacturers Basis of Design:
   1. CECO Door Products (C) Honeycomb Core - Regent Series.

Hollow Metal Frames

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
B. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.
   1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
   2. Manufacturers Basis of Design:
      a. CECO Door Products (C) – SQSeries.
      b. Curries Company (CU) – M Series.
C. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.
   1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
   2. Manufacturers Basis of Design:
      a. CECO Door Products (C) - SQ Series.
      b. Curries Company (CU) - M Series.
D. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.
E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

Frame Anchors

A. Jamb Anchors:
   1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
   2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
   3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.
   4. Windstorm Opening Anchors: Types as tested and required for indicated wall types to meet specified wind load design criteria.
B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.
C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

Installation:
Install hollow metal doors and frames according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

081416- Flush Interior Wood Doors

Door Construction - General
A. WDMA I.S.1-A Performance Grade: Extra Heavy Duty; Aesthetic Grade: Premium.
B. U-Factor: 0.50
Core Construction
A. Particleboard Core Doors:
   1. Particleboard: Wood fiber based materials complying with ANSI A208.1 Particleboard standard. Grade LD-2.
   2. Adhesive: Fully bonded construction using Polyurethane (PUR) glue.
   3. Blocking: As indicated under article "Blocking".
Veneered Doors for Painted Finish
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. ASSA ABLOY Wood Doors (GR): GPD Series.
   2. Eggers Industries (EG): Premium Series.
   3. Marshfield-Algoma (MF): Signature Series.
   4. VT Industries (VT): Artistry Series.
B. Interior Solid Core Doors:
   1. Grade: Custom.
   2. Faces: Veneer grades as noted below; veneer minimum 1/50-inch (0.5mm) thickness at moisture content of 12% or less.
      a. Rotary Sliced Natural Birch, A grade faces.
   3. Match between Veneer Leaves: Book match.
   4. Assembly of Veneer Leaves on Door Faces:
      a. Running Match.
   5. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
   6. Transom Match: Continuous match.
   7. Vertical Edges: Matching same species as faces. Wood or composite material, one piece, laminated, or veneered. Minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors.
   8. Horizontal Edges: Solid wood or structural composite material meeting the minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors

081416- Flush Interior Wood Doors (continued):

   9. Construction: Five plies. Stiles and rails are bonded to core, then entire unit sanded before applying face veneers.
   10. At doors over 40% of the face cut-out for lights and or louvers, furnish engineered composite lumber core.

Light Frames and Glazing
A. Metal Frames for Light Openings in doors with up to 1-inch thick insulated glazing.
   1. Low profile beveled vision lite frame
   2. Color: Gray
   3. 20 gauge cold rolled steel
   4. Mitered and welded corners with counter sunk mounting holes
   5. Size as indicated on plans.
B. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with the flush wood door manufacturer's written instructions.
Fabrication
A. Factory fit doors to suit frame opening sizes indicated.
   1. Comply with requirements in NFPA 80 for fire rated doors.
   2. Undercut: As required per manufacturer's templates and sill condition.
B. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
   1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
   2. Metal Astragals: Factory machine astragals and formed steel edges for hardware for pairs of fire rated doors.
C. Openings: Cut and trim openings through doors in factory.
   1. Light Openings: Trim openings with moldings of material and profile indicated.
   2. Glazing: Comply with applicable requirements in Division 08 Section "Glazing."

Installation
A. Install per manufacturers' standard written instructions.

Warranty
A. Provide manufacturers' standard material warranty.

083113- Access Doors and Frames

Manufacturers:

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

Products:
A. Insulated Aluminum Access Door:
   i. Model Number: #WB AL 1500 36x36
   ii. Lock: WB Cylinder Lock (keyed alike with 2 keys per lock)

Installation:
1. Install equipment platform access according to manufacturer's written instructions.

Warranty:
1. Provide manufacturers' standard product warranty.

083613- Sectional Doors (Standard and Hurricane Non-Impact):

Manufacturers:

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

Please note: Overhead Door Company is not an approved manufacturer.

Products:

Notes:
1.) All glazing to have proper labels as required by local AHJ and building codes.
2.) 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.

1.1 MANUFACTURERS
A. Acceptable Manufacturer: Raynor, which is located at: 1101 East River Rd, P. O. Box 448; Dixon, IL 61021-0448; Toll Free Tel: 800-4-RAYNOR; Tel: 815-288-1431; Fax: 888-598-4790; Email: (architectsupport@raynor.com); Web:http://www.raynor.com
B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

1.2 SECTIONAL RIBBED PAN DOOR **(Standard Windload)**
A. SteelForm as manufactured by Raynor Garage Doors:
   1. Doors:
      a. Operation:
         1) Provide doors designed for manual operation.
      b. Jamb Construction:
         1) Steel jambs with self-tapping fasteners.
      c. Structural Performance Requirements:
         1) Wind Loads: See Structural.

   2. Sections:
      a. SteelForm S24C (Basic):
         1) Section end stiles and center stiles to be a minimum 16 gauge galvanized steel. End stiles and center stiles to be riveted to outside face with stainless steel rivets and resistance welded to interior rail.
         2) Material: Steel pan construction, 2 inches thick, roll formed from 24 gauge embossed thickness, commercial quality, hot-dipped galvanized (G40) steel complying with ASTM A 653. Exterior of door to have two deep ribs, four pencil grooves, and roll-formed tongue-and-groove joints for weathertight closure.
         3) Finish: Exterior skin to have two coats of paint, one primer coat and one finish coat.
            a) Color: White polyester paint.
      b. Seals: Bottom of door to have flexible U-shaped vinyl seal retained in aluminum rail. Optional blade seal on top section to prevent airflow above header
      c. Trussing: Doors designed to withstand specified windload. Deflection of door in horizontal position to be maximum of 1/120th of door width.
   3. Windows: Locations to comply with door elevation drawings.
      a. Full-view windows consisting of aluminum stile and rail construction and (where applicable) color matched to door exterior with powdercoat paint in specified door sections. - See door elevation sheet.
      b. Non-Impact Rated Glazing: 1/4 inch Clear Tempered Glass consisting of one pane of 1/4 inch non-insulated glass.
   4. Mounting: Sections mounted in door opening using:
      a. Lap Jamb Angle Mounting: section overlap door jambs by 1 inch on each side of door opening.
   5. Track:
      a. Material: Hot-dipped galvanized steel (ASTM A 653), fully adjustable for adequate sealing of door to jamb or weatherseal.
      b. Track Size: 2 inches.
         1) Jamb Type: Steel.
            a) Mounting: QuikClip. Clip-Angle brackets pre-assembled to continuous angle from floor to door header and continuous angle from door header to door shaft. Angle Size: 2-5/16 x 1-1/4 x 3/32 inches.
   6. Counterbalance:
      a. Counterbalance System: Provided with aircraft-type, galvanized steel lifting cables with minimum safety factor of 5. Torsion Springs consisting of heavy-duty oil-tempered wire torsion springs on a continuous ball-bearing cross-header shaft.
         1) Spring Cycle Requirements: High cycle: 50,000 cycles.
   7. Hardware:
      a. Hinges and Brackets: Fabricated from galvanized steel.
      b. Perimeter Seal: Provide complete weather stripping system to reduce air infiltration. Weather stripping shall be replaceable.
         1) For angle mounted doors provide angle clip-on seal.

083613- Sectional Doors (Standard and Hurricane Non-Impact) (continued):

      c. Furnish door system with locks: Two Interior slide locks with dead bolt provided with hole to receive padlock provided by Owner.
      d. Provide leaf spring bumpers.
   8. SteelForm Limited Warranty: Raynor warrants the door sections against defects in material and workmanship, and deterioration due to rust-through for ten years from date of delivery to the original purchaser. Window components are warranted against defects in material and workmanship for one year from date of delivery to the original purchaser. Raynor warrants all hardware and spring components against defects in material and workmanship for one year (or cycle life of the springs) from date of delivery to the original purchaser. Additional Limited Warranty requirements in accordance with manufacturer's full standard limited warranty documentation.
   9. **Configuration Type: Vertical Lift Clearance: Track must provide 35" available headroom, which will maintain 14'-0" minimum clearance from finish floor to underside of lift equipment.**
   10. Follow manufacturer's instructions for installation. Support tracks are to be adequately reinforced with continuous angle attached to structure.

PART 2 EXECUTION

2.1 EXAMINATION
A. Do not begin installation until substrates have been properly prepared. Verify that site conditions are acceptable for installation of doors, operators, controls and accessories. Ensure that openings are square, flush and plumb.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

2.2 PREPARATION
A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

2.3 INSTALLATION
A. General: Install door, track and operating equipment complete with all necessary accessories and hardware according to shop drawings, manufacturer's instructions.
B. Lubricate bearings and sliding parts, and adjust doors for proper operation, balance, clearance and similar requirements.

2.4 PROTECTION
A. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and legally dispose of construction debris from project site.
B. Remove temporary coverings and protection of adjacent work areas. Repair or replace installed products damaged prior to or during installation.
C. Lubricate bearings and sliding parts, assure weather tight fit around door perimeter and adjust doors for proper operation, balance, clearance and similar requirements. Protect installed products until completion of project.
D. Touch-up, repair or replace damaged products before Substantial Completion.

Installation:
Install sectional doors according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

084113- Aluminum-Framed Entrances and Storefronts (Standard & Hurricane Non-Impact)

Manufacturers:

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

1. Kawneer
2. Or Approved equal

Products:

A. Exterior Storefront System

   1. YES 45 TU
   2. Center set.
   3. Thermal Barrier: Provide continuous thermal barrier by means of a poured and debridged pocket consisting of a two part, chemically curing high density polyurethane which is bonded to the aluminum by YKK ThermaBond Plus.
   4. Materials: Anodized Aluminum; 0.050" minimum thickness.
   5. Accessories: As recommended by the manufacturer.
   6. Components: Manufacturer's standard extruded aluminum mullions, entrance doors, framing, and indicated shapes, perimeter anchor fillers and steel reinforcing as required.
   7. Glazing Stops: Manufacturer's standard glazing stops with EPDM glazing gaskets to prevent water infiltration at the exterior and Dow Corning 995 Structural Silicone Sealant with fixed stops at the interior. Color to match storefront.
   8. Finish: See finish schedule.
   9. Wind Load: See Structural for design pressures.
   10. Door: 35D - Medium Stile
      a. Material: 0.050" aluminum min. thickness
      b. Finish: See finish schedule.
      c. Hardware: See Division 8 Door Hardware
      d. Accessories: Manufacturer's standard
      e. Glass: See Division 8 Glazing
      f. Glazing Stops: Manufacturer's standard
      g. Weather-stripping: Manufacturer's standard

B. Interior Storefront System

   1. YES 45 FS
   2. Center set.
   3. Materials: Anodized Aluminum; 0.050" minimum thickness.
   4. Accessories: As recommended by the manufacturer.
   5. Finish: See finish schedule.

C. Storefront Glazing
   1. Glazing: Comply with Division 08 "Glazing"
   2. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of light gray resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
   3. Glazing Sealants: As recommended by the manufacturer.

Installation:
Install aluminum-framed entrances and storefronts according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

TIMOTHY AHO, ARCHITECT
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10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Architectural Specifications

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

G201

Scale 12" = 1'-0"

10/31/2024 3:12:53 PM

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

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by the following manufacturers, or approved equal:

1. MK- McKinney
2. AD- Adams Rite
3. YA- Yale
4. RO-Rockwood
5. NO-Norton
6. PE- Pemko

General Notes:
1. Hardware listed for design criteria, confirm with specific door manufacturer.
2. Door hardware must meet specified windstorm rating (Florida Approval Number / Texas Department of Insurance Approval) This is to be provided by door supplier, if applicable.
3. Finishes for all door hardware are to be as indicated on Finish Schedule.

Hardware Sets:

Set: 1.0
Doors: 1
Description: EXT - ALUM

1	Continuous Hinge	MCK-25HD	MK
1	Deadlatch	4900 x 4591	AD
1	Cylinder	Mort / Cyl as required	YA
2	Pull	BF168	RO
1	Surface Closer	CLP8501	NO
1	Mtg Plate	as required	NO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	by door / frame mfg	
1	Sweep	315CN	PE

Set: 2.0
Doors: 2, 3, 22, 23
Description: BAYS

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (classroom)	PB 5408LN	YA
1	Surface Closer	8501 Reg / PA	NO
1	Kick Plate	K1050 8" X 2" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE

Set: 3.0
Doors: 4
Description: WAITING - ALUM

1	Continuous Hinge	MCK-25HD	MK
2	Door Pull	BF168	RO
1	Surface Closer	8501 Reg / PA	NO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	by door / frame mfg	

Set: 3.1
Doors: 9, 20, 21, 24
Description: EXT - BAYS

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
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Rain Guard	346C x LAR	PE
1	Sweep	315CN	PE

Set 3.2
Door: 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 5407LN	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:

1. Guardian Industries Corp.
2. Or Approved equal

Products:

Notes:
1.) All glazing to have proper labels as required by local AHJ and building codes.
2.) 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
1. Conformance: ASTM E 2190
2. Outdoor Lite: Clear Float Glass as manufactured by Vitro Architectural Glass
   a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
   b. Glass Thickness: 6mm (1/4")
   c. Magnetic Sputter Vacuum Deposition Coating (MSVD): ASTM C 1376.
   d. Coating: Solarban® 90 on Surface # 2
   e. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
3. Interspace Content: Air 1/2" (12.7mm)
4. Indoor Lite: Clear float glass as manufactured by Vitro Architectural Glass
   a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
   b. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
   c. Glass Thickness: 6mm (1/4")
5. Performance Requirements:
   a. Visible Light Transmittance: 51 percent minimum.
   b. Winter Nighttime U-Factor: 0.29 (Btu/hr*ft²*°F) maximum.
   c. Summer daytime U-Factor: 0.27 (Btu/hr*ft²*°F) maximum.
   d. Shading Coefficient: 0.27 maximum.
   e. Solar Heat Gain Coefficient: 0.23 maximum.
   f. Outdoor Visible Light Reflectance: 12 percent maximum.

B. GL-2 Monolithic Single-Glaze Float-Glass:
Monolithic Clear Glass Clear 6mm
1. Clear float glass as manufactured by Vitro Architectural Glass
   a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
   b. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
   c. Glass Thickness: 6mm (1/4")
2. Performance Requirements:
   a. Visible Light Transmittance: 89 percent minimum.
   b. Winter Nighttime U-Factor: 1.02 (Btu/hr*ft²*°F) maximum.
   c. Summer daytime U-Factor: 0.92 (Btu/hr*ft²*°F) maximum.
   d. Shading Coefficient: 0.94 maximum.
   e. Solar Heat Gain Coefficient: 0.82 maximum.
   f. 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:

1. Georgia-Pacific
2. USG
3. National Gypsum

Products:

A. Moisture and Mold-Resistant Type: Mold Defense
   1. Thickness: 1/2 inch
   2. Long Edges: Tapered
   3. Finish: Level 4 in areas exposed to view. Level 1 in concealed areas.
B. Water-resistant Type: Watercheck (@ Toilet Rooms and behind plumbing fixtures)
   1. Thickness: 1/2 inch
   2. Long Edges: Tapered
   3. Finish: Level 4
   4. Cuts: All cuts in board shall be covered with special waterproofing sealant as recommended by the manufacturer.
C. Type X: Firecheck (As Required)
   1. Thickness: 5/8"
   2. Long Edges: Tapered
   3. Finish: Level 4
   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
   1. Style: 1775 Dune
   2. Surface Texture: Fine Texture
   3. Composition: Mineral Fiber
   4. Color: White
   5. Size: 24 inch x 24 inch
   6. Edge Profile: Square Lay-in

B. Metal Suspension Systems
   1. Suprafine XL 9/16" Exposed Tee Grid and Edge Molding
   2. 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:

1. Johnsonite, a Tarkett Company
2. Armstrong World Industries
3. Or Approved equal

Products:

A. Rubber Base: Pinnacle Rubber by Roppe
   1. Height: 4"
   2. Length: Coils in manufacturer's standard length
   3. Outside Corners: Job formed
   4. Inside Corners: Job formed
   5. 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 Rexthane 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:

1. Bobrick Washroom Equipment, Inc.
2. American Specialties, Inc.
3. 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:

1. 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.

2. 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:

1. Kidde
2. 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:

1. Larsens Manufacturing Company
2. JL Industries
3. 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:

1. Install fire extinguishers in locations and heights indicated and in compliance with requirements of authorities having jurisdiction.

2. 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.

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10/31/2024

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Architectural Specifications

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

G202

Scale 12" = 1'-0"

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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 ENGINEER STANDARDS - EXTERIOR

PAINTED GRAY BRICK

Painted buildings include all of the same specs 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

4

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.

9

Awnings by General Contractor. See Details

BRANDED SCONCES

40"x08" 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 to be evenly spaced between the bay doors, and vertically centered with the bay doors.

10

Branded Sconces by Others

CHANNEL LETTERS

White 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, these letters are treated as directional signage. 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

8

Letters by Others

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

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Architectural Specifications & EOC Standards - Exterior

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

G300

Scale	12" = 1'-0"

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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 (OPTIONAL)

In-Bay Media relays all 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.

14

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.expressoilprint.com

POSTER FRAMES, MAGAZINE AND ACE CARD HOLDERS

These frames and holders are made of aluminum to match the branding of EOC&TE.

16

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. The are both black leather with metal accent.

Global Lounge Chair - Large

Europa Guest Chair - Small

TILE

All tile must be replaced unless it is in good shape and is a gray color.
Replacement is Dal-Tile Healthland HL05 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 screw on the back. These can be purchased at Home Depot or online (search Wiremold Desktop Power Center or WSR320-S)

CHAIRS FOR LAPTOP WORKSTATION

Small, armless chairs with leather cushion seat.

Sonic Armless Chair

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.

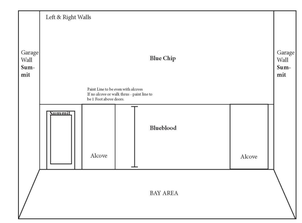
Bay Area - Avery 700 Medium Gray and Rubber Duckie
Lobby Word Wall - Oracal 631 Gray 071

23

Wall Graphics by Others

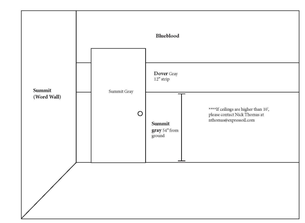
PAINT SCHEME

BAY AREA



25

LOBBY



26

See Finish Schedule for Paint Selections

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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EOC Standards - Interior

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

G301

Scale	12" = 1'-0"

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COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	24036_EOC Baton Rouge, LA (Old Hammond)
Location:	Baton Rouge, Louisiana
Climate Zone:	2a
Project Type:	New Construction
Vertical Glazing / Wall Area:	3%

Construction Site:	Owner/Agent:	Designer/Contractor:
9340 Old Hammond Hwy Baton Rouge, Louisiana 70809	Express Oil Change & Tire Engineers 1880 Southpark Drive Birmingham, Alabama 35244 ashley.bernatski@expressoil.com	Aho Architects, LLC 1855 Data Drive Hoover, Alabama 35244 acain@ahoarch.com

Additional Efficiency Package(s)
Credits: 10.0 Required 16.0 Proposed
Reduced lighting power, 16.0 credit

Building Area	Floor Area
1-Automotive Facility : Nonresidential	573

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 70.00, Thermal Emittance = 0.90 (d), [Bldg. Use 1 - Automotive Facility]	573	---	30.0	0.032	0.039
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Automotive Facility] (c)	123	---	---	0.730	0.730
NORTH					
Int. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	996	24.0	0.0	0.058	0.064
Door #2: Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	---	---	0.500	0.370
Door #13: Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	---	---	0.500	0.370
EAST					
Int. Wall (East @ Break Room / Toilet 8): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	315	24.0	0.0	0.058	0.064
Int. Wall (East @ Manager / Toilet 3): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	315	24.0	0.0	0.058	0.064
SOUTH					
Int. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	996	24.0	0.0	0.058	0.064
Door #3: Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	---	---	0.500	0.370
Door #16: Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	---	---	0.500	0.370
WEST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	293	24.0	0.0	0.058	0.064
Door #1: Glass (over 50% glazing): Metal Frame, Entrance	21	---	---	0.210	0.770

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Door, Perf. Specs.: Product ID Triple Glazed Solarban 90 on Clear, SHGC 0.21, PF 0.63, [Bldg. Use 1 - Automotive Facility] (b)					
Window B: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Triple Glazed Solarban 90 on Clear, SHGC 0.21, PF 0.63, [Bldg. Use 1 - Automotive Facility] (b)	85	---	---	0.210	0.450
Int. Wall (West @ Break Room / Toilet 8): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	315	24.0	0.0	0.058	0.064
Door #15: Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	---	---	0.500	0.370

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
(d) High albedo roof requirement options: 1) 3-year aged solar reflectance index >= 55.0 thermal emittance >= 0.75, 2) 3-year aged solar reflectance index >= 64.0, 3) Initial year aged solar reflectance >= 0.70 thermal emittance >= 0.75, 4) Initial year aged solar reflectance index >= 82.0.

Envelope PASSES: Design 10% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jennifer Hughes | | 10-23-24
Name - Title | Signature | Date

COMcheck Software Version COMcheckWeb
Inspection Checklist
Energy Code: 2021 IECC

Requirements: 5.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C402.4.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.2 [PR14][1]	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.4 [FO7][2]	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12][2]	Fenestration products rated in accordance with NFRC certified and as to performance labels or certificates provided.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.3 [FR10][1]	Vertical fenestration SHGC value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.3, C402.4.3.4 [FR8][1]	Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.5 [FR14][2]	U-factor of opaque swinging and nonswinging doors associated with the building thermal envelope meets requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1 [FR16][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.4 [FR18][3]	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3][1]	Roof insulation installed per manufacturer's instructions and is labeled with R-value or insulation certificate providing R-value and other relevant data. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.1 [IN20][1]	Roof assembly meets minimal thermal resistance installed between roof framing or in a continuous fashion on the roof assembly as stipulated in Table C402.1.3. Requirements for above deck insulation, minimum thickness, suspended ceilings, staggered joints and skylight curbs will be met.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.3 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [IN18][3]	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3 [IN5][3]	High-albedo roofs satisfy one of the following: 3-year-aged solar reflectance >= 0.55 and thermal emittance >= 0.75 or 3-year-aged solar reflectance index >= 64.0.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C401.3 [FI58][1]	A thermal envelope certificate will be supplied and completed by an approved third party.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.10 [FI26][3]	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.8 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.3 [FI67][1]	Reduced lighting power - this credit specifies that the connected lighting power is >= 10% more efficient than 2021 IECC requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

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TIMOTHY A. AHO REG. NO. 9277 STATE OF LOUISIANA REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Building COMCheck

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

G400

Scale

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1 General Information

PROJECT INFORMATION

Name of Project: Single Building / Left Hand Oil Change/ Front Enter/ Side Tire Storage

Client: Express Oil Change & Tire Engineers

Location: Baton Rouge, LA
Authority Having Jurisdiction (AHJ): City: Baton Rouge 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

■ 2021 International Building Code
■ 2021 International Plumbing Code
■ 2021 International Energy Conservation Code
■ 2017 ICC/ANSI 117.1
■ 2021 International Fire Code
■ 2020 National Electrical Code
■ 2021 International Fuel Gas Code
■ 2021 NFPA 101
■ 2021 International Mechanical Code

3 Use and Occupancy Classification(s) (2021 IBC)

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

4 Special Detailed Requirements Based On Use and Occupancy (2021 IBC)

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 414.2.1 through 414.2.5 (IFC)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) of IBC and 3206.2 of IFC)

■ Class IIIB Liquids — ■ Actual Storage per control area: 4040.13 gallons
■ Class IA Flammable Liquids — ■ Actual Storage per control area: 0.94 gallons
■ Class IB Flammable Liquids — ■ Actual Storage per control area: 3.25 gallons

■ High-Hazard Commodities per IFC 2018 3203.6 / 3206.2 (Rubber Tires)

■ Allowable Quantity: 0-500 s.f. ■ Actual Quantity: X≤500 s.f.

5 General Building Heights and Areas (2021 IBC)

504 Building Height and Areas and 506 Building Area (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 = 7043 s.f. (5662 Main Level + 1381 Pit)

505.3 Equipment Platforms

■ Project complies with 505.3 through 505.3.3

508 Mixed Use and Occupancy

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

No separation required between Group B and Group S-1 Occupancies

6 Types of Construction (2021 IBC)

601 General and 602 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 South	Right West	Front North	Left East
X < 5				
5 ≤ X < 10				
10 ≤ X < 30				15'-0"
X ≥ 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 (2021 IBC)

Table 803.13 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 (2021 IBC)

903 Automatic Sprinkler Systems
903.2.9.1 Repair Garages

☐ 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 (2021 IBC)

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	1269 SF	200	6.34
S-1	Corridor	6	118 SF	200	0.59
S-1	Service	9	2483 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 (2021 IBC)

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	6.34			0.2	1.27
S-1	Corridor	6	0.59			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

Tables 1006.2.1 Spaces with One Exit or Exit Access Doorway

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

Table 1006.3.3 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 Provided (Feet)
S-1	200	N/A	71'-1"
B	200	N/A	84'-10"

12 Interior Environment (2021 IBC)

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

1209.2 Attic spaces

Opening not less than 20 inches by 30 inches is provided for attic area with clear height over 30 inches. 30" headroom provided at or above access opening

■ Yes ☐ Not Required

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Life Safety / Code Summary

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

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29 Plumbing Systems (2021 IBC)

Table 2902.1 Minimum Number of Required Plumbing Fixtures

DT_Plumbing Fixture_Group S1												
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 Exception 2

2902.2.1 Family or assisted use toilet facilities serving as separate facilities

■ Yes ☐ No ☐ Not Required

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 (2021 IFC)

505.1 Address Identification

■ Yes ☐ No ☐ Not Required

■ Project complies 505.1 Address Identification

506 Key Boxes

■ Yes ☐ No ☐ Not Required

■ Project complies 506.1 Where Required

23 Motor Fuel-Dispensing Facilities and Repair Garages (2021 IFC)

2311.2.2 Waste oil, motor oil and other Class IIIB Liquids

■ Project complies with 2311.2.2 Waste oil, motor oil and other Class IIIB liquids.

2311.2.2.1 Tank Location

■ Project complies with 2311.2.2.1 tank location ☐ Not Applicable

2311.2.3 Drainage and disposal of liquid and oil-soaked waste

☐ Yes ☐ No ■ Not Required

■ Garage floors do not contain floor drains.

2311.4 Below-grade areas

■ Project complies with 2311.4.1 through 2311.4.3 ☐ Not Applicable

2311.7 Fire Extinguishers

■ Project complies with 2311.7 fire extinguishers (See Section 9 Fire Protection Systems)

32 High Piled Combustible Storage (2021 IFC)

3203.6 High-hazard commodities

■ Yes ☐ No

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

Definitions per Chapter 2 of the International Fire Code

High-piled Combustible Storage. Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12'-0" in height. When required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets, and similar commodities, where the top of storage is greater than 6'-0" in height.

■ Project does contain high piled combustible storage over 6'-0" (<500 s.f. of rubber tire storage over 6 feet high).

Table 3206.2 General Fire Protection and Life Safety Requirements

Commodity Class	Size of High Piled Storage Area	All Storage Areas			
		Automatic Fire Extinguishing System	Fire Detection System	Building Access	Smoke and Heat Removal
High Hazard	0-500 s.f.	Not Required	Not Required	Not Required	Not Required

Solid-Piled Storage, Shelf Storage and Palletized Storage			
Max. Pile Dimension (Feet)	Max. Permissible Storage Height (Feet)	Max. Pile Volume (Cubic Feet)	
60 feet	Not Required	Not Required	

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 Occcupancies

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 genral 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 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 requirment 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

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Baton Rouge, Louisiana (Old Hammond Hwy)

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Life Safety / Code Summary

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

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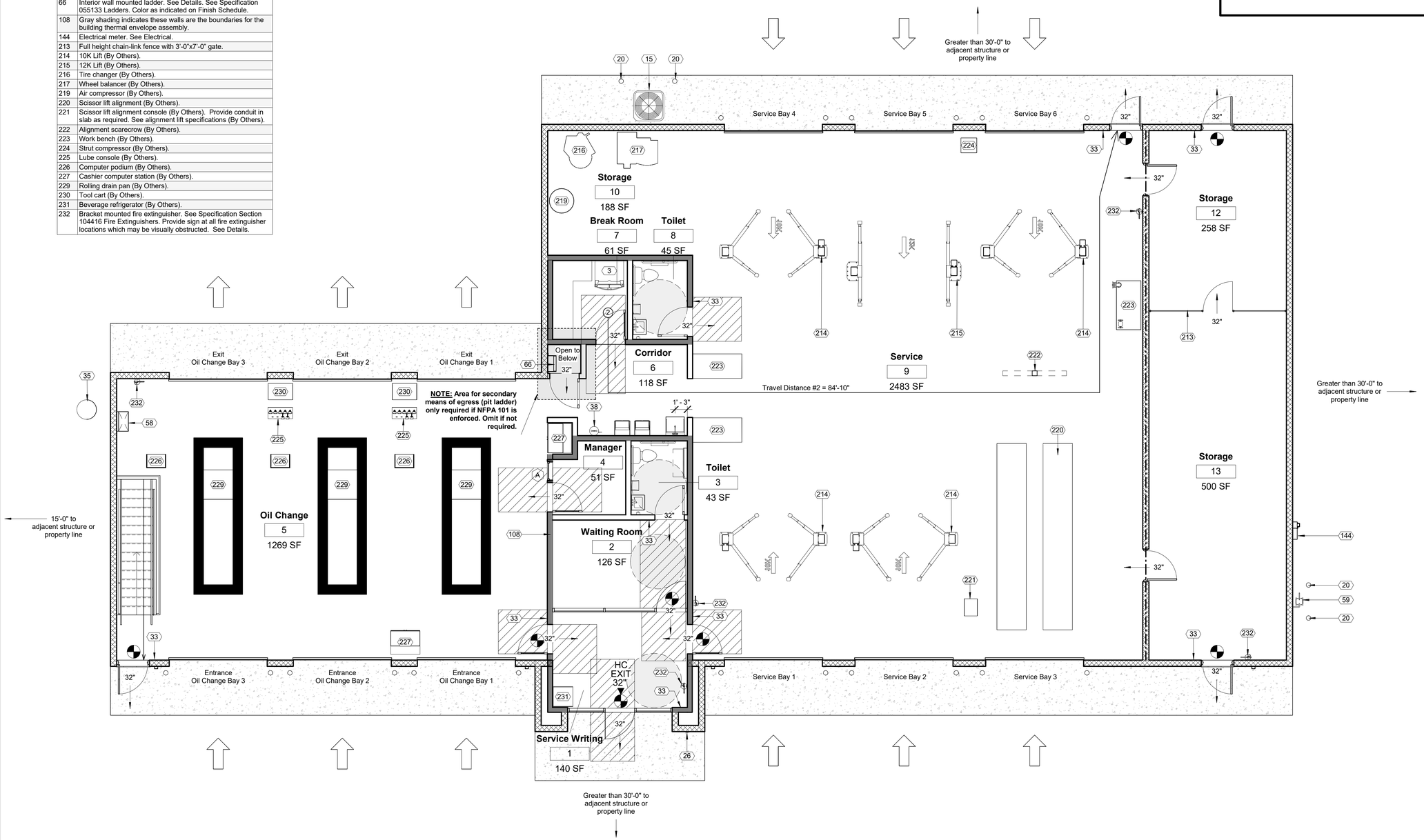
Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
15	HVAC condensing unit. See Mechanical.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 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.
59	Gas meter. See Plumbing.
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.
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.

LIFE SAFETY SYMBOL LEGEND

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



1 05_Life Safety Plan_Main
3/16" = 1'-0"

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Life Safety Plan - Main

Project number	24036
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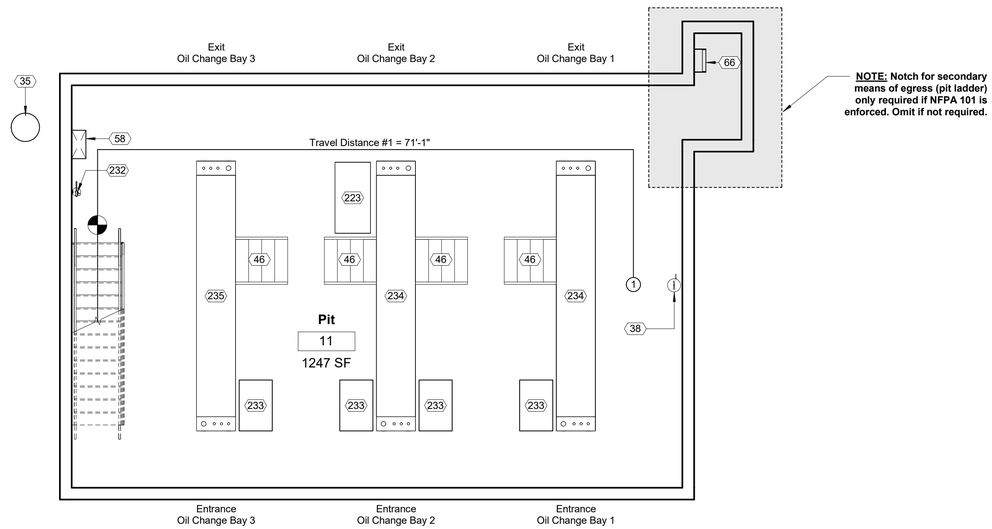
LIFE SAFETY SYMBOL LEGEND

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



1 04_Life Safety Plan_Pit
3/16" = 1'-0"

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Life Safety - Pit

Project number	24036
Date	10/31/2024
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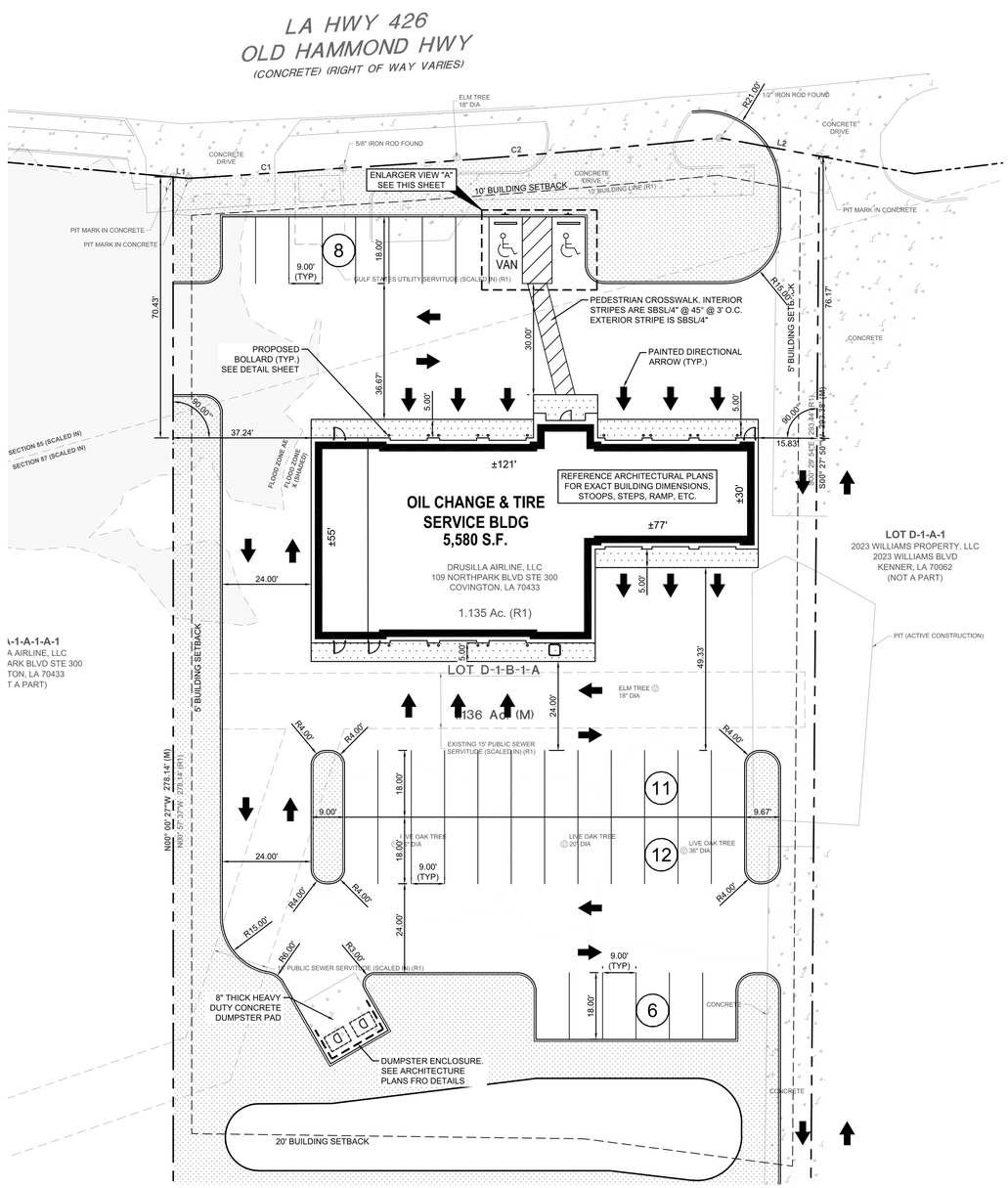
NOTE:

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.



1 Architectural Site Plan
N.T.S.

TRUE NORTH

PLAN NORTH

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Architectural Site Plan

Project number	24036
Date	10/31/2024
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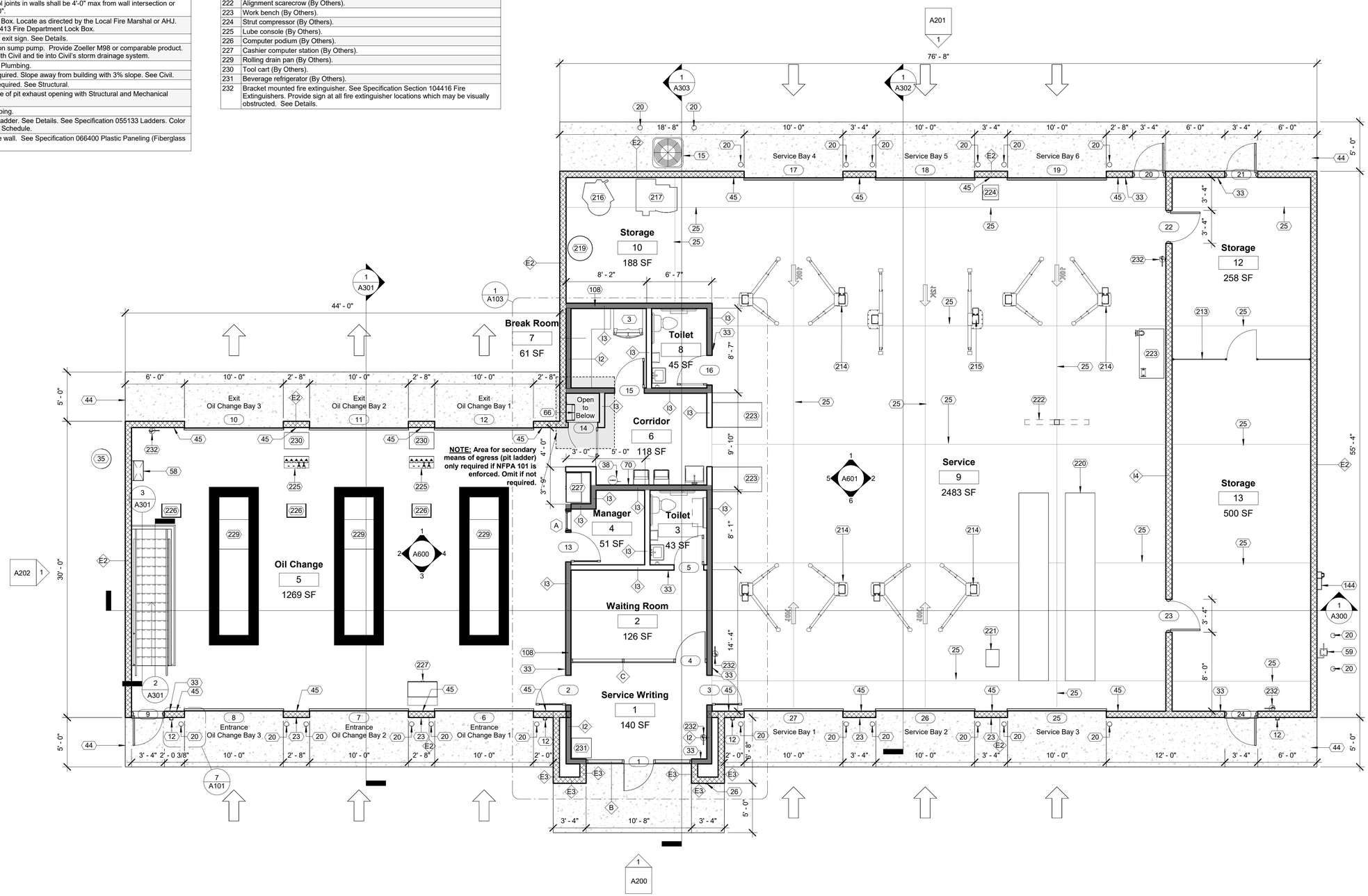
Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
12	Pre-finished metal conductor head with built-in overflow and downspout. Boot piped to storm drainage system unless otherwise indicated to discharge at grade. If discharging at grade, provide a pre-finished elbow and concrete 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.
59	Gas meter. See Plumbing.
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).

Keynote Schedule	
Tag	Text
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.



1 01_Floor Plan_Main
3/16" = 1'-0"

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Floor Plan - Main

Project number	24036
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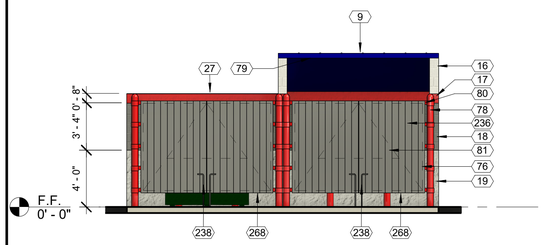
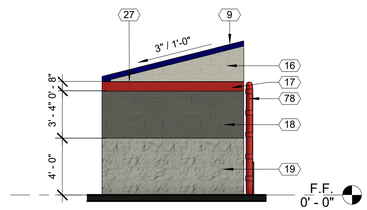
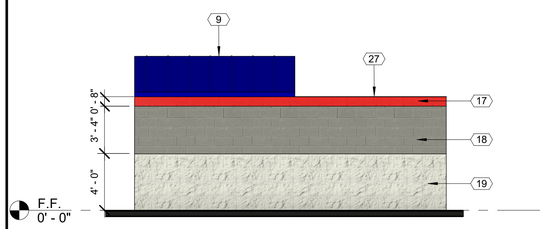


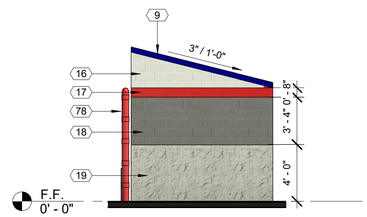
3 05_Dumpster Elevation_A
3/16" = 1'-0"



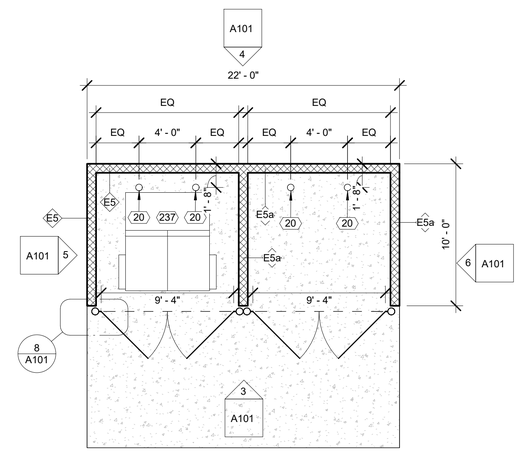
5 07_Dumpster Elevation_C
3/16" = 1'-0"



4 06_Dumpster Elevation_B
3/16" = 1'-0"



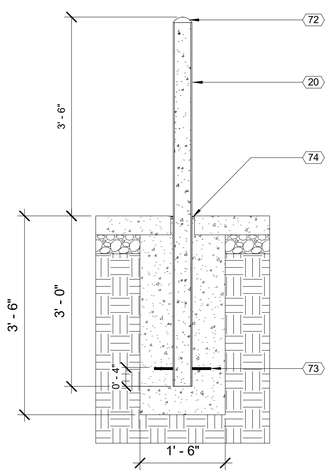
6 08_Dumpster Elevation_D
3/16" = 1'-0"



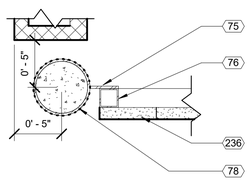
2 02_Floor Plan_Dumpster
3/16" = 1'-0"

Keynote Schedule

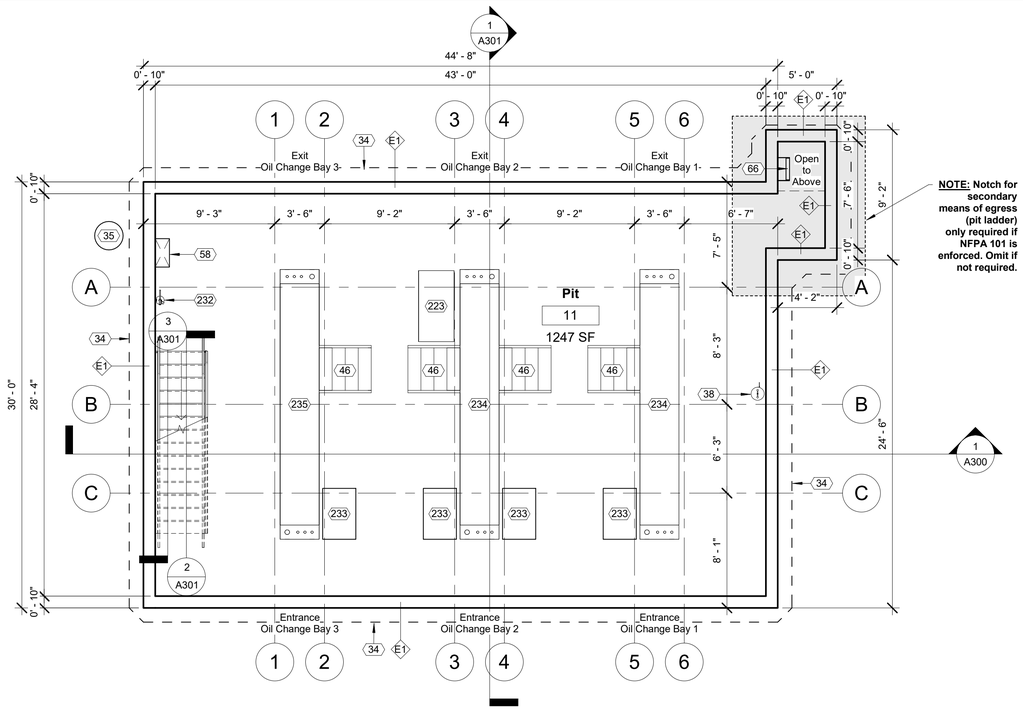
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
17	Painted split-face CMU (bond beam 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 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.
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.



7 DT_Sheet A101_Bollard Detail
3/4" = 1'-0"



8 DT_Sheet A101_Dumpster Detail @ Gate
1 1/2" = 1'-0"



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

1 00_Floor Plan_Pit
3/16" = 1'-0"

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10/31/2024

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Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Pit Floor Plan and Site Details

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A101

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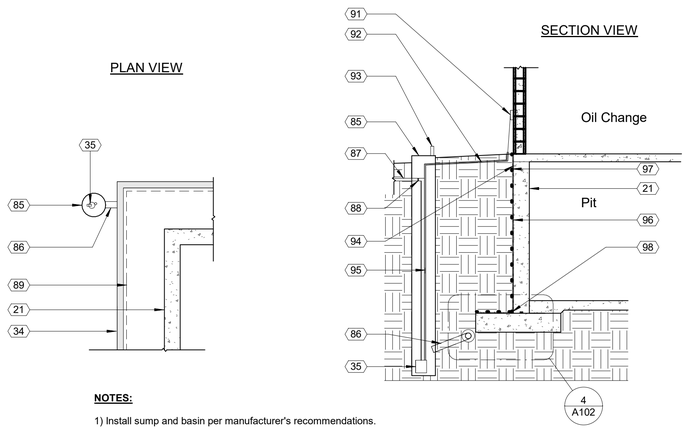
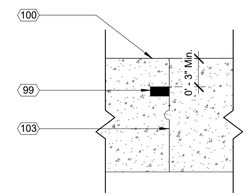


NOTES:

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"

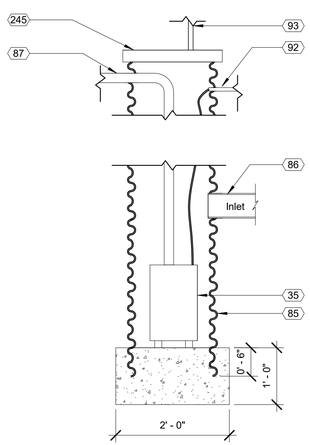


NOTES:

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"

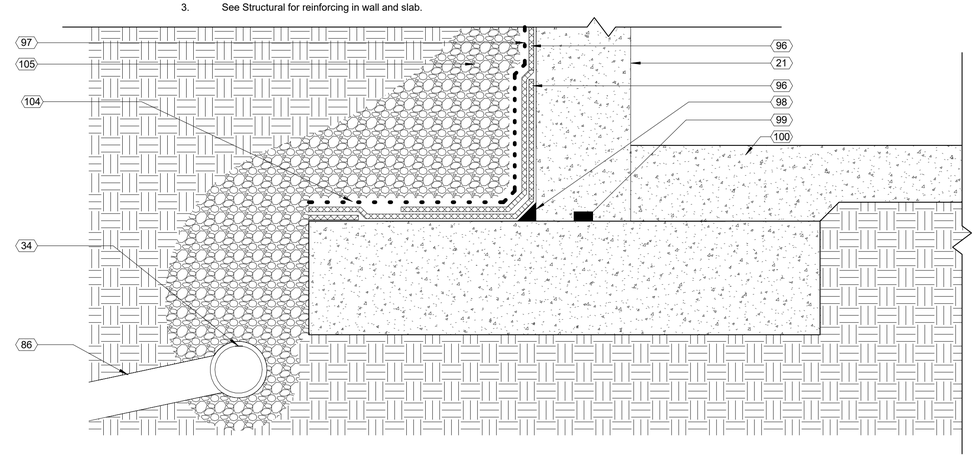
Keynote Schedule	
Tag	Text
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
34	4" perforated perimeter drain with silt filtration fabric. See Details.
35	Submersible foundation sump pump. Provide 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.
103	Construction joint.
104	CCW MiraDrain 9800.
105	3" washed #57 stone wrapped in silt filtration fabric.
245	Lockable cover @ sump pump.



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

NOTES:

1. Install all waterproofing and drainage components per manufacturer's recommendations.
2. GC to contact Owner for copy of Geotech Report.
3. See Structural for reinforcing in wall and slab.



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

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Foundation Details

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A102

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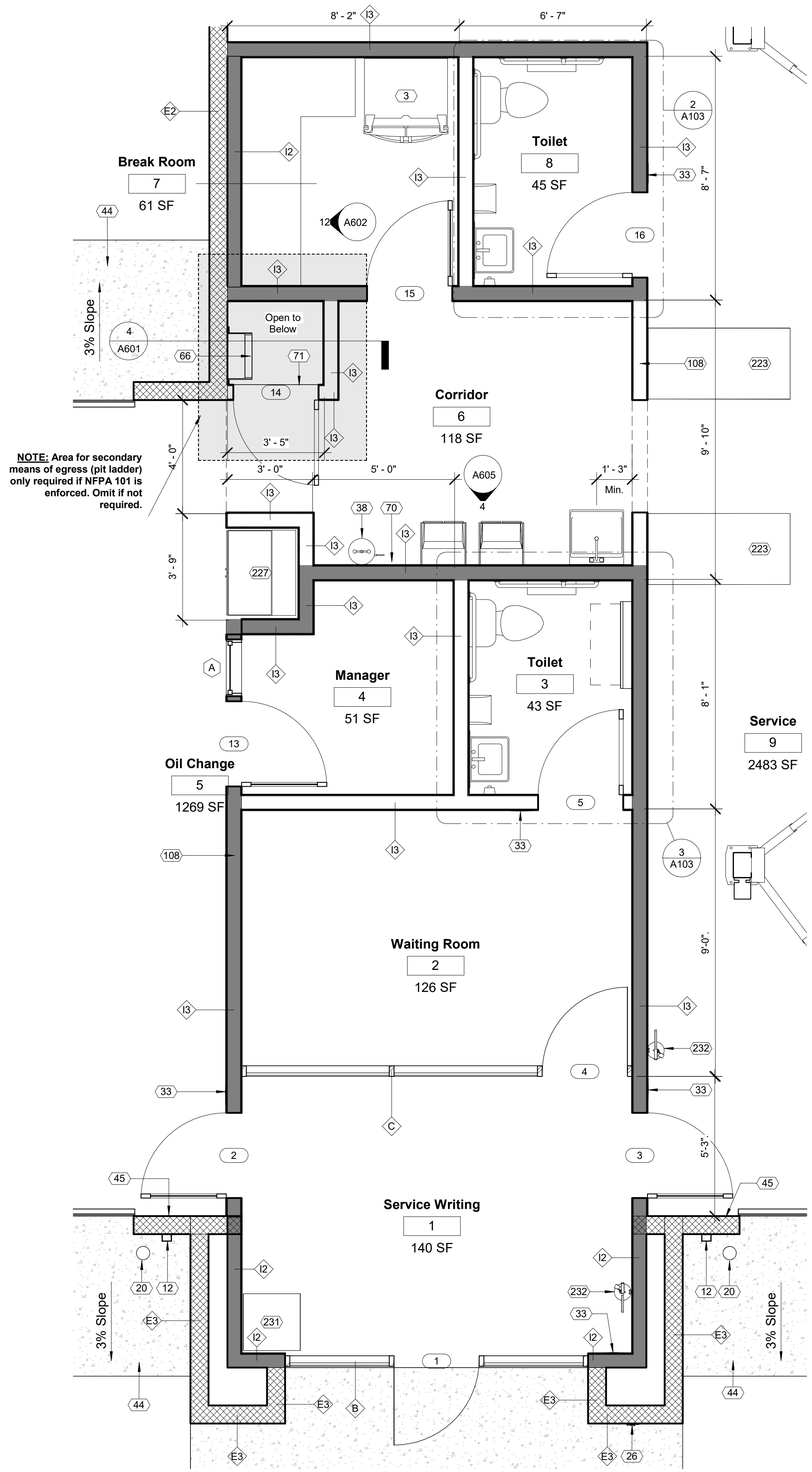
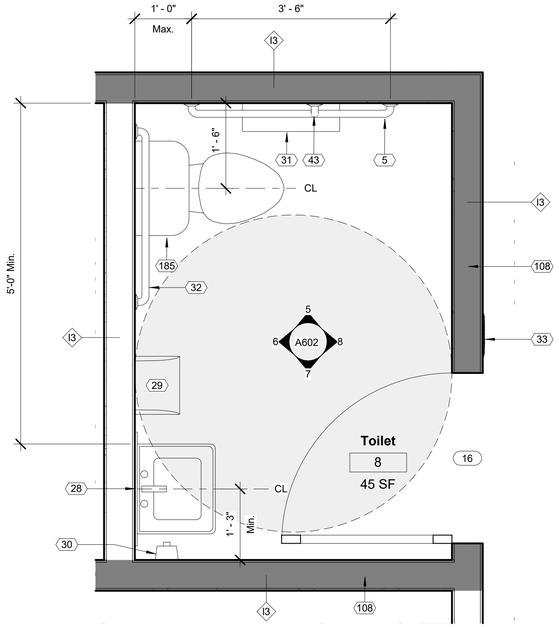
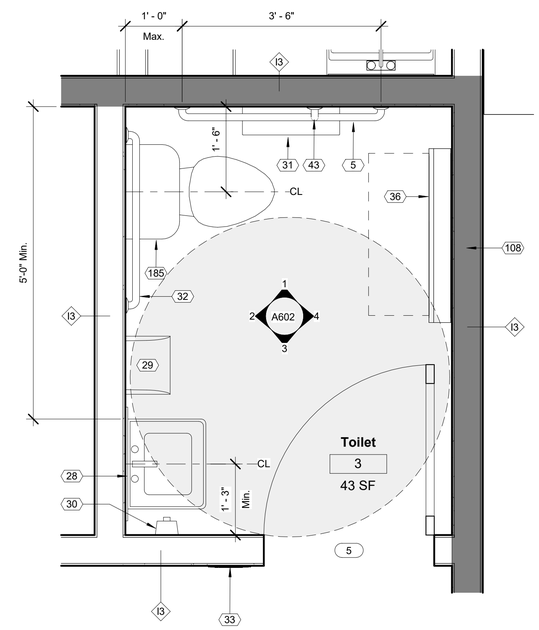


1 08_Enlarged Plan _Main
3/8" = 1'-0"



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).
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 / Left Hand Oil Change / Front Enter / Side Tire Storage

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No.	Description	Date

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Enlarged Floor Plans and Details

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A103

Scale: As indicated

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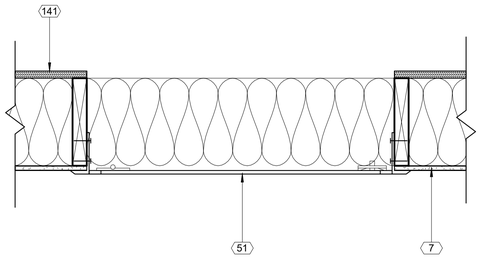
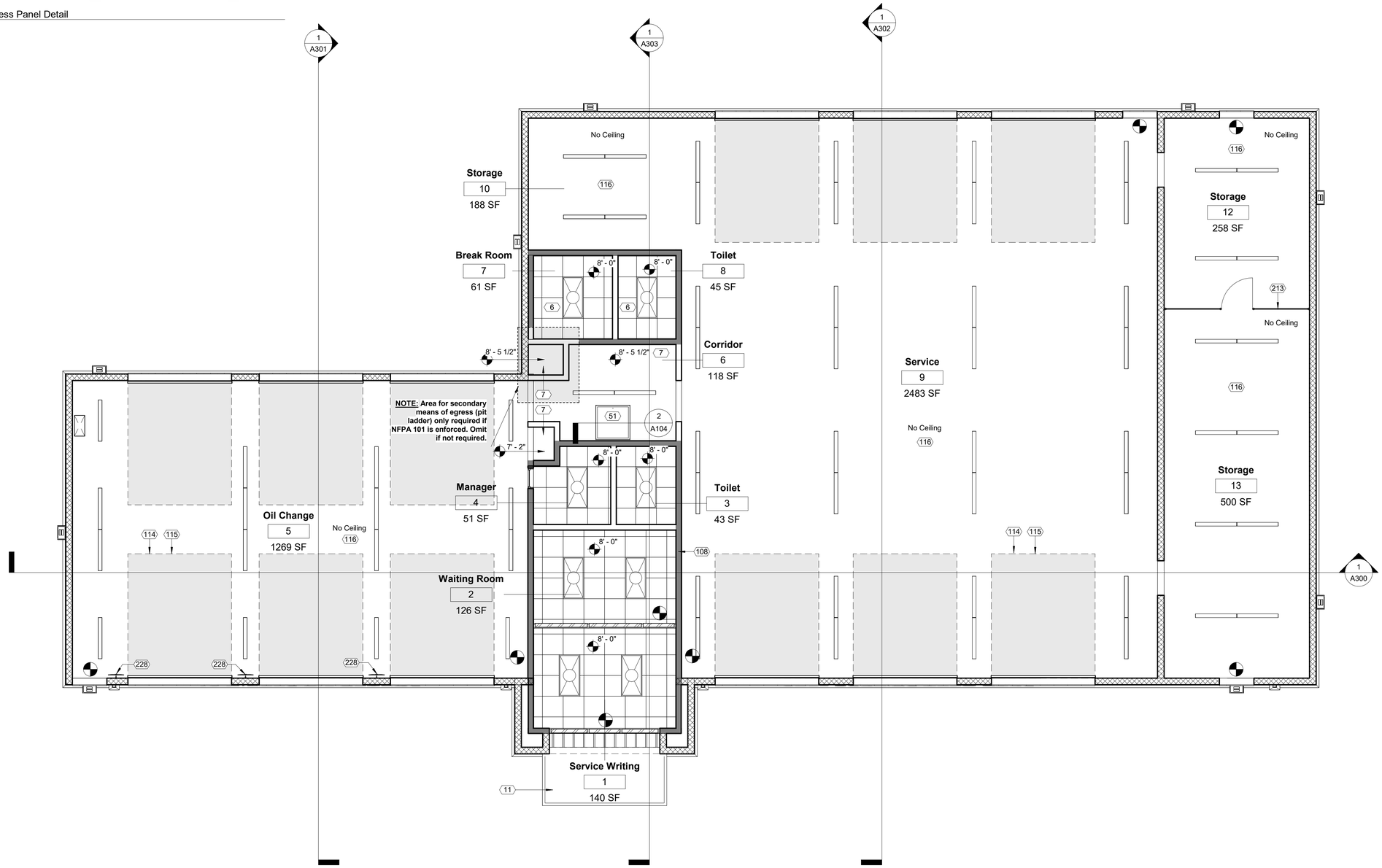


2 DT_Sheet A104_Access Panel Detail
1 1/2" = 1'-0"



1 01_RCP_Main
3/16" = 1'-0"

Keynote Schedule	
Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
7	Painted ½" 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).

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No.	Description	Date

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Reflected Ceiling Plan - Main

Project number	24036
Date	10/31/2024
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Checked by	N/A

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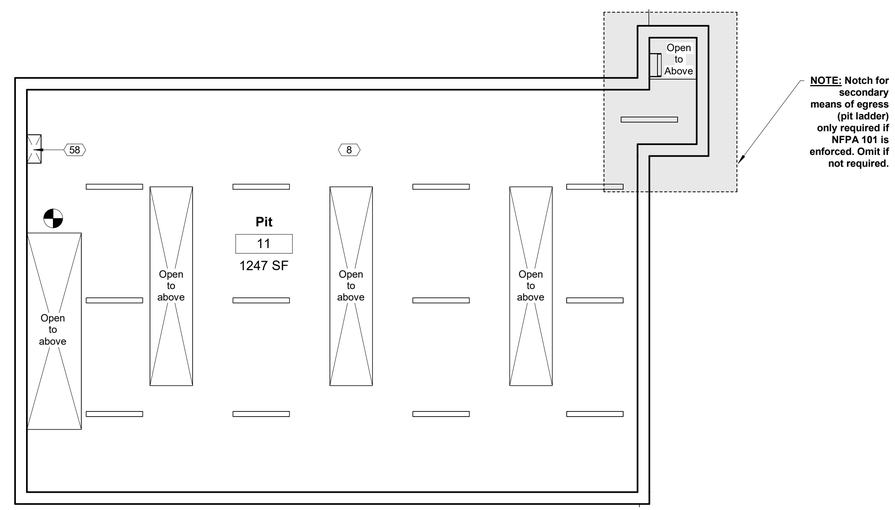
Keynote Schedule	
Tag	Text
8	Exposed to structure above.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.



1 00_RCP_Pit
3/16" = 1'-0"

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No.	Description	Date

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Reflected Ceiling Plan - Pit

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A105

Scale	3/16" = 1'-0"

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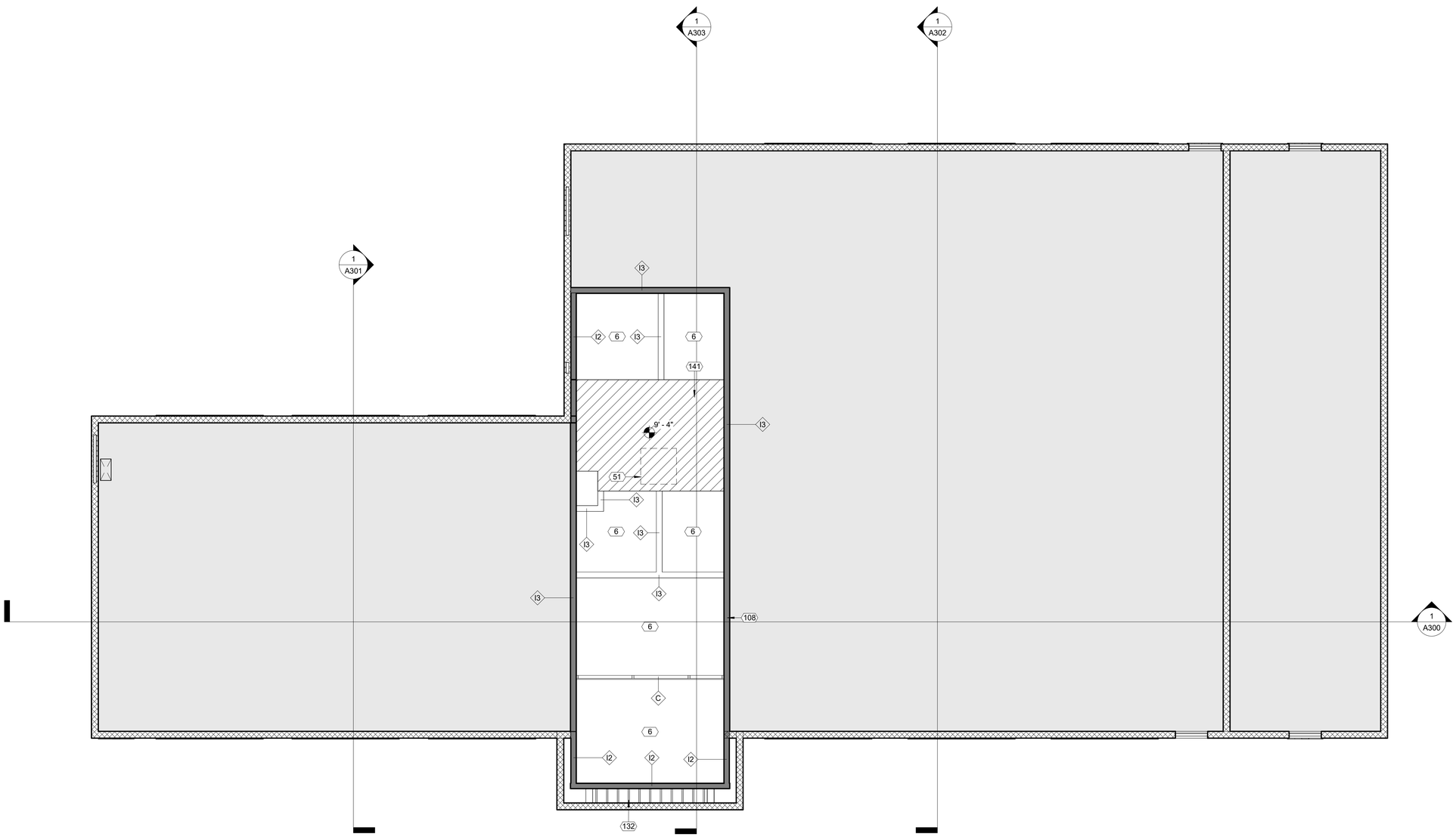
Keynote Schedule	
Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
51	36"x36" removable insulated access panel.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
132	2x wood framing @ 16" o.c. with kraft face R-38 batt insulation 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.



1 11_Floor Plan_Platform
3/16" = 1'-0"

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No.	Description	Date

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Floor Plan - Platform

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A106

Scale 3/16" = 1'-0"

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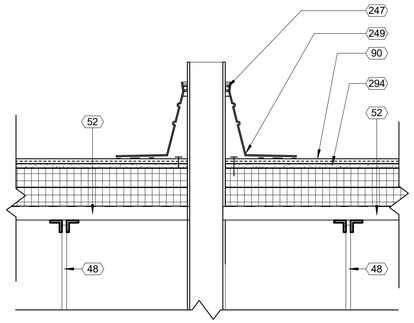
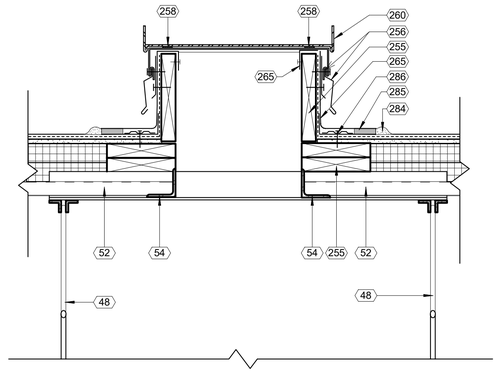


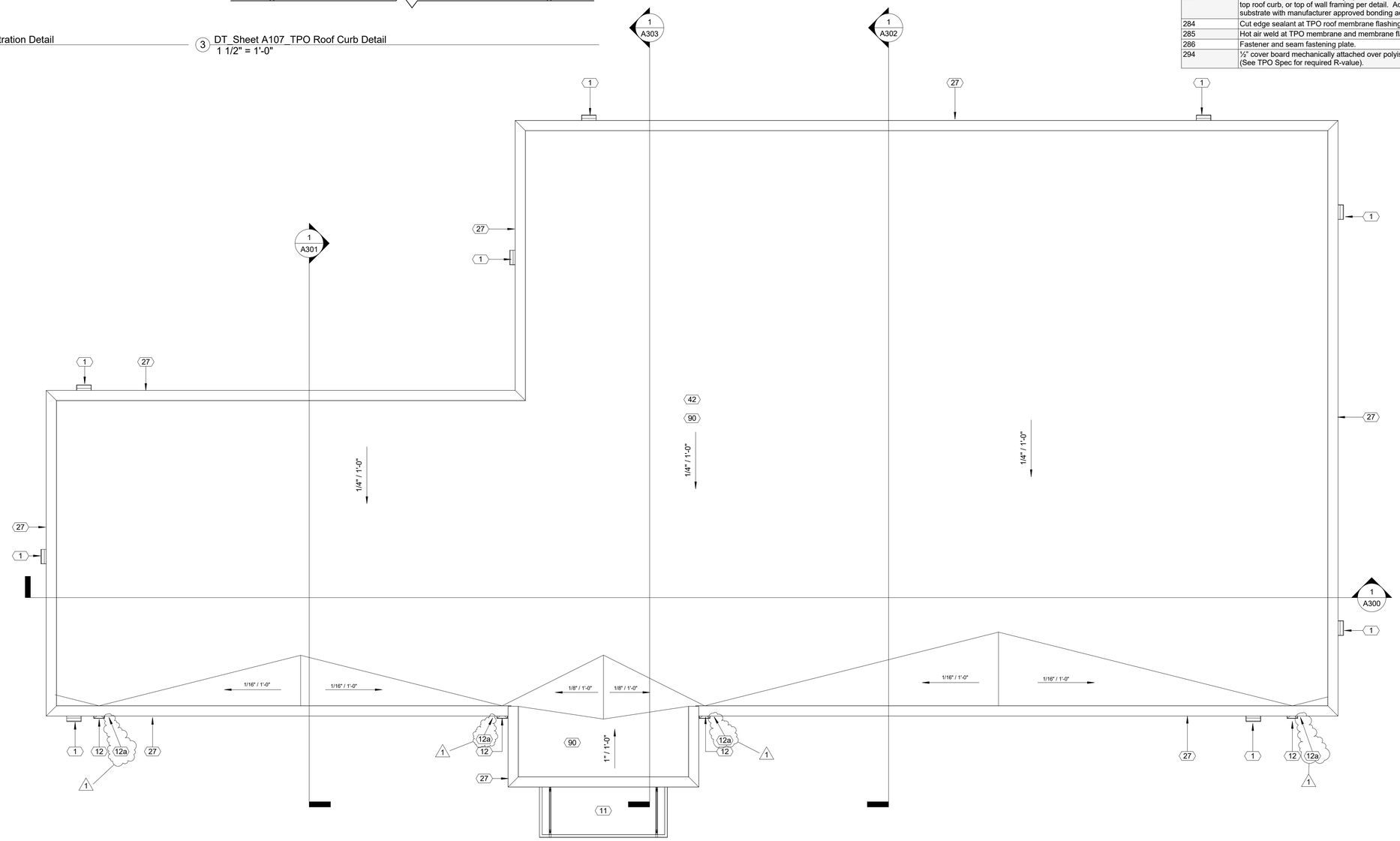
2 DT_Sheet A107_TPO Roof Penetration Detail
1 1/2" = 1'-0"



3 DT_Sheet A107_TPO Roof Curb Detail
1 1/2" = 1'-0"

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.
12a	Emergency roof drain scupper.
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.
42	Paint all roof penetrations to match roof color.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
247	Sealant compatible with water block sealant.
249	TPO pre-molded vent boot with pre-manufactured TPO membrane flashing by TPO manufacturer.
255	2x pressure treated wood blocking.
256	Prefinished metal flashing and counterflashing.
258	Continuous sealant around perimeter.
260	Base of equipment to extend 1/2" minimum beyond and down over top of roof curb.
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	½" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).



1 03_Roof Plan
3/16" = 1'-0"

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1/8/2025

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date
1	ASI #1	1/8/2025

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Roof Plan

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A107

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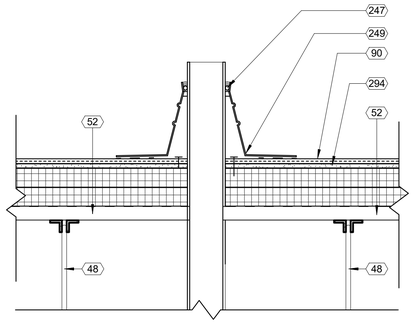
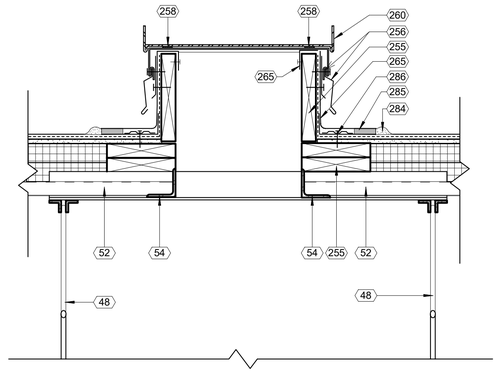


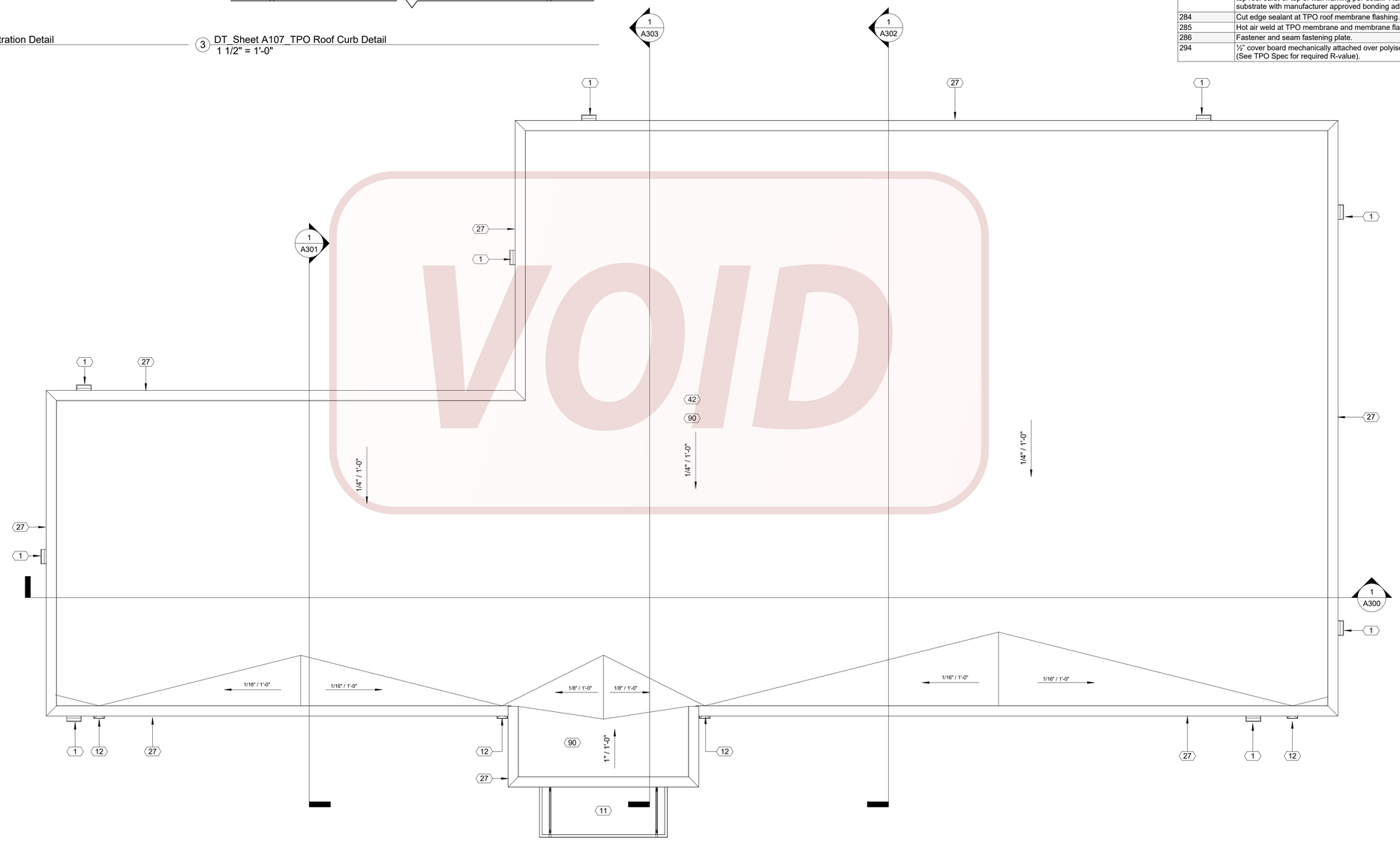
2 DT_Sheet A107_TPO Roof Penetration Detail
1 1/2" = 1'-0"



3 DT_Sheet A107_TPO Roof Curb Detail
1 1/2" = 1'-0"

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.
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.
42	Paint all roof penetrations to match roof color.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
247	Sealant compatible with water block sealant.
249	TPO pre-molded vent boot with pre-manufactured TPO membrane flashing by TPO manufacturer.
255	2x pressure treated wood blocking.
256	Prefinished metal flashing and counterflashing.
258	Continuous sealant around perimeter.
260	Base of equipment to extend 1/2" minimum beyond and down over top of roof curb.
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	½" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).



1 03_Roof Plan
3/16" = 1'-0"

VOID

TIMOTHY AHO, ARCHITECT
www.ahoarch.com

TIMOTHY A. AHO
REG. NO. 9217
STATE OF LOUISIANA
REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Roof Plan

VOID

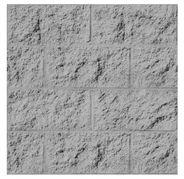
Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A107

Scale As indicated

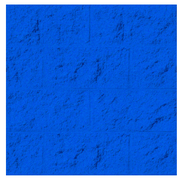
10/31/2024 3:13:51 PM

EXTERIOR FINISH MATERIAL LEGEND



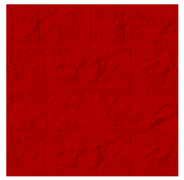
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: SW6966 Blueblood
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

SOLARBAN® 90 (2) Clear + Clear Glass Insulating Glass Unit

	Exterior Reflectance	Interior Reflectance	U-Value (Btu/hr/ft²/°F) Air	Argon	SHGC
vLT					
51%	13%	19%	0.29	0.24	0.33

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.
12a	Emergency roof drain scupper.
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.
59	Gas meter. See Plumbing.
144	Electrical meter. See Electrical.

1 01_Exterior Elevation_Front (North)
3/16" = 1'-0"

TIMOTHY AHO, ARCHITECT
www.ahoarch.com

TIMOTHY A. AHO REG. NO. 9217 STATE OF LOUISIANA REGISTERED ARCHITECT
1/8/2025

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date
1	ASI #1	1/8/2025

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Exterior Elevation - Front (North)

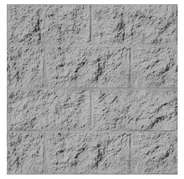
Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A200

Scale 3/16" = 1'-0"

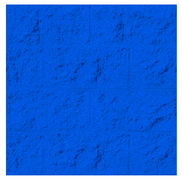
1/9/2025 2:01:40 PM

EXTERIOR FINISH MATERIAL LEGEND



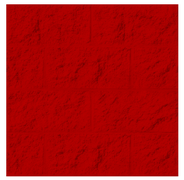
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: SW6966 Blueblood
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.
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.
59	Gas meter. See Plumbing.
144	Electrical meter. See Electrical.

1 01_Exterior Elevation_Front (North)
3/16" = 1'-0"

TIMOTHY AHO, ARCHITECT
www.ahoarch.com
TIMOTHY A. AHO REG. NO. 9217 STATE OF LOUISIANA REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Exterior Elevation - Front (North)

VOID

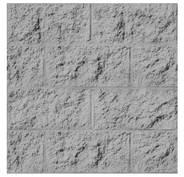
Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A200

Scale 3/16" = 1'-0"

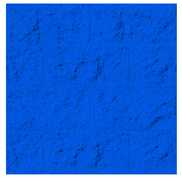
10/31/2024 3:13:58 PM

EXTERIOR FINISH MATERIAL LEGEND



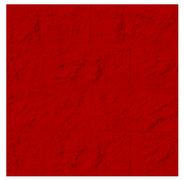
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: SW6966 Blueblood
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

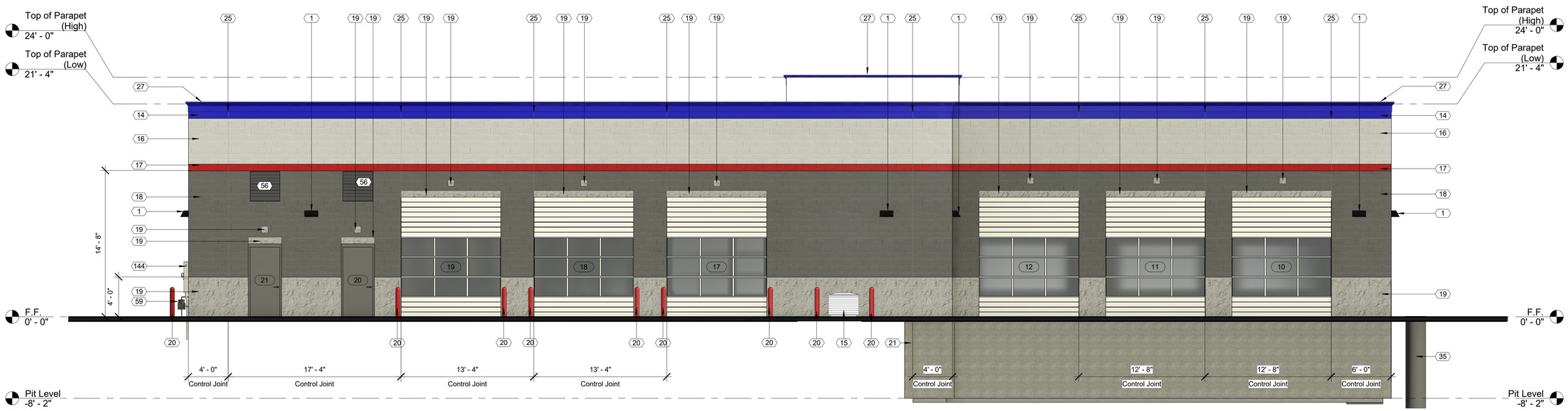
Color: Clear Anodized Aluminum
Manuf: YKK

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.
59	Gas meter. See Plumbing.
144	Electrical meter. See Electrical.



1 02_Exterior Elevation_Rear (South)
3/16" = 1'-0"

TIMOTHY AHO, ARCHITECT
www.ahoarch.com

TIMOTHY A. AHO
REG. NO. 9217
STATE OF LOUISIANA
REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Exterior Elevation - Rear (South)

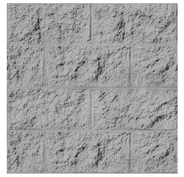
Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A201

Scale 3/16" = 1'-0"

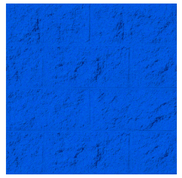
10/31/2024 3:14:04 PM

EXTERIOR FINISH MATERIAL LEGEND



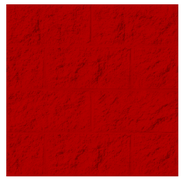
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: SW6966 Blueblood
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

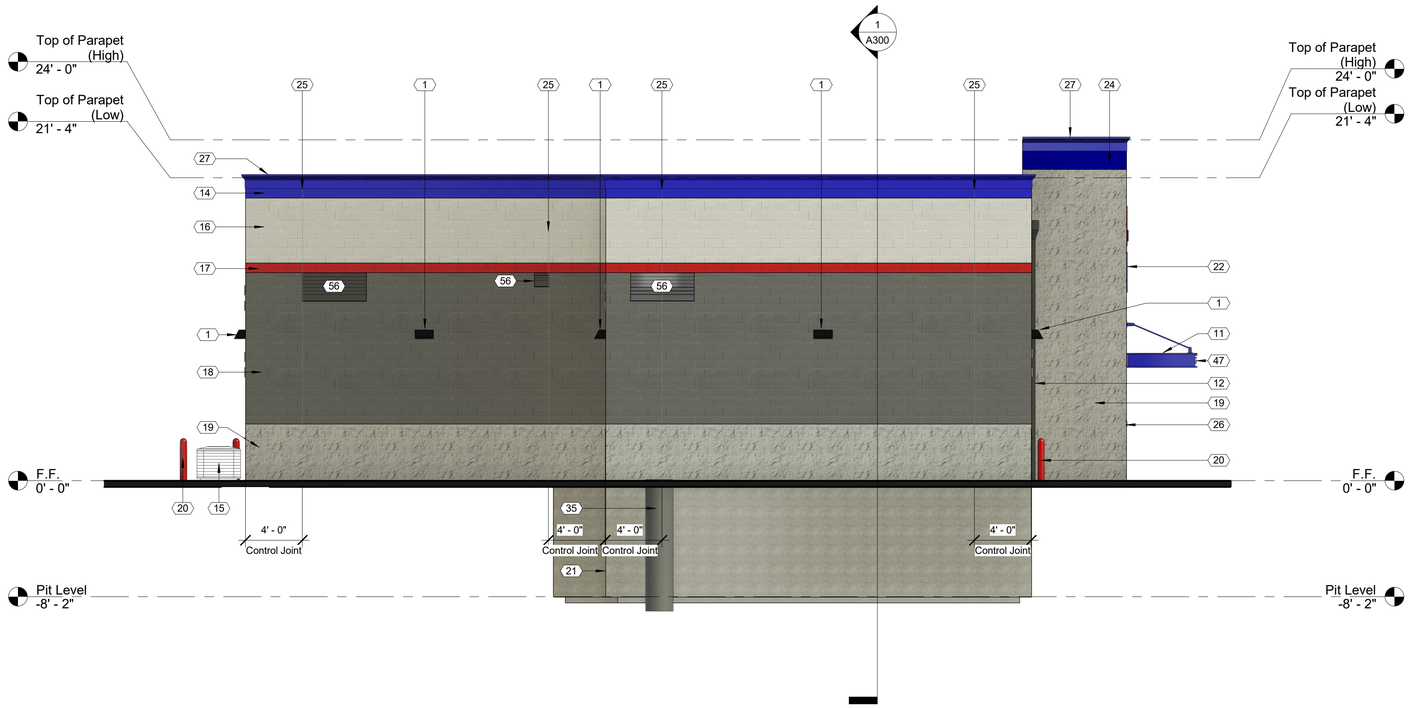
Color: Clear Anodized Aluminum
Manuf: YKK

TINTED GLAZING

Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

Keynote Schedule

Tag	Text
1	Wall pack. See Electrical.
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.



1 03_Exterior Elevation_Left (East)
3/16" = 1'-0"

TIMOTHY AHO, ARCHITECT

www.ahoarch.com

TIMOTHY A. AHO
REG. NO. 9217
STATE OF LOUISIANA
REGISTERED ARCHITECT

10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Exterior Elevation - Left (East)

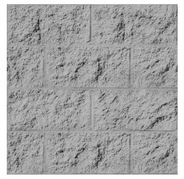
Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A202

Scale 3/16" = 1'-0"

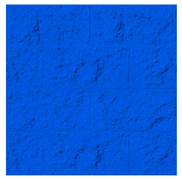
10/31/2024 3:14:09 PM

EXTERIOR FINISH MATERIAL LEGEND



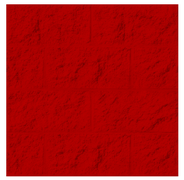
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



PAINTED SPLIT-FACE CMU

Color: SW6966 Blueblood
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

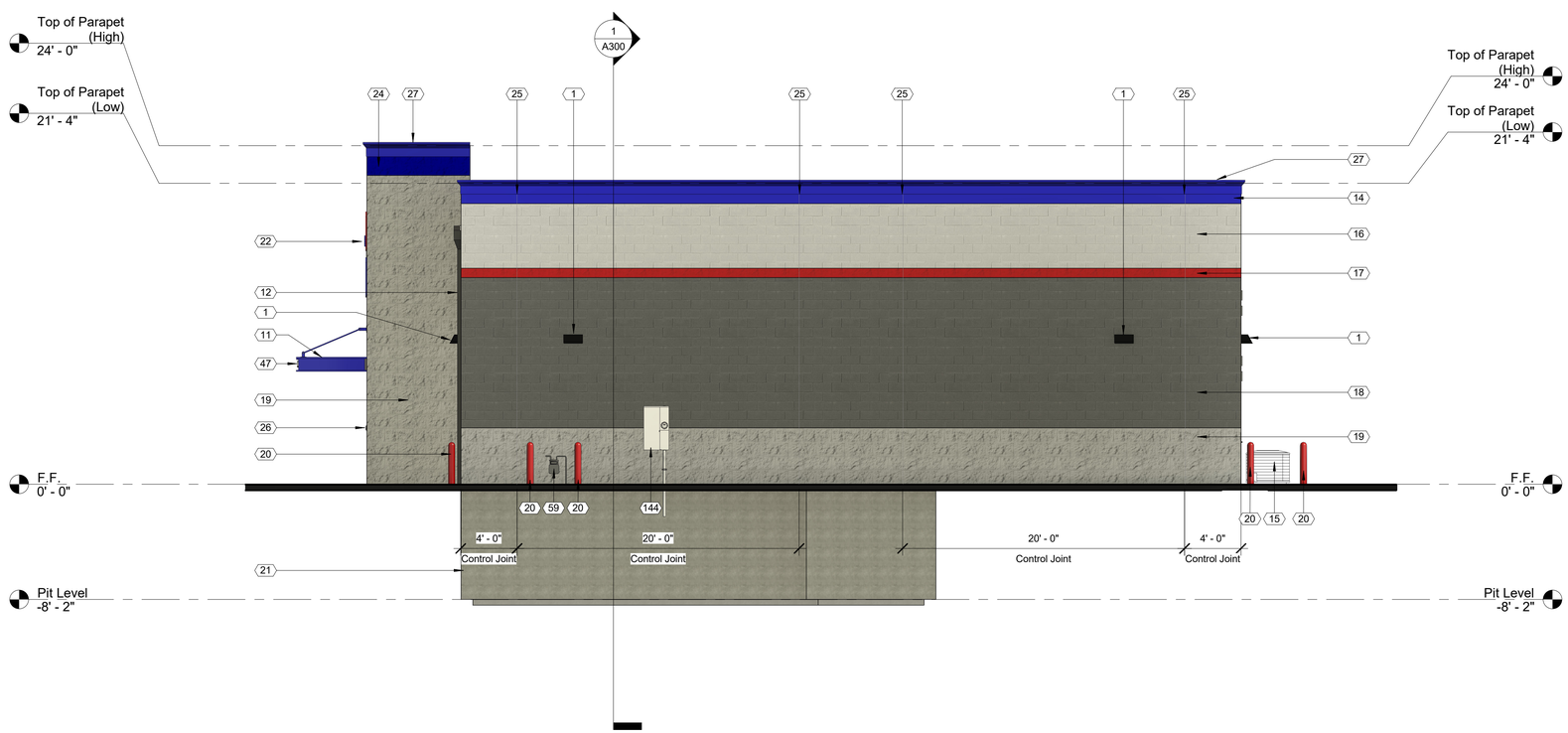
Color: Clear Anodized Aluminum
Manuf: YKK

TINTED GLAZING

Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

Keynote Schedule

Tag	Text
1	Wall pack. See Electrical.
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.
59	Gas meter. See Plumbing.
144	Electrical meter. See Electrical.



1 04_Exterior Elevation_Right (West)
3/16" = 1'-0"

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STATE OF LOUISIANA
REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Exterior Elevation - Right (West)

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A203

Scale 3/16" = 1'-0"

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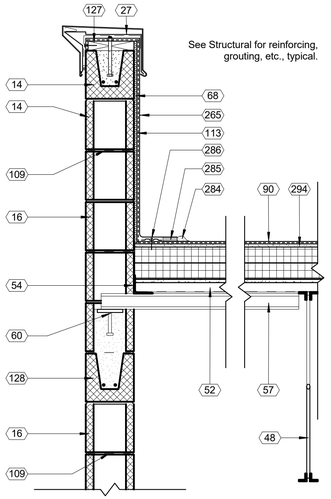
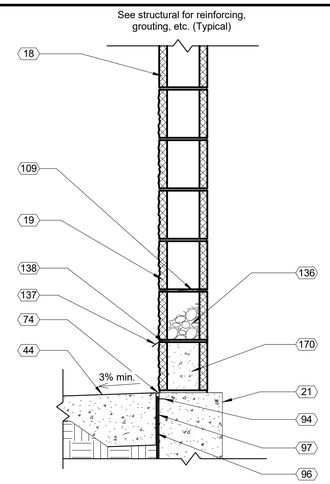
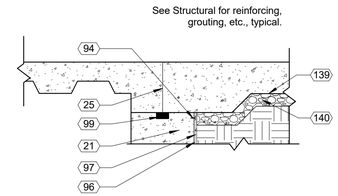


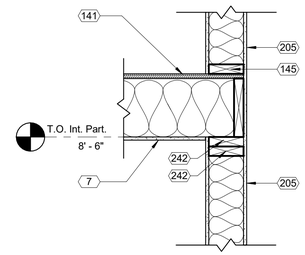
2 DT_Sheet A300 Roof at Parapet (Side Wall) Standard
1" = 1'-0"



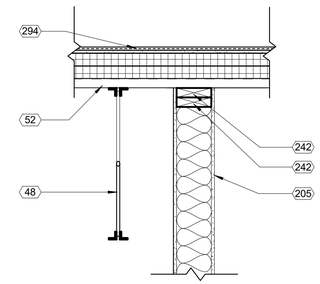
3 DT_Sheet A300_Water Table Detail @ Pit Wall Standard
1" = 1'-0"



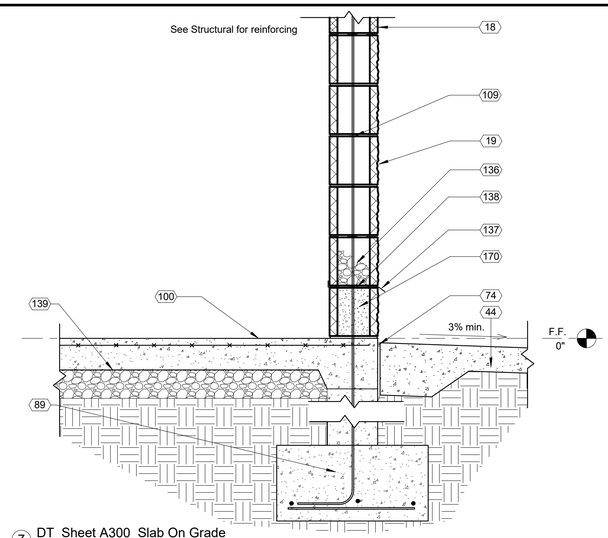
4 DT_Sheet A300_Slab On Grade - Pit Wall Transition
1" = 1'-0"



5 DT_Sheet A300_Wall Detail @ Floor Joist
1" = 1'-0"



6 DT_Sheet A300_Wall Detail at Joist
1" = 1'-0"



7 DT_Sheet A300_Slab On Grade
1" = 1'-0"

Keynote Schedule

Tag	Text
1	Wall pack. See Electrical.
7	Painted ½" 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.

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.
44	Concrete apron as required. Slope away from building with 3% slope. See Civil.
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.

Keynote Schedule

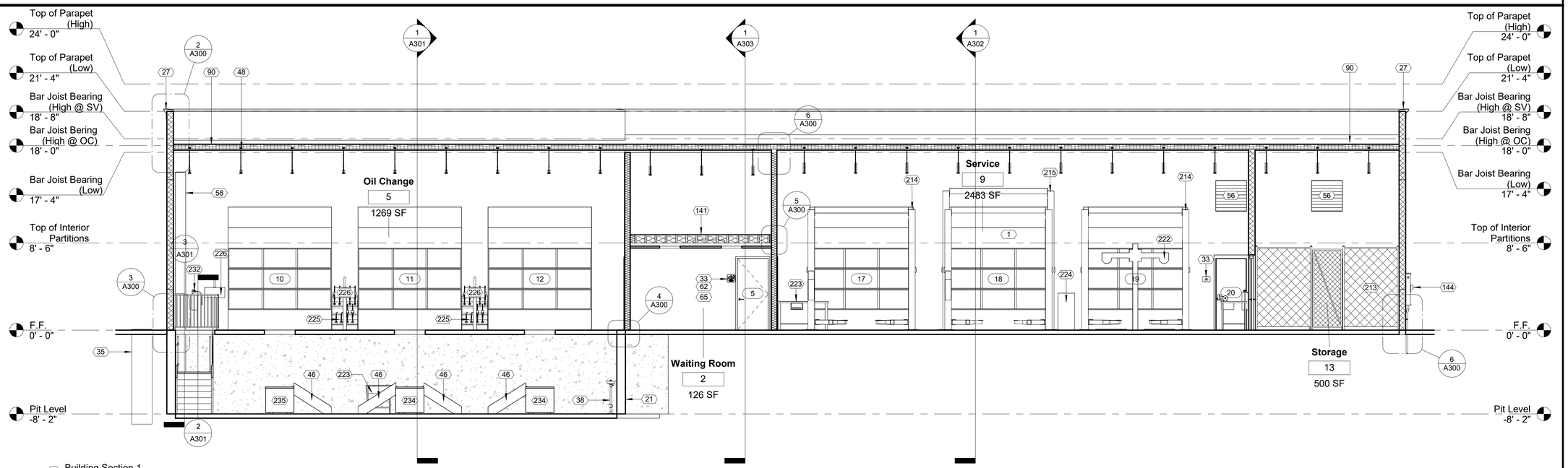
Tag	Text
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
99	CCW MiraStop.
100	Concrete slab. See Structural.
109	Horizontal joint reinforcement at 16" o.c. vertical.
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.

Keynote Schedule

Tag	Text
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.
144	Electrical meter. See Electrical.
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).
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.

Keynote Schedule

Tag	Text
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	½" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).



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

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STATE OF LOUISIANA
REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Building Sections

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A300

Scale As indicated

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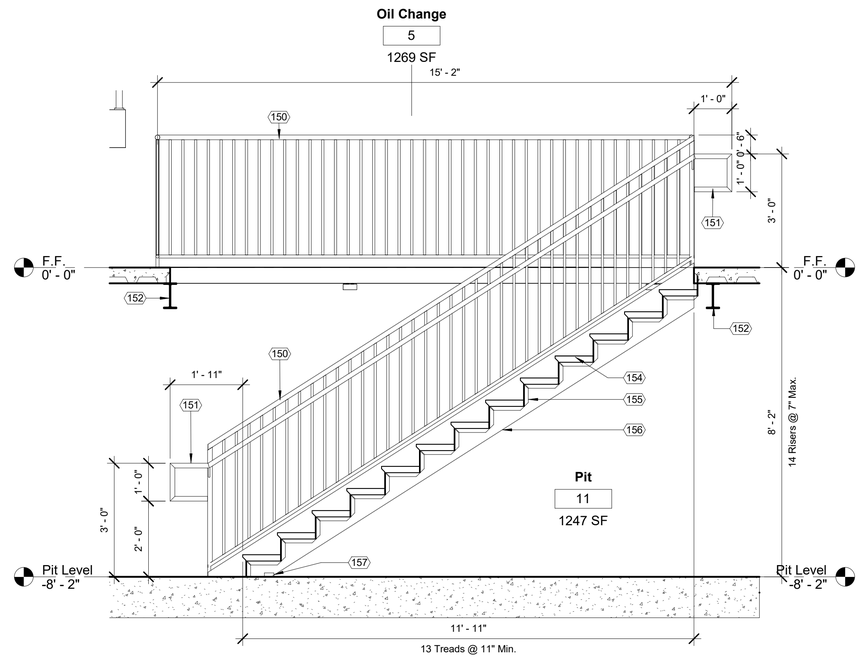
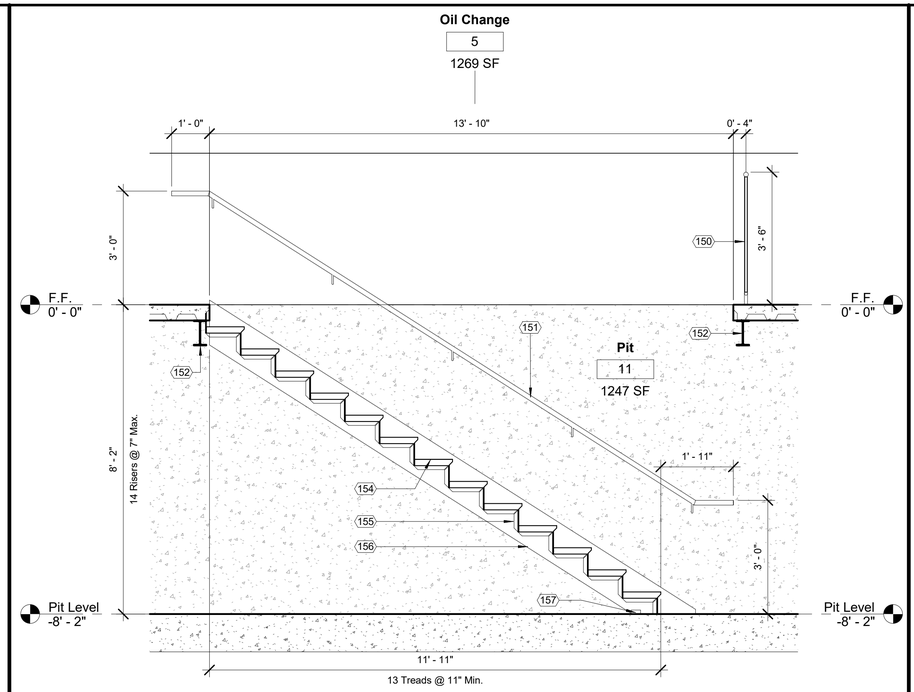
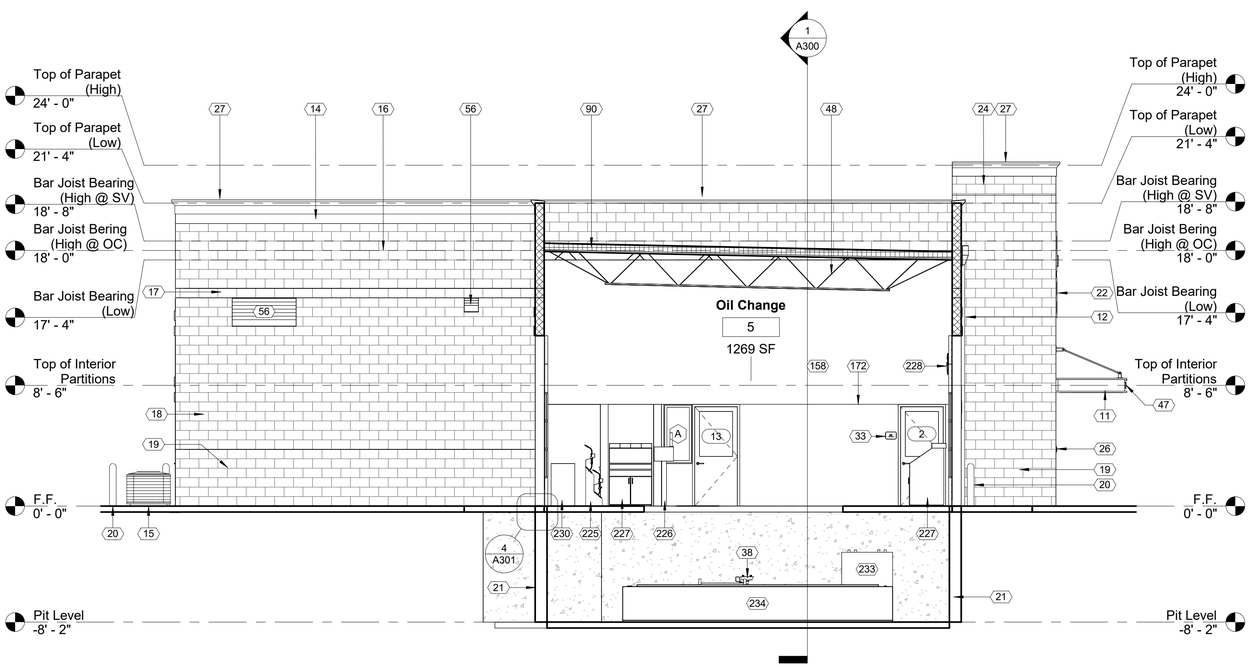


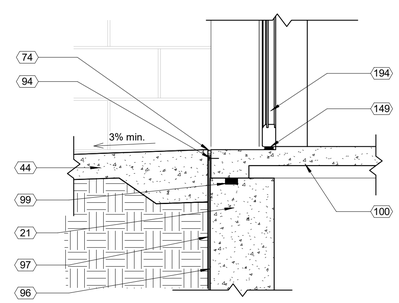
2 Stair Section 1
1/2" = 1'-0"



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



1 Building Section 2
3/16" = 1'-0"



4 DT_Sheet A301_Slab Detail @ Pit Wall
1" = 1'-0"

Keynote Schedule

Tag	Text
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.
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.
33	ADA compliant room / exit sign. See Details.
38	Eyewash station. See Plumbing.
44	Concrete apron as required. Slope away from building with 3% slope. See Civil.
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.
74	1/2" expansion joint with backer rod and sealant.
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.
100	Concrete slab. See Structural.
149	1/2" recess at scheduled door. See Structural.
150	Painted guardrail with painted 1/2" round pickets at 4" max o.c. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
151	Painted 1-1/2" outside diameter pipe handrail. Return handrail to guard/wall. Typical. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
152	Paint all structural steel P-5 Safety Yellow.
154	Concrete filled pre-fabricated metal pan stair treads with safety yellow abrasive nosing, full grit, full length, adhered and fastened. Typical. See Finish Schedule for color. See Specification 055113 Metal Pan Stairs.
155	1-1/4" steel angle clips.
156	10" steel channel stringer. See Finish Schedule for color. See Specification 055113 Metal Pan Stairs.
157	3"x3"x3-1/4" angle floor clip.
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.
194	Scheduled door. See plans for details.
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).
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.

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REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Building Sections

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A301

Scale As indicated

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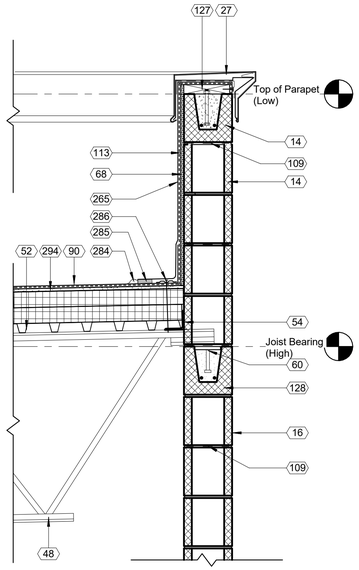
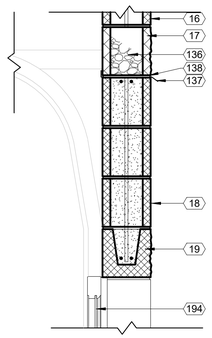
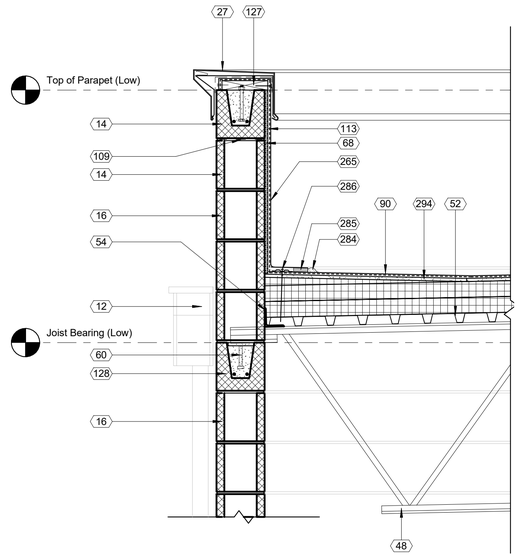


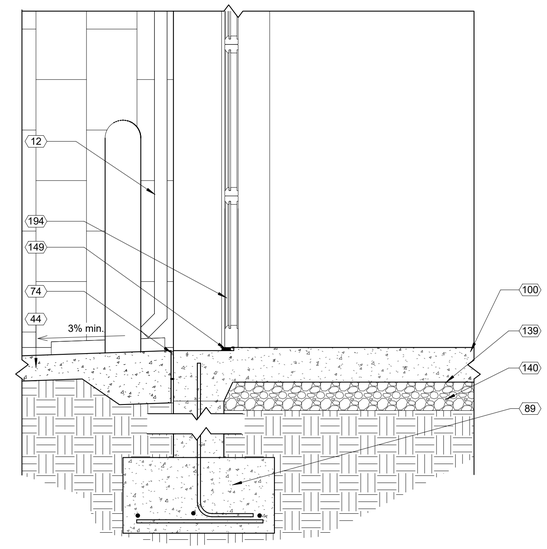
2 DT_Sheet A302 Roof at Parapet (High) Standard
1" = 1'-0"



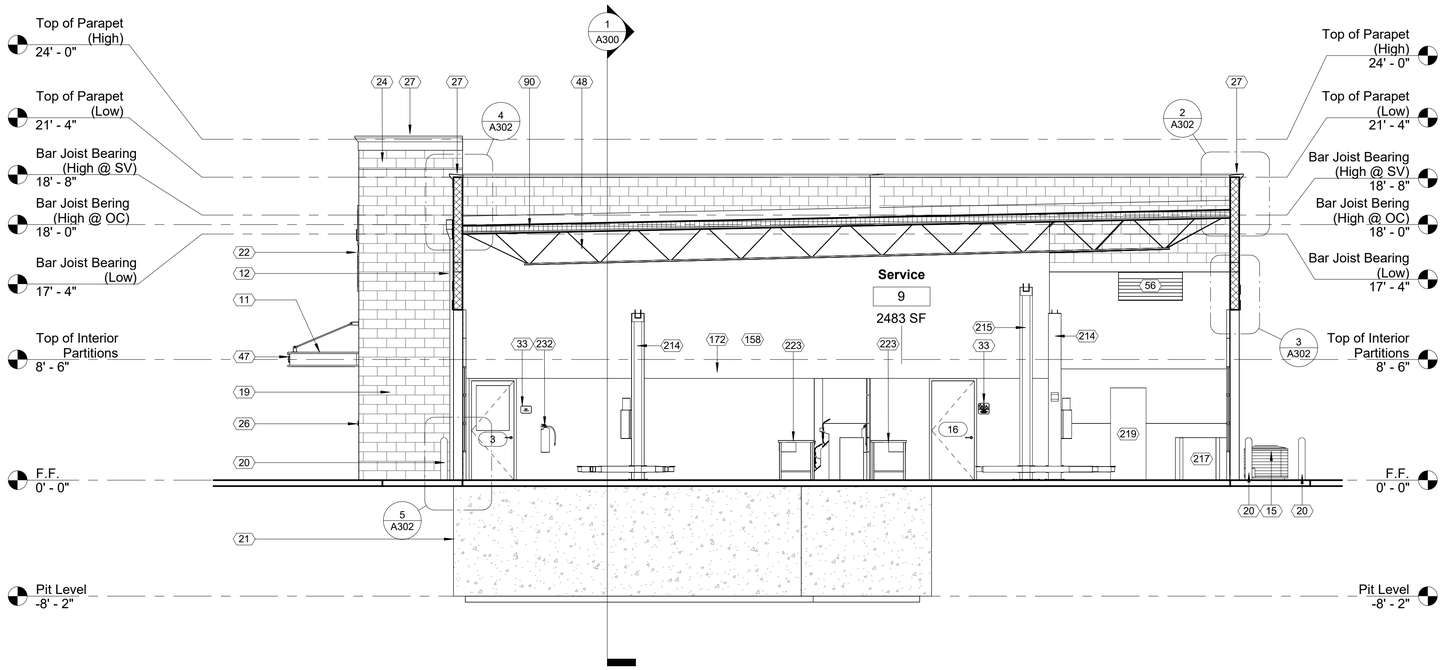
3 DT_Sheet A302_OH Door Head Detail
1" = 1'-0"



4 DT_Sheet A302 Roof at Parapet (Low) Standard
1" = 1'-0"



5 DT_Sheet A302_Slab on Grade @ OH Door with downspout
1" = 1'-0"



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

Keynote Schedule

Tag	Text
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.
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.
33	ADA compliant room / exit sign. See Details.
44	Concrete apron as required. Slope away from building with 3% slope. See Civil.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
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.
60	Steel plate with headed studs. See Structural.
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.
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.
149	1/2" recess at scheduled door. See Structural.
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.
194	Scheduled door. See plans for details.
214	10K Lift (By Others).
215	12K Lift (By Others).
217	Wheel balancer (By Others).
219	Air compressor (By Others).
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.
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	½" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Building Sections

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A302

Scale As indicated

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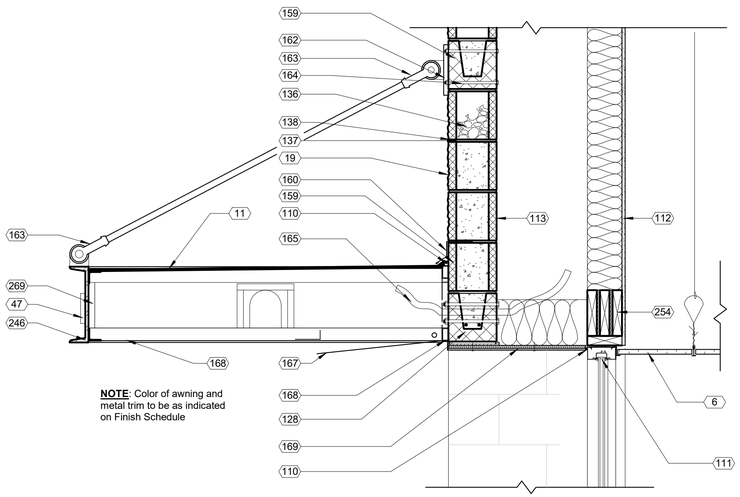
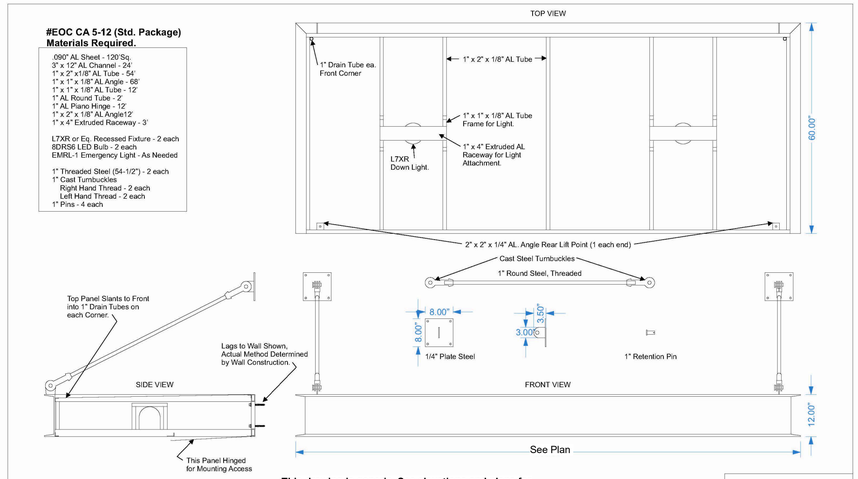


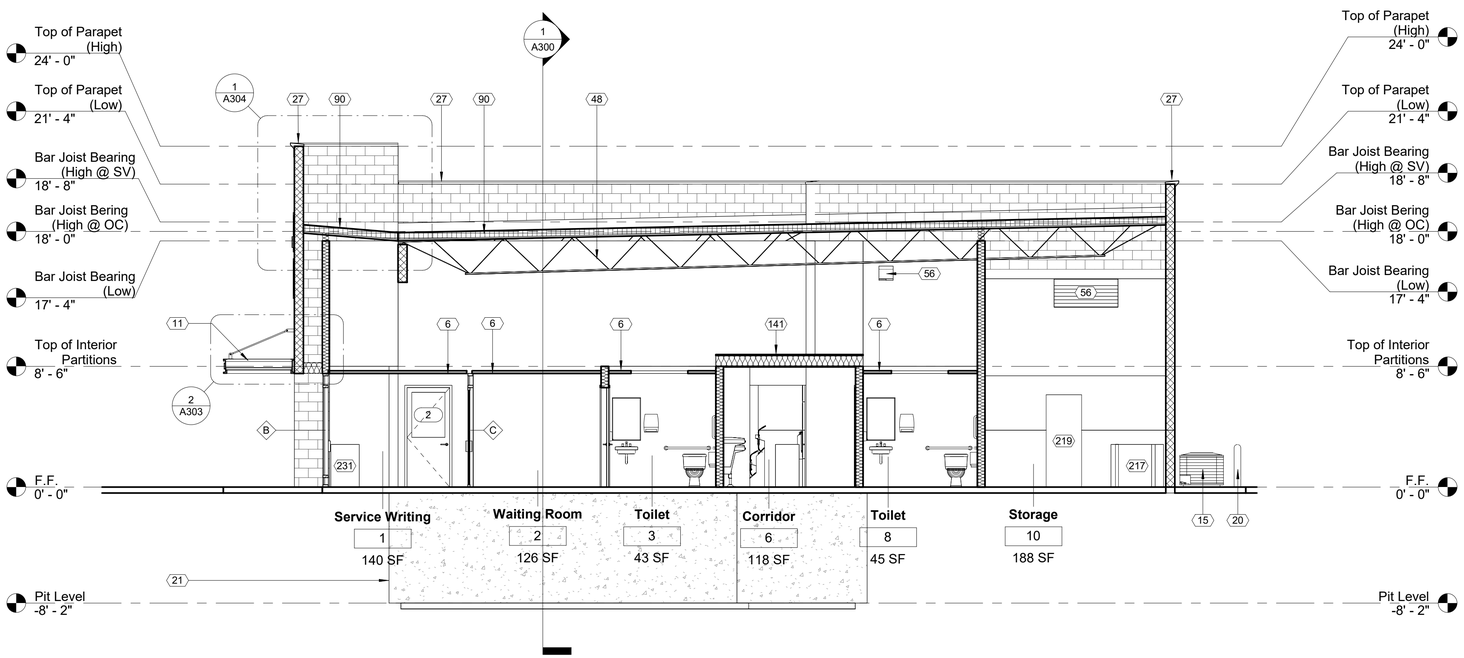
2 DT_Sheet A303_Awning Section
1" = 1'-0"



3 DT_Sheet A303_Awning Details
N.T.S.

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"

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10/31/2024

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Building Sections

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A303

Scale As indicated

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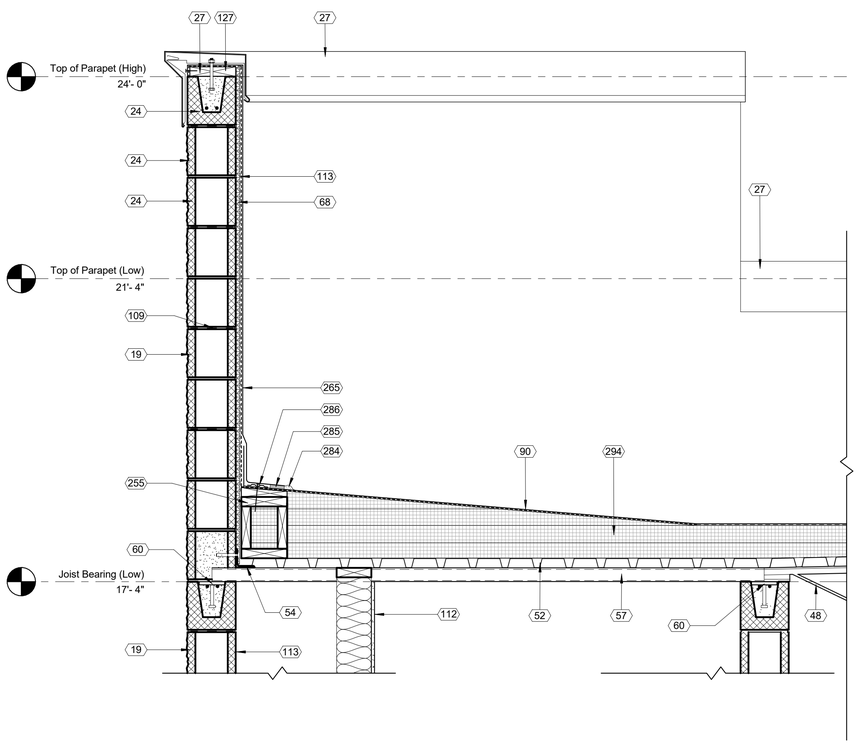
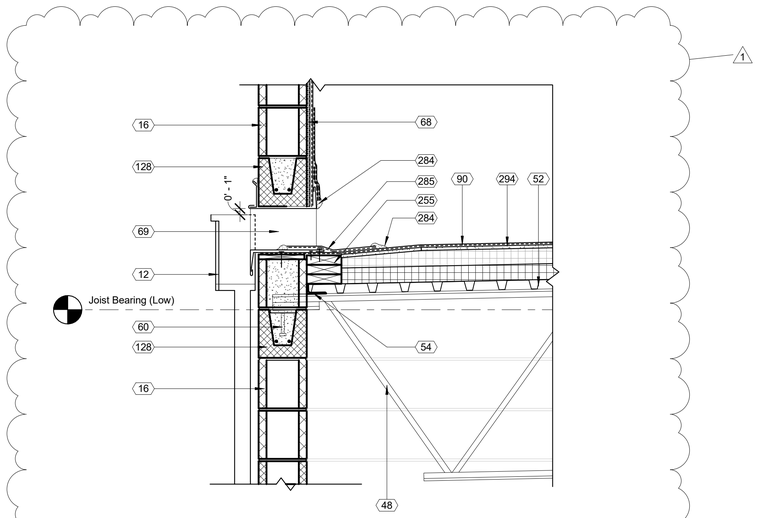
Keynote Schedule

Tag	Text
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.
16	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.
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.
69	Thru-wall metal roof scupper for roof drainage. See Specification 077100 Roof Specialties.
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.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
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	½" cover board mechanically attached over polyisocyanurate insulation board (See TPO Spec for required R-value).

1



1 DT_Sheet A304_Section Detail @ Front Entry Tower
1" = 1'-0"



2 DT_Sheet A304 Roof Scupper Detail (Rear) Standard
1" = 1'-0"

1

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1/8/2025

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date
1	ASI #1	1/8/2025

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Building Sections

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A304

Scale 1" = 1'-0"

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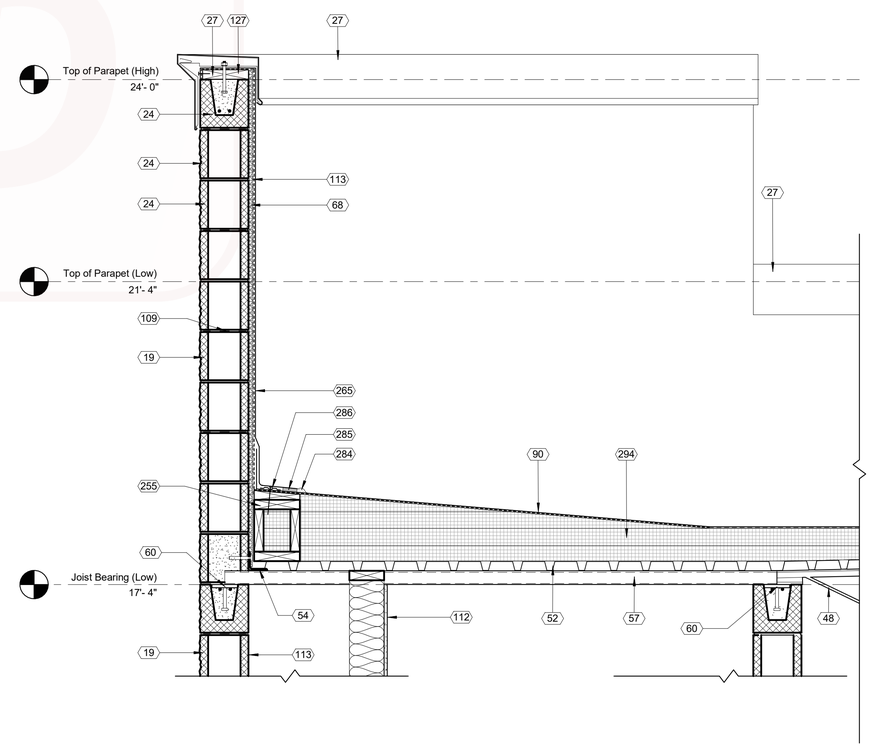

1 DT_Sheet A304_Section Detail @ Front Entry Tower
1" = 1'-0"

VOID

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

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No.	Description	Date

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Building Sections

VOID

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A304

Scale 1" = 1'-0"

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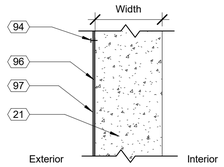
E1

Refer to structural drawings for reinforcing and other information

Install all waterproofing per manufacturer's recommendations.

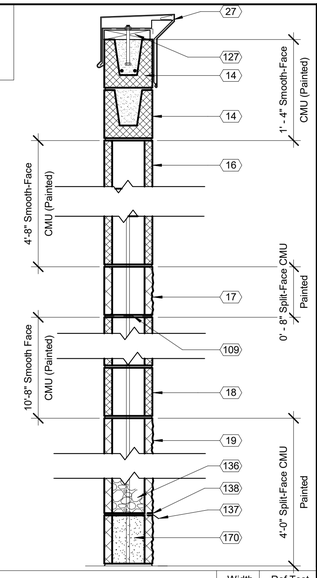


Wall Type No.	Description	Width	Ref Test
E1	As shown	See Struct.	-

E2

Refer to structural drawings for reinforcing, grouting, and other information

Install siloxane on the exterior side of wall construction

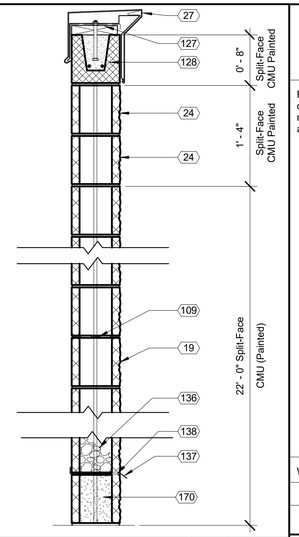


Wall Type No.	Description	Width	Ref Test
E2	As shown	7 5/8"	-

E3

Refer to structural drawings for reinforcing and other information

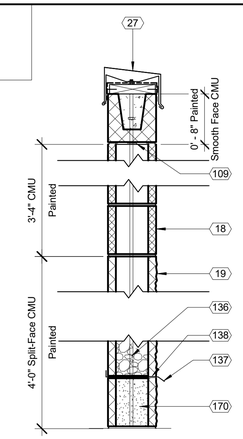
Install siloxane on the exterior side of wall construction



Wall Type No.	Description	Width	Ref Test

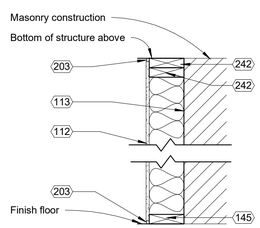
E5

Refer to structural drawings for reinforcing, grouting, and other information



Wall Type No.	Description	Width
E5	As shown	7 5/8"
E5a	As shown, except without coping and painted CMU to roof. See Elevations on A101.	7 5/8"

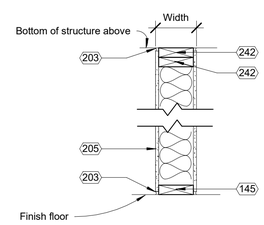
I2



Wall Type No.	Description	Width	Ref Test
I2	As shown	6"	-

I3

Note: Stagger electrical outlet boxes, switches, etc. Seal around all penetrations in wall with acoustical sealant.

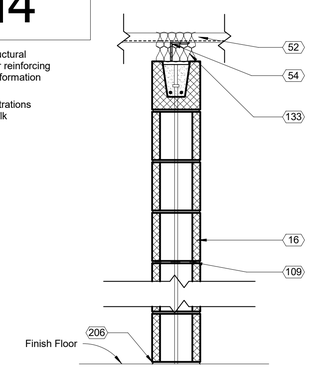


Wall Type No.	Description	Width	Ref Test
I3	As shown	6 1/2"	-

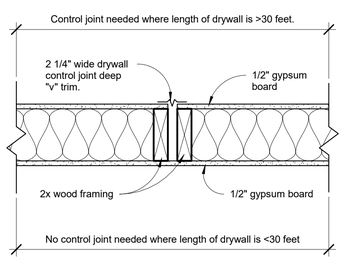
I4

Refer to structural drawings for reinforcing and other information

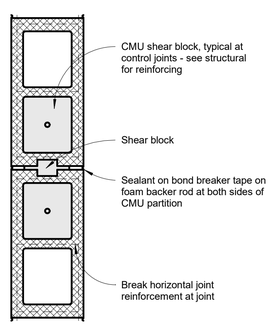
Seal all pentrations with fire caulk



Wall Type No.	Description	Width	Ref Test
I4	As shown - Full Height	7 5/8"	U905/U305

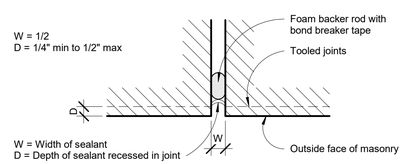


1 DT_Sheet A400_Gypsum Board Control Joint
1 1/2" = 1'-0"



2 DT_Sheet A400_Masonry Control Joint
1 1/2" = 1'-0"

*Detail also applies to inside corners of masonry where indicated on the exterior elevations



3 DT_Sheet A400_Sealant Detail
6" = 1'-0"

Keynote Schedule

Tag	Text
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.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
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.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
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.
109	Horizontal joint reinforcement at 16" o.c. vertical.

Keynote Schedule

Tag	Text
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.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
133	Firestop safing.
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.
145	2x pressure treated wood sill plate.
170	Fill first course of CMU with grout.
203	Acoustical sealant and backer rod. See Specification 079219 Acoustical Joint Sealants.
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.
206	Fire caulk both sides. Typical. See Specification 078443 Joint Firestopping.
242	2x pressure treated wood top plate.

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10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Wall Types

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A400

Scale: As indicated

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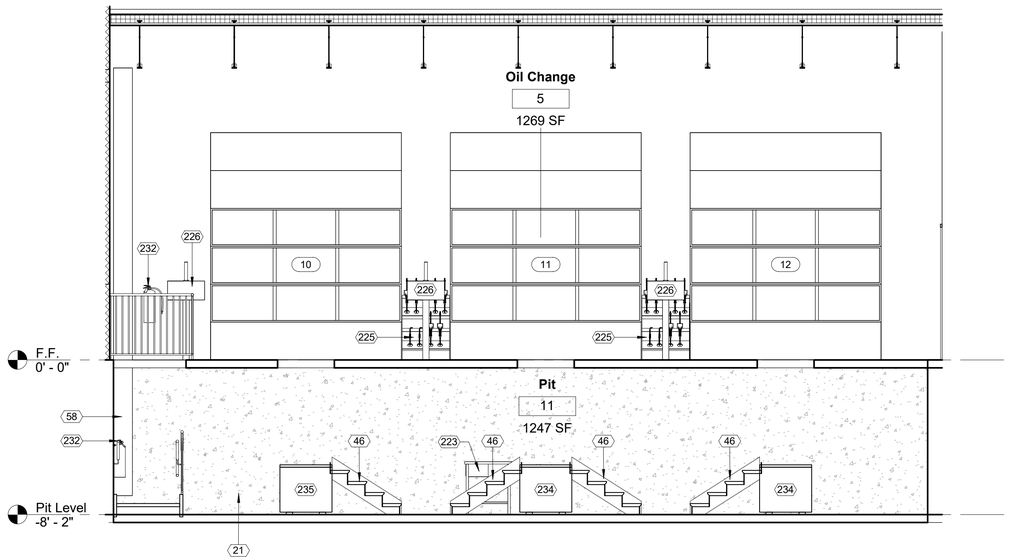
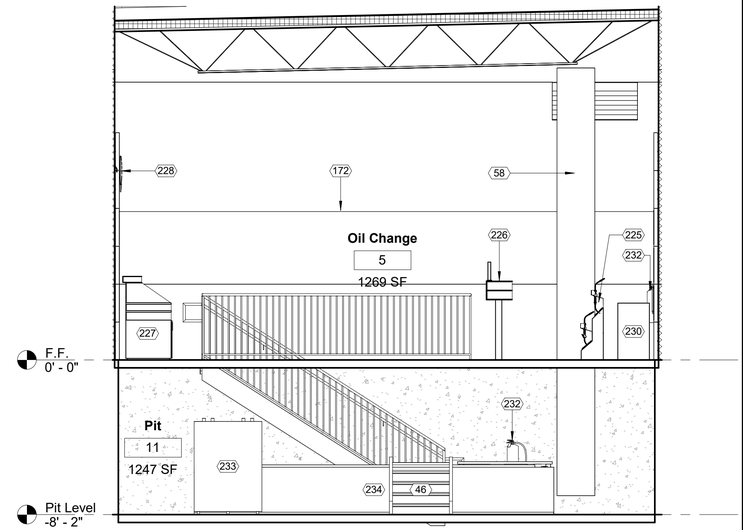
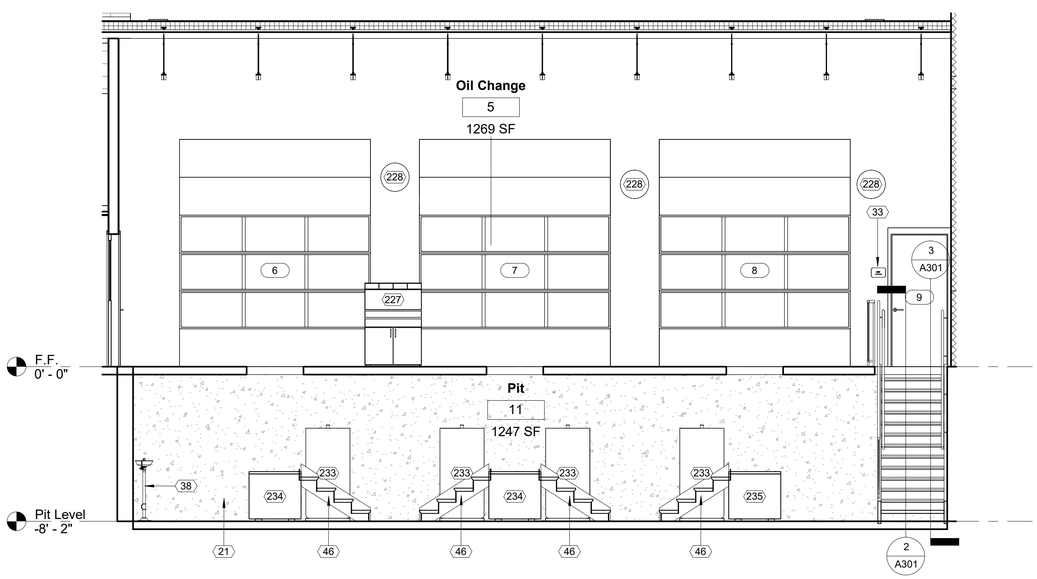


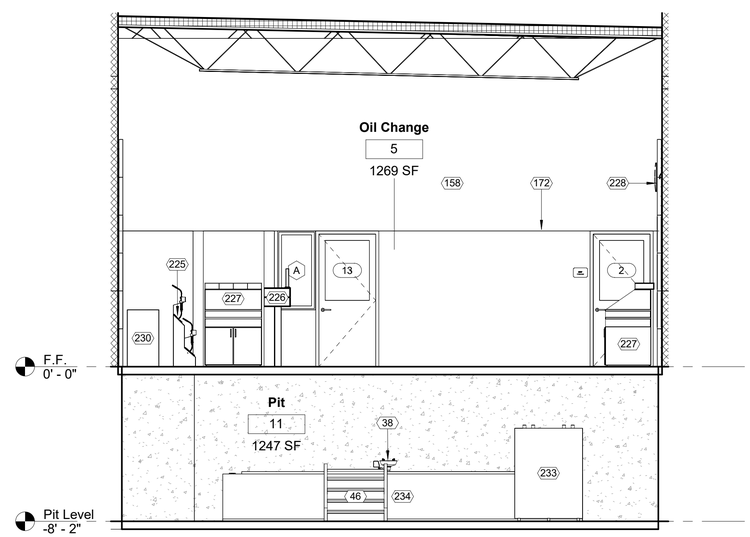
1 Oil Change_Interior Elevation A
1/4" = 1'-0"



2 Oil Change_Interior Elevation B
1/4" = 1'-0"



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



4 Oil Change_Interior Elevation D
1/4" = 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.
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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Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Interior Elevations

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A600

Scale 1/4" = 1'-0"

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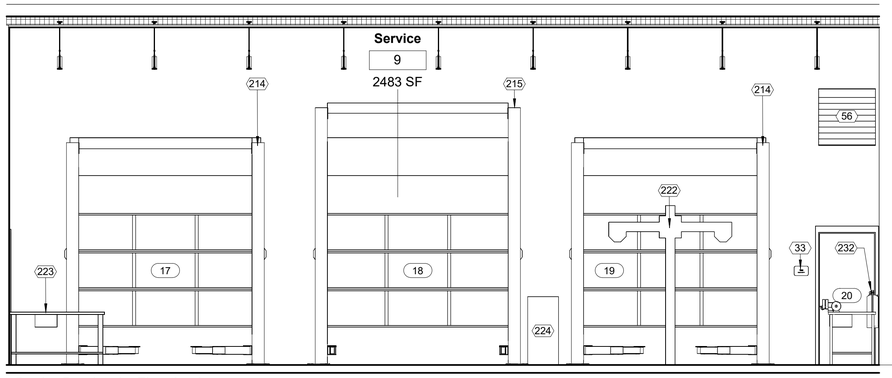
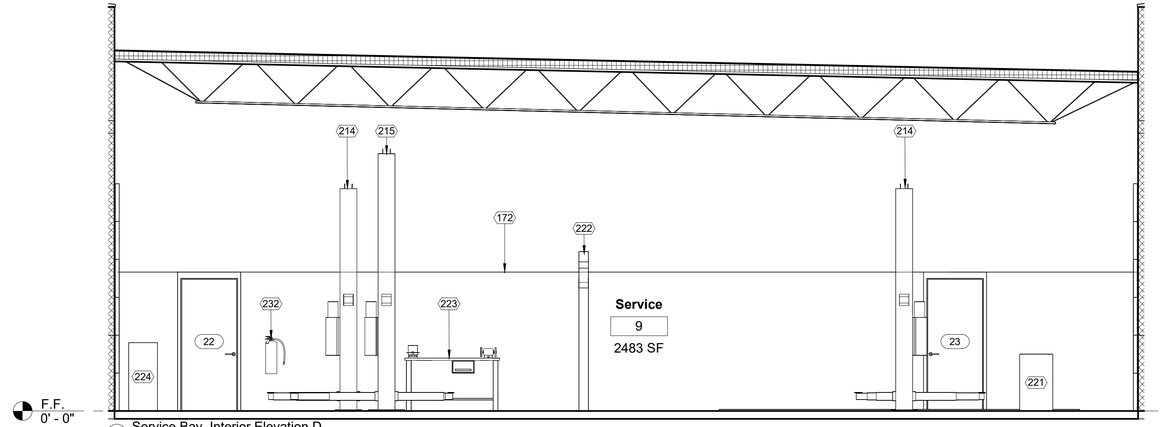
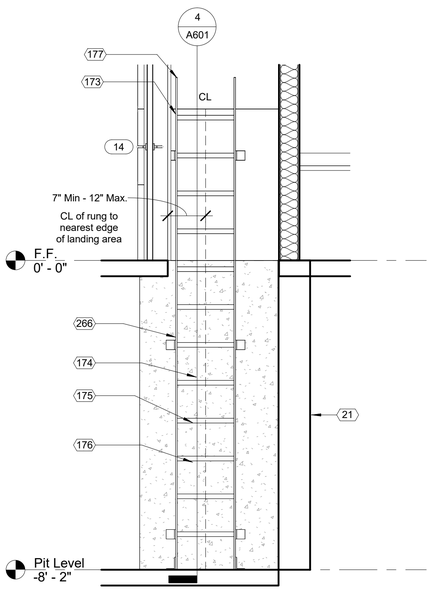


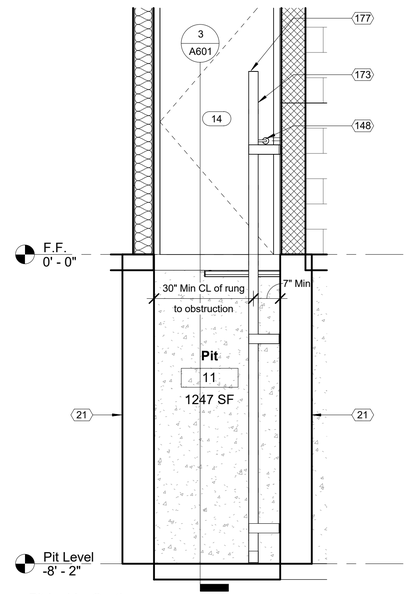
1 Service Bay_Interior Elevation A
1/4" = 1'-0"



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



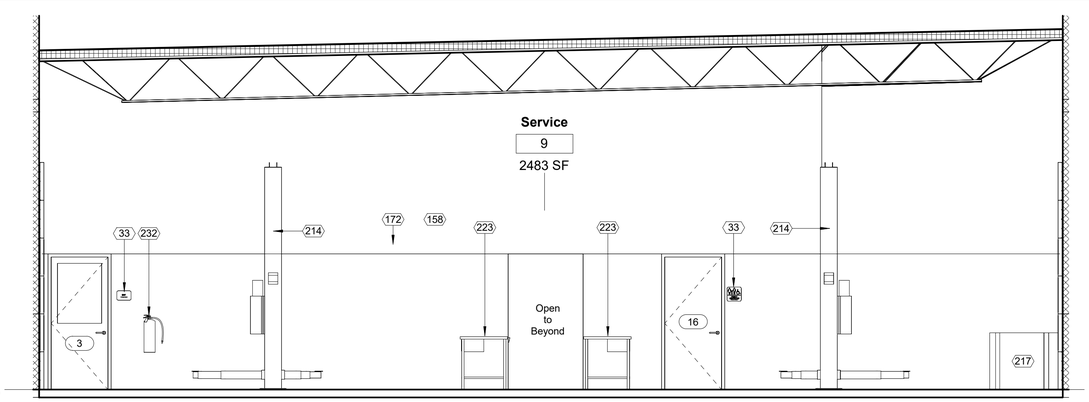
3 Pit Ladder Elevation
1/2" = 1'-0"



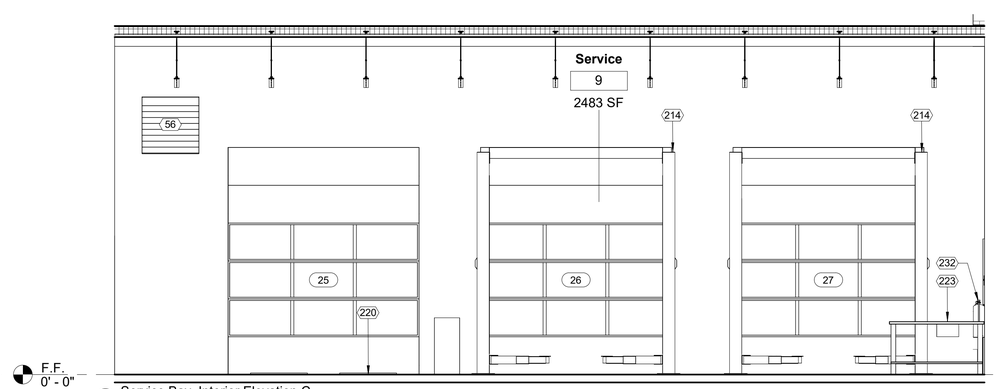
4 Pit Ladder Section
1/2" = 1'-0"

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 scarecrow (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"

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10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Interior Elevations

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A601

Scale As indicated

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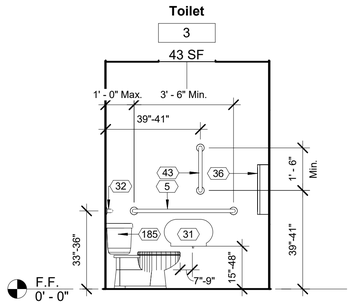
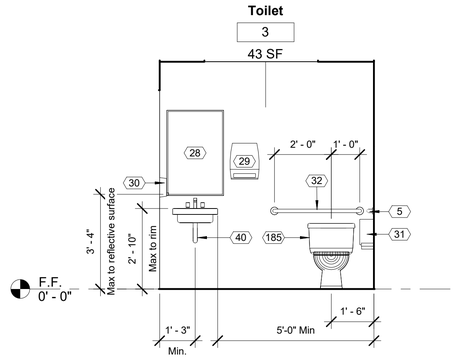
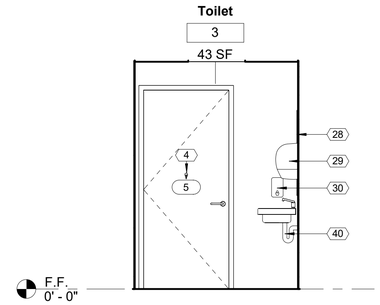


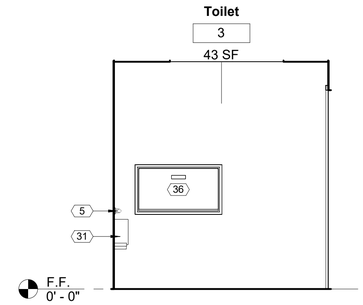
1 Toilet #3_Interior Elevation A
3/8" = 1'-0"



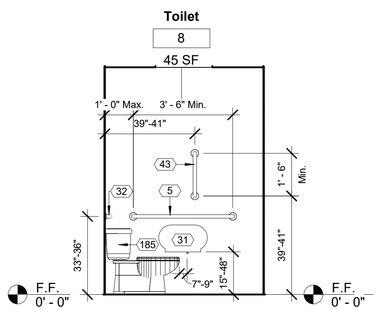
2 Toilet #3_Interior Elevation B
3/8" = 1'-0"



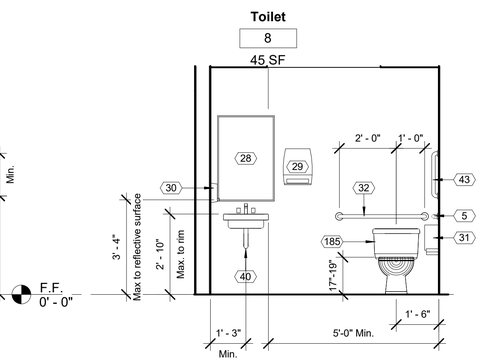
3 Toilet #3_Interior Elevation C
3/8" = 1'-0"



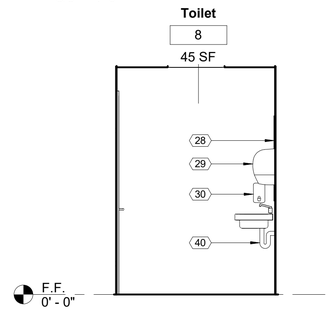
4 Toilet #3_Interior Elevation D
3/8" = 1'-0"



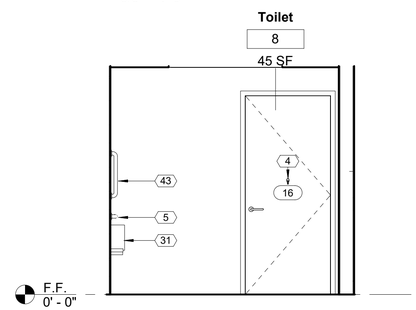
5 Toilet #8_ Interior Elevation A
3/8" = 1'-0"



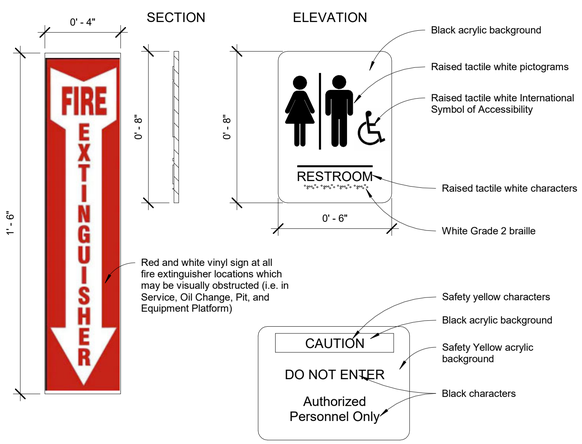
6 Toilet #8_Interior Elevation B
3/8" = 1'-0"



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

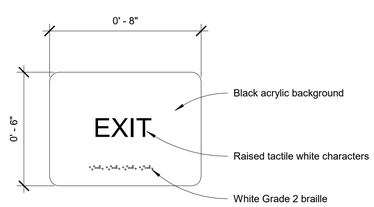


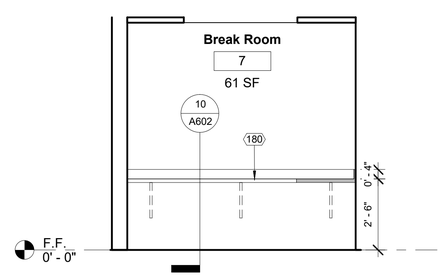
8 Toilet #8_Interior Elevation D
3/8" = 1'-0"



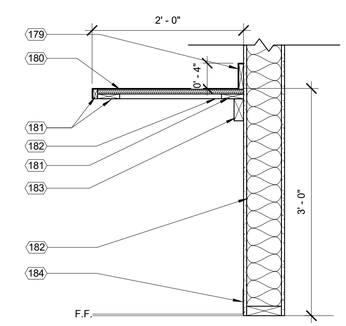
9 DT_Sheet A602_Signage @ OC Building
3" = 1'-0"

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





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



10 DT_Sheet A602_Countertop Section @ Wall
1" = 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.

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No.	Description	Date

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Interior Elevations

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A602

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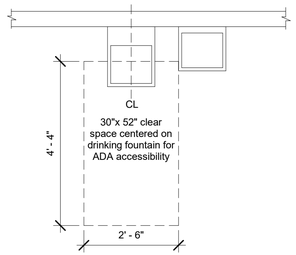
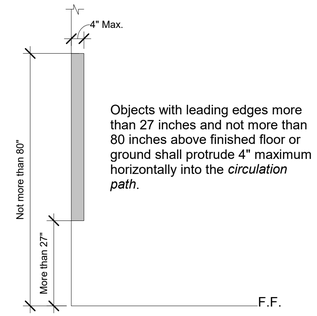
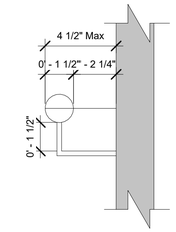


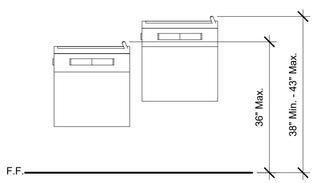
1 DT-Sheet A605_Drinking Fountain_Plan View
1/2" = 1'-0"



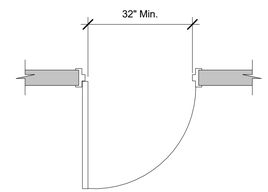
2 DT_Sheet A605_Limits of Protruding Objects
1/2" = 1'-0"



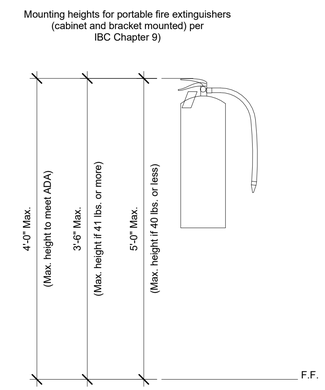
3 DT_Sheet A605_Handrail Detail
3" = 1'-0"



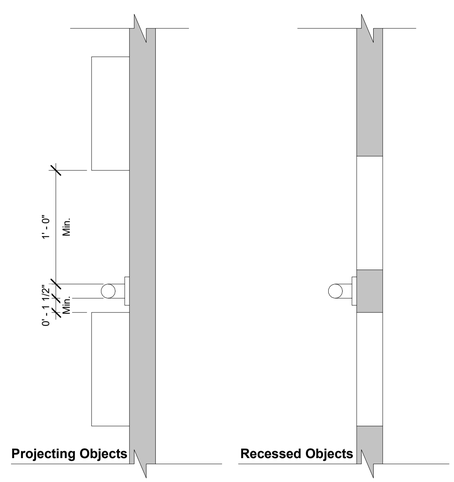
4 DT_Sheet A605_Drinking Fountain_Front View
1/2" = 1'-0"



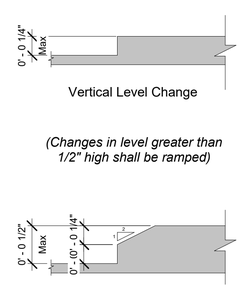
5 DT_Sheet A605_Clear Width @ Doorways
1/2" = 1'-0"



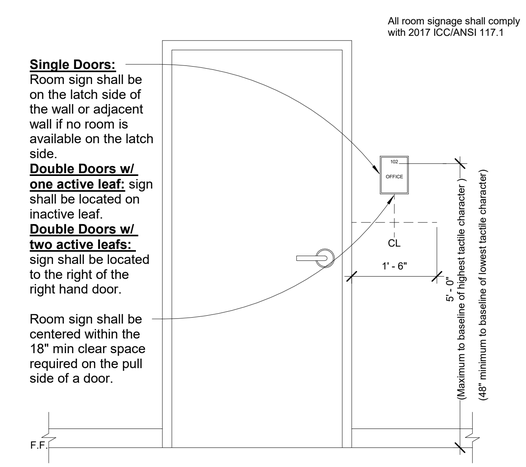
6 DT_Sheet A605_Fire Extinguisher Mounting Heights
1" = 1'-0"



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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10/31/2024

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Interior Dimensional Info.

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A605

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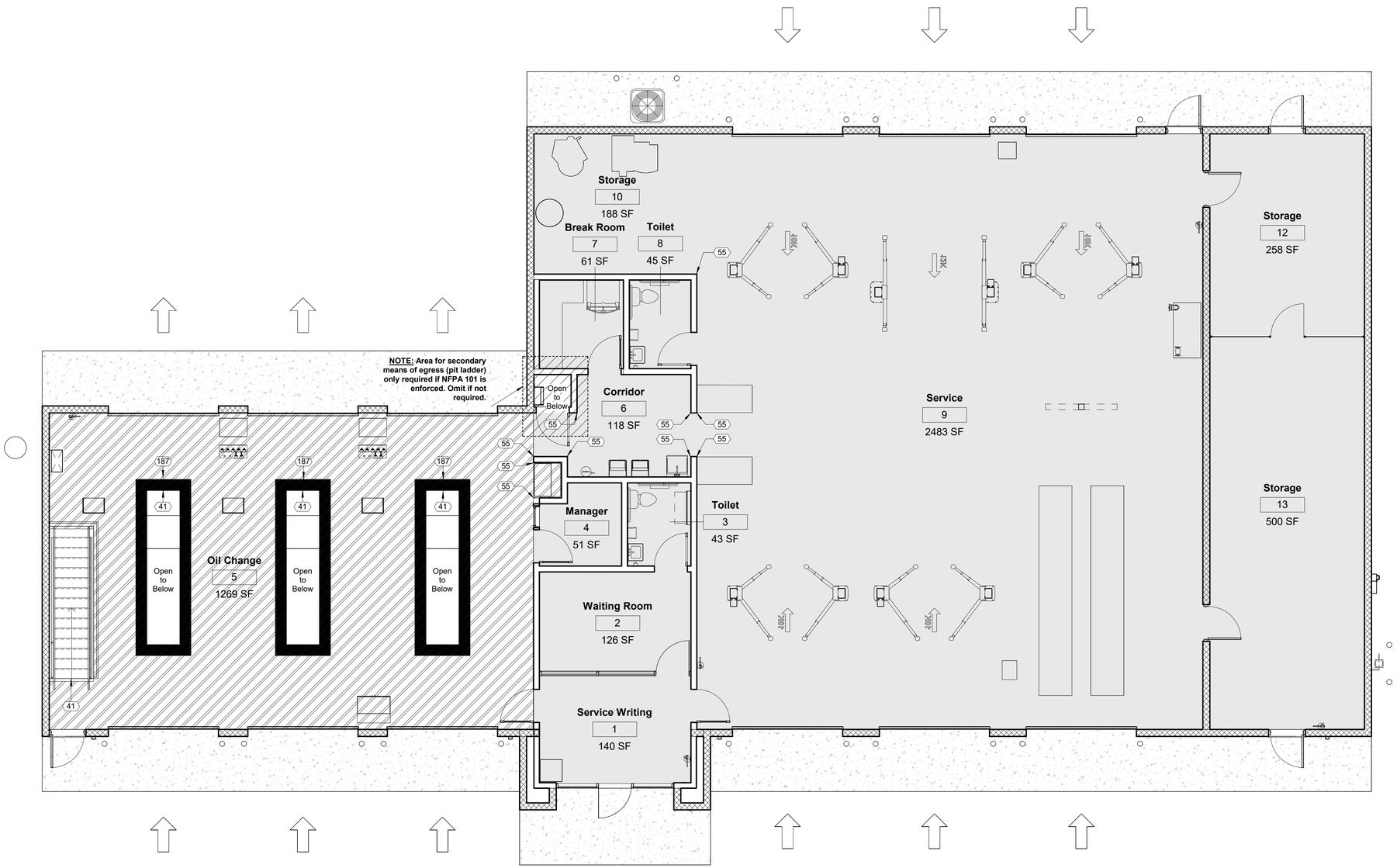
FLOOR FINISH LEGEND

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.



2 07_Floor Finish Plan_Main
3/16" = 1'-0"

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Floor Finishes - Main

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A610

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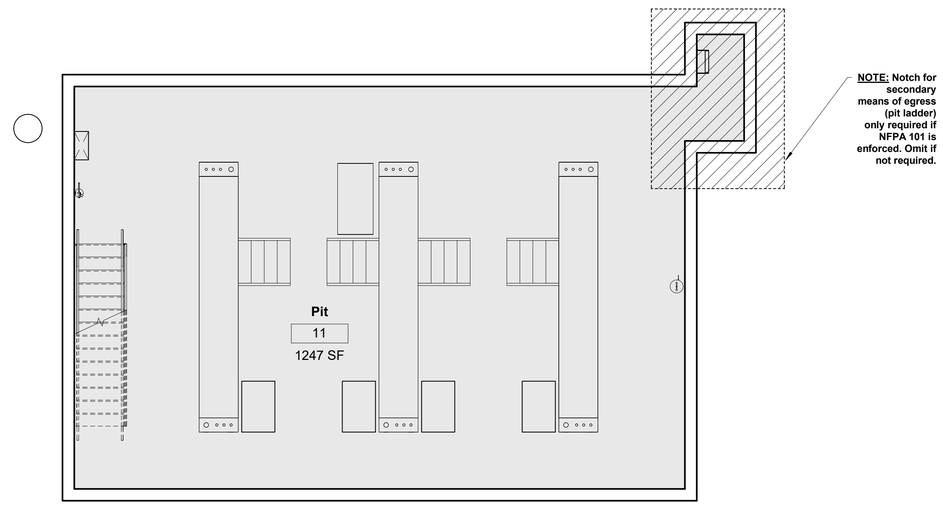
FLOOR FINISH LEGEND

Sealed Concrete

Stonhard Flooring (By Others)

Safety Yellow Paint.



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

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Floor Finishes - Pit

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A611

Scale	As indicated

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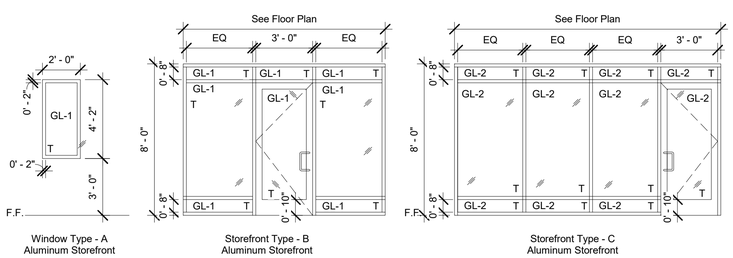
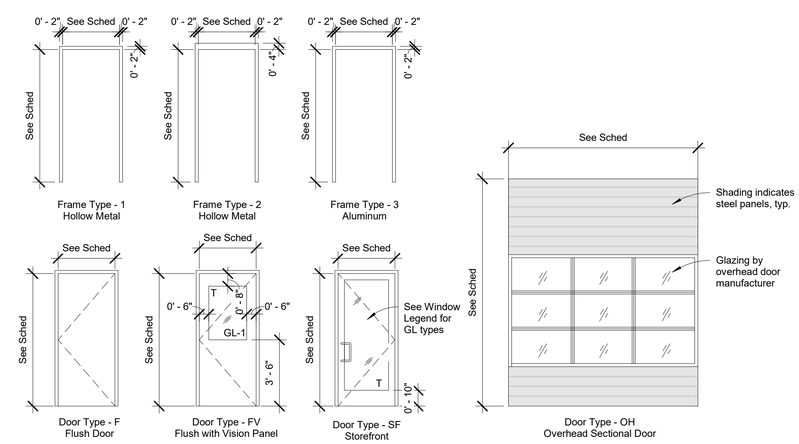
Door and Frame Schedule												
	Door						Frame					
Number	Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish	Glass	UL Label	Notes
1	3' - 0"	7' - 0"	0' - 1 3/4"	SF	Aluminum / Glass	Factory Finish	3	Aluminum	Factory Finish	Tempered		If required by the 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	Aluminum / 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



1 DT_Sheet A620_Window Legend_Single Front Enter
1/4" = 1'-0"

DOOR AND FRAME LEGEND



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

2 DT_Sheet A620_Door & Frame Legend
1/4" = 1'-0"

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Schedules

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A620

Scale 1/4" = 1'-0"

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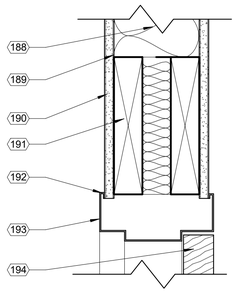
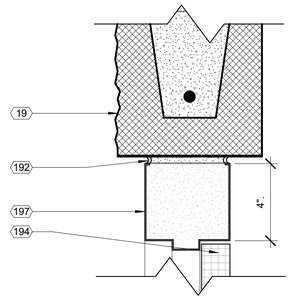
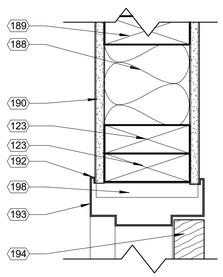


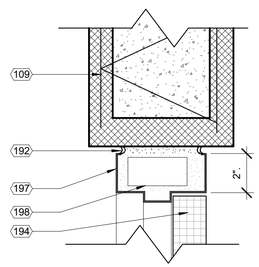
1 DT_Sheet A621_Door Head Detail_Wood
3" = 1'-0"



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.

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	25.	Dumpster Gate / Frame: P-3
2.	Bollards & Dumpster Posts: P-6	10.	Keynote 17: P-6	18.	Window Gaskets: Light Gray	26.	Overhead Door: White
3.	Exterior Pole Sign: By others.	11.	Keynote 18: P-2	19.	Exterior Aluminum Storefront & Door: Clear Anodized	27.	Lintel at OH Doors: P-3
4.	Conductor Head / Downspouts: Match P-2	12.	Keynote 19: P-3	20.	Abrasive Nosing: Safety Yellow	28.	Countertop Carbon Mesh: PL1
5.	Electrical covers to be brushed aluminum	13.	Knox Box: Aluminum	21.	Interior Aluminum Storefront & Door: Clear Anodized	29.	Keynote 24: P-1
6.	Paint all louvers to match adjacent finish	14.	Roof: White TPO	22.	Chair Rail: Stainless Steel by others	30.	SSMR @ Dumpster: Royal Blue
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		

Finish Schedule

Number	Name	Area	Floor Finish	Base Finish	Walls: Rear (South)	Walls: Left (East)	Walls: Front (North)	Walls: Right (West)	Ceiling Finish	Remarks
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	1269 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	118 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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REGISTERED ARCHITECT
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Finish Schedules & Head, Jamb, and Sill Details

Project number	24036
Date	10/31/2024
Drawn by	ARC
Checked by	N/A

A621

Scale As indicated

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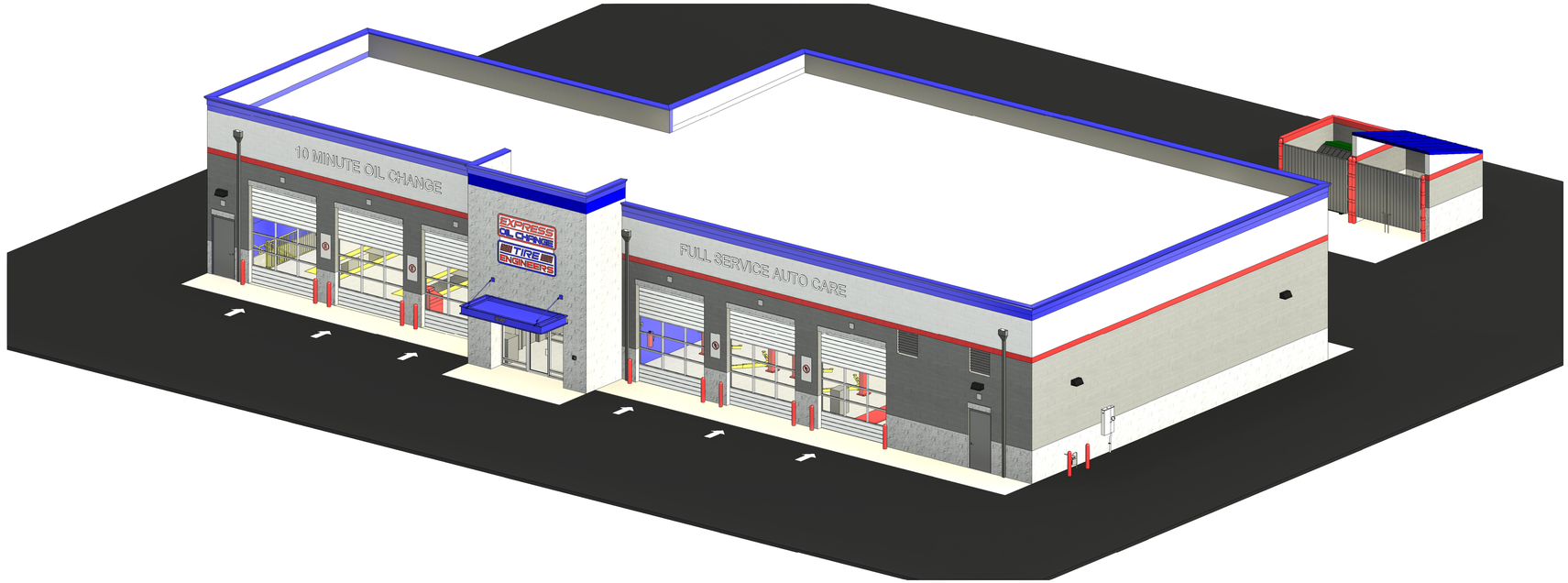

1 02_3D View_Front (North)

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

2 03_3D View_Rear (South)

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

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3D Views

Project number	24036
Date	10/31/2024
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R100

Scale

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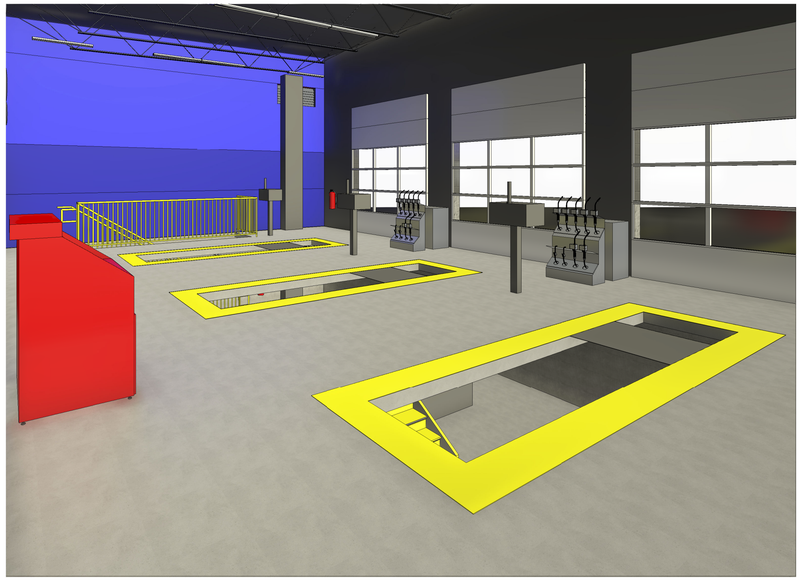
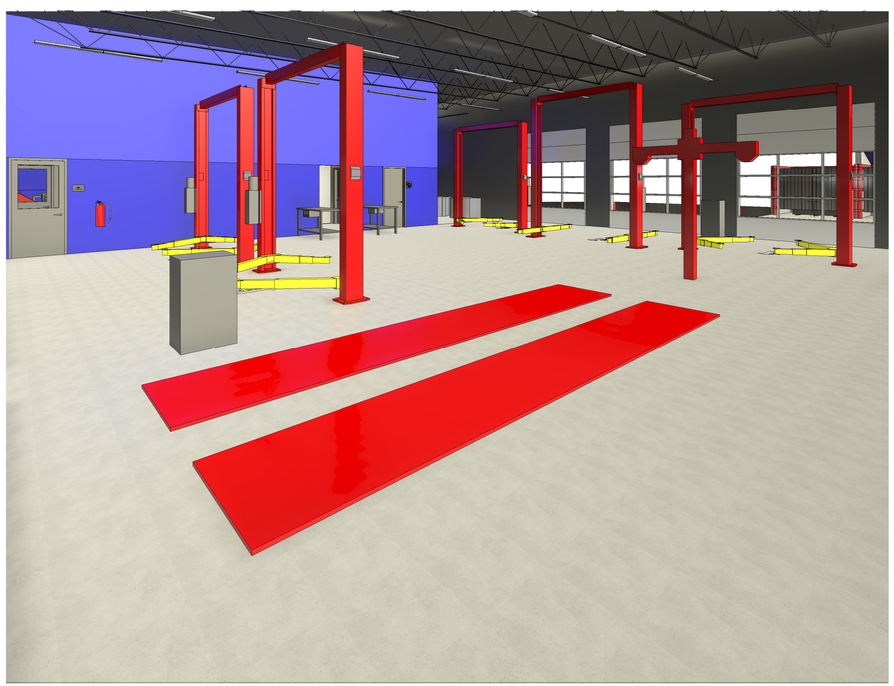
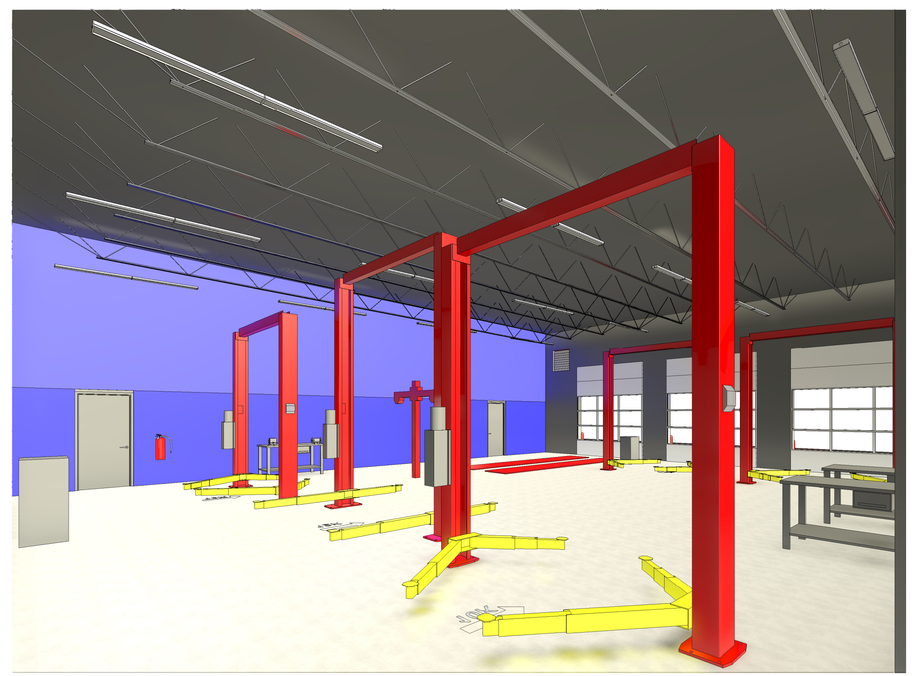


1 04_3D View_Oil Change A

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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3D Views

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R101

Scale

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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, lightgage truss fabricator, wood truss fabricator.	Periodic	
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, lightgage 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.	Periodic	As recommended in approved soils report and specified in earthwork specifications.
Inspect installation of pile foundations including installation of test piles.	Continuous	As recommended in approved soils report and specified in pile 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.	Periodic	Prior to each pour.
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	
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 comleted 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.	Periodic	At beginning of masonry construction and every _____ square feet of masonry thereafter.
Inspect masonry cells and cleanouts prior to placement of grout. Inspect grout proportions. Inspect placement of reinforcement.	Periodic	Prior to grouting of masonry.
Inspect grouting operations to ensure compliance with code and construction documents.	Continuous	During grouting.
Inspect protection of masonry during cold weather and hot weather.	Periodic	During periods with temperatures below 40 degrees or above 90 degrees.
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	Periodic	
Verify adequate bearing of ends of decking	Periodic	
Steel Joist		
1. Installation of open-web steel joists		
a. End connections - welded or bolted	Periodic	
b. Bridging - horizontal or diagonal.		
1. Standard bridging	Periodic	
2. Bridging that differs from the SJI specifications listed in Section 2207.1	Periodic	
Special Inspections for Wind Resistance		
Roof Cladding and Roof Framing Connections	Periodic	
Wall Connections to Roof and Floor Diaphragms and Framing	Periodic	
Roof and Floor Diaphragm Systems, including Collectors, Drag Struts, and Boundary Elements.	Periodic	
Vertical Windforce-Resisting Systems, including Braced Frames, Moment Frames, and Shearwalls	Periodic	
Windforce-Resisting System Connections to the Foundation.	Periodic	
Fabrication and installation of components and assemblies required to meet the impact-resistance requirements of Section 1609.1.4.	Periodic	

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GENERAL NOTES

1. 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.
2. Structural drawings or parts of the structural drawings may not be used as shop drawings without prior written approval.
3. All or parts of these drawings were produced with computer aided drafting. Drawings are available from the Engineer in DWG format on request.
4. Contractor proposed changes to details must be clearly noted on the first sheet of all shop drawings.
5. Construction shown is stable after the building is complete including interior and exterior finishes. The Contractor is responsible for temporary bracing of the structure during construction.
6. 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

1. Reference code for loading 2021 IBC.
   a. Building Classification II
   b. Wind Load
      1) Basic Wind Speed (3 sec gust) 124 mph
      2) Wind Exposure C
      3) Internal Pressure Coefficient +/- 0.18
      4) Velocity Pressure (qz) 34.0 psf
   c. Roof Snow Load
      1) Ground Snow Load (Pg) 0 psf
      2) Flat Roof Snow Load (Pf) 0 psf
      3) Snow Exposure (Ce) 1.0
      4) Importance Factor 1.0
      5) Thermal Factor (Ct) 1.0
   d. Seismic Load
      1) Importance Factor 1.0
      2) Mapped Spectral Response Accelerations
         a) Ss 0.088
         b) S1 0.057
      3) Site Class D
      4) Spectral Response Coefficients
         a) Sds 0.094
         b) Sd1 0.091
      5) Seismic Design Category B
      6) Base Seismic-Force-Resisting System(s) and Response Modification Factor
         a) Intermediate Reinforced Masonry Shear Walls 3.5
      7) Design Base Shear 7 kips
      8) Seismic Response Coefficient (Cs) 0.03
      9) Analysis Procedure = Equivalent Lateral Force
   e. Live Load
      1) Roof Load 20 psf
      2) Service Bay and slabs on grade 100 psf
      3) Mezzanine 50 psf

FOUNDATIONS

1. Foundation design for this project was based on soils information provided by Terracon
2. Bearing capacity---------- 1500 psf
3. All footings are to bear on engineered fill.
4. Install corner bars at all footing intersections and corners (Provide lap length e.w.)
5. All footing elevations are given to the top of the footings.
6. 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.
7. Coordinate foundation elevations with plumbing requirements. Step footings as required to clear plumbing lines.
8. Provide drainage for all retaining walls, see architectural for notes and details.

MASONRY

1. 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
2. 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.
3. 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.
4. Use truss type joint reinforcement (Dur-O-Wall SW DA3100 or better) at 16" o/c. in all other masonry walls.
5. Provide joint reinforcement at 8" o/c. for all walls constructed with stack bond.
6. Use Type "M" or Type "S" mortar in accordance with IBC Table 2103.7(1).
7. Minimum compressive strength of concrete masonry f'm = 2500 psi. Submit for review test data on strength of units before starting any masonry work.
8. 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".
9. Use "Fine" grout for all reinforced piers and reinforced wall in accordance with ASTM C 476.
10. Each grout lift shall not exceed 5'-0" unless cleanouts are provided in the bottom course.
11. Fill cells under all lintels with grout.
12. Provide lintels over all openings through wall. See lintel details for reinforcement.
13. Unless otherwise noted provide control joints in all walls 4'-0" from wall intersections or corners and at 20'-0"
14. Extend all horizontal steel and bond beams thru control joints.
15. Vertical Reinforcement shall extend into the bond beam.
16. Unless noted, all bars are to be located at the center of cell. Where bars are specified at each face, provide minimum ¾" clear space between reinforcement and CMU face shell.
17. Anchor bolt into grouted cell locations only, unless noted otherwise.

REINFORCING STEEL AND CONCRETE

1. All concrete work is to be in accordance with the "Building Code Requirements for Reinforced Concrete" (ACI 318-19).
2. All detailing is to be in accordance with "ACI Detailing Manual" SP-66
3. Use of Calcium Chloride, Chloride Ions, or other salts in concrete are prohibited.
4. Concrete Properties: See Schedule
   a. All concrete must obtain 7 day strength of 70% of design strength.
   b. Concrete mixes may use up to 25% of cementious weight as fly ash.
   c. Concrete mixes may use water reducers, accelerators or retarders with prior approval.
   d. Do not provide air entrainment in concrete mixes for interior slabs.
5. All steel reinforcement shall be of deformed bars of billet steel conforming to ASTM A615, Grade 60 in all concrete.
6. Welded wire fabric shall be ASTM 185 and shall lap 2 cross wires or 6" whichever is greater on all sides. All laps shall be wired together.
7. Provide (2) #4 bars x 4'-0" at re-entrant corner locations Typical. Locate 3" away from corner and space 1'-0" apart.
8. All slabs on grade are 6", unless noted. Slabs are to be placed on 10 Mil, PVC vapor barrier over 4" of porous fill. Reinforce slabs with 6x6 W2.9 x W2.9 WWF placed 1" from top of slab. Unless otherwise noted slabs shall have joints placed a 12'-0" on centers. Joints may be control joints or construction joints. See Architectural Plans for floor slopes and recesses for hard tile.
9. Minimum concrete cover for reinforcement:
   a) Footings 3" bottom, 2" sides
   b) Cast-In-Place Walls
      Surfaces exposed to weather or soil 2" - #6 and greater, 1-1/2" - #5 and smaller
      Other surfaces 3/4"
10. Provide corner bars at all wall and footing intersections.
11. No openings shall be allowed to penetrate any concrete work, unless it is shown on the structural framing plans without prior written approval. Contractor shall submit for review locations of proposed openings not shown 30 days prior to pouring any concrete.
12. Provide a continuous water bar at all wall construction joints below ground level.
13. Use 3/4" chamfer for all exposed corners unless noted.
14. Testing samples for preparing strength test specimens of each concrete mixture placed each day shall be taken in accordance with (1) through (3).
    1. At least once a day
    2. At least once for each 150yd^3 of concrete
    3. At least once for each 5000ft^2 of surface area for walls or slabs.

STRUCTURAL STEEL

1. All detailing, fabricating, and erection of structural steel shall be in accordance with the AISC 360-16 "Specifications for Structural Steel Buildings". All reactions shown are ASD loads.
2. All connections are to be detailed as Type 2 "simple frame connections".
3. All structural steel W shapes shall be ASTM A992.
4. All structural steel Tube sections shall be ASTM A500 Grade B.
5. All structural steel Pipe sections shall be ASTM A501.
6. All structural steel channels, angles and other sections shall be ASTM A36, unless noted.
7. Headed Studs shall be Type B Shear Connectors.
8. Shop and field connections shall be welded with E-70XX electrodes or bolted with 3/4" dia. A-325N or A-325F bolts, unless noted.
9. Use 3/4" cap and bearing plates, unless noted.
10. Use 3/4" dia x 1'-0" long ASTM 1554 Grade 36 anchor bolts, unless noted. In lieu of cast bolts, 3/4"x1'-0" long HAS rods epoxied with Hilti HVA epoxy, or equal, may be used with prior approval.
11. Grout under baseplates with ASTM C 1107 cementitious 6000 psi Non-Shrink Grout.
12. Structural steel shall be shop primed per SSPC paint system No. 7. Primer shall be SSPC paint with a minimum thickness of 2.0 MILS. Omit Paint at surfaces to be fireproofed.
13. Provide L 3"x3"x1/4" frames around all roof opening through metal decking.

STEEL JOIST

-

1. All steel joists shall conform to the standard specifications for the joist noted, as adopted by the Steel Joist Institute.
2. Refer to Components & Cladding Table and Diagram for roof uplift zones and pressures. Use 8psf dead load for net uplift determination.
3. K Series joists shall be welded to bearing plates or steel members with two 1/8" fillet welds 2" long.
4. All joist bearing plates are to be set 1/4" above the top of concrete masonry units.
5. Weights of mechanical units are not included in the joist loading designation shown. Design joist for loading shown plus the weight of mechanical shown. General contractor is to verify all weights of mechanical units with Mechanical Subcontractor before submitting shop drawings.

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JOHN CANNON JONES
L.C. NO. 36598
REGISTERED PROFESSIONAL ENGINEER
STRUCTURAL ENGINEERING
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

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No.	Description	Date

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General Notes

Project number	24036
Date	10/31/2024
Drawn by	jcj
Checked by	jd

S0.1

Scale 3/4" = 1'-0"

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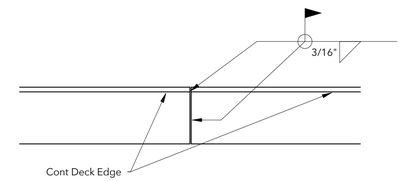
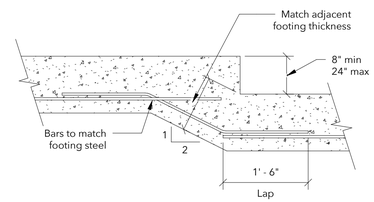
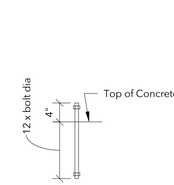
125 18TH STREET NORTH
PELL CITY, ALABAMA
205-884-5334



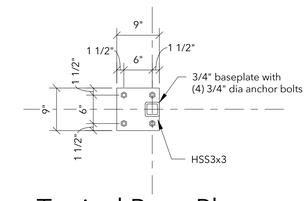
Typical Roof Deck Edge Angle Splice Detail



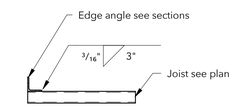
Single Footing Step



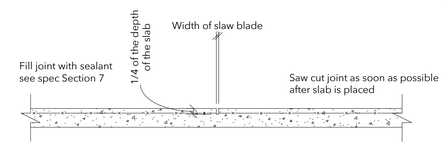
Typical Anchor Bolt Detail



Typical Base Plate

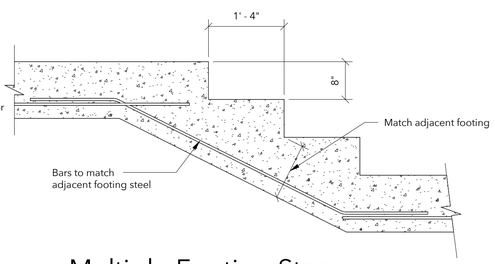


Deck Edge
Fastening Detail

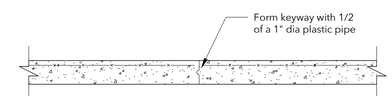


Note: Saw cut joint must be made the same day the slab is placed

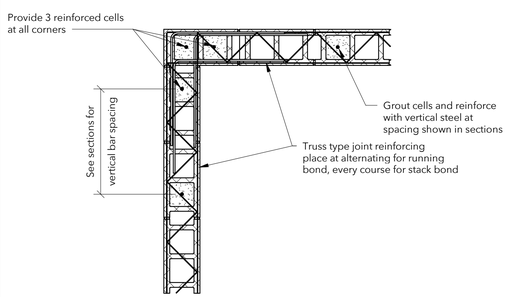
Typical Control Joint



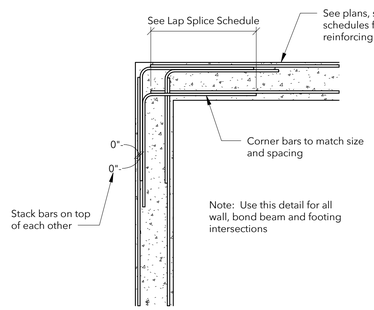
Multiple Footing Step



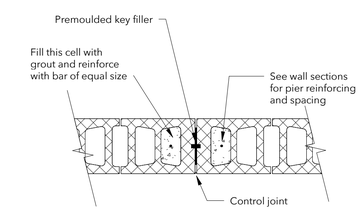
Typical Construction Joint



Typical Joint
Reinforcing at Corner

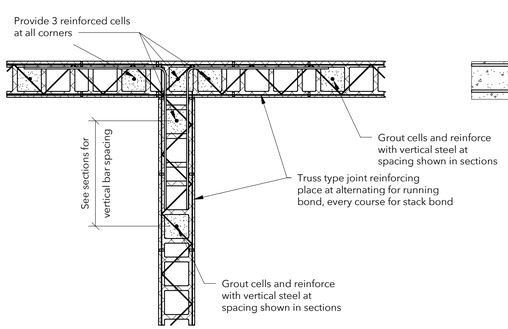


Typical Beam, Wall or Footing
Reinforcing at Corners

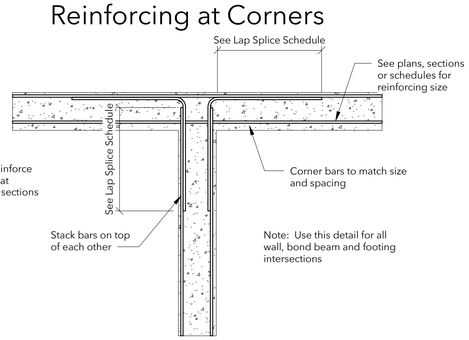


Note:
1. See architectural plan for spacing. If spacing is not shown place joints at 3 times the wall height but not greater than 20'-0" o.c., and at 4'-0" from corners
2. Extend all horizontal reinforcing including bond beam steel thru control joints.

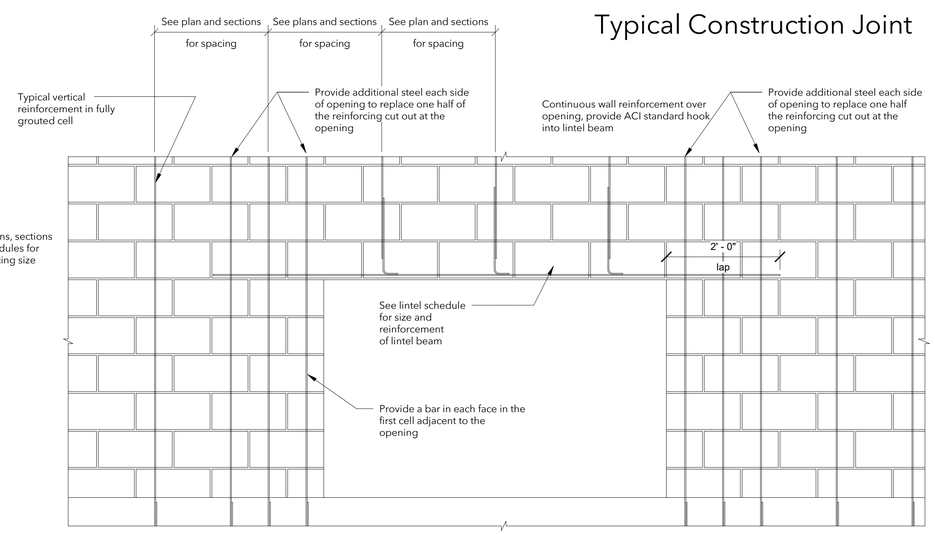
Typical MasonryWall
Control Joint



Typical Joint Reinforcing
at Intersection



Typical Beam, Wall or Footing
Reinforcing at Intersetions



CMU Lintel Elevation

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STRUCTURAL ENGINEERING
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Typical Details

Project number	24036
Date	10/31/2024
Drawn by	jcj
Checked by	jd

S0.2

Scale 3/4" = 1'-0"

JOHN JONES, PE, SE
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125 18TH STREET NORTH
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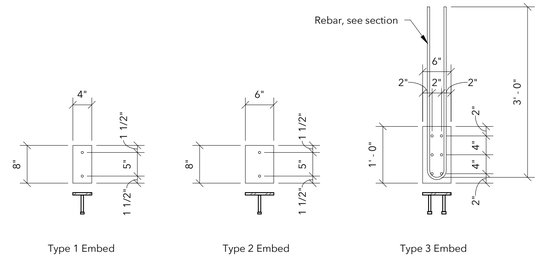


Embed plates

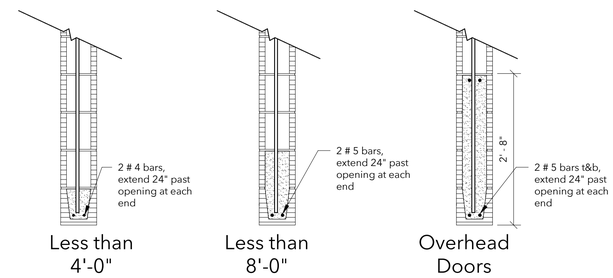
⅜" plate w/ ½"x4"headed studs

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

Metal Deck Attachment Schedule

Area	Support Fastener/Pattern	Sidelap Fastener/Pattern
Roof - typical	⅝" puddle welds 36/4 pattern	2 - #10 TEK screws
Roof - hatched area	⅝" puddle welds 36/4 pattern	4 - #10 TEK screws



CMU Lintel Schedule

Reinforcing Steel Lap Splice Lengths

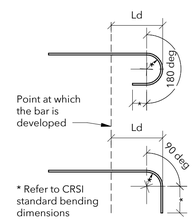
Bar Size	Column Splices	Bm, Ftg & Wall Splices	
		Top Bars	Other Bars
# 3	12"	19"	15"
# 4	15"	25"	19"
# 5	19"	31"	24"
# 6	23"	37"	29"
# 7	26"	54"	42"
# 8	30"	62"	48"
# 9	34"	70"	54"
# 10	38"	79"	61"
# 11	42"	87"	67"

Notes:
1. 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.
2. All horizontal reinforcing bars in walls may be detailed as "Other Bars".
3. 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:
1. Lengths are for vertical splces in walls.
2. Bar length for center of wall are based on f'm of 1500 psi or greater.
3. Bar length for face of wall are based on f'm of 2000 psi or greater.
4. Refer to General Notes and details for masonry strength.



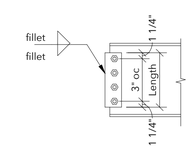
Components and Cladding Schedule
a = 6.5'

Area (sf)	Zone 1,2,3 (+) psf	Zone 1 (-) psf	Zone 2 (-) psf	Zone 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

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"

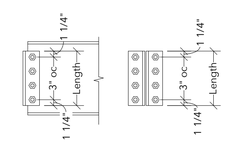
- Use this table for Wide Flange Beams to HSS Columns
- Loads are ASD
- Bolts are 3/4"dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane. More than 5 bolts must have short-slotted holes.
- Plate is A36 and welds are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

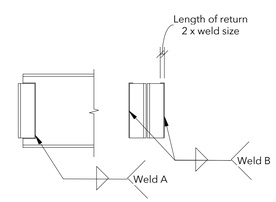


Beam Double Angle Shear Connection Schedule

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





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10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Schedules

Project number	24036
Date	10/31/2024
Drawn by	jcj
Checked by	jd

S0.3

Scale 3/4" = 1'-0"

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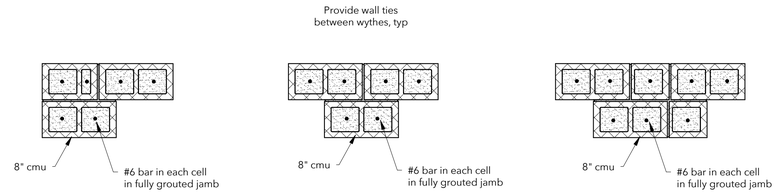
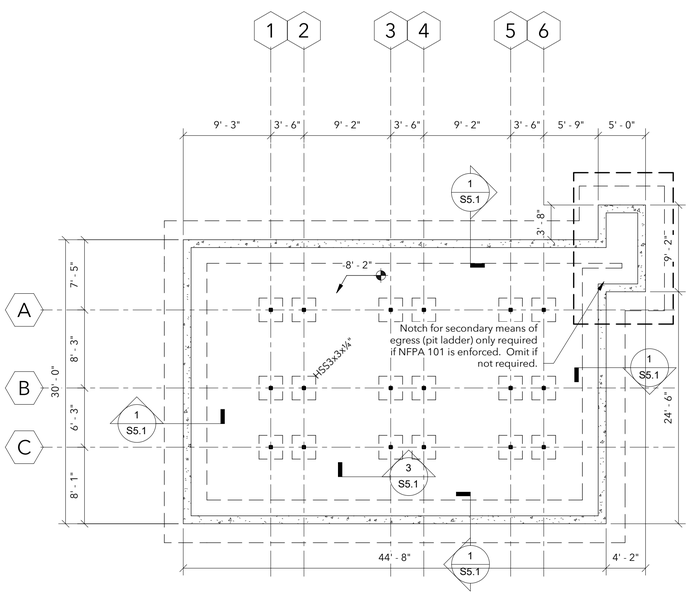


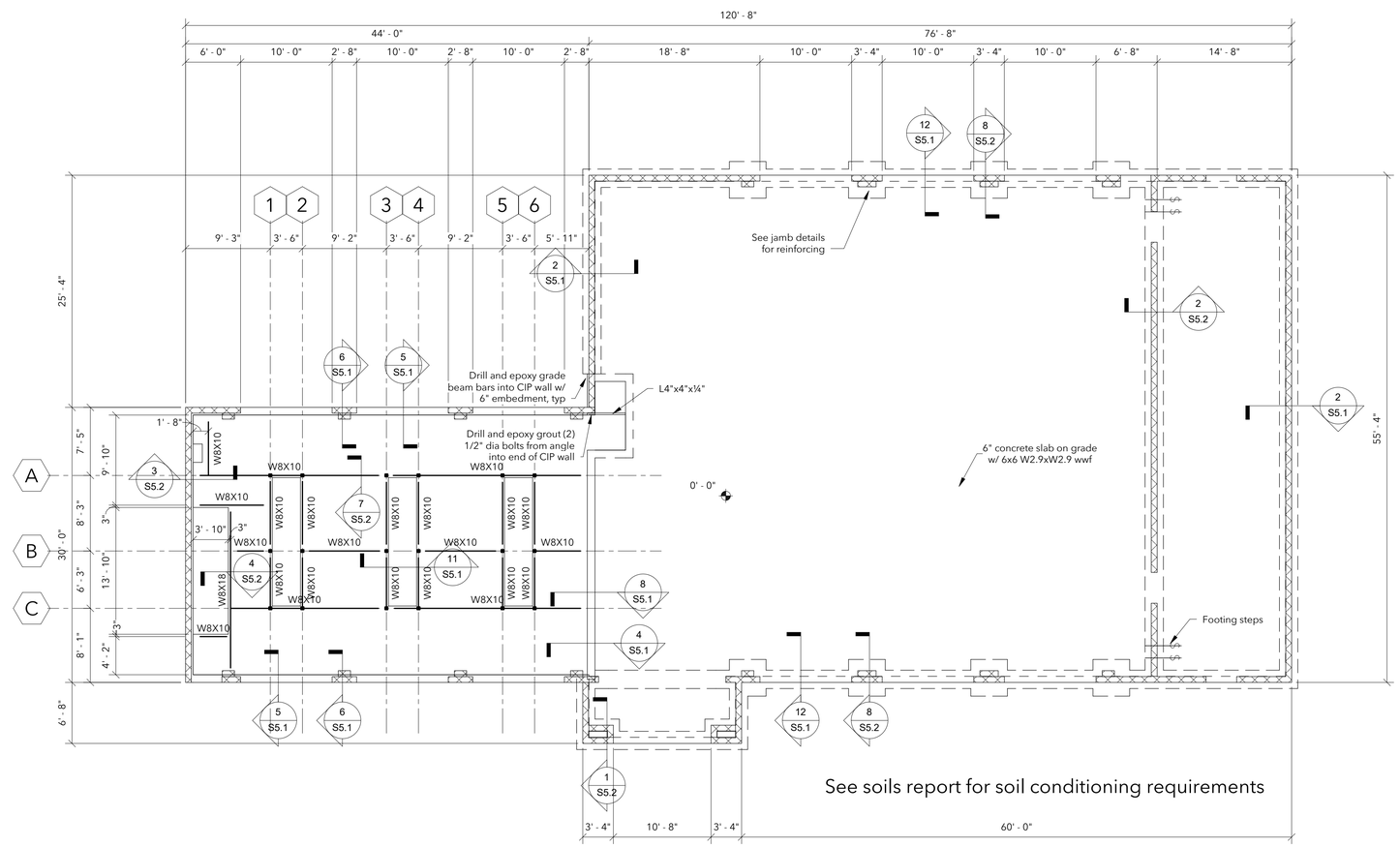
16" Jamb Reinforcing

32" Jamb Reinforcing

40" Jamb Reinforcing



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



See soils report for soil conditioning requirements

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.

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No.	Description	Date

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Foundation Plan

Project number	24036
Date	10/31/2024
Drawn by	jcj
Checked by	jd

S1.1

Scale: As indicated

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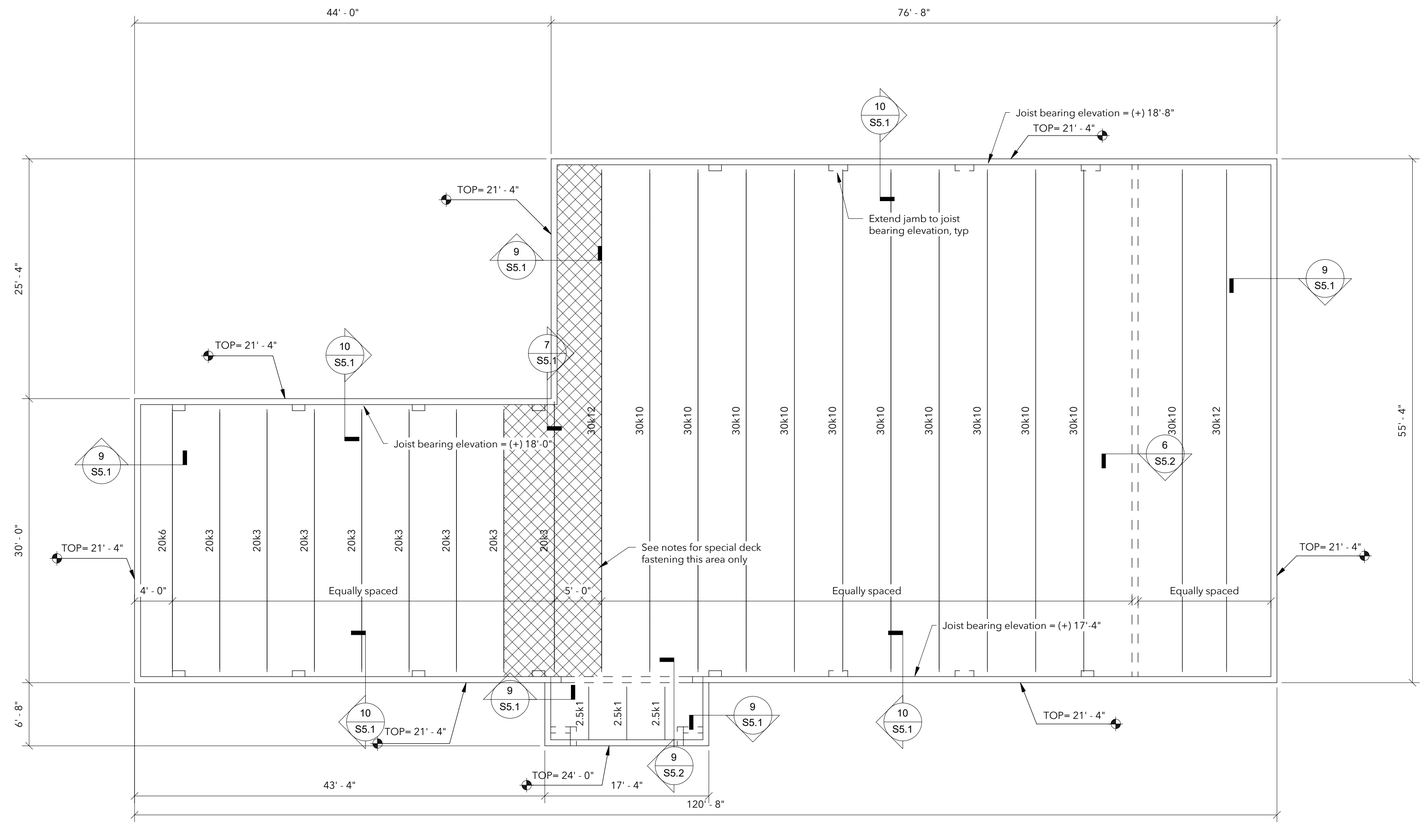

ROOF FRAMING PLAN

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 (+) 0'-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.

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FINAL

No.	Description	Date

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Roof Framing Plan

Project number	24036
Date	10/31/2024
Drawn by	jcj
Checked by	jd

S3.1

Scale As indicated

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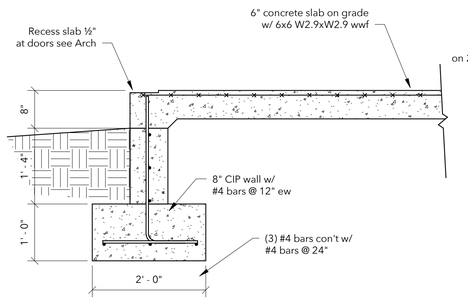
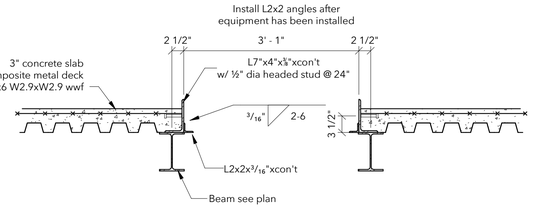


Section 12
3/4" = 1'-0"



Section 11
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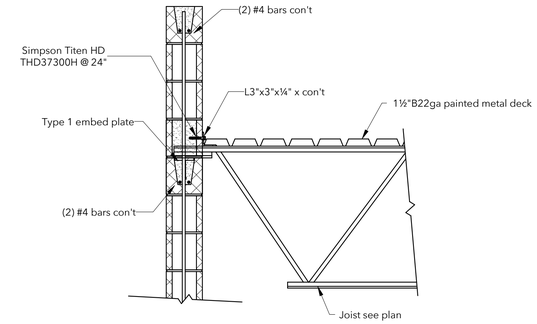

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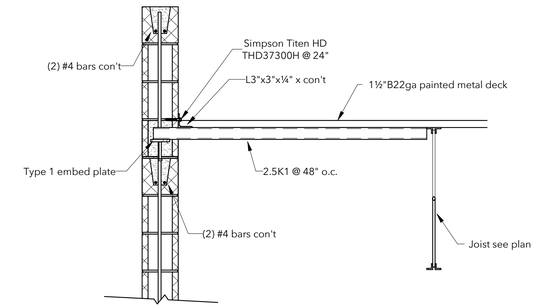

Section 9
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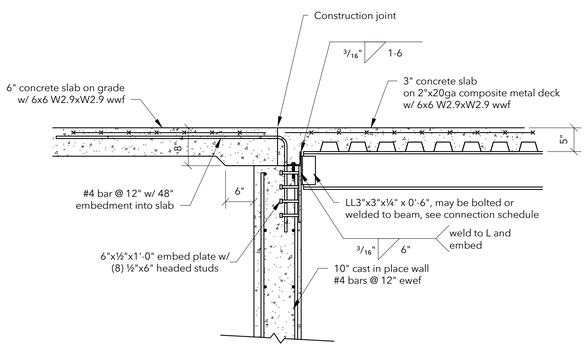

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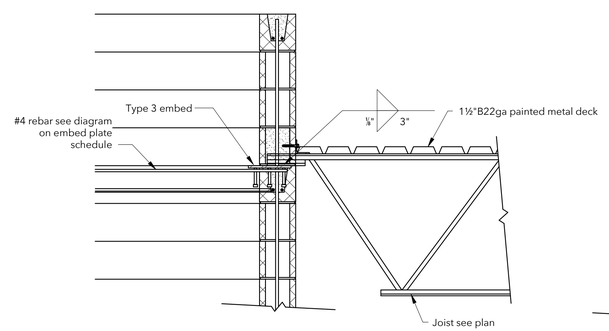

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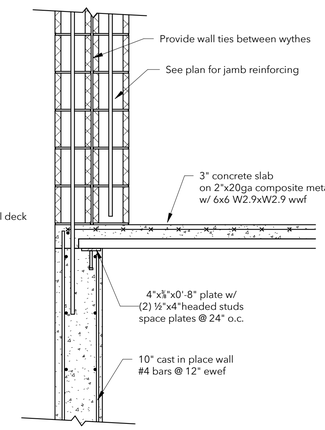

Section 6
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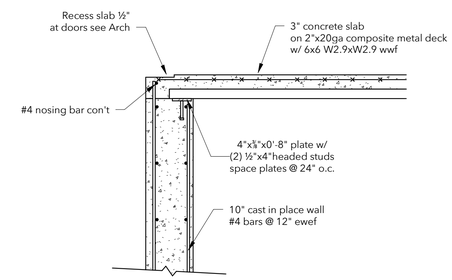

Section 5
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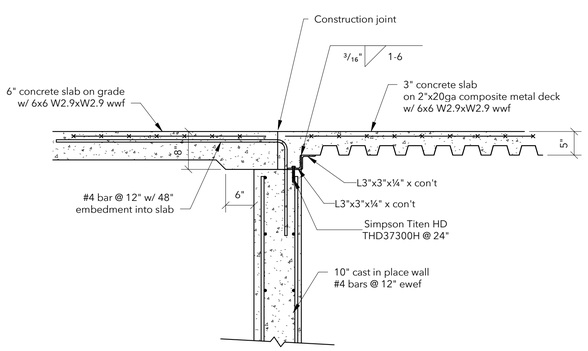

Section 4
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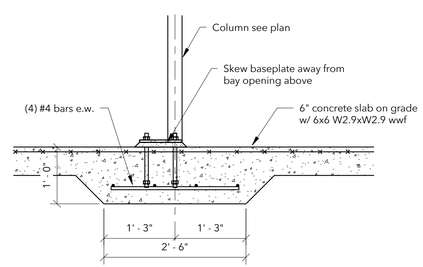

Section 3
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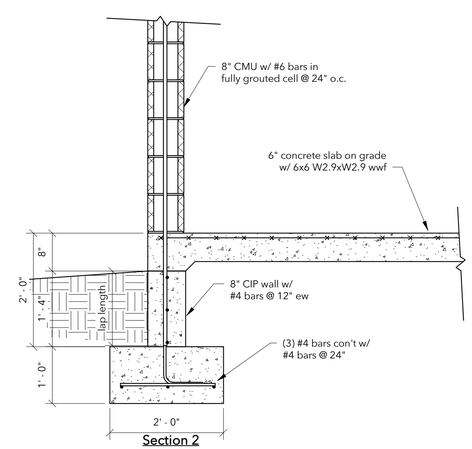

Section 2
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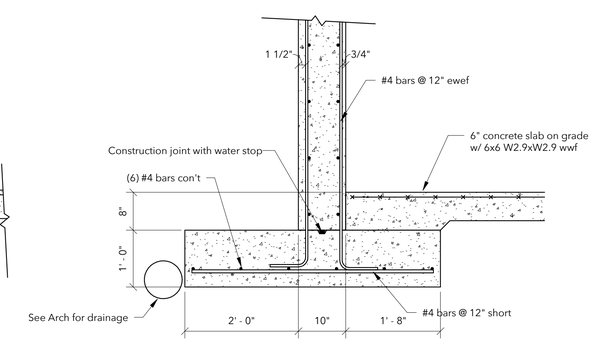

Section 1
3/4" = 1'-0"

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STATE OF LOUISIANA
JOHN CANNON JONES
LIC. NO. 36589
REGISTERED
PROFESSIONAL
ENGINEER
STRUCTURAL ENGINEERING
10/31/2024

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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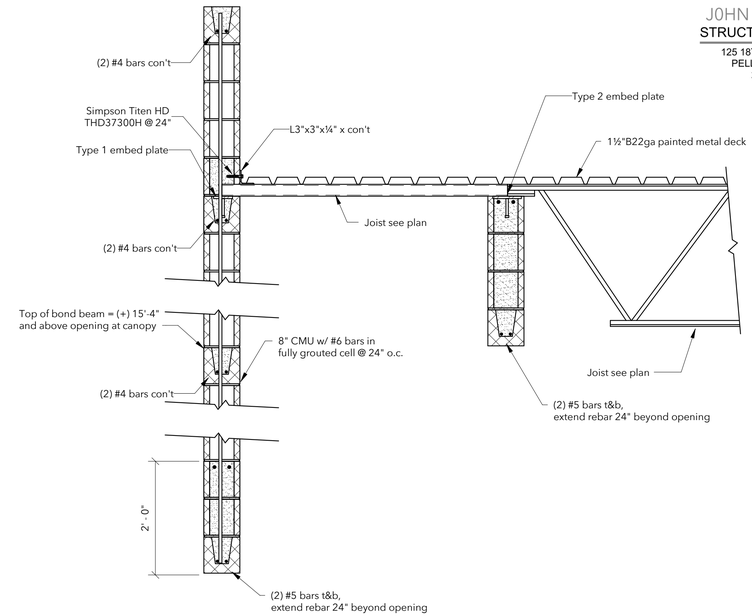
Sections and Details

Project number	24036
Date	10/31/2024
Drawn by	jcj
Checked by	jd

S5.1

Scale 3/4" = 1'-0"

JOHN JONES, PE, SE
STRUCTURAL ENGINEER
125 18TH STREET NORTH
PELL CITY, ALABAMA
205-884-5334



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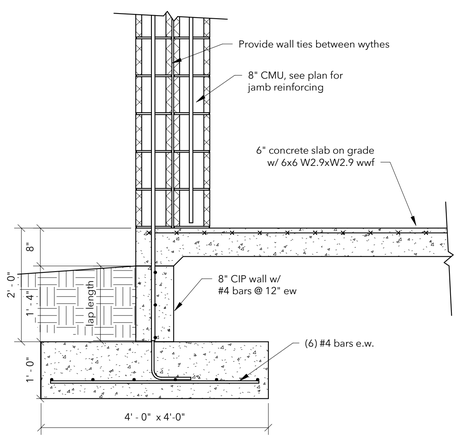
3/4" = 1'-0"



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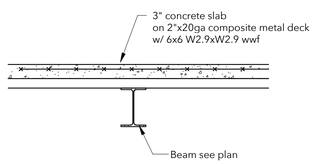

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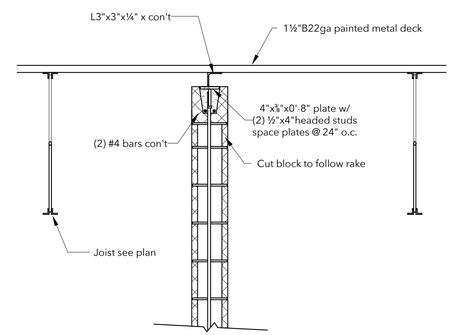

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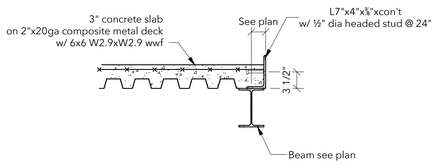

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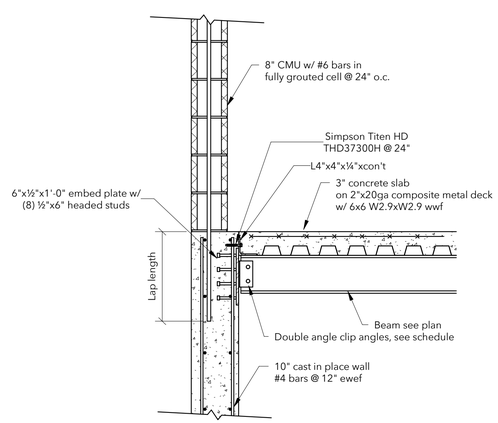
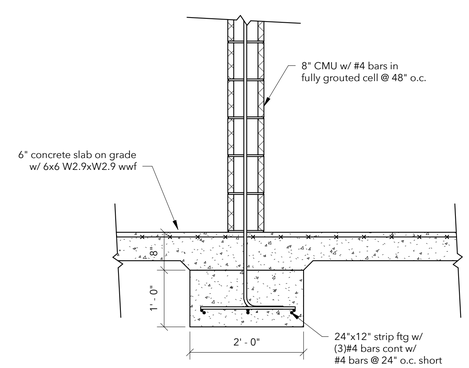
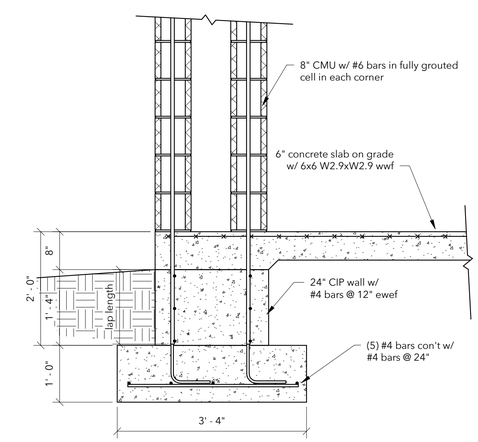
3/4" = 1'-0"



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



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



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

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S5.2

Scale 3/4" = 1'-0"

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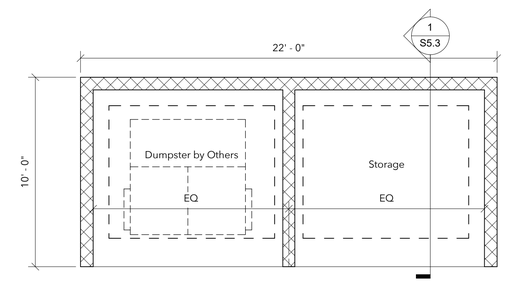
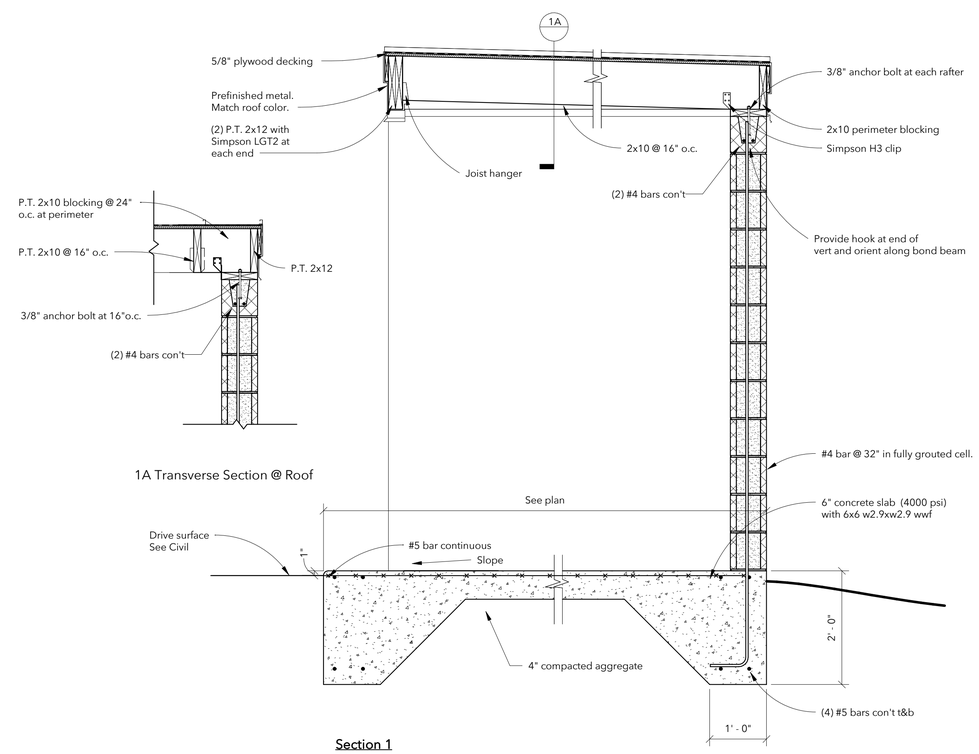


Dumpster Enclosure Plan
1/4" = 1'-0"



1A Transverse Section @ Roof

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

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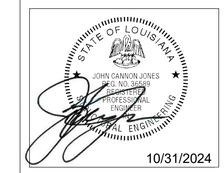

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S5.3

Scale	As indicated

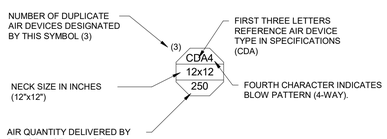
LEGEND

- 12x20 — DUCT SIZE, FIRST FIGURE IS SIDE SHOWN INSIDE CLEAR DIMENSION UNLESS NOTED OTHERWISE
- 24x12 — LOW PRESSURE, RECTANGULAR (GALVANIZED STEEL)
- 20"ø — ROUND (GALVANIZED STEEL)
- FLEXIBLE DUCT
- R — DUCT RISE
- D — DUCT DROP
- EXISTING DUCTWORK TO REMAIN
- DUCT TRANSITION
- RECTANGULAR TO ROUND DUCT TRANSITION
- TURNING VANES
- FD — FIRE DAMPER AND SLEEVE, PROVIDE ACCESS DOOR
- SD — SMOKE DAMPER AND SLEEVE, PROVIDE ACCESS DOOR
- SD/FD — COMBINATION FIRE/SMOKE DAMPER, PROVIDE ACCESS DOOR
- MANUAL VOLUME DAMPER
- STANDARD 45° BRANCH, SUPPLY OR RETURN, NO SPLITTER
- STANDARD 45° BRANCH, SUPPLY OR RETURN, NO SPLITTER, WITH MANUAL VOLUME DAMPER
- CONICAL SPIN-IN FITTING WITH BUTTERFLY DAMPER
- GRILLE OR REGISTER, CEILING
- A — ACCESS DOOR
- D — CONDENSATE DRAIN PIPING
- AD — AUXILIARY CONDENSATE DRAIN PIPING
- R — REFRIGERANT PIPING (2 LINES TOTAL)
- ELBOW, 90° (LONG RADIUS)
- TEE
- TEE, TURNED UP
- TEE TURNED DOWN
- ELBOW, TURNED DOWN
- ELBOW, TURNED UP
- T — WALL MOUNTED THERMOSTAT
- H — WALL MOUNTED HUMIDISTAT
- S — WALL MOUNTED TEMPERATURE SENSOR
- SMOKE DETECTOR
- TIE NEW INTO EXISTING
- UC — UNDERCUT DOOR 3/4 INCHES
- SUPPLY AIR FLOW
- RETURN OR EXHAUST AIR FLOW

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

ABBREVIATIONS

AB.CL'G	ABOVE CEILING
ABV.	ABOVE
AC	ALTERNATING CURRENT
A/C	AIR COMPRESSOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALT.	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
Ø	DIAMETER
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	HOUR(S)
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 / MEP## — AIR DEVICE LEGEND
NO SCALE

GAS FIRED FURNACE SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	CFM	O.A. CFM	E.S.P. (IN. W.C.)	FAN HP	COOLING COIL	GAS HEAT CAP. (MBH)		VENTING		ELECTRICAL			MOUNTING	WGT. (LBS)	REMARKS
							INPUT	OUTPUT	INTAKE (IN.)	DISCHARGE (IN.)	MCA	MOCP	VOLTS/PH./HZ.			
GFF-1	TRANE S9X1B040	1195	150	0.5	1/2	CC-1	40	38.8	3	3	8.8	15	115/1/60	HORIZONTAL	150	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 4TXCB004	DIRECT EXPANSION	--	--	--	1195	78.0	66.0	58.3	56.3	0.5	R-410A	1)

REMARKS:
1) MOUNTED ON DISCHARGE OF FURNACE UNIT

AIR COOLED CONDENSING UNIT SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	SERVICE	NOMINAL CAPACITY (TONS)	ELECTRICAL				WEIGHT (LBS)	REMARKS
				DISCONNECT	MCA	MOCP	VOLTS/PH./HZ.		
CU-1	TRANE 4TTR4036	GFF-1	3.0	BY DIV. 16	18	30	208/1/60	175	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	MOTOR VOLTS/PH./HZ.					
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.

GAS 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	100	0.1	BY DIV. 26	115/1/60	160	13 6"	1), 2), 4), 5)
RH-2	RE-VERBER-RAY DR-50	50	0.1	BY DIV. 26	115/1/60	50	11' 9"	1), 2), 3), 4)
RH-3	RE-VERBER-RAY DR-50	50	0.1	BY DIV. 26	115/1/60	50	11' 9"	1), 2), 3), 4)

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.

OUTSIDE AIR CALCULATIONS

MECHANICAL CODE OUTSIDE AIR REQUIREMENT

Served By	Space Name	Supply Air (cfm) Vpz (Max)	Area (sq. ft) Az	Occupancy Classification	Max Number of Occupants/SF (per 1000 SF)	Number of Occupants Rp	O.A. Area Air Rate (cfm / sq. ft) Ra	O.A. People Air Rate (cfm/person) Pz	O.A. Area Air Rate (cfm)	O.A. People Air Rate (cfm)	O.A. (cfm) Vbz	Zone Effectiveness Ez	Corrected CFM Voz	MAX OA REQUIRED Vot	Primary O.A. Fraction Zp	Ventilation Effectiveness Ev	Remarks
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	

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Mechanical Legend, Abbreviations and Schedules

Project number	24036
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Checked by	JB

M0.01

Scale 12" = 1'-0"

10/30/2024 2:53:15 PM

SECTION 15010 - MECHANICAL 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 RE-INSTALL MECHANICAL 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. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.
G. 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.
H. 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.
I. 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.
J. INSTALLATION SUBJECT TO ENGINEER'SOBSERVATION, FINAL APPROVAL, AND ACCEPTANCE. ENGINEER MAY REJECT UNSUITABLE WORK.
K. 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.

L. 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 EXPENSE TO THE OWNER.
M. 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 SUBMITTED WITHOUT THIS STAMP OF APPROVAL WILL NOT BE CONSIDERED AND WILL BE RETURNED FOR PROPER RESUBMISSION.
N. 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 DIFFERING FROM THAT SHOWN.
O. 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, MANUFACTURERS WARRANTIES, AND VALVE TAG LIST.
P. 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, DUCTWORK, VALVES, DAMPERS, AND EQUIPMENT. TURN OVER PRINTS TO ENGINEER AT FINAL OBSERVATION.
Q. FURNISH ENGINEER WRITTEN 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 15050 - BASIC MATERIALS AND METHODS

A. CONCRETE HOUSEKEEPING PADS:
1. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT, PIPE SUPPORT AND DUCT SUPPORTS AND WHERE INDICATED. CONCRETE SHALL BE 3000 PSI AT 28 DAYS MINIMUM.
2. PADS SHALL BE DOWELED TO FLOOR WITH NOT LESS THAN 4 NO. 4 BARS GROUTED IN PLACE. ANCHOR BOLTS FOR EQUIPMENT SHALL BE POURED INTEGRAL WITH THE PAD. PADS SHALL BE REINFORCED WITH AT LEAST ONE NO. 4 BAR (STIRRUPS). PADS SHALL HAVE CHAMFERED EDGES AND A BROOM FINISH.
3. HOUSEKEEPING PADS SHALL BE NOT LESS THAN 3-1/2 IN. THICK, SIZED AT LEAST 8 IN. LARGER THAN THE EQUIPMENT.

B. 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.

C. 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. IN AN EXISTING BUILDING ALL PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED AT THE END OF EACH WORKING DAY. THESE CLOSURES SHALL HAVE AN EQUAL FIRE RESISTANCE RATING TO THE FLOOR OR WALL.
3. PROVIDE SOUND PROOFING THROUGH NON-RATED WALLS.

D. 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.

E. 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 PIPE SLEEVES 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.

F. 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 GROUTED-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.
3. FLOOR MOUNTED STATIC ITEMS, WALL AND CEILING MOUNTED EQUIPMENT BRACKET AND HANGERS SHALL BE INSTALLED USING DRILLED ANCHORS. ANCHORS SHALL BE PHILLIPS DRILL COMPANY "RED HEAD" OR MULTI-SET II. SIZE ANCHORS FOR FOUR TIMES THE APPLIED LOAD. BOLTS USED OUTDOORS OR IN A WET ENVIRONMENT SHALL BE HOT DIP GALVANIZED.

G. PIPE IDENTIFICATION:
1. IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI-A13.1. PIPE MARKERS SHALL BE SETON'S 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.

H. 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.

I. 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 SCREWS, EXCEPT USE CONTACT EPOXY ADHESIVE WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.

J. 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.

K. 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 MANUFACTURER'S DETAILS.

SECTION 15260 - HVAC INSULATION

A. GENERAL:
1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATING 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 - ACOMMERCIAL AND INDUSTRIAL INSULATION STANDARDS@ FOR DEFINING HOW INSULATION MATERIALS WILL BE APPLIED.
3. ALL PIPE OR DUCT INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES; EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED.
4. INSULATE ITEMS MOUNTED IN DUCTWORK WITH THE SAME THICKNESS OF INSULATION AS SPECIFIED FOR DUCTWORK: INCLUDING AIR MEASURING STATIONS, SMOKE DAMPERS, AND AUTOMATIC DAMPERS.
5. REPAIR INSULATION DAMAGED BY WORK UNDER THIS CONTRACT TO MATCH EXISTING WORK OR REPLACE DAMAGED PORTION WITH INSULATION SPECIFIED FOR NEW WORK.

B. ELASTOMERIC CLOSED CELL INSULATION:
1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LATEX ENAMEL.
2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENATE PIPING, CHILLED WATER RUN-OUTS TO TERMINAL DEVICES, COVERS AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPURTENANCES SUBJECT TO SWEATING.

C. CONCEALED DUCTWORK:
1. DUCT WRAP SHALL BE 2 IN. THICK, 1.0 PCF WITH ALUMINUM OR FRK FACING, HAVING A MAXIMUM VAPOR TRANSMISSION OF .02 PERMS. MINIMUM INSTALLED "R" VALUE SHALL BE 5.6 WITH 25% COMPRESSION. INSULATION SHALL BE 250 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE, KNAUF, OR CERTAINTEED.
2. APPLY JACKETED DUCTWRAP TO ALL CONCEALED DUCTWORK PROVIDING CONDITIONED AIR, OR OUTSIDE AIR. ONLY INSULATE RETURN DUCTWORK IN NON-CONDITIONED SPACES AND IN CEILING SPACES BELOW A ROOF. PULL INSULATION SNUG, BUT DO NOT COMPRESS INSULATION MORE THAN 1/4 INCH.
3. SECURE DUCTWRAP INSULATION TO DUCTWORK USING ADHESIVE. SECURE INSULATION ON BOTTOM ON SIDES OF HORIZONTAL DUCTWORK AND ALL SIDES OF VERTICAL DUCTWORK WITH INSULPINS WELDED TO DUCT ON 12 TO 18 INCH CENTERS AND WITH CLIPS SLIPPED OVER THE PINS. APPLY CLIPS WITHOUT COMPRESSING INSULATION. MAKE JOINTS BY LAPPING THE FACING A MINIMUM OF 2 INCH AND STAPLING WITH T-5 FLARED STAPLES. VAPOR - SEAL WITH CHILDERS CP-30 LOW ODOR AT ALL STAPLES, CLIP LOCATIONS AND OTHER PENETRATIONS. SEAL JOINTS WITH 3 INCH WIDE FSK TAPE.
4. FOR DUCTWORK INSIDE THERMAL ENVELOPE, INSULATION SHALL BE 2 IN. THICK. FOR DUCTWORK OUTSIDE THE THERMAL ENVELOPE, ALL DUCTWORK EXCEPT EXHAUST SHALL BE 4 IN. THICK (2 LAYERS).

D. EXPOSED DUCTWORK:
1. INSULATION BOARD SHALL BE 2 IN. THICK 3 PCF WITH FRK FACING. MINIMUM INSTALLED "R" VALUE 6. INSULATION SHALL BE 250 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE, KNAUF, OR CERTAINTEED.
2. APPLY 2 IN. THICK INSULATION BOARD WITH FRK FACING TO ALL EXPOSED DUCTWORK PROVIDING CONDITIONED AIR, OR OUTSIDE AIR. INSULATE RETURN DUCTWORK IN NON-CONDITIONED SPACES.
3. SECURE INSULATION WITH INSULPINS (ALL SURFACES) WELDED TO DUCT ON 12 TO 18 IN. CENTERS AND WITH CLIPS SLIPPED OVER PINS. SEAMS AND JOINTS SHALL BE VAPOR SEALED WITH 3 IN. WIDE FSK TAPE. CORNERS AND EDGES OF DUCTWORK SHALL BE REINFORCED WITH ROLL-ON CORNER BEAD. SEAL ALL BREAK AND PUNCTURES WITH VAPOR BARRIER SEALANT AND FSK TAPE.

E. 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. 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. FITTING COVERS SHALL BE ONE PIECE 20 MIL PVC. COVERS SHALL BE CEEL-TITE 550 PVC-UVR BY CEEL-CO OR EQUALS.

A. DUCTWORK FINISHES:
INSULATED DUCTWORK INSTALLED OUTDOORS, INSULATED DUCTWORK WITHIN 8 FT. OF THE FINISHED FLOOR IN A MECHANICAL ROOM SHALL BE COVERED WITH 30 GAUGE GALVANIZED STEEL. COVERING SHALL BE HEMMED, AND FLANGED. SECURE WITH SELF TAPPING SCREWS ON EIGHT INCH CENTERS. DO NOT PUNCTURE VAPOR BARRIER

SECTION 15535 - REFRIGERANT PIPING SYSTEMS

A. REFRIGERANT PIPING SHALL BE TYPE L, HARD DRAWN COPPER TUBING CONFORMING TO ASTM SPECIFICATION B-280, CLEANED AND CAPPED AND MARKED "ACR". FITTINGS FOR REFRIGERANT LINES SHALL BE AS WROUGHT COPPER OR FORGED BRASS CONFORMING TO ANSI/ASME STANDARD B16.22. JOINTS IN REFRIGERANT LINES SHALL BE BRAZED IN ACCORDANCE WITH ANSI B9.1. KEEP REFRIGERATION PIPING SEALED UNTIL IT IS USED. CAP OPEN ENDS OF INSTALLED PIPING UNTIL READY FOR FINAL CONNECTIONS.
B. THE REFRIGERATION SYSTEM PIPING AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SAFETY CODE FOR MECHANICAL REFRIGERATION ANSI/ASHRAE 15-92 AND THE REFRIGERATION PIPING CODE ANSI/ASME B31.5. THE REFRIGERANT TUBE SIZES, AND INSTALLATION OF TUBING SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
C. REFRIGERANT SUCTION LINE SIZE SHALL LIMIT THE TEMPERATURE RISE TO TWO DEGREES F AT FULL LOAD AND HOLD THE REFRIGERANT GAS VELOCITY TO NOT LESS THAN 500 FT. PER MIN. (FPM) IN THE HORIZONTAL NOR LESS THAN 1000 FPM IN THE VERTICAL AT MINIMUM LOAD. REFRIGERANT LIQUID LINE SIZE SHALL LIMIT THE PRESSURE DROP BETWEEN 4 AND 6 PSI AT FULL LOAD.
D. PITCH HOT GAS LINES AND SUCTION LINES APPROXIMATELY 1/8 INCH PER 10 FT. HOT GAS LINES AND SUCTION LINES EXCEEDING 30 FT. VERTICAL LIFT SHALL BE TRAPPED EVERY 20 FT. VERTICAL REFRIGERANT LINES SHALL BE RUN PLUMB, HORIZONTAL LINES SHALL RUN PARALLEL WITH BUILDING WALLS. REFRIGERANT LINES SHALL NOT CONTACT BUILDING STRUCTURE. ISOLATE PIPING WITH RESILIENT LINER IN PIPE SUPPORT OR ELASTOMERIC INSULATION.
E. TEST FOR LEAKS WITH AN ELECTRONIC LEAK DETECTOR. REPAIR LEAKS, REFILL, REPRESSURIZE, AND RETEST. FOLLOW STANDARD CHARGING AND DEHYDRATION PROCEDURES. CHARGE THROUGH THE SYSTEM FILTER-DRIER. CHANGE FILTER DRIERS AFTER 40 HOURS OF OPERATION.
F. PROVIDE A LINE SIZE FILTER-DRIER IN EACH LIQUID REFRIGERANT LINE BETWEEN THE CONDENSER AND THE EXPANSION VALVE. FILTER-DRIER SHALL BE A HENRY VALVE CO., SPORLAN OR ALCO.
G. SERVICE VALVES SHALL BE BACK SEATING TYPE, STEEL OR IRON BODY. PROVIDE SERVICE VALVES AT CONDENSING UNIT. SERVICE VALVES SHALL BE LINES SIZE. VALVES SHALL BE HENRY VALVE CO., COMPRESSOR VALVES, SPORLAN OR ALCO.
H. PROVIDE ISOLATION VALVES AROUND THE FILTER-DRIER TO PERMIT SERVICING THE DRIER WITHOUT LOSS OF REFRIGERANT. ISOLATION VALVES SHALL BE HENRY VALVE CO., 900 SERIES BALL VALVES. SPORLAN AND ALCO ARE APPROVED EQUAL.
I. CHARGING VALVE SHALL BE INSTALLED IN EACH LIQUID REFRIGERANT LINE BETWEEN THE CONDENSER AND THE FILTER DRIER. CHARGING VALVE SHALL BE A HENRY VALVE CO. TYPE 927 OR APPROVED EQUAL. SPORLAN AND ALCO ARE APPROVED EQUAL.

J. SIGHT GLASS SHALL BE INSTALLED IN EACH LIQUID REFRIGERANT LINE AT THE EVAPORATOR COIL. SIGHT GLASS SHALL BE HENRY VALVE CO. MI 31 SERIES DOUBLE PORT STYLE WITH EXTENDED ENDS FOR SOLDERING FOR LINES 5/8 INCH OD OR LARGER. USE MI 30 SERIES SINGLE PORT SOLDERING FOR LINES 5/8 INCH OD OR LARGER. USE MI 30 SERIES SINGLE PORT FOR LINES 1/2 INCH OD AND SMALLER. SPORLAN AND ALCO ARE APPROVED EQUAL.
K. PROVIDE BALANCED EXTERNALLY EQUALIZED THERMOSTATIC EXPANSION VALVE. DISTRIBUTORS SHALL BE MATCHED WITH THERMOSTATIC EXPANSION VALVES AND DIRECT EXPANSION COIL FOR PROPER PERFORMANCE. THERMOSTATIC EXPANSION VALVE (TXV) SHALL BE BALANCED EXTERNALLY EQUALIZED TYPE. DISTRIBUTIONS SHALL BE MATCHED WITH THERMOSTATIC EXPANSION VALVES AND DIRECT EXPANSION COIL FOR PROPER PERFORMANCE. DISTRIBUTORS SHALL BE ALCO OR APPROVED EQUAL. LOCATE BULB IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. CONNECT THE EQUALIZING LINE TO THE TXV DOWN STREAM OF THE BULB. PROVIDE TRAPPED DOUBLE SUCTION RISERS ON SYSTEMS WITH UNLOADING CAPABILITY, WHEN REQUIRED FOR PROPER OIL RETURN.
L. PROVIDE FLEXIBLE CONNECTORS ON LIQUID LINE, AND SUCTION LINE AT THE CONDENSING UNIT. FLEXIBLE CONNECTORS SHALL BE BRAIDED BRONZE COVERING ON A BRONZE HOSE. END CONNECTORS SHALL BE FEMALE COPPER TUBE TYPE. UNITS SHALL BE RATED NOT LESS THAN 270 PSI AT 250 DEGREES F. UNITS SHALL BE SOUTHEASTERN HOSE, INC., SUPERIOR OR ANACONDA.

SECTION 15620 - DIRECT VENT GAS-FIRED FURNACES

A. GAS-FIRED FURNACES SHALL BE COMPLETELY FACTORY ASSEMBLED INCLUDING COIL, CONDENSATE DRAIN PAN, FURNACE SECTION, FAN MOTOR(S), FILTERS AND CONTROLS IN AN INSULATED CASING THAT CAN BE APPLIED IN EITHER VERTICAL OR HORIZONTAL CONFIGURATION. UNITS SHALL BE RATED AND TESTED IN ACCORDANCE WITH ARI STANDARD 210. UNITS SHALL BE UL LISTED AND LABELED IN ACCORDANCE WITH UL 465 AND 559 FOR INDOOR BLOWER COIL UNITS AND SHALL BE AGA CERTIFIED.

B. UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, MINIMUM 20 GAUGE, GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE FINISHED WITH A WEATHER-RESISTANT BAKED ENAMEL FINISH. CASING SHALL BE COMPLETELY INSULATED WITH FIRE-RETARDANT, PERMANENT, ODORLESS GLASS FIBER MATERIAL. KNOCKOUTS SHALL BE PROVIDED FOR UNIT ELECTRIC POWER AND REFRIGERANT PIPING CONNECTIONS. CAPTIVE SCREWS SHALL BE STANDARD ON ALL ACCESS PANELS.

C. FURNACE HEAT EXCHANGER SHALL BE SECTIONAL TYPE, FABRICATED OF HEAVY GAUGE ALUMINIZED STEEL. VENTING SHALL BE DIRECT OUTDOORS. BURNERS SHALL BE MULTI-PORT, IN-SHOT TYPE CONSTRUCTED OF ALUMINIZED STEEL. GAS MAIN AND UNIT SHALL BE AGA APPROVED WITH REDUNDANT VALVE. FURNACE PILOT SHALL BE ELECTRONIC IGNITION. HEAT EXCHANGER SECTION SHALL BE INSULATED WITH FOIL FACE INSULATION.

D. EVAPORATOR COIL SHALL CONSIST OF CONFIGURED ALUMINUM FIN SURFACE MECHANICALLY BONDED TO 3/8 INCH INTERNALLY ENHANCED COPPER TUBING. COIL SHALL BE FACTORY PRESSURE AND LEAK TESTED AT 375 PSIG. COIL SHALL BE ARRANGED FOR BLOW-THROUGH AIRFLOW AND PROVIDED WITH CONDENSATE DRAIN PAN CONSTRUCTED OF PVC PLASTIC. EXTERNAL CONNECTIONS SHALL BE PROVIDED ON EITHER SIDE OF THE UNIT.

E. EVAPORATOR FAN SHALL BE FORWARD CURVED, CENTRIFUGAL-TYPE FAN(S) WITH ADJUSTABLE SPEED DIRECT DRIVE MOTOR. THERMAL OVERLOAD PROTECTION SHALL BE STANDARD ON MOTOR. FAN AND MOTOR BEARINGS SHALL BE PERMANENTLY LUBRICATED.

F. MAGNETIC EVAPORATOR FAN CONTACTOR, LOW VOLTAGE TERMINAL STRIP, CHECK VALVE(S), AND SINGLE POINT POWER ENTRY SHALL BE INCLUDED. ALL NECESSARY CONTROLS SHALL BE FACTOR-INSULATED AND WIRED. EVAPORATOR DEFROST CONTROL SHALL BE INCLUDED TO PREVENT COMPRESSOR SLUGGING BY TEMPORARILY INTERRUPTING COMPRESSOR OPERATION WHEN LOW EVAPORATOR COIL TEMPERATURES ARE ENCOUNTERED.

G. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL CONDENSATE DRAIN PIPING FROM UNIT TO DRAIN AS INDICATED ON THE DRAWINGS. PROVIDE UNIT WITH NECESSARY VENT PIPING AND CONCENTRIC INTAKE/EXHAUST ACCESSORIES.

H. GAS FIRED FURNACES SHALL BE CARRIER MODEL MXA OR APPROVED EQUAL.

SECTION 15630 – GAS FIRED RADIANT HEATERS

A. HIGH-INTENSITY INFRARED HEATER (GAS-FIRED)
1. GAS-FIRED HIGH-INTENSITY INFRARED HEATERS SHALL COMPLY WITH ANSI Z83.19, SECTION 2.10 RADIANT COEFFICIENT, WITHOUT THE USE OF A SECONDARY RE-RADIATING SURFACE OF EITHER RODS OR SCREEN. THE CERAMIC RADIANT SURFACE SHALL BE HORIZONTAL WHEN HEATER IS INSTALLED AT 0 DEGREES. HEATERS SHALL BE CAPABLE OF ANGLE MOUNTING FROM 5 TO 30 DEGREES,
2. WITHOUT THE USE OF AN ADDITIONAL REFLECTOR. HEATERS SHALL BE FULLY TESTED AND READY TO INSTALL, PIPE AND WIRE FOR OPERATION ON NATURAL OR LP/PROPANE GAS. HEATERS SHALL BE DESIGNED TO SATISFACTORILY OPERATE AT A MINIMUM SUPPLY
3. INLET GAS PRESSURE OF 7 INCHES WATER COLUMN (W.C.) WHEN SPECIFIED FOR NATURAL GAS OR 11 INCHES W.C. WHEN SPECIFIED FOR LP/PROPANE GAS AND AT A MAXIMUM SUPPLY INLET GAS PRESSURE OF 14 INCHES W.C.F. HEATERS SHALL BE DESIGNED TO OPERATE WITHOUT ADJUSTMENTS WHEN BURNING NATURAL GAS HAVING A HEAT VALUE OF 1000 BTU PER CUBIC FOOT WITH A SPECIFIC GRAVITY OF .65,
4. HEATERS SHALL BE EQUIPPED WITH ONE OF THE FOLLOWING CONTROLS: 1. SINGLE-STAGE, 120 VAC DIRECT SPARK IGNITION CONTROL HAVING: 100% SAFETY SHUT OFF WITH FLAME MONITORING AND 10.8 VA MAXIMUM POWER CONSUMPTION. CONTROL SHALL OPERATE WITH NO EXTERNAL ELECTRICAL POWER, BUT INSTEAD USE MILLI-VOLTAGE GENERATED BY THE PILOT FLAME. THE HEATER'S CONTROLS SHALL BE EASILY ACCESSIBLE.THE DIRECT SPARK IGNITOR OR MANUAL PILOT SHALL BE DURABLE TO RESIST BREAKAGE. THE HEATER IS FITTED WITH A GAS ORIFICE FOR EACH BURNER FOR PROPER AIR TO GAS MIXTURE FOR SEA LEVEL. HEATERS CAN BE ORDERED OR CONVERTED FOR USE AT HIGH ALTITUDES, OR WITH EITHER LP/PROPANE OR NATURAL GAS.
5. CONSTRUCTION: THE HEATER SHALL BE OF MODULAR DESIGN EMPLOYING MULTIPLE BURNERS TO ACHIEVE THE SPECIFIED INPUT. THE BURNER(S) SHALL INCLUDE A CERAMIC COMBUSTION SURFACE, A PLENUM CHAMBER AND A VENTURI MIXER AND SHALL BE REMOVABLE WITH A SINGLE SCREWFOR CLEANING OR REPLACEMENT WITHOUT DISCONNECTING ANY GAS, ELECTRICAL OR HANGING DEVICE. THE CERAMIC COMBUSTION SURFACE SHALL BE CAPABLE OF REACHING TEMPERATURES UP TO 1850 DEGREES F (AN INCANDESCENT APPEARANCE) AND WITHSTAND THERMAL SHOCK WHEN WATER QUENCHED. THE COMBUSTION SURFACE SHALL BE A CORDIERITE-BASED GROOVED CERAMIC OF AN EXCLUSIVE PERMEABLE DESIGN WHEREBY ALTERNATE ROWS OF 230 PERFORATIONS PER SQUARE INCH TERMINATE AT THE BOTTOM OF SLOTS MAKING ONE HALF OF THE FLAME BELOW THE TOP SURFACE OF THE CERAMIC AND CREATING A MORE INTIMATE CONTACT BETWEEN FLAME AND SURFACE. THE BURNER'S PLENUM CHAMBER SHALL BE OF 20 GA. (.035") CORROSION-FREE ALUMINIZED STEEL, ONE-PIECE FABRICATION AND SEAMLESS NO-WELD CONSTRUCTION. THE PLENUM CHAMBER SHALL UTILIZE A ONE-PIECE STAINLESS STEEL RETAINER TO HOLD THE CERAMIC SURFACE IN PLACE AROUND ITS ENTIRE PERIMETER AND A 14 GA. (.083") ALUMINIZED STEEL BACK BRACKET FOR HOLDING THE BURNER ASSEMBLY IN PLACE TO ACHIEVE PROPER ALIGNMENT OF THE SURFACE, VENTURI AND ORIFICE. THE VENTURI SHALL BE MADE OF ALUMINIZED STEEL. F. THE HEATER'S MAIN FRAME SHALL BE 16 GA. (.065") CORROSION-FREE ALUMINIZED STEEL AND OF NO-WELD CONSTRUCTION. THE MAIN FRAME SHALL HAVE A DOUBLE TURNED UPPER EDGE AND TWO (2) CORNER REINFORCEMENT BRACKETS FOR RIGIDITY. THE SIDE FRAMES SHALL HAVE FOUR (4) 3/8" DIAMETER HOLES FOR EASY MOUNTING WITH S-HOOKS AND CHAIN. REFLECTORS SHALL BE OF 21 GA. (.032") HIGHLY POLISHED MIRROR BRITE ALUMINUM WITH A REFLECTIVITY OF NOT LESS THAN 98%. STANDARD REFLECTOR DESIGN (SHAPE) SHALL HAVE .352 SQUARE FEET OF REFLECTIVE AREA PER LINEAR FOOT, WITH A DOUBLE TURNED EDGE FOR RIGIDITY AND BE MOUNTED TO THE HEATER AT THE FACTORY.
6. UNITS SHALL BE DETROIT RADIANT/REVERBERRAY,

B. TUBULAR INFRARED HEATERS
1. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
2. DESCRIPTION: FACTORY ASSEMBLED, PIPED, AND WIRED, AND COMPLYING WITH ANSI Z83.20/CSA 2.34.
3. FUEL TYPE: DESIGN BURNER FOR NATURAL GAS HAVING CHARACTERISTICS SAME AS THOSE OF GAS AVAILABLE AT PROJECT SITE.
4. COMBUSTION TUBING: 4-INCH- DIAMETER ALUMINIZED STEEL WITH HIGH-EMISSIVITY, HIGH-TEMPERATURE, CORROSION-RESISTANT EXTERNAL FINISH.
5. TUBING CONNECTIONS: STAINLESS-STEEL COUPLINGS OR FLARED JOINTS WITH STAINLESS-STEEL DRAW BOLTS.
6. REFLECTOR: POLISHED ALUMINUM, 97 PERCENT MINIMUM REFLECTIVITY, WITH END CAPS. SHAPE TO CONTROL RADIATION FROM TUBING FOR UNIFORM INTENSITY AT FLOOR LEVEL WITH 100 PERCENT CUTOFF ABOVE CENTERLINE OF TUBING. PROVIDE FOR ROTATING REFLECTOR OR HEATER AROUND A HORIZONTAL AXIS FOR MINIMUM 30-DEGREE TILT FROM VERTICAL.
7. REFLECTOR EXTENSION SHIELDS: SAME MATERIAL AS REFLECTORS, ARRANGED FOR FIXED CONNECTION TO LOWER REFLECTOR LIP AND RIGID SUPPORT TO PROVIDE 100 PERCENT CUTOFF OF DIRECT RADIATION FROM TUBING AT ANGLES GREATER THAN 30 FROM VERTICAL.
8. INCLUDE HANGER KIT AND BURNER SAFETY CONTROLS:
9. GAS CONTROL VALVE: SINGLE-STAGE, REGULATED REDUNDANT 24-V AC GAS VALVE CONTAINING PILOT SOLENOID VALVE, ELECTRIC GAS VALVE, PILOT FILTER, PRESSURE REGULATOR, PILOT SHUTOFF, AND MANUAL SHUTOFF ALL IN ONE BODY. BLOCKED VENT SAFETY: DIFFERENTIAL PRESSURE SWITCH IN BURNER SAFETY CIRCUIT TO STOP BURNER OPERATION WITH HIGH DISCHARGE OR SUCTION PRESSURE.
10. CONTROL PANEL INTERLOCK: STOPS BURNER IF PANEL IS OPEN. INDICATOR LIGHTS: BURNER-ON INDICATOR LIGHT.
11. BURNER AND EMITTER TYPE: GRAVITY-VENTED POWER BURNER, WITH THE FOLLOWING FEATURES:
12. EMITTER TUBE: 4-INCH- DIAMETER, ALUMINIZED STEEL TUBING WITH SIGHT GLASS FOR BURNER AND PILOT FLAME OBSERVATION.
13. VENTING: CONNECTOR AT EXIT END OF EMITTER TUBING FOR VENT-PIPE CONNECTION. VENT TERMINAL: HORIZONTAL.
14. BURNER/IGNITION: POWER GAS BURNER WITH ELECTRONIC SPARK AND ELECTRONIC FLAME SAFETY. COMBUSTION-AIR CONNECTION: DUCT CONNECTION FOR COMBUSTION AIR TO BE DRAWN DIRECTLY FROM OUTDOORS BY BURNER FAN.

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SECTION 15671 - AIR COOLED CONDENSING UNITS

A. UNITS SHALL BE ASSEMBLED ON MINIMUM 10 GAUGE STEEL MOUNTING/LIFTING RAILS AND SHALL BE WEATHER PROOFED. UNIT SHALL INCLUDE HERMETIC OR SEMI-HERMETIC RECIPROCATING COMPRESSOR(S), PLATE FIN CONDENSER COIL, FANS AND MOTORS, CONTROLS AND HOLDING CHARGE OF R-22. UNITS SHALL BE UL LISTED, AND RATED IN ACCORDANCE WITH ARI STANDARD 240 AND 270.
B. UNIT CASING SHALL BE CONSTRUCTED OF MINIMUM 18 GAUGE G-210, HEAVY GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE FINISHED WITH A WEATHER-RESISTANT BAKED ENAMEL FINISH. COATING SYSTEM SHALL HAVE BEEN TESTED 500 HOURS IN SALT SPRAY TEST (ASTM B117). UNITS SHALL HAVE REMOVABLE PANELS THAT ALLOW ACCESS TO ALL MAJOR COMPONENTS AND CONTROLS.
C. SINGLE COMPRESSOR UNITS LESS THAN 7-1/2 TONS:
1. COMPRESSOR SHALL BE HERMETICALLY SEALED AND MOUNTED ON RUBBER VIBRATION ISOLATORS. COMPRESSOR SHALL INCLUDE INTERNAL OVER TEMPERATURE AND PRESSURE PROTECTION, THERMOSTATICALLY CONTROLLED SUMP HEATER, AND INTERNAL SPRING MOUNTS. REFRIGERATION CIRCUIT SHALL INCLUDE FACTORY INSTALLED LIQUID LINE DRIER, LOW PRESSURE SWITCH. LIQUID LINE AND SUCTION LINE SERVICE VALVE WITH GAUGE PORT.
D. CONDENSER SHALL BE INTERNALLY FINNED OR SMOOTH BORE 3/8 INCH COPPER TUBES MECHANICALLY BONDED TO CONFIGURED ALUMINUM PLATE FIN AS STANDARD. COIL SHALL BE FACTORY PRESSURE AND LEAK TESTED TO 375 PSIG AIR PRESSURE. PROVIDE CONDENSER COIL GUARD CONSISTING OF METAL GRILLE WITH PVC COATING.
E. CONDENSER FAN AND MOTOR(S) SHALL HAVE DIRECT-DRIVE, STATICALLY AND DYNAMICALLY BALANCED FAN(S) WITH ALUMINUM BLADES AND ELECTRO-COATED STEEL HUBS. FANS SHALL BE MOUNTED IN DRAW-THROUGH VERTICAL DISCHARGE POSITION. PERMANENTLY LUBRICATED TOTALLY ENCLOSED TYPE MOTORS SHALL BE PROVIDED AND SHALL HAVE BUILT IN CURRENT AND THERMAL OVERLOAD PROTECTION. MOTOR(S) SHALL BE BALL BEARING TYPE.
F. UNITS SHALL BE COMPLETELY FACTORY WIRED WITH NECESSARY CONTROLS AND CONTACTOR WITH PRESSURE LUGS OR TERMINAL BLOCK FOR POWER WIRING. CONTROL WIRING SHALL BE 24-VOLT CONTROL CIRCUIT WHICH INCLUDES FUSING AND CONTROL TRANSFORMER.
G. DEFROST CONTROLS SHALL INCLUDE ELECTRONIC TIME INITIATED, TEMPERATURE TERMINATED DEFROST SYSTEM. TIMED OVERRIDE LIMITS DEFROST CYCLE TO 10 MINUTES.
H. LOW AMBIENT HEAD PRESSURE SHALL BE PROVIDED TO MODULATE THE RPM OF UNIT OUTDOOR FAN MOTOR IN RESPONSE TO OUTDOOR AMBIENT TEMPERATURES AND UNIT HEAD PRESSURE. PROVIDE UNIT COOLING OPERATION TO OUTDOOR TEMPERATURE 0 DEGREES F.
I. PROVIDE ANTI-SHORT-CYCLE TIMER TO PREVENT RAPID ON-OFF COMPRESSOR CYCLING IN LIGHT LOAD CONDITIONS BY NOT ALLOWING COMPRESSOR TO OPERATE FOR 5-7 MINUTES UPON SHUTDOWN. TIMER SHALL CONSIST OF A SOLID STATE TIMING DEVICE, 24-VOLT, 60 CYCLE.
J. WARRANTY:
1. PROVIDE A WRITTEN WARRANTY AGREEING TO REPLACE COMPONENTS THAT FAIL IN MATERIALS AND WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PERIOD, PROVIDED MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLATION, OPERATION, AND MAINTENANCE HAVE BEEN FOLLOWED.
2. WARRANTY PERIOD: MANUFACTURERS STANDARD, BUT NOT LESS THAN FIVE (5) YEARS FROM DATE OF SUBSTANTIAL COMPLETION FOR COMPRESSOR(S) AND ONE (1) YEAR FOR ALL OTHER COMPONENTS.
K. UNITS SHALL BE JCI, CARRIER OR APPROVED EQUAL. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER=S INSTRUCTIONS.

SECTION 15855 - SPLIT SYSTEM DX AIR HANDLING UNITS

A. AIR HANDLING UNITS SHALL BE COMPLETELY FACTORY ASSEMBLED INCLUDING COIL, CONDENSATE DRAIN PAN, FAN MOTOR(S), FILTERS AND CONTROLS IN AN INSULATED CASING THAT CAN BE APPLIED IN EITHER VERTICAL OR HORIZONTAL CONFIGURATION. UNITS SHALL BE RATED AND TESTED IN ACCORDANCE WITH ARI STANDARD. UNITS SHALL BE UL LISTED AND LABELED IN ACCORDANCE WITH UL 465 AND UL 1995 FOR INDOOR BLOWER COIL UNITS.
B. UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, MINIMUM 20 GAUGE, G-90 GALVANIZED STEEL. CASING SHALL BE COMPLETELY INSULATED WITH FIRE-RETARDANT, PERMANENT, ODORLESS GLASS FIBER MATERIAL WITH R-VALVE NOT LESS THAN 4. KNOCKOUTS SHALL BE PROVIDED FOR UNIT ELECTRIC POWER AND REFRIGERANT PIPING CONNECTIONS. CAPTIVE SCREWS SHALL BE STANDARD ON ALL ACCESS PANELS.
C. DIRECT EXPANSION COIL SHALL BE ALUMINUM FIN SURFACE MECHANICALLY BONDED TO 3/8 INCH INTERNALLY ENHANCED COPPER TUBING AND FACTORY PRESSURE AND LEAK TESTED AT 375 PSIG.
D. CONDENSATE DRAIN PAN SHALL BE ONE-PIECE, CORROSION RESISTANT, AND FULLY DRAINABLE. COIL SHALL BE MOUNTED ABOVE, NOT IN, THE DRAIN PAN TO ALLOW FULL INSPECTION OR CLEANING OF DRAIN PAN. UNIT SHALL CONTAIN CONDENSATE DRAIN PANS FOR BOTH HORIZONTAL AND VERTICAL APPLICATIONS. DRAIN PANS SHALL HAVE CONNECTIONS ON BOTH SIDES OF THE UNIT. INSTALL FULL SIZE CONDENSATE DRAIN PIPING FROM UNIT TO LOCATION INDICATED ON PLAN. DRAIN LINE SHALL BE INSTALLED WITH A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT DOWN IN THE DIRECTION OF FLOW.
E. BLOWER FAN SHALL BE DOUBLE INLET, DOUBLE WIDTH, FORWARD CURVED, CENTRIFUGAL-TYPE FAN(S) WITH ADJUSTABLE BELT DRIVE UNLESS NOTED OTHERWISE. THERMAL OVERLOAD PROTECTION SHALL BE STANDARD ON MOTOR. FAN AND MOTOR BEARINGS SHALL BE PERMANENTLY LUBRICATED.
F. MAGNETIC MOTOR STARTER, LOW VOLTAGE TERMINAL STRIP, AND SINGLE POINT POWER ENTRY SHALL BE INCLUDED. ALL NECESSARY CONTROLS SHALL BE FACTORY-INSULATED AND WIRED. EVAPORATOR DEFROST CONTROL SHALL BE INCLUDED TO PREVENT COMPRESSOR SLUGGING BY TEMPORARILY INTERRUPTING COMPRESSOR OPERATION WHEN LOW EVAPORATOR COIL TEMPERATURES ARE ENCOUNTERED.
G. FILTERS SHALL BE ONEINCH, THROW-AWAY TYPE FILTERS FILTERS SHALL BE ACCESSIBLE FROM EITHER SIDE THROUGH THE COIL ACCESS PANEL.

H. PROVIDE UNIT MOUNTED ELECTRIC HEATERS AS SCHEDULED. ELECTRIC HEAT ASSEMBLY SHALL BE UL, ETL, AND CSA APPROVED FOR DIRECT INSTALLATION ON FAN DISCHARGE. HEATER ASSEMBLY SHALL HAVE SINGLE-POINT POWER WIRING AND INCLUDE CONTACTORS WITH 24 VOLT COILS, POWER WIRING, 24 VOLT CONTROL WIRING TERMINAL BLOCKS, AND A HINGED ACCESS PANEL. ELECTRIC HEATER ELEMENTS SHALL BE CONSTRUCTED OF HEAVY-DUTY NICKEL CHROMIUM ELEMENTS.
I. UNITS SHALL BE YORK, CARRIER OR APPROVED EQUAL. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER=S INSTRUCTIONS.

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STATE OF LOUISIANA
STEPHEN PRIOLA
REG. No. 0046107
REGISTERED PROFESSIONAL ENGINEER
MECHANICAL ENGINEERING
10/31/24

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Mechanical Specifications

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

M0.02

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 204-96.

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 L 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:

1. 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.

2. AN INTEGRAL CONDUIT CHASE SHALL BE PROVIDED THROUGH THE CURB CAP AND INTO THE MOTOR COMPARTMENT TO FACILITATE WIRING CONNECTIONS.

3. 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.

4. 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.

5. 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, KEYED 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.

6. 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:

1. 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.

2. 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.

3. MOTOR SHALL BE HEAVY DUTY TYPE WITH PERMANENTLY LUBRICATED SEALED BALL BEARINGS AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE AND ENCLOSURE.

4. FAN SHALL BE MODEL SQI-D AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.

I. CEILING MOUNTED EXHAUST FAN - DIRECT DRIVE:

1. 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 MOUNT/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.

2. MOTOR SHALL BE OPEN DRIP PROOF TYPE WITH PERMANENTLY LUBRICATED SEALED BEARINGS AND INCLUDE IMPEDANCE OR THERMAL OVERLOAD PROTECTION AND DISCONNECT PLUG. MOTOR SHALL BE FURNISHED AT THE SPECIFIED VOLTAGE.

3. 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
1. 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 "A". DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
2. 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.
3. INSTALL IN THE DUCTWORK DEVICES FURNISHED BY THE TEMPERATURE CONTROLS SUB-CONTRACTOR. INSTALL SMOKE DETECTORS IN DUCTWORK FURNISHED BY THE DIVISION 16 CONTRACTOR.
4. 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:
1. GALVANIZED STEEL DUCTWORK SHALL CONFORM TO ASTM A653 (G60). ALL LONGITUDINAL SEAMS SHALL BE GROOVED, DOUBLE OR PITTSBURGH TYPE.

C. DUCTWORK FITTINGS:
1. 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 AIRFOIL-TYPE TURNING VANES SHALL BE PROVIDED FOR ALL SQUARE TURNS.

D. HANGERS AND SUPPORTS:
1. 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.
2. HANGER, STRAPS AND RODS SHALL WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE" STANDARDS
3. DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS OR SELF-TAPPING METAL SCREWS; COMPATIBLE WITH DUCT MATERIALS.

E. SEALANT MATERIAL:
1. 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 DESIGN NO. 601. TRANSVERSE SEAMS SHALL BE TAPED AND SEALED WITH TWO LAYERS OF UNITED SHEET METAL, UNI-CAST OR CAULKED WITH DUCT SEALER.

F. FLEXIBLE CONNECTORS:
1. 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.
2. CONNECTORS SHALL BE NOT LESS THAN 4 INCHES LONG (IN CLEAR) AND PROPERLY ATTACHED TO DUCT AND FAN CONNECTION COLLAR 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.
3. FLEXIBLE CONNECTORS SHALL BE U.L. LISTED, NEOPRENE COATED HEAVY GLASS FABRIC. FABRIC SHALL BE VENTGLAS, MANUFACTURED BY VENTFABRICS, INC.

G. FLEXIBLE DUCTWORK:
1. 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.
2. 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.
3. 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: CPE LINER, COATED SPRING STEEL WIRE HELIX, FIBERGLASS INSULATING BLANKET, FIBERGLASS SCRIM AND REINFORCED ALUMINUM VAPOR BARRIER. THERMAL CONDUCTANCE SHALL BE .23 OR LESS.
4. DUCT SHALL BE FLEXMASTER TYPE 8M OR PRIOR APPROVED EQUAL.

A. VOLUME DAMPERS:
1. 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).
2. 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:
1. 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.
2. FIRE DAMPERS SHALL BE RUSKIN DIDB2 SERIES FOR 1 2 HOUR RATING. FIRE DAMPERS SHALL BE RUSKIN DIDB23 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:
1. 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:
1. 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.
2. 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:
1. FURNISH AND INSTALL AN ELECTRIC SYSTEM OF AUTOMATIC TEMPERATURE CONTROL AS SPECIFIED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS AS MANUFACTURED BY HONEYWELL, JOHNSON CONTROLS, INVENSYS, OR APPROVED EQUAL.
2. EXTRA COSTS INCURRED BY USE OF OTHER THAN BASE BID CONTROL SYSTEM, SUCH AS WIRING, CONTRACT DRAWINGS CHANGES, CHANGES IN DESIGN, ADDED SUPERVISION, ETC., SHALL BE THE RESPONSIBILITY OF THE TEMPERATURE CONTROL SUBCONTRACTOR (TCSC).
3. 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 CD50. GREENHECK IN AN APPROVED EQUAL.

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

E. TEMPERATURE CONTROL WIRING:
1. 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 COORDINATE ALL CONTROL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO BID.
2. 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.
3. 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, RACEWAYS, ETC., REQUIRED. TCSC SHALL FURNISH AND INSTALL ALL CONTROL AND INTERLOCK WIRING. TCSC SHALL FURNISH AND INSTALL ALL REQUIRED AUXILARY STARTER CONTACTS OR RELAYS, ETC., FOR A COMPLETE ELECTRICAL INTERLOCK AND CONTROL WIRING SYSTEM.

F. INSTALLATION:
1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. ALL CONTROL DEVICES ARE TO BE MOUNTED IN ACCESSIBLE LOCATIONS. ALL DEVICES EXPOSED TO THE WEATHER SHALL BE HOUSED IN WEATHERPROOF ENCLOSURES.
7. 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 OWNER'S INSTRUCTION:
1. 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.
2. 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:
1. HVAC UNITS:
   1. NORMAL OPERATION:
      1. UNITS SHALL BE CONTROLLED BY SPACE THERMOSTAT. FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED MODE AND INTERMITTENTLY DURING UNOCCUPIED MODE.
      2. HEATING AND COOLING SHALL BE ENABLED BY THERMOSTAT.
      3. COOLING SETPOINT SHALL BE 73°F (ADJUSTABLE).
      4. HEATING SETPOINT SHALL BE 68°F (ADJUSTABLE).
      5. 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.
2. EXHAUST FANS:
   1. 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. DEVICES SHALL BE PARALLEL TO THE PLANE OF THE SURFACES THEY ARE MOUNTED.

F. 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 35º 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 38º 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. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN ASHRAE APPLICATIONS HANDBOOK, AABC OR NEBB NATIONAL STANDARDS.

C. 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.

D. 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.

E. SET HVAC SYSTEM AIRFLOW AND WATER FLOW RATES WITHIN THE FOLLOWING TOLERANCES:
1. SUPPLY, RETURN, AND EXHAUST FANS: PLUS 5 TO PLUS 10 PERCENT.
2. AIR OUTLETS AND INLETS: 0 TO MINUS 10 PERCENT.
3. HEATING-WATER FLOW RATE: 0 TO MINUS 10 PERCENT.
4. COOLING-WATER FLOW RATE: 0 TO MINUS 5 PERCENT.

F. 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 INITIAL 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.

G. 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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STATE OF LOUISIANA
STEPHEN PRIOLA
REG. NO. 37046
MECHANICAL ENGINEER
10/31/24

Express Oil Change & Tire Engine

COM*check* Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: EOC - Baton Rouge, LA (Hammond Highway)
Location: Baton Rouge, Louisiana
Climate Zone: 2a
Project Type: New Construction

Construction Site:
Baton Rouge, Louisiana

Owner/Agent:
Express Oil Change & Tire Engineers
1880 Southpark Drive
Birmingham, Alabama 35244
2059451771
jdavis@expressoil.com

Designer/Contractor:
Steve Priola
Pinnacle Engineering
2031 Shady Crest Drive
Hoover, Alabama 35216

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
1	AHU-1 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 40 kBtu/h Proposed Efficiency = 96.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Split System, Capacity = 33 kBtu/h, Air-Cooled Condenser, Unknown Economizer Proposed Efficiency = 14.30 SEER2, Required Efficiency = 13.40 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: FAN SYSTEM 1 | office -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 1 Supply, Constant Volume, 1000 CFM, 0.3 motor nameplate hp, 67.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
1	RH-1 (Single Zone w/ PerimeterSystem): Heating: 1 each - Radiant Heater, Gas, Capacity = 100 kBtu/h No minimum efficiency requirement applies
2	RH-2,3 (Single Zone w/ PerimeterSystem): Heating: 1 each - Radiant Heater, Gas, Capacity = 50 kBtu/h No minimum efficiency requirement applies
1	Water Heater: Electric Storage Water Heater, Capacity: 30 gallons w/ Circulation Pump No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Steve Priola, PE — [signature] — 10/30/24
Name - Title — Signature — Date

COM*check* Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC

Requirements: 58.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical and service water heating systems and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C402.4.2 [PR14][1]	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.4 [FO7][2]	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C403.13.2, C403.13.3 [FO9][3]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature above 50F and outdoor temperature above 40F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12][2]	Fenestration products rated in accordance with NFRC certified and as to performance labels or certificates provided.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.3 [FR10][1]	Vertical fenestration SHGC value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.3, C402.4.3.4 [FR8][1]	Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.5 [FR14][2]	U-factor of opaque swinging and nonswinging doors associated with the building thermal envelope meets requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1 [FR16][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.4 [FR18][3]	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1, C404.6.2 [PL3][1]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1, C404.6.1.1 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.3 [ME117][2]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.3 [ME117][2]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.6 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.9 [ME144][2]	Large diameter fans where installed shall be tested and labeled in accordance with AMCA 230.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3 [ME55][2]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >15 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.2 [ME115][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.6 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.5 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.1.4 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.11.3, C403.11.3.1, C403.11.3.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.11.3.1 and refrigeration compressor systems that comply with C403.11.3.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.7 [EL28][1]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3][1]	Roof insulation installed per manufacturer's instructions and is labeled with R-value or insulation certificate providing R-value and other relevant data. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.1 [IN20][1]	Roof assembly meets minimal thermal resistance installed between roof framing or in a continuous fashion on the roof assembly as stipulated in Table C402.1.3. Requirements for above deck insulation, minimum thickness, suspended ceilings, staggered joints and skylight curbs will be met.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.3 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [IN18][3]	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3 [IN5][3]	High-albedo roofs satisfy one of the following: 3-year-aged solar reflectance >= 0.55 and thermal emittance >= 0.75 or 3-year-aged solar reflectance index >= 64.0.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C401.3 [FI58][1]	A thermal envelope certificate will be supplied and completed by an approved third party.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.10 [FI26][3]	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.8 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.3.1 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2.1, C403.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C404.3 [FI11][3]	Heat traps installed on supply and discharge piping of non-circulating systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.4 [FI25][2]	All piping insulated in accordance with section details and Table C403.12.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1 [FI12][3]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment, systems and system-to-system relationships have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC and service water heating control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5.2 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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REGISTERED PROFESSIONAL ENGINEER
MECHANICAL ENGINEERING
10/31/24

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Mechanical Comcheck

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

M0.04

Scale 6" = 1'-0"

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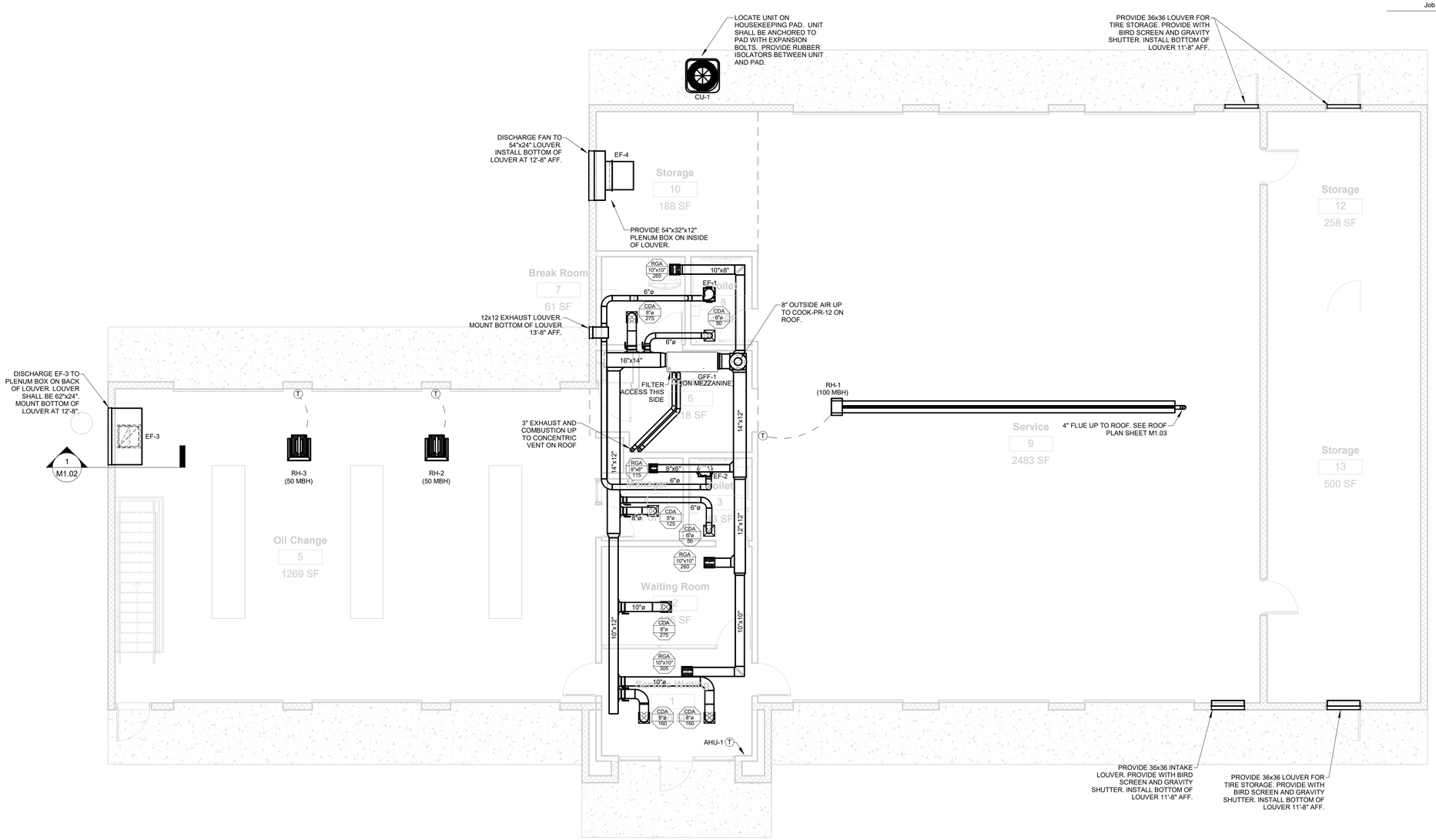

NORTH

MAIN FLOOR PLAN
MECHANICAL
3/16" = 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 HZ700MD 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 AIR HANDLING UNITS IN ACCORDANCE WITH DETAILS.
11. 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.

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Mechanical Floor Plan

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

M1.01

Scale As indicated

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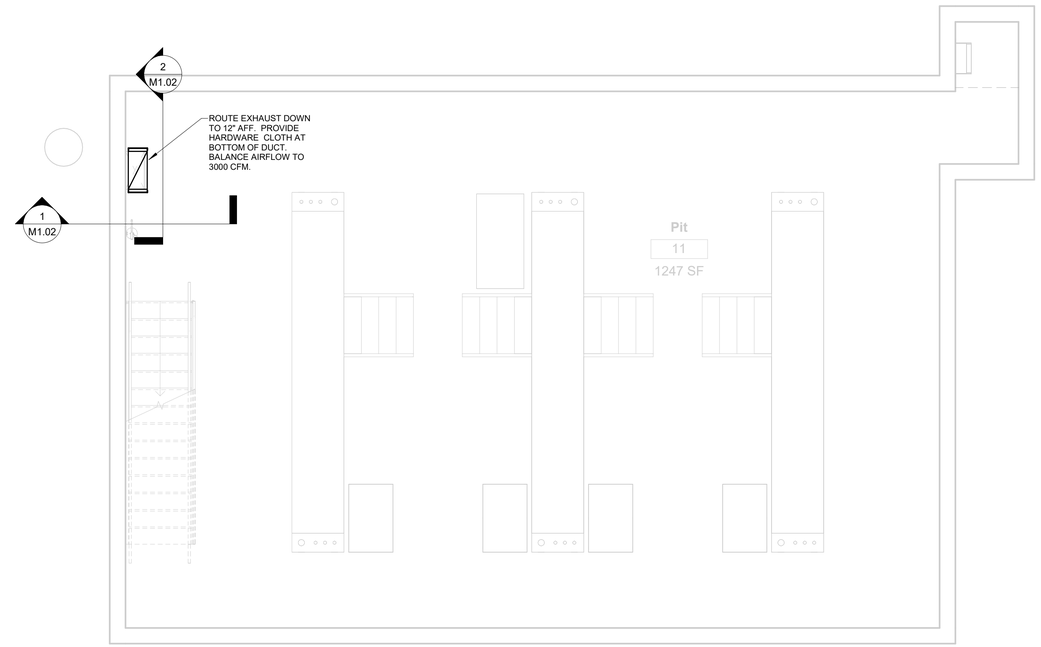
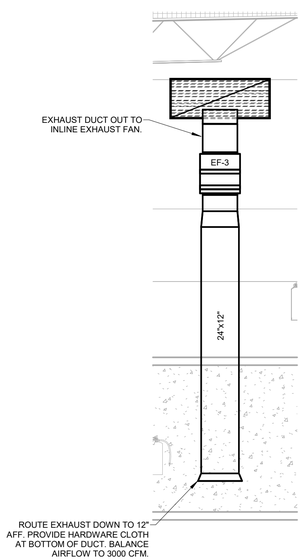
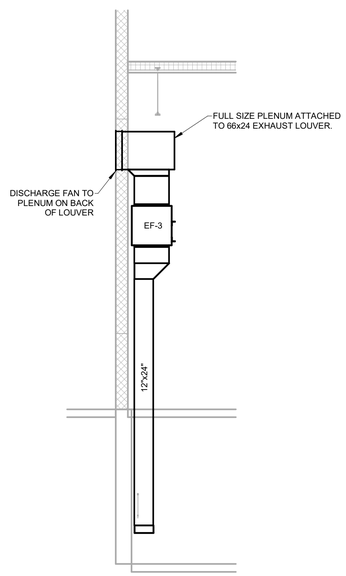


NORTH

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



2 M1.02 Pit Exhaust Elevation
1/4" = 1'-0"



1 M1.02 Section Through Pit Exhaust2
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.
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6. LOUVERS SHALL BE RUSKIN HZ700MD 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.

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Baton Rouge, Louisiana (Old Hammond Hwy)

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No.	Description	Date

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Partial Mechanical Floor Plans - Pit and Platform

Project number	24036
Date	10/31/2024
Drawn by	CA
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M1.02

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NORTH

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

GENERAL NOTES:

1. VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.

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Mechanical Roof Plan

Project number	24036
Date	10/31/2024
Drawn by	CRA
Checked by	JAB

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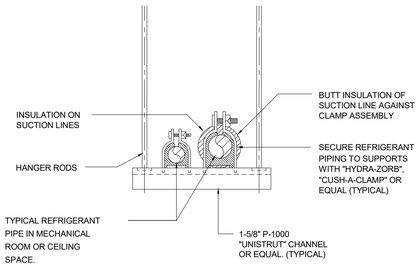
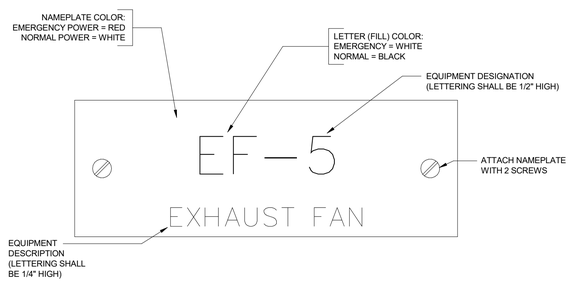


7 / M2.01 **REFRIGERANT PIPING SUPPORT DETAIL**
TYPICAL FOR PIPING SUSPENDED FROM STRUCTURE
NO SCALE



8 / M2.01 **MECHANICAL EQUIPMENT NAMEPLATE DETAIL**
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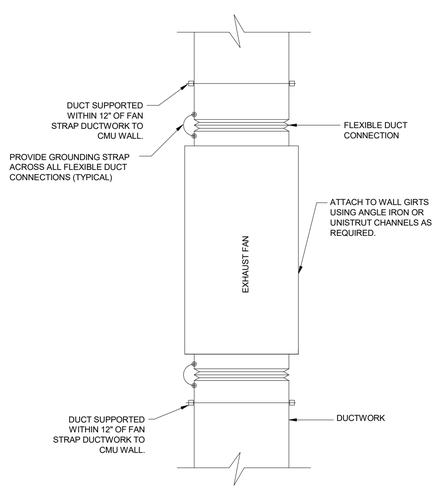
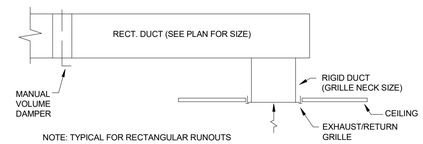
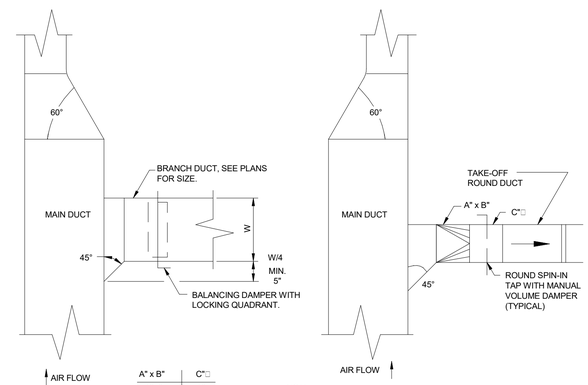


9 / M2.01 **INLINE EXHAUST FAN DETAIL**
NO SCALE



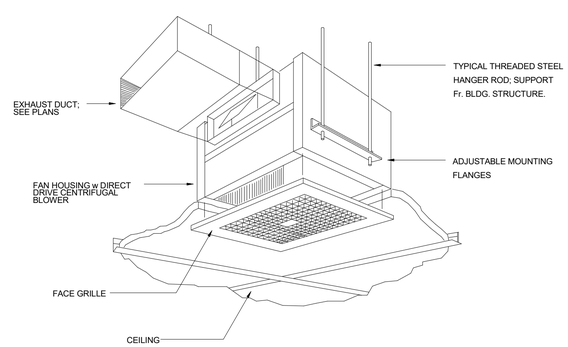
4 / M2.01 **TYPICAL RETURN AND EXHAUST RUN-OUT DETAIL**
NO SCALE



A" x B"	C"□
12x8	10
12x10	12
16x10	14
22x10	16

NOTE:
USE 45° BRANCH FITTING WHEN MAIN SUPPLY DUCT DEPTH IS EQUAL TO OR SMALLER THAN TAKE-OFF ROUND DUCT SIZE.

5 / M2.01 **TYPICAL DUCT TAKEOFF DETAIL**
NO SCALE



6 / M2.01 **EXHAUST FAN INSTALLATION DETAIL(CEILING)**
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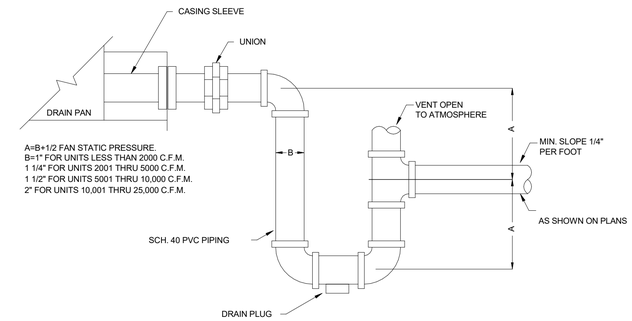

1 / M2.01 **CONDENSATE DRAIN TRAP DETAIL**
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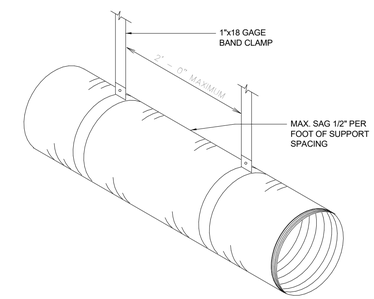
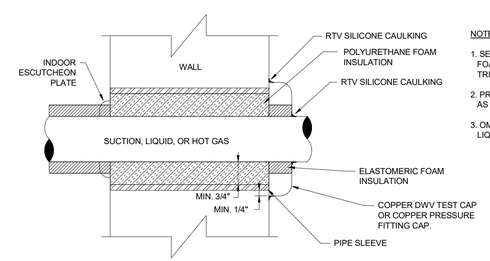


2 / M2.01 **FLEXIBLE DUCT SUPPORT DETAIL**
NO SCALE



NOTES:
1. SEAL OPENING WITH POLYURETHANE FOAM. EQUAL TO VERSI-FOAM TRIM OFF EXCESS FOAM.
2. PROVIDE INTERMEDIATE SUPPORTS AS REQUIRED.
3. OMIT ELASTOMERIC INSULATION ON LIQUID LINE.

3 / M2.01 **REFRIGERANT LINE - WALL PENETRATION DETAIL**
NO SCALE

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Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Mechanical Details

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

M2.01

Scale 12" = 1'-0"

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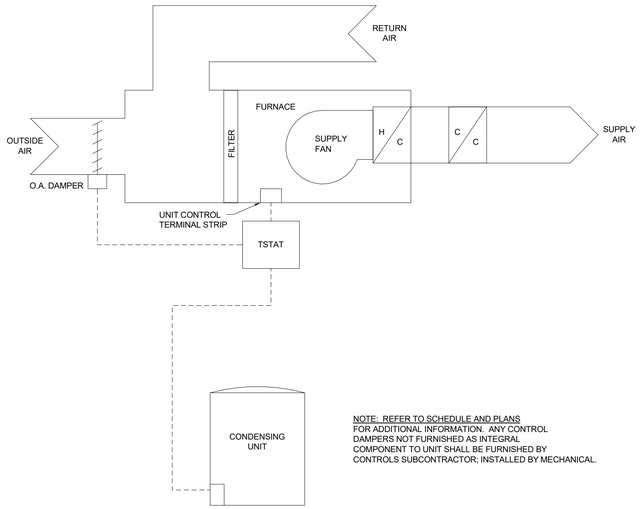
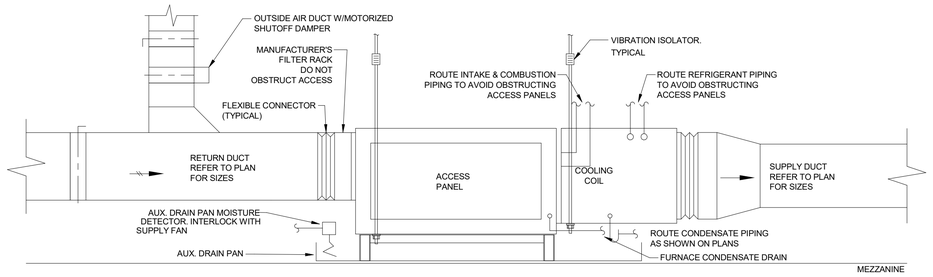
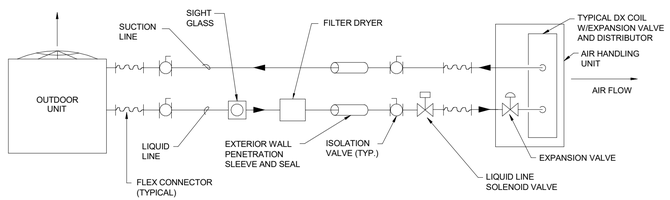


NOTE: REFER TO SCHEDULE AND PLANS
FOR ADDITIONAL INFORMATION. ANY CONTROL DAMPERS NOT FURNISHED AS INTEGRAL COMPONENT TO UNIT SHALL BE FURNISHED BY CONTROLS SUBCONTRACTOR; INSTALLED BY MECHANICAL.

6 / M2.02 HVAC CONTROL DIAGRAM
TYPICAL
NO SCALE

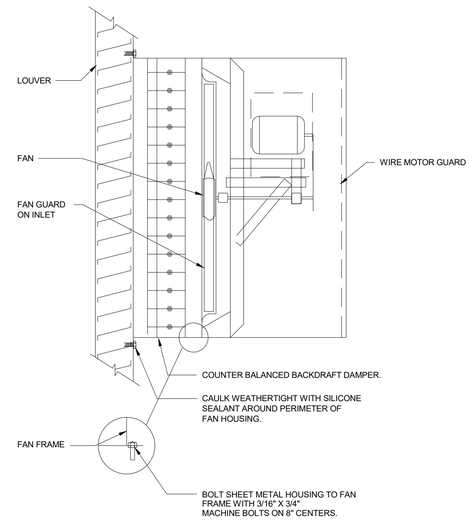


3 / M2.02 FURNACE AND COOLING COIL UNIT DETAIL
NO SCALE

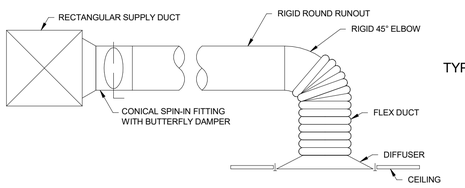


NOTE: SCHEMATIC IS TYPICAL FOR EACH REFRIGERANT CIRCUIT.

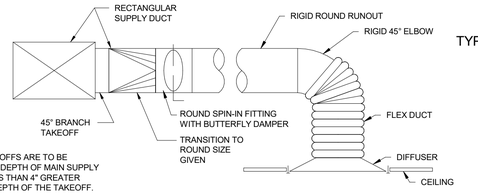
4 / M2.02 REFRIGERANT PIPING DETAIL
NO SCALE



1 / M2.02 WALL EXHAUST FAN OR SUPPLY DETAIL
NO SCALE



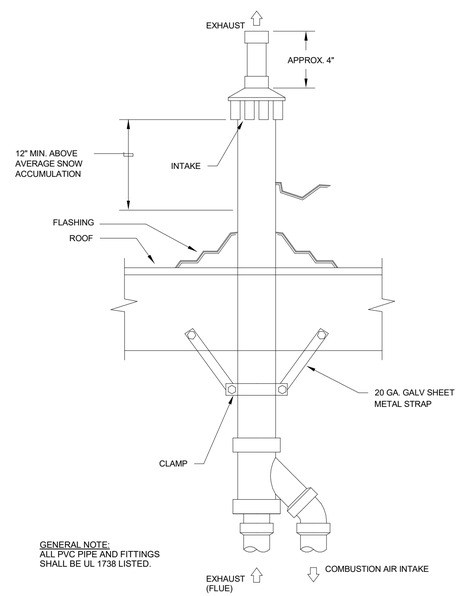
TYPE 1



TYPE 2

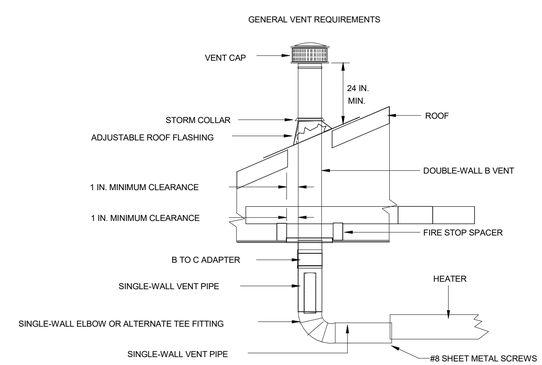
NOTE:
TYPE 2 TAKEOFFS ARE TO BE USED WHEN DEPTH OF MAIN SUPPLY DUCT IS LESS THAN 4" GREATER THAN THE DEPTH OF THE TAKEOFF.

7 / M2.02 TYPICAL DIFFUSER RUN-OUT DETAIL
NO SCALE



GENERAL NOTE:
ALL PVC PIPE AND FITTINGS SHALL BE UL 1738 LISTED.

5 / M2.02 CONCENTRIC ROOF TERMINATION DETAIL
NO SCALE



2 / M2.02 HEATER VENTING DETAIL
NO SCALE

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STATE OF LOUISIANA
STEPHEN PRIOLA
REG. NO. 034604
MECHANICAL ENGINEER
10/31/24

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Mechanical Details

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

M2.02

Scale 12" = 1'-0"

10/30/2024 2:53:17 PM

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	CO	CLEANOUT - FLOOR TYPE	BFF	BELOW FINISHED FLOOR
	SANITARY WASTE	CO	CLEANOUT - WALL TYPE	CW	COLD WATER
			P-TRAP	DN	DOWN
			PIPE TURNING DOWN	EX	EXISTING
			PIPE TURNING UP	HW	HOT WATER
			TEE DOWN	WS	WASTE STACK
			TEE UP	VS	VENT STACK
			TIE NEW INTO EXISTING	AC	ABOVE CEILING
		P-1	PLUMBING FIXTURE NUMBER	WHA	WATER HAMMER ARRESTOR
		XX	RISER NUMBER	BFG	BELOW FINISHED GRADE
			WATER HAMMER ARRESTOR	TMV	THERMOSTATIC MIXING VALVE
			PLUG TYPE CLEANOUT	TP	TRAP PRIMER
			BALANCING VALVE	DS	DOWNSPOUT
			CHECK VALVE	UG	UNDER GROUND
			GATE VALVE		
			REDUCED PRESSURE ZONE BFP		
			THERMOSTATIC MIXING VALVE		
			FLOOR SINK		
			FLOOR DRAIN		
			ROOF DRAIN/OVERFLOW DRAIN		
		XX	FOOD SERVICE EQUIPMENT		

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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
EWC-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	QNTY		
EWH-1	A.O. SMITH ECS-30X	BATHROOMS/EYEWASH	--	60	120	21	30	3'-3"	1'-8"	4.5 KW	1	240 / 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
		BUILDING TOTAL (GPD)	424

REMARKS:
1) NO CARS WASHED ON SITE.

SANITARY SYSTEM SUMMARY

TOTAL LOAD (FIXTURE UNITS)	GPM
12.5	14

WATER METER SUMMARY

TOTAL LOAD (FIXTURE UNITS)	GPM
16	18

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FINAL

No.	Description	Date

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Plumbing Legend, Abbreviations, and Schedules

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

P0.01

Scale 12" = 1'-0"

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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 RE-INSTALL 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. PROVIDE BACKFILL 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'SOBSERVATION, 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 EXPENSE 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 SUBMITTED 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 DIFFERING FROM THAT 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, MANUFACTURERS 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 WRITTEN 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 PIPE SLEEVES 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 GROUTED-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.
3. 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 SETON'S 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 SCREWS, 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 MANUFACTURER'S DETAILS.

SECTION 15261 - PLUMBING INSULATION

A. GENERAL:
1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATING 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" FOR DEFINING HOW INSULATION MATERIALS WILL BE APPLIED.
3. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES; EXCEPT WHERE FIRESTOP OR FIRESAFING 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.

B. 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.

C. ELASTOMERIC CLOSED CELL INSULATION:
1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LATEX ENAMEL.
2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENATE PIPING, AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPURTENANCES SUBJECT TO SWEATING.

D. 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. FITTING 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 BELOW 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-2665 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-2665 USING SOLVENT CEMENT ASTM D-2564.
D. STORM, SANITARY WASTE AND VENT FITTINGS: ABOVE GROUND: ![NO 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 CEILING.
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.
E. 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 2 INCH AND LARGER SHALL USE WELDED FITTINGS AND FLANGED VALVES. EXTERIOR PIPING SHALL BE COATED WITH AN ALKYD ENAMEL PRIMER (MINIMUM DRY THICKNESS 3 MILS). EXTERIOR PIPING SHALL BE SUPPORTED ON GALVANIZED B-LINE CHANNELS AND PIPE CLAMPS.
H. UNDERGROUND PIPING:
1. UNDERGROUND PIPING SHALL BE CARBON STEEL - A53/A106-WELDED OR POLYETHYLENE. UNDERGROUND STEEL PIPING SHALL HAVE AT LEAST 18 INCH OF PROPER BACKFILL COVER.
2. UNDERGROUND PIPING SHALL BE PROTECTED FROM CORROSION. PROVIDE COATED PIPING AND FITTINGS. REPAIR DAMAGED COATING AT WELDS. INSTALL SACRIFICIAL ANODES ON STEEL PIPING INTERVALS NOT EXCEEDING 100 FT.
3. WHERE PIPES PENETRATE BASEMENT WALLS AND FOUNDATIONS INSTALL THUNDERLINE LINK SEAL.
4. 1. 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 WELDBAND. 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 D3261.

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, TFE 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 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 MEDIUM PRESSURE GAS; 0-5 PSI RANGE. FOR LOW PRESSURE GAS; 0-30 INCH W.C. RANGE. USE LOW PRESSURE TYPE 2-1/2 INCH DIAL PRESSURE GAGE WITH APPROPRIATE RANGE, OCI MODEL CO 34, TRERICE, WEKSLER OR APPROVED EQUAL.

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Plumbing Specifications

Project number	24036
Date	10/31/2024
Drawn by	CA
Checked by	JB

P0.02

Scale 12" = 1'-0"

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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 CLOSURE 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 "SHOKSTOP", 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 CB 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, ¼ INCH NPT TAPPED AND PLUGGED DRAIN PORT. BRONZE BODY/BRASS BALL CONSTRUCTION WITH GLASS AND CARBON FILLED TFE 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 U5B-GG BRONZE BODY SINGLE SEATED WITH COMPOSITION DIAPHRAGM 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, ½" 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 ZN-415-P-NH 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.

I. FLOOR DRAIN (FD-2): DRAIN SHALL INCLUDE SUR-SET BUCKET, 9" DIAMETER MEDIUM DUTY CAST IRON GRATE, COATED CAST IRON BODY, ½" TRAP PRIMER CONNECTION, BOTTOM OUTLET, SEEPAGE PAN, AND COMBINATION MEMBRANE CLAMP. DRAIN SHALL BE ZURN Z-554-P-NH 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 ½ INCH THREADED FLUSH CONNECTION. DRAIN SHALL BE JOSAM 8821-051 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 HYDRANTS 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, ¾ 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.

B. 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 DEADENED. 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 ALL 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 527SS ELONGATED SELF-SUSTAINING WITH CHECK HINGES, OPEN FRONT, HEAVY DUTY SOLID PLASTIC SEAT.

LAV-1 LAVATORY (ADA COMPLIANT, WALL HUNG):
1. KOHLER K-2005 WALL MOUNTED 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 GRID 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 Z535.1.
3. INCLUDE MIXING VALVE/TEMPERED WATER BLENDING SYSTEM.
4. EQUAL TO GUARDIAN G1825. CONFORM TO ANSI Z358.1.

EWC-1 WATER COOLER (WALL MOUNT, BOTTLE FILLING STATION, ADA):
1. ELKAY LZSTL8WSVRSK. 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 WHITE BAKED 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 #150 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, CUTLER, 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, SUNROC, 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 CONSTRICTION. 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 HYDROPNEUMATIC 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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MECHANICAL ENGINEERING
10/31/24

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Plumbing Specifications

Project number	24036
Date	10/31/2024
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P0.03

Scale 12" = 1'-0"

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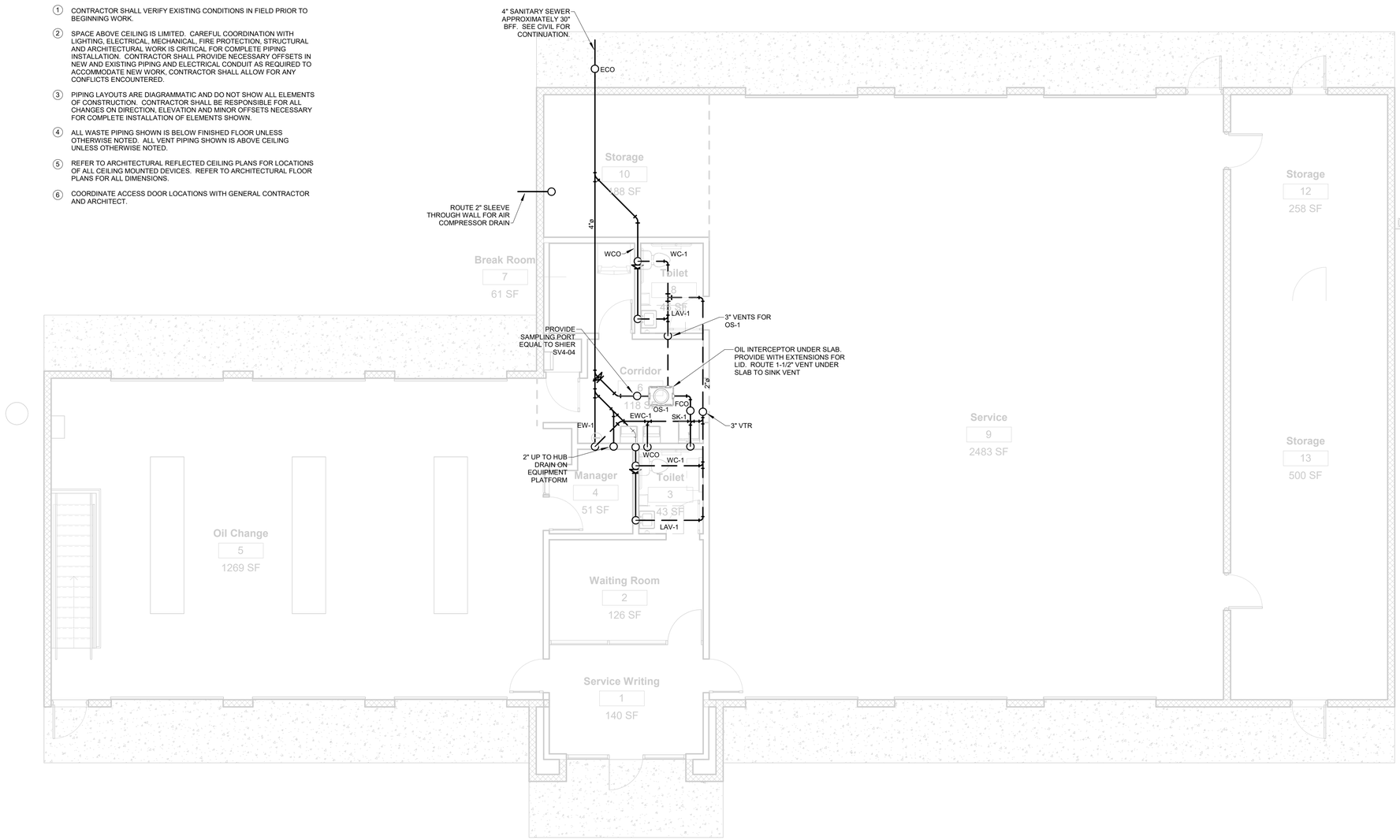
10/31/24

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 WASTE PIPING SHOWN IS BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL VENT PIPING SHOWN IS ABOVE CEILING 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.



NORTH

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

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Plumbing Floor Plan Gravity

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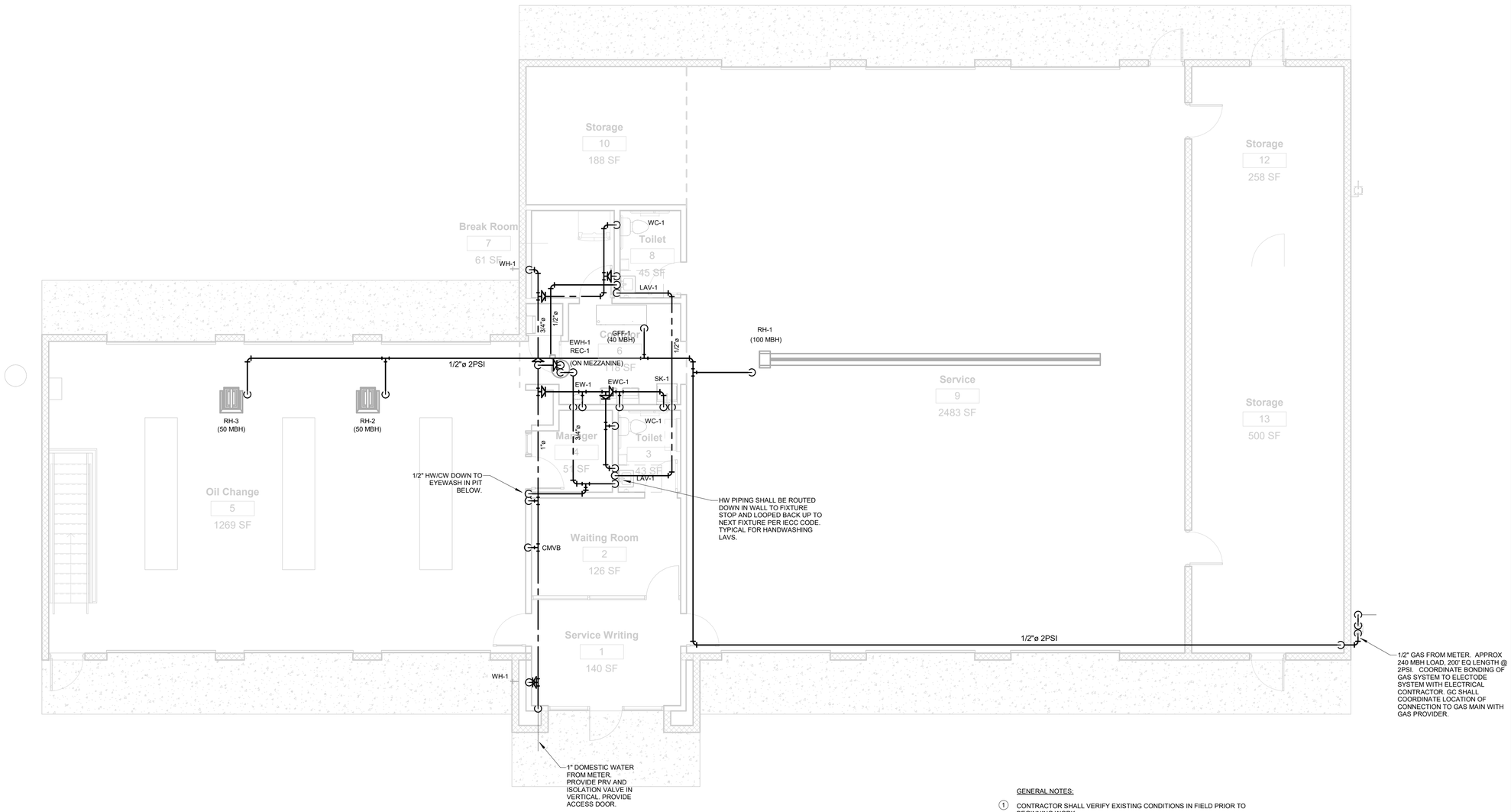

NORTH

MAIN FLOOR PLAN
PLUMBING - PRESSURE
3/16" = 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 COMPLETTE INSTALLATION OF ELEMENTS SHOWN.
4. 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.
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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Plumbing Floor Plan Pressure

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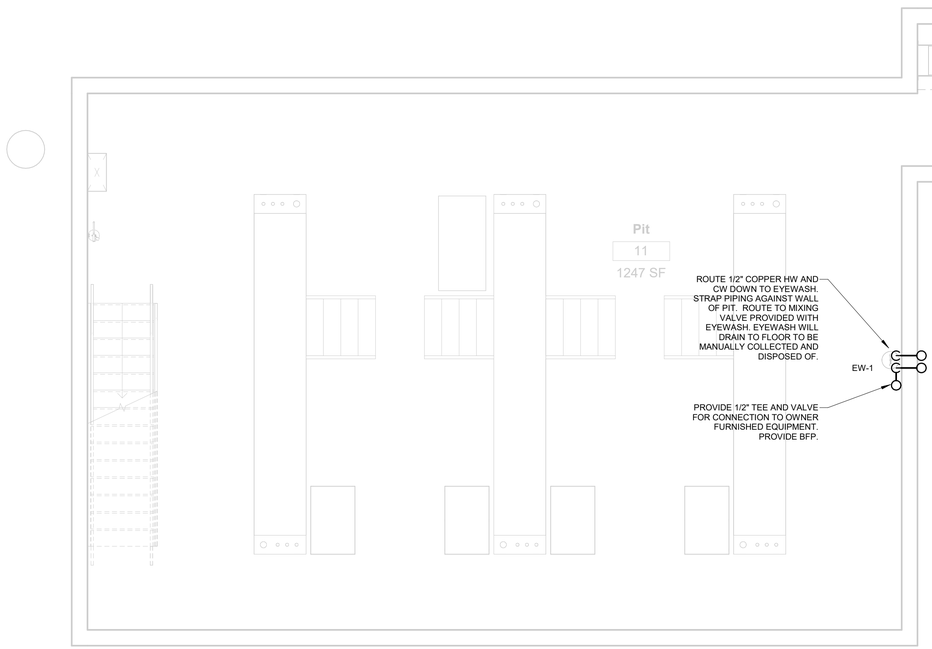

NORTH

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 ½" 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

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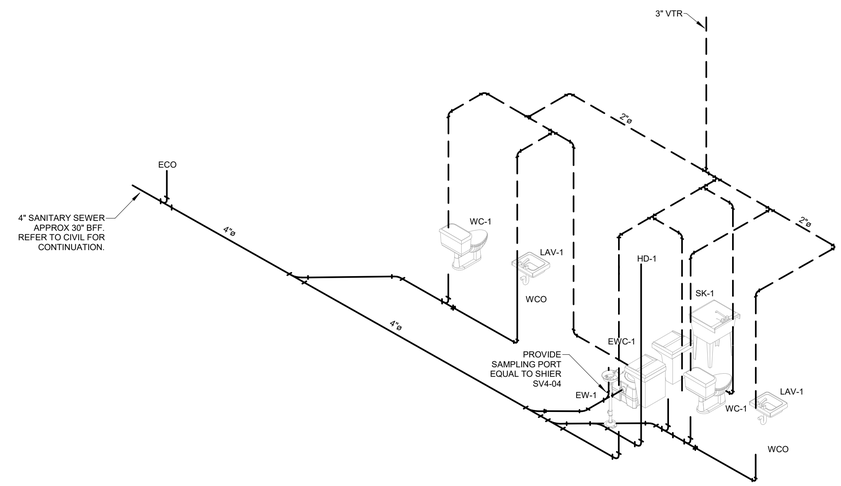

1
P2.01
Gravity Riser

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Plumbing Riser - Gravity

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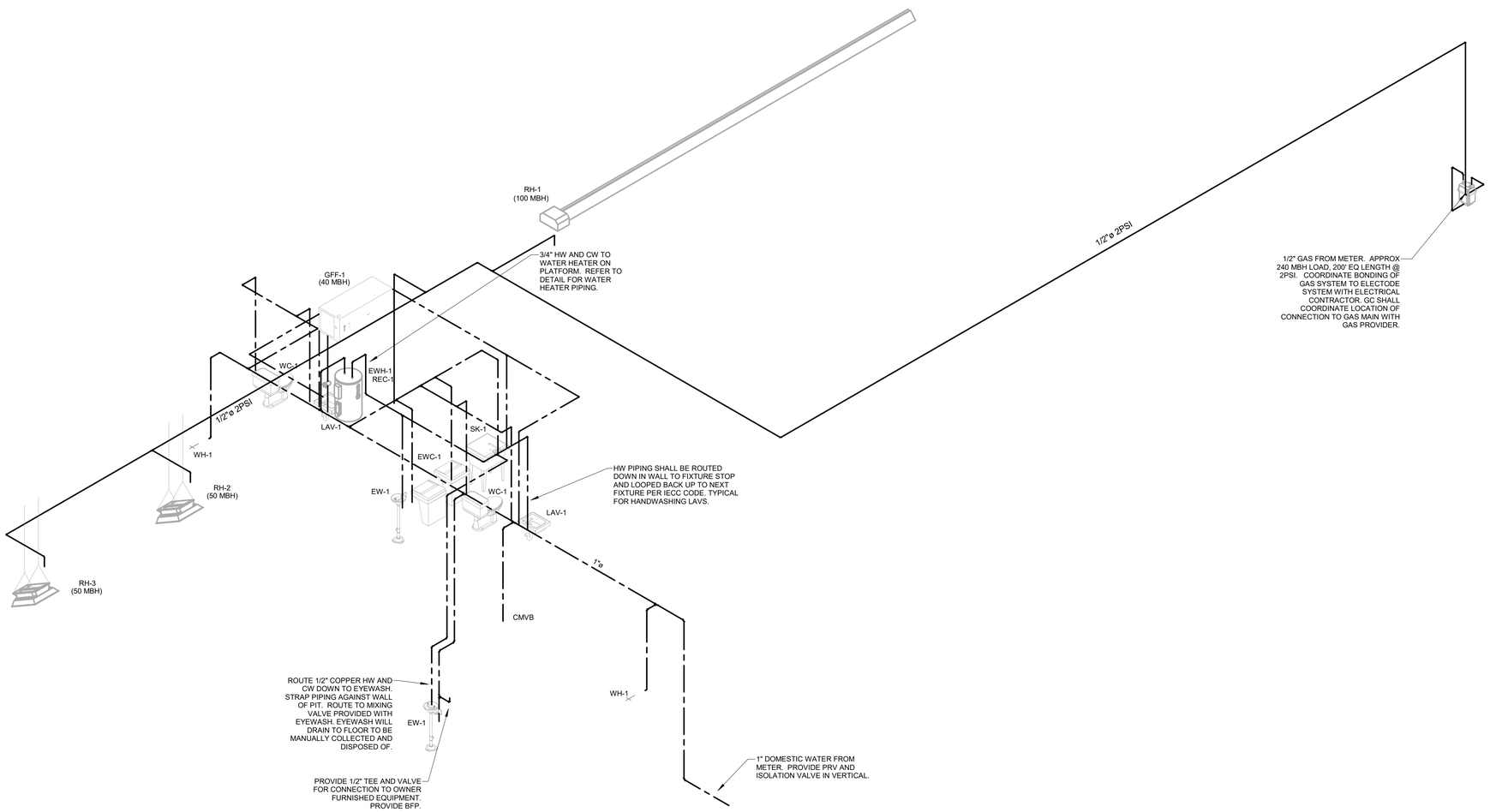

2 | P2.02 Pressure Riser

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Plumbing Riser - Pressure

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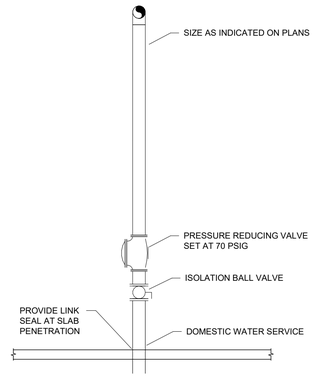
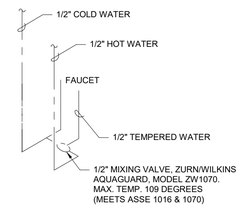
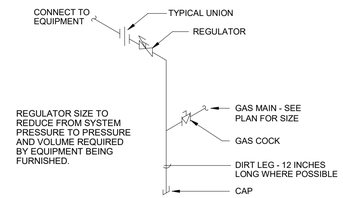


5 / P2.03 DOMESTIC WATER ENTRANCE DETAIL
NO SCALE

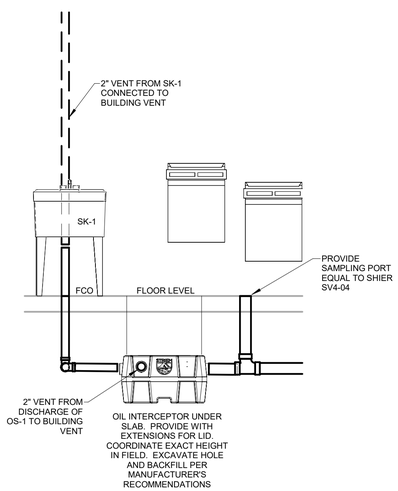


SINGLE

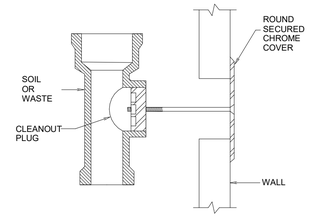
3 / P2.03 TYPICAL LAVATORY MIXING VALVE
SCALE: NONE



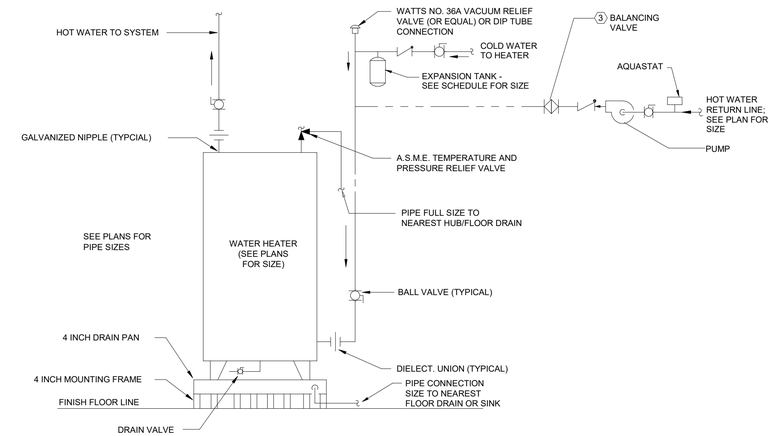
1 / P2.03 TYPICAL GAS CONNECTION
NO SCALE



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



4 / P2.03 WALL CLEANOUT
NO SCALE



2 / P2.03 ELECTRIC WATER HEATER (FLOOR MOUNTED)
NO SCALE

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LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS QUANTITY	LAMPS WATTS	LAMPS TYPE	MTG. TYPE	MTG. HT.	REC. DEPTH	DESCRIPTION
L1P	MAXLITE	(2)VT-4850U-40, VT-CONKIT VT-ENDBRKT, (2)MLCHKLSV15	28	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	14	50	LED	S	C	–	4' LINEAR LED FIXTURE, SURFACE MOUNTED WITH ALUMINUM VAPOR TIGHT HOUSING, 5700 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. PROVIDE ALL REQUIRED ACCESSORIES FOR SURFACE MOUNTING. SEE LIGHTING PLANS FOR LOCATIONS AND QUANTITIES.
	APPROVED EQUAL								
L2P	MAXLITE	VT-4850U-40 MLCHKLSV15	8	50	LED	P	15'5"AFF	–	4' LINEAR LED FIXTURE, PENDANT MOUNTED WITH ALUMINUM VAPOR TIGHT HOUSING, 5700 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. PROVIDE ALL REQUIRED ACCESSORIES FOR SUSPENDED MOUNTING. SEE LIGHTING PLANS FOR LOCATIONS AND QUANTITIES.
	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	6	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. UL LISTED FOR WET LOCATION. NOTE 4.
	APPROVED EQUAL								
L4E	MAXLITE	M40U4W-CSBWCREO 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								
	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								
S1	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	–	WALL MOUNTED LED SIGN LIGHTING FIXTURE. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
S2	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	–	WALL MOUNTED LED LIGHT FIXTURE. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
BL	LITHONIA	ELM6L							
	APPROVED EQUAL		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.
W1	MAXLITE	LSV2U20WCSCR							
	APPROVED EQUAL		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.
XL	MAXLITE	EX-GW							
	APPROVED EQUAL		FURNISHED WITH UNIT			W	AD	–	WHITE THERMOPLASTIC LED EXIT SIGN WITH SINGLE FACE, GREEN LETTERS, UNIVERSAL MOUNTING, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK.

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–CANOPY TC–TOP OF METAL CANOPY AW–ABOVE WINDOW VA–VERIFY WITH ARCHITECT

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

1. 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.
2. 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.
3. 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.
4. OUTLET BOXES SERVING WET LOCATION FIXTURE SHALL BE CODE SIZE, WITH A WATERTIGHT SOLID CAST TOP. CONDUIT ENTRIES SHALL BE THREADED.
5. FIXTURE MOUNTING HEIGHTS IN SCHEDULE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.
6. FOR LIGHTING PACKAGE PRICING, CONTACT THE FOLLOWING:

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

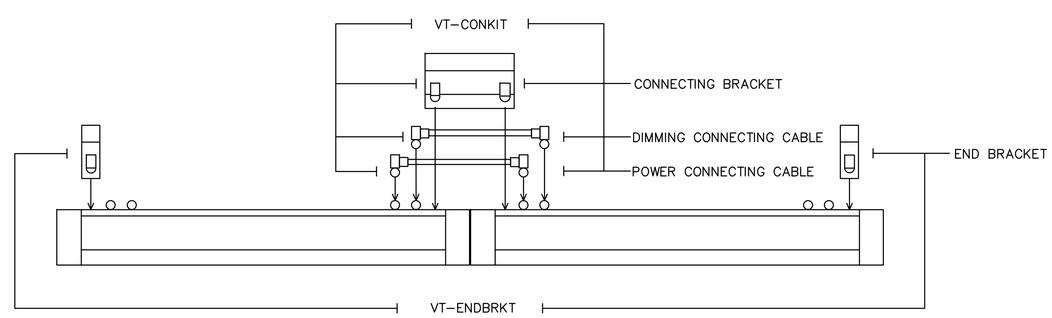
   STEPHEN MITCHELL
   MAXLITE
   (M) 908–256–3115
   SMITCHELL@MAXLITE.COM

LIGHTING FIXTURE SCHEDULE NOTES:

1. SEE MOUNTING DETAIL ON THIS SHEET FOR MORE INFORMATION.
2. INSTALLED BY SIGN COMPANY.
3. VERIFY MOUNTING HEIGHT WITH SIGN COMPANY BEFORE ROUGHING IN.
4. 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:

1. 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.
2. SERVICE TO THE BUILDING SHALL BE 120/240 VOLTS, 1PHASE, 3WIRE.
3. ALL CONDUIT SHALL BE RUN CONCEALED UNLESS SPECIFICALLY SHOWN EXPOSED, OR INSTALLED IN EXPOSED CEILING.
4. THE CONTRACTOR SHALL CHECK ALL LIGHTING FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED BEFORE ROUGHING IN.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. THE MAIN SERVICE SHALL HAVE THE GROUNDED CONDUCTOR (NEUTRAL) GROUNDED 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 GROUNDED CONDUCTOR (NEUTRAL), THE GROUNDING ELECTRODE CONDUCTOR, AND THE EQUIPMENT GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE INSIDE THE SERVICE ENTRANCE EQUIPMENT.
11. ALL CONDUCTORS SHALL BE COPPER, EXCEPT AS SHOWN ON DRAWINGS.
12. MINIMUM CONDUCTOR SIZE SHALL BE #12.
13. ALL CONDUIT INSTALLED INDOORS SHALL BE EMT, OTHERWISE SHALL BE IMC.
14. SWITCH AND RECEPTACLE COVER PLATES SHALL BE STAINLESS STEEL.
15. ALL DEVICES SHALL BE GRAY.
16. ALL FUSES SHALL BE DUAL ELEMENT, TIME DELAY, RATED 100,000 AIC.
17. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
18. ALL CONDUCTORS SHALL BE DUAL RATED THHN/THWN TYPE INSULATION.
19. 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.
20. 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.
21. 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 THE COST NOT BE AVAILABLE, PRIOR TO BID, THE CONTRACTOR SHALL SUBMIT A LETTER SO STATING WITH HIS BID.
22. 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.
23. 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.
24. 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.



DETAIL
FIXTURE "L1" MOUNTING
NOT TO SCALE

GIDEON WAMAE, P.E.
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STATE OF LOUISIANA
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License No. 46448
PROFESSIONAL ENGINEER
10/31/24

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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General Notes & Fixture Schedules

Project number	24036
Date	10/31/2024
Drawn by	TH
Checked by	GW

E100

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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.
EX	BRANCH CIRCUIT	EXISTING CONDUIT BARS DENOTE NEW CONDUCTORS.
	BRANCH CIRCUIT	EXPOSED.
o	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
10	BRANCH CIRCUIT	2#10&1#10GRD–3/4"C
10	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	
J	JUNCTION BOX.
J	WALL MOUNTED JUNCTION BOX.
J	WALL MOUNTED JUNCTION BOX WITH FLEXIBLE CONNECTION TO EQUIPMENT.
TV	ONE GANG BOX WITH 3/4"C. STUB UP ABOVE ACCESSIBLE CEILING WITH COAXIAL CABLE AND TV JACKS.
$T	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.
TR	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		
1 A	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.
$3	SWITCH OUTLET	A.C. TYPE, THREE WAY, 20A, 125/277V.
$4	SWITCH OUTLET	A.C. TYPE, FOUR WAY, 20A, 125/277V.
$OS	SWITCH OUTLET	180° DUAL TECH SENSOR LIGHTING MOTION DETECTOR, WALL MOUNTED. WATT STOPPER #DW–100.
PP	SWITCH OUTLET	LIGHTING MOTION DETECTOR POWER PACK. INSTALL ABOVE ACCESSIBLE CEILING.
M	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.	

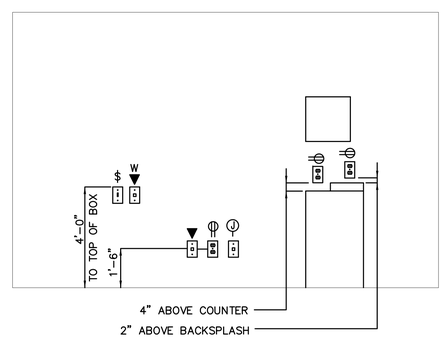
EXIT LIGHT SYMBOLS	
XL	WALL OR CEILING MOUNTED, SINGLE FACE, NO ARROW.
XL	CEILING MOUNTED, DOUBLE FACE, LEFT OR RIGHT ARROWS.
XL	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT OR RIGHT ARROW.
XL	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT AND RIGHT ARROWS.
XL	CEILING MOUNTED, DOUBLE FACE, LEFT AND RIGHT ARROWS.

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/WP8M
	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:

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



DETAIL
TYPICAL MOUNTING HEIGHTS
NOT TO SCALE

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PROFESSIONAL ENGINEER
10/31/24

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Symbol Legends and Details

Project number	24036
Date	10/31/2024
Drawn by	TH
Checked by	GW

E101

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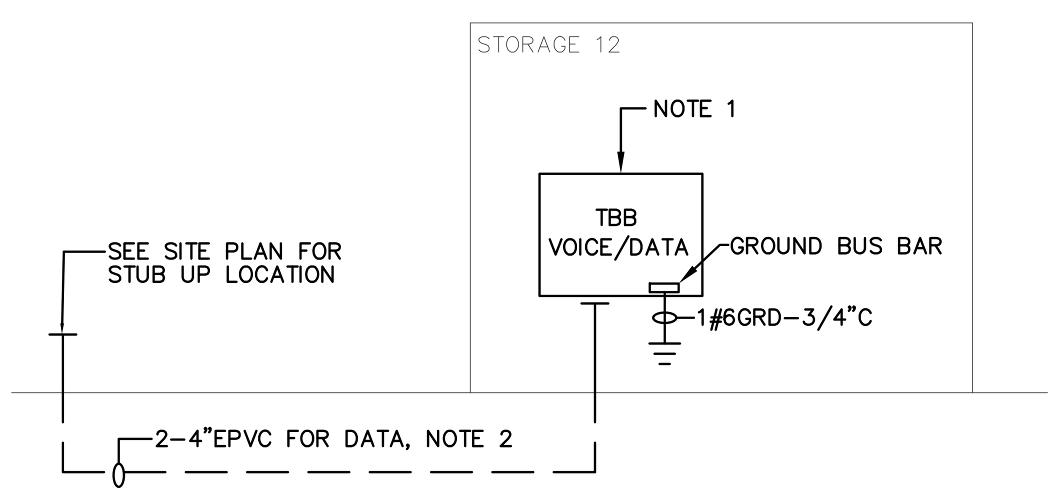
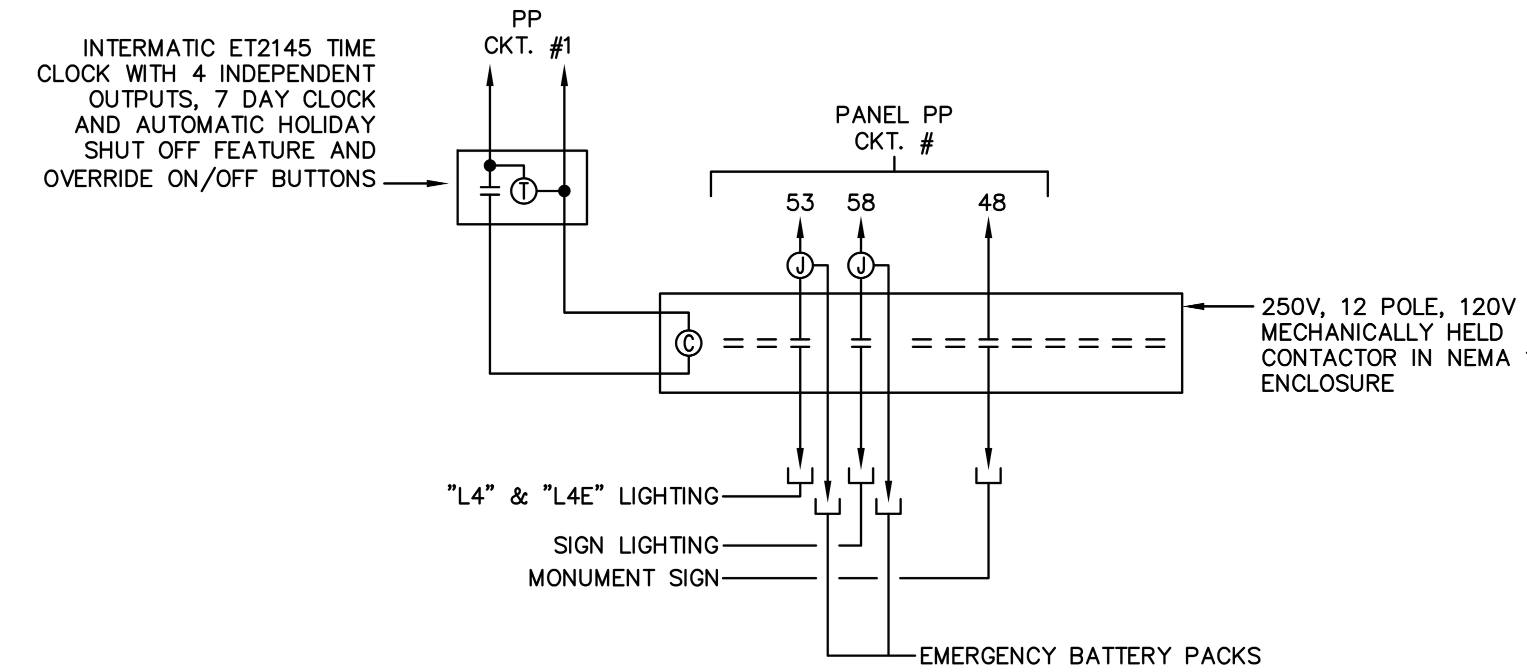
DETAIL
ARC FLASH HAZARD WARNING LABEL
NOT TO SCALE

NOTES:

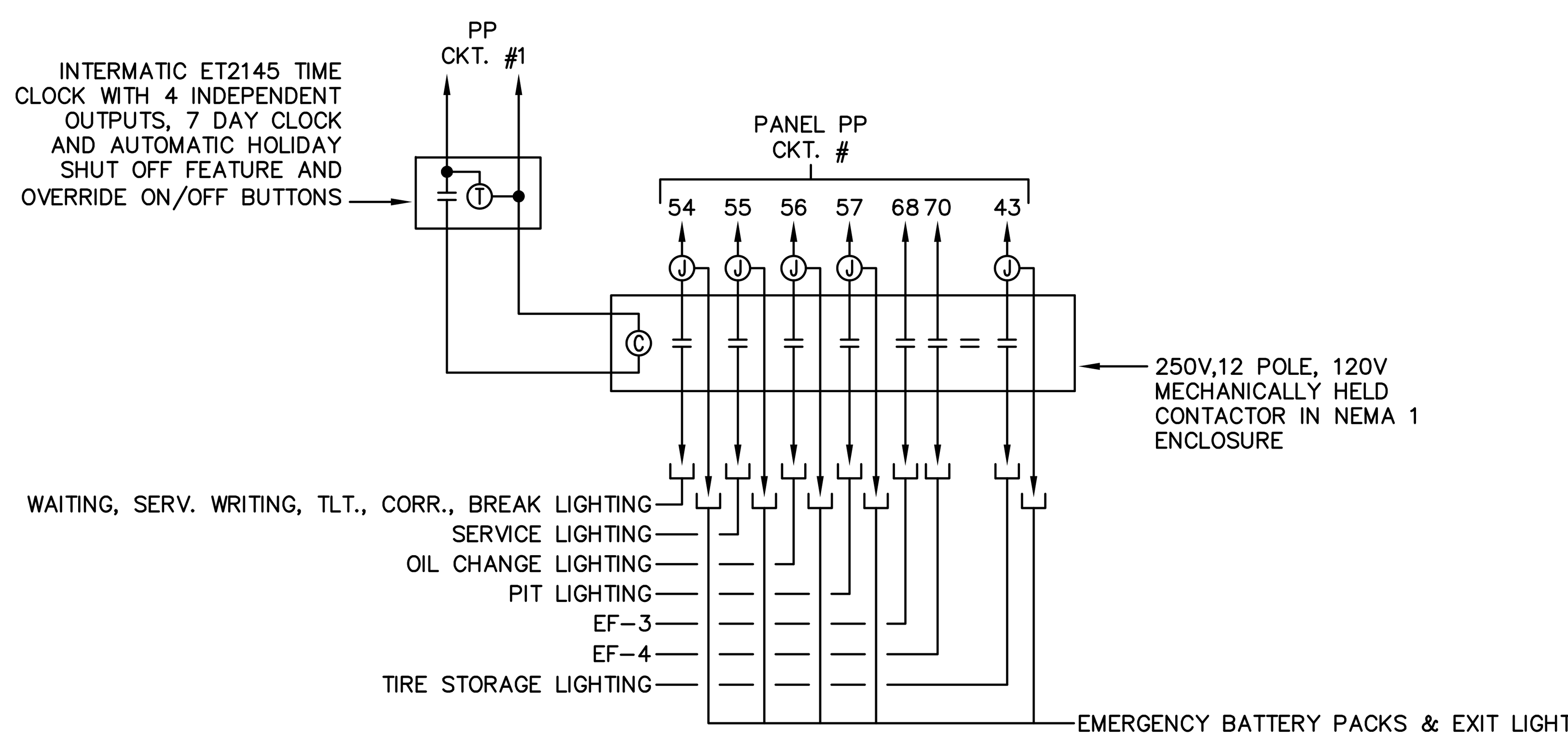
1. 48"x48" FREE STANDING TELEPHONE BACKBOARD. PROVIDE ACCESS AND WORK SPACE CLEARANCE AS REQUIRED BY LOCAL TELECOM UTILITY COMPANY.
2. CONDUIT ELBOWS SHALL BE SWEEPING WITH NO HARD ANGLES.



SINGLE LINE DIAGRAM
AUXILIARY
NOT TO SCALE



WIRING DIAGRAM
CONTACTOR C–2
NOT TO SCALE



WIRING DIAGRAM
CONTACTOR C–1
NOT TO SCALE

PANEL LOAD SUMMARY

Panel: PP (SECTION I)

Equipment	LIGHT&CONT.	RCPT	O/M	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT & CONT.	RCPT	O/M	Equipment
CONTACTOR C-1 & C-2			100	20/1	1	100		2	20/1				SPARE
OUTDOOR RECEPTACLE		200		20/1	3		800	4	20/1		600		SERVICE WRITING RECEP.
WAITING ROOM RECEP.		800		20/1	5	1600		6	20/1		800		MANAGER RECEPTACLE
TLT/CORR/BREAK RECEP.		800		20/1	7		1000	8	20/1		200		BREAK RECEPTACLE
SERVICE RECEPTACLE		400		20/1	9	600		10	20/1		200		BREAK RECEPTACLE
SERVICE RECEPTACLE		400		20/1	11		600	12	20/1		200		BREAK FRIDGE RECEPTACLE
MANAGER RECEPTACLE		400		20/1	13	800		14	20/1		400		SERVICE RECEPTACLE
SERVICE RECEPTACLE		400		20/1	15		400	16	20/1				SPARE
TIRE CHANGER			900	20/2	17	3900		18	30/2			3000	ALIGNMENT LIFT
			900		19		3900	20				3000	
10K LIFT			1440	20/2	21	2880		22	20/2			1440	10K LIFT
			1440		23		2880	24				1440	
10K LIFT			1440	20/2	25	2880		26	20/2			1440	10K LIFT
			1440		27		2880	28				1440	
12K LIFT			1440	20/2	29	2640		30	20/2			1200	WHEEL BALANCER
			1440		31		2640	32				1200	
AIR COMPRESSOR			3360	60/2	33	3560		34	20/1		200		EQUIPMENT PLATFORM RECEP.
			3360		35		3760	36	20/1		400		SERVICE DESK RECEPT.
IRRIGATION CONTROLLER		200		20/1	37	200		38	20/1				SPARE
OIL CHANGE RECEPTACLE		600		20/1	39		1200	40	20/1		600		OIL CHANGE RECEPTACLE
SUMP PUMP		1176		20/1	41	1376		42	20/1		200		OIL CHANGE DESK RECEP.
Sub-Total	0	5376	17260			20536	20060			0	3800	14160	Sub-Total

	TOTAL CONNECTED LOAD PER PHASE	
LOAD TYPE	Phase A	Phase B
LIGHTING & CONTINUOUS LOADS	0.00	0.00
RECEPTACLES	4776.00	4400.00
MOTORS/OTHER	15760.00	15660.00
TOTAL	20536.00	20060.00

TOTAL CONNECTED LIGHTING LOAD	0.00	KVA
TOTAL CONNECTED RECEPTACLE LOAD	9.18	KVA
TOTAL CONNECTED MOTOR/OTHER LOAD	31.42	KVA
TOTAL CONNECTED LOAD	40.60	KVA

* Diversified per NEC Table 220.44.

ENCLOSURE	NEMA 1
MOUNTING	SURFACE
MAIN TYPE	ML
SIZE	400A
FEED THRU	YES
FEED	BOTTOM
BUS RATING	400A
SERVICE RATED	NO
MIN FULL EQUIP KAIC RATING	22
TYPE	LOAD CENTER
MANUFACTURER	
OTHER	

VOLTS 120/ 240 V 1 Phase, 3 Wire & Grd Bus Bar

PANEL LOAD SUMMARY

Panel: PP (SECTION II)

Equipment	LIGHT	RCPT	O/M	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT	RCPT	O/M	Equipment
TIRE STORAGE LIGHTING	300			20/1	43	500		44	20/1		200		OIL CHANGE DESK RECEP.
OIL CHANGE DESK RECEP.		200		20/1	45		400	46	20/1		200		OIL CHANGE DESK RECEP.
SPARE				20/1	47	100		48	20/1	100			MONUMENT SIGN
PIT RECEPTACLE		600		20/1	49		800	50	20/1		200		PIT RECEPTACLE
ELECTRIC DRAIN SYSTEM		400		20/1	51	800		52	20/1		400		TBB RECEPTACLE
EXTERIOR LIGHTING	150			20/1	53		470	54	20/1	320			S.WRIT/WAIT/TLT/BRK LTG./EQUIP.PLATFORM/EF1&2
SERVICE LIGHTING	1638			20/1	55	2366		56	20/1	728			OIL CHANGE LIGHTING
PIT LIGHTING	540			20/1	57		1890	58	20/1	1350			SIGN LIGHTING
SPARE				20/1	59	0		60	20/1				SPARE
FUTURE EV CHARGER				50/2	61		50	62	20/1			50	REC-1
					63	1680		64	25/2			1680	CU-1
SPARE				20/1	65		1680	66				1680	
EWH-1			2250	25/2	67	3900		68	20/1	1650			EF-3
			2250		69		3900	70	20/1	1650			EF-4
RH-1			100	20/1	71	300		72	20/1		200		EXTERIOR RECEPTACLE
RH-2 & RH-3			100	20/1	73		1150	74	15/1			1050	GFF-1
DRINKING FOUNTAIN		200		20/1	75	200		76	20/1				SPARE
SPARE				20/1	77		200	78	20/1		200		LOT BELL
SPARE				20/1	79	0		80	20/1				SPARE
LIFT RECEPTACLE		600		20/1	81		600	82	20/1				SPARE
LIFT RECEPTACLE		600		20/1	83			84	20/1				SPARE
Sub-Total	2628	2600	4700			9846	11140			5798	1400	4460	Sub-Total

	TOTAL CONNECTED LOAD PER PHASE			DEMAND LOAD (VA)	
LOAD TYPE	Phase A	Phase B	DEMAND FACTOR	Phase A	Phase B
LIGHTING & CONTINUOUS LOADS	4416.00	4010.00	1.25	5520.00	5012.50
RECEPTACLES	6776.00	6400.00	*	5888.00	5700.00
MOTORS/OTHER	19790.00	20790.00	1.00	19790.00	20790.00
TOTAL	30982.00	31200.00		31198.00	31502.50

TOTAL CONNECTED LIGHTING LOAD	8.43	KVA
TOTAL CONNECTED RECEPTACLE LOAD	4.00	KVA
TOTAL CONNECTED MOTOR/OTHER LOAD	9.16	KVA
TOTAL CONNECTED LOAD	21.59	KVA

* Diversified per NEC Table 220.44.

WIRE SIZE CALCULATIONS		
LARGEST PHASE DEMAND	31.50	KVA
NO. OF PHASES	2.00	
DEMAND LOAD	63.01	KVA
TOTAL DEMAND LOAD	63.01	KVA
SUPPLY VOLTAGE	240.00	V
DEMAND AMPS	262.52	AMPS
MINIMUM CCT AMPS	262.52	AMPS

ENCLOSURE	NEMA 1
MOUNTING	SURFACE
MAIN TYPE	ML
SIZE	400A
FEED THRU	NO
FEED	TOP
BUS RATING	400A
SERVICE RATED	NO
MIN FULL EQUIP KAIC RATING	22
TYPE	LOAD CENTER
MANUFACTURER	
OTHER	

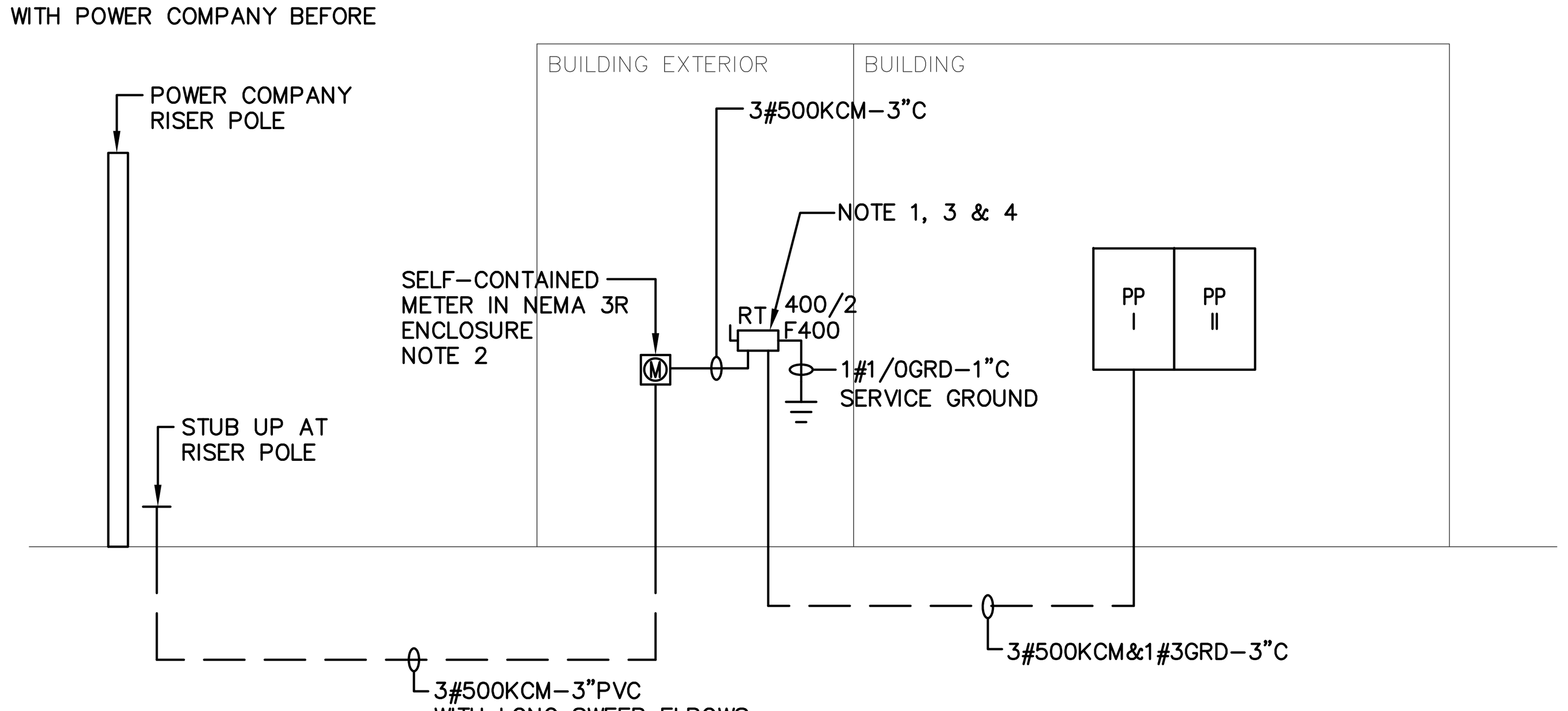
VOLTS 120/ 240 V 1 Phase, 3 Wire & Grd Bus Bar

GENERAL NOTES:

1. COORDINATE SERVICE SECONDARY FROM UTILITY TRANSFORMER TO METER WITH POWER COMPANY BEFORE BID AND PRICING. PROVIDE PER POWER COMPANY REQUIREMENTS.
2. EQUIPMENT WITH ALUMINUM FEEDERS SHALL BE PROVIDED WITH DUAL RATED TERMINALS.
3. PROVIDE 120/240V, 1Ø, 400A, UNDERGROUND SERVICE.
4. PROVIDE 2"X3" ENGRAVED LABEL WITH BLUE LETTERING INDICATING MAXIMUM AVAILABLE FAULT CURRENT AND DATE OF CALCULATION.
5. 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.

NOTES:

1. SERVICE ENTRANCE RATED DISCONNECT SWITCH, NEMA 3R ENCLOSURE
2. COORDINATE METERING WITH POWER COMPANY BEFORE ROUGHING IN.



SINGLE LINE DIAGRAM
POWER
NOT TO SCALE

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:

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

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Single Line Diagram & Panelboard Schedules

Project number	24036
Date	10/31/2024
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E102

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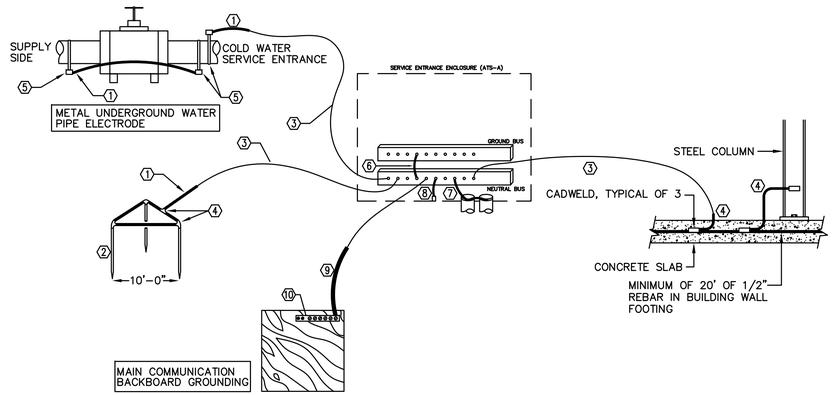
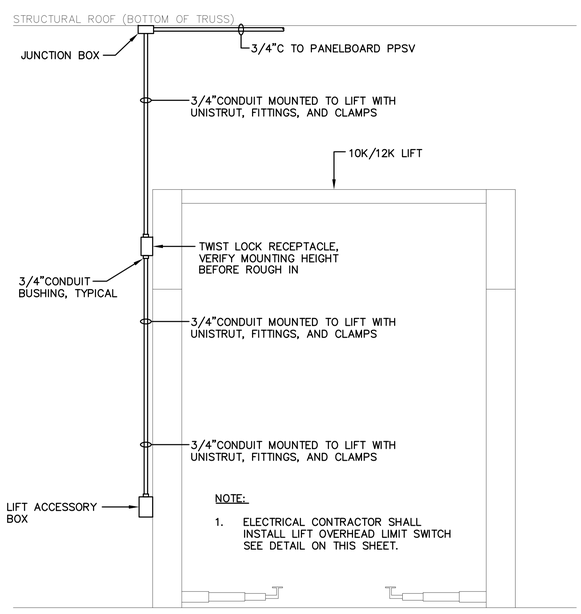


GROUNDING SYSTEM DETAIL

NOT TO SCALE

GROUNDING SYSTEM DETAIL – KEY NOTES

1. 1/0 BARE GROUNDING ELCTRODE CONDUCTOR.
2. 3/4"x10'-0" CLAD STEEL GROUND ROD, DRIVEN 24" BELOW GRADE, MINIMUM.
3. 1/0 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, O-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. 1/0 BARE BONDING JUMPER.
10. 6 CONDUCTOR GROUND BUS, COPPER OR ALUMINUM RATED, ILSCO #PDE.



NOTE:

1. ELECTRICAL CONTRACTOR SHALL INSTALL LIFT OVERHEAD LIMIT SWITCH SEE DETAIL ON THIS SHEET.

ELEVATION
LIFT POWER DETAIL

NOT TO SCALE

TYPICAL FEEDER DESIGNATION

_#_ & 1#_GRD – _C (_A/_P)

- NUMBER OF CIRCUIT CONDUCTORS
- SIZE OF CIRCUIT CONDUCTORS "AWG UNLESS NOTED kCMIL"
- SIZE OF GROUNDING CONDUCTOR
- SIZE OF CONDUIT
- PROTECTIVE DEVICE TO WHICH THE CIRCUIT IS CONNECTED

NOTE:

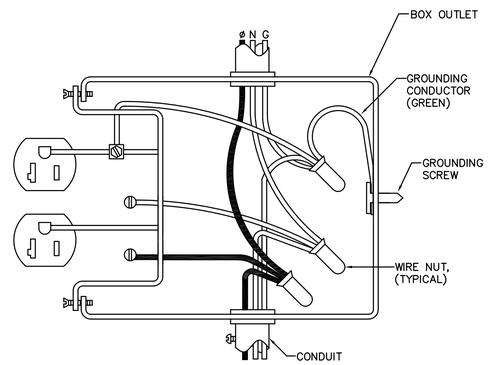
1. CONDUCTOR INSULATION TO BE 600V UNLESS OTHERWISE INDICATED.

TYPICAL LUMINAIRE, DEVICE AND CIRCUIT DESIGNATIONS

a(R)1	LUMINAIRE TYPE 'R', CIRCUIT NO. 1, CONTROLLED BY SWITCH "a"
2[A]b	FLUORESCENT LUMINAIRE TYPE 'A', CIRCUIT NO. 2, CONTROLLED BY SWITCH "b"
2	WALL OUTLET WITH RECEPTACLE NOTED, CONNECT TO CIRCUIT NO. 2
1J	EQUIPMENT CONNECTION – CONNECT TO CIRCUIT NO. 1

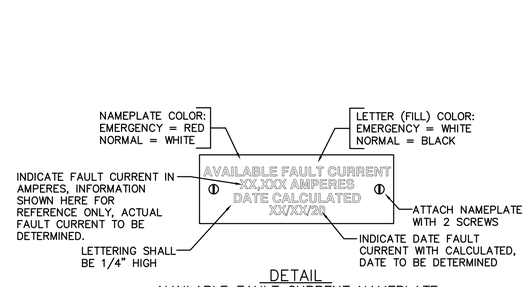
DETAIL
WIRING DESIGNATION

NOT TO SCALE



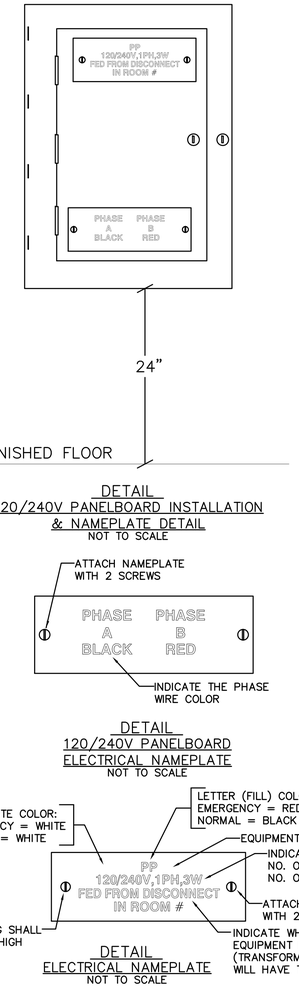
DETAIL
RECEPTACLE INSTALLATION

NOT TO SCALE



DETAIL
AVAILABLE FAULT CURRENT NAMEPLATE

NOT TO SCALE



DETAIL
120/240V PANELBOARD INSTALLATION & NAMEPLATE DETAIL

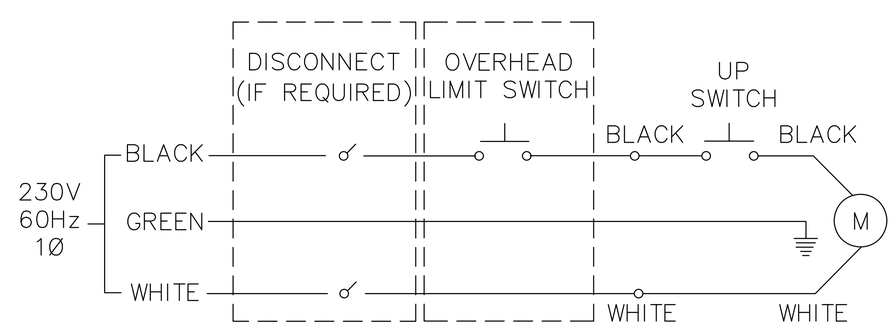
NOT TO SCALE

DETAIL
120/240V PANELBOARD ELECTRICAL NAMEPLATE

NOT TO SCALE

DETAIL
ELECTRICAL NAMEPLATE

NOT TO SCALE



LIFT LIMIT SWITCH
WIRING DETAIL

NOT TO SCALE

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Details

Project number	24036
Date	10/31/2024
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E103

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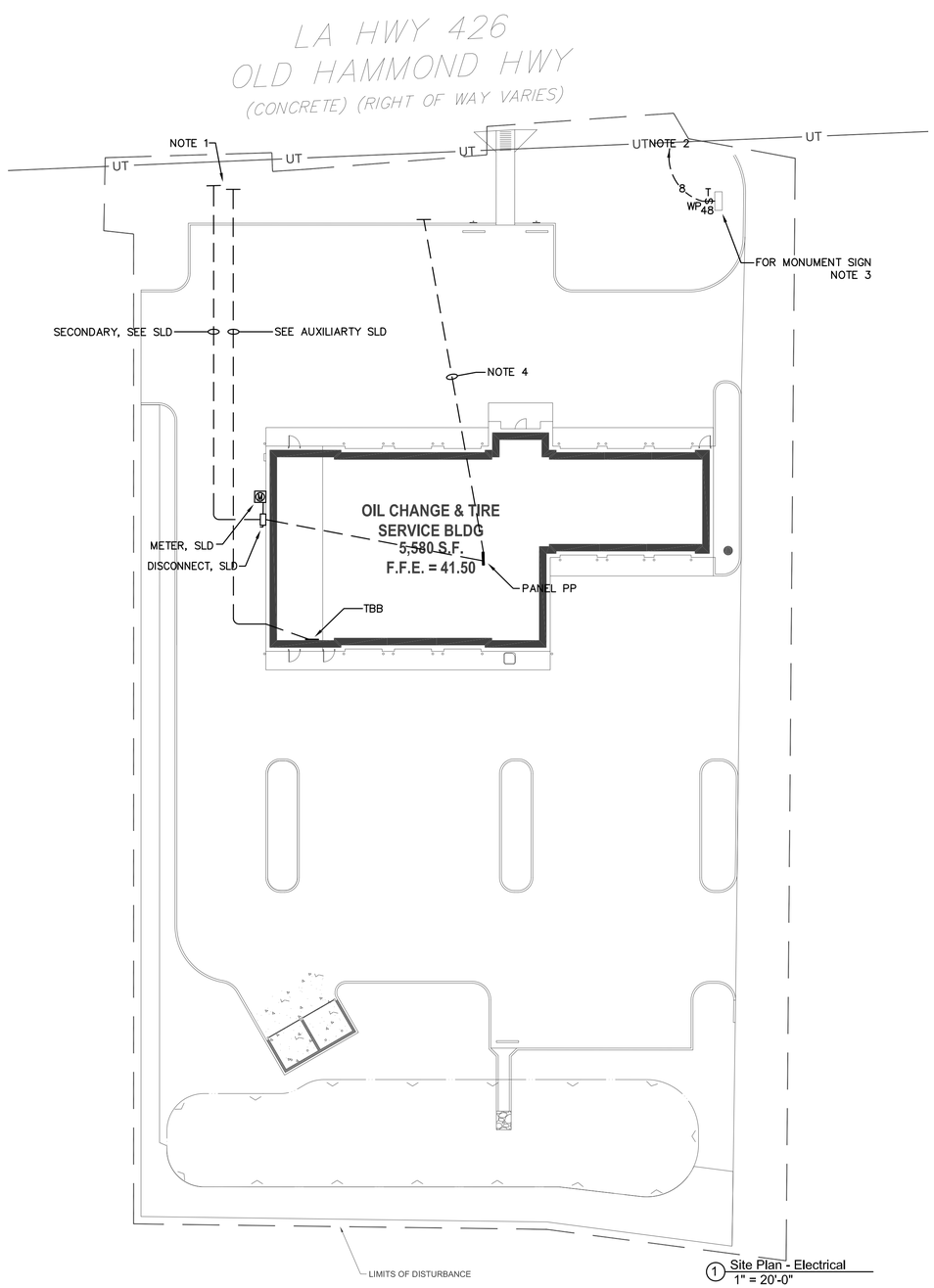
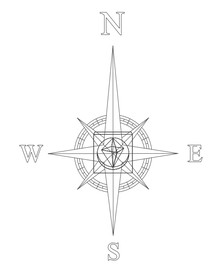


1 Site Plan - Electrical
1" = 20'-0"



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. PROVIDE 1-1" CONDUIT. HOMERUN TO PANEL PP FOR FUTURE EV CHARGING STATION. VERIFY EXACT LOCATION OF STUB UP PRIOR TO INSTALLATION.

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Site Plan - Electrical

Project number	24036
Date	10/31/2024
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E104

Scale	1" = 20'-0"

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GENERAL NOTES:

1. CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.

2. ENSURE LIGHTING FIXTURES L1 AND L2 DO NOT CONFLICT WITH OVERHEAD DOORS.

3. 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

4. ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT TO THE STRUCTURE AS POSSIBLE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.

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

6. FOR LIGHTING, QUICK CONNECT CABLES SHALL NOT BE INSTALLED ABOVE CILING. SURFACE MOUNT QUICK CONNECT CABLES BELOW CEILING.

NOTES:

1. CONNECT TO PIT LIGHTING. SEE SHEET E201 FOR CONTINUATION.

2. HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE DETAIL ON SHEET E102.

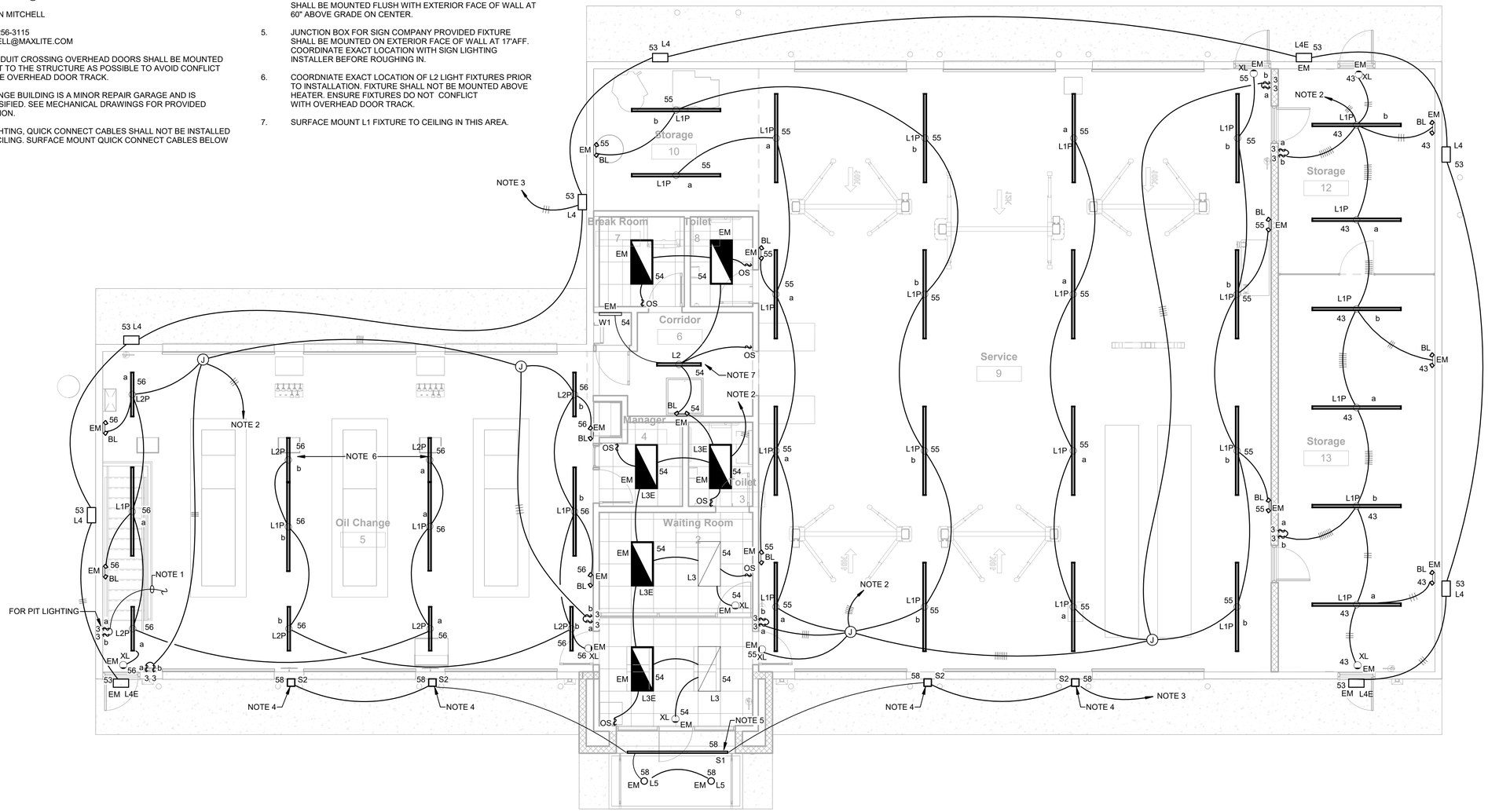
3. HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2. SEE DETAIL ON SHEET E102.

4. JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED FLUSH WITH EXTERIOR FACE OF WALL AT 60" ABOVE GRADE ON CENTER.

5. 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.

6. COORDNIATE 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.

7. SURFACE MOUNT L1 FIXTURE TO CEILING IN THIS AREA.



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

PLAN NORTH

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Main Level Plan - Lighting

Project number	24036
Date	10/31/2024
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E200

Scale 3/16" = 1'-0"

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GENERAL NOTES:

1. CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.

2. 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

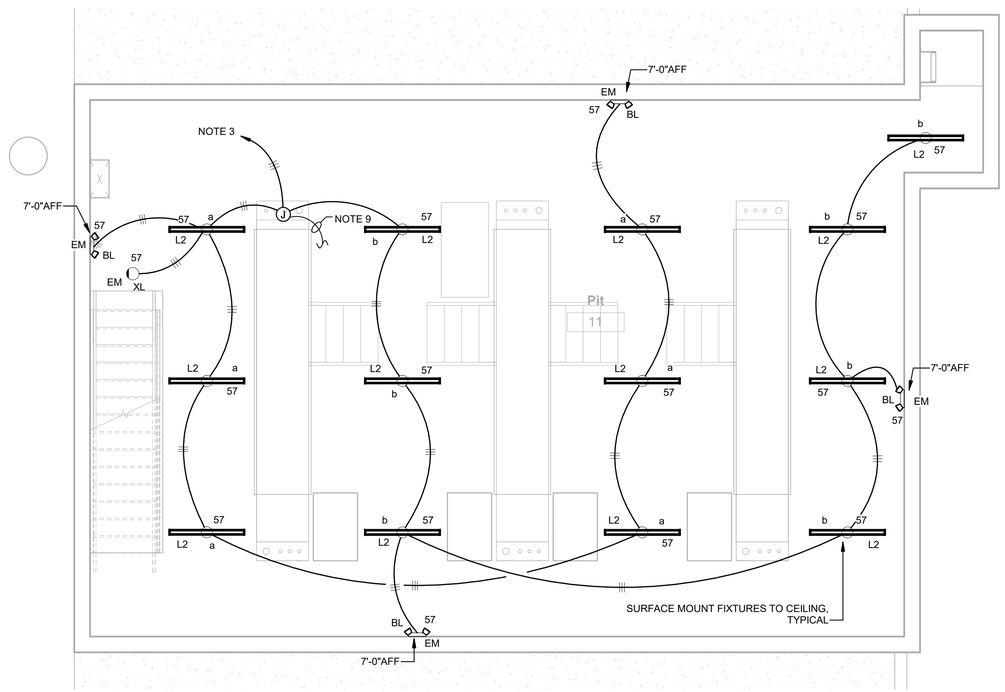
3. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENILATION.

4. ADJUST LIGHT FIXTURES AS NEEDED TO AVOID CONFLICT WITH STRUCTURAL STEEL.

NOTES:

1. CONNECT TO LIGHT SWITCH ON FIRST FLOOR. SEE SHEET E200 FOR CONTINUATION.

2. HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1.



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

PLAN NORTH

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Pit Level Plan - Lighting

Project number	24036
Date	10/31/2024
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E201

Scale 1/4" = 1'-0"

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GENERAL NOTES:

1. 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.

2. ALL HORIZONTAL CONDUIT RUNS SHALL BE A MINIMUM OF 8' ABOVE FINISHED FLOOR EXCEPT FOR DROPS. ENSURE CONDUIT DOES NOT CONFLICT WITH OVERHEAD DOOR.

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

4. EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVALABILITY 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

5. ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT AS POSSIBLE TO THE STRUCTURE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.

6. 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:

1. 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.

2. HOMERUN 3/4"EC TO TELEPHONE BACKBOARD.

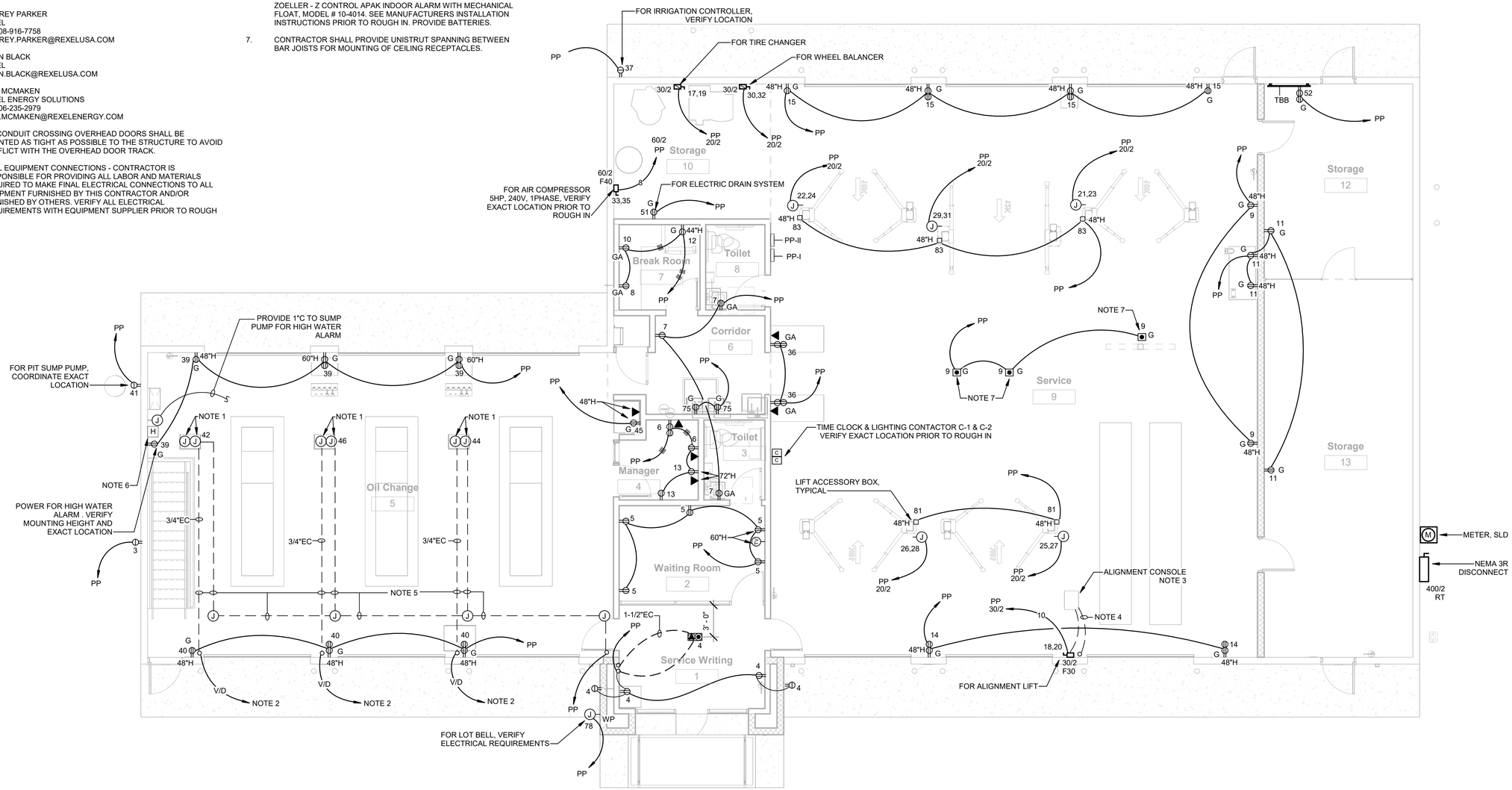
3. LOCATIONS SHOWN HERE ARE APPROXIMATE. FIELD COORDINATE EXACT LOCATION OF CONSOLE & CONDUIT WITH OWNER & ALIGNMENT LIFT SHOP DRAWINGS BEFORE ROUGH-IN.

4. PROVIDE 1 1/2" EMPTY CONDUIT FROM CONSOLE, STUBBED 8" UP ON INSIDE FACE OF EXTERIOR WALL.

5. CONDUIT FOR WORK PEDESTALS IN OIL CHANGE AREA SHALL BE MOUNTED/ROUTED ON THE CEILING OF THE PIT IN LIEU OF IN THE SLAB.

6. 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.

7. CONTRACTOR SHALL PROVIDE UNISTRUT SPANNING BETWEEN BAR JOISTS FOR MOUNTING OF CEILING RECEPTACLES.



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

PLAN NORTH

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No.	Description	Date

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Main Level Plan - Power & Voice/Data

Project number	24036
Date	10/31/2024
Drawn by	TH
Checked by	GW

E300

Scale 3/16" = 1'-0"

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GENERAL NOTES:

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

4. EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVALABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:

JEFFREY PARKER
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JEFFREY.PARKER@REXELUSA.COM

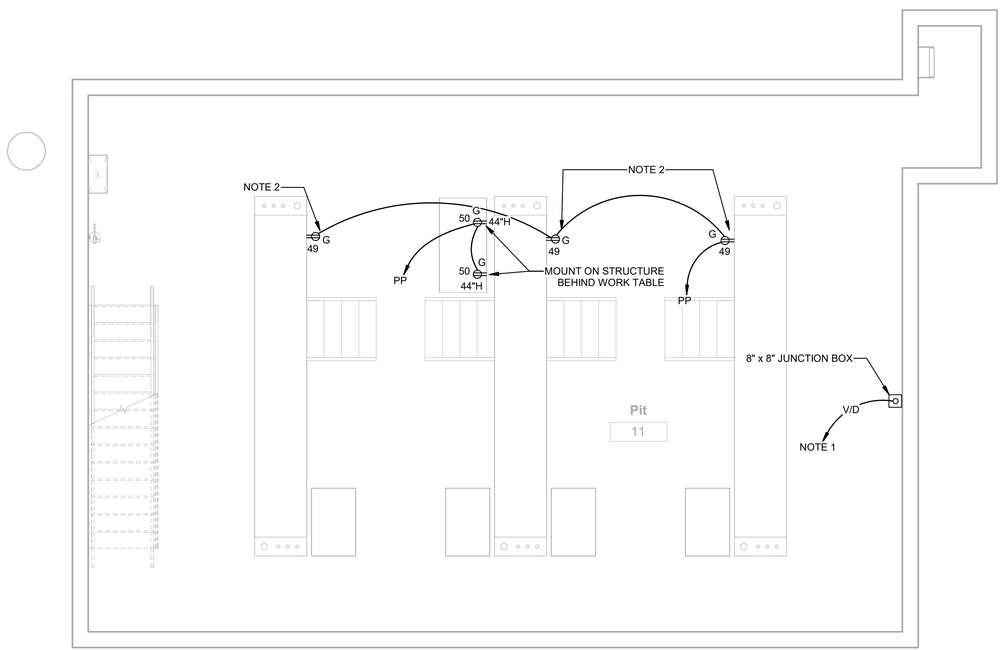
COLIN BLACK
REXEL
COLIN.BLACK@REXELUSA.COM

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

NOTES:

1. 2"EC HOMERUN TO TELEPHONE BACKBOARD ON EQUIPMENT PLATFORM.

2. MOUNT RECEPTACLES ONTO STRUCTURAL COLUMN.



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

PLAN
NORTH

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Pit Level Plan - Power & Voice/Data

Project number	24036
Date	10/31/2024
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E301

Scale	1/4" = 1'-0"

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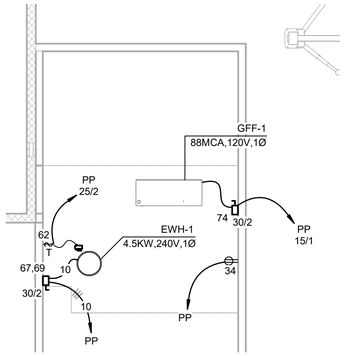
GENERAL NOTES:

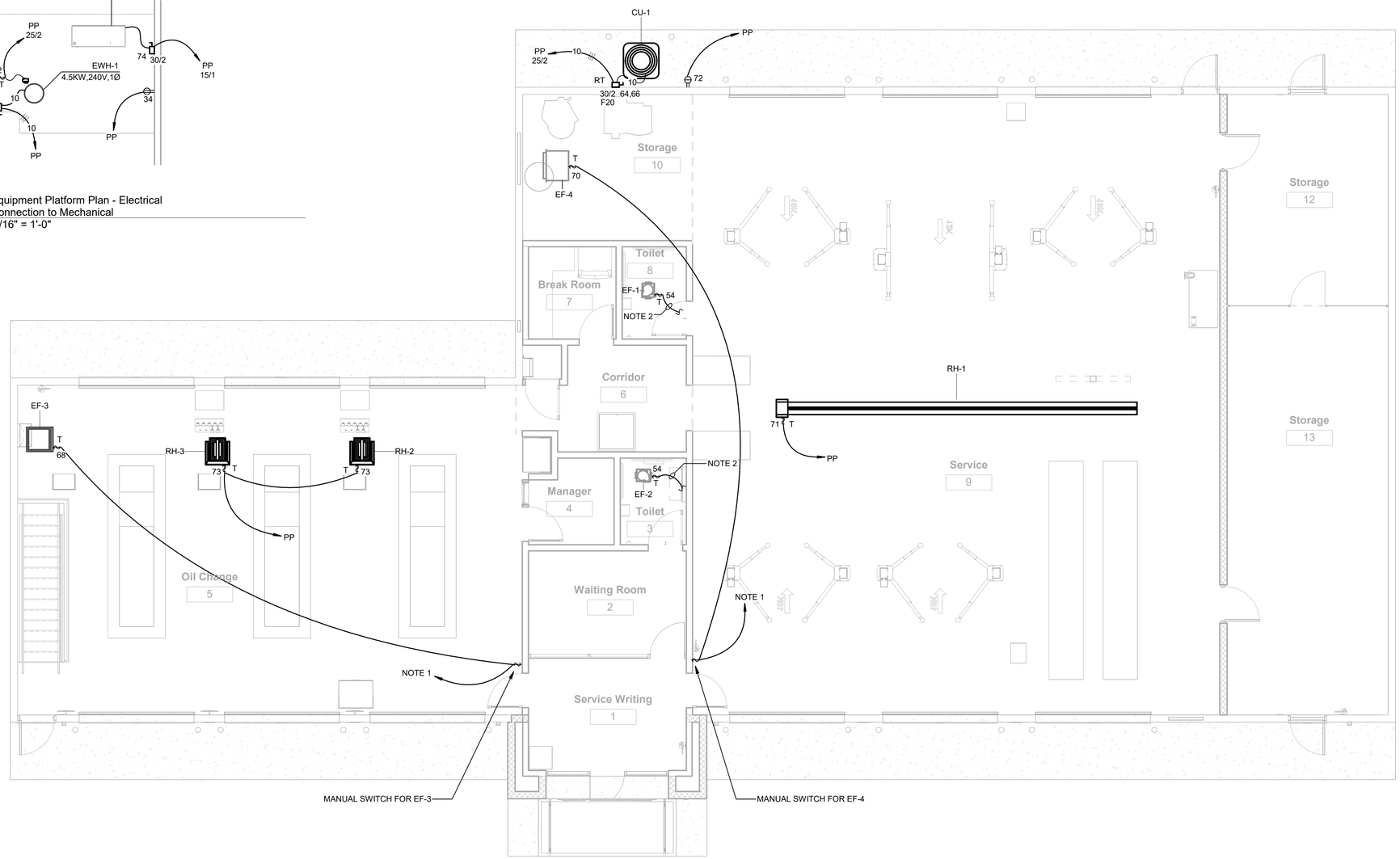
1. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENILATION.

NOTES:

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



2 Equipment Platform Plan - Electrical Connection to Mechanical
3/16" = 1'-0"



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

PLAN NORTH

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PROFESSIONAL ENGINEER
10/31/24

Express Oil Change & Tire Engineers

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

Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Main Level Plan - Elec. Conn. to Mech.

Project number	24036
Date	10/31/2024
Drawn by	TH
Checked by	GW

E400

Scale 3/16" = 1'-0"

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SECTION 16010 - ELECTRICAL SPECIFICATIONS

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 raintight: 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. Watertight 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 side 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, filler 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.

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Single Building / Left Hand Oil Change / Front Enter / Side Tire Storage
Baton Rouge, Louisiana (Old Hammond Hwy)

FINAL

No.	Description	Date

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Specifications

Project number	24036
Date	10/31/2024
Drawn by	TH
Checked by	GW

E500

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Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Express Oil Change & Tire Engineers - Baton Rouge, LA
Project Type: New Construction

Construction Site:
Baton Rouge, Louisiana

Owner/Agent:
Express Oil Change & Tire Engineers
Birmingham, Alabama

Designer/Contractor:
Taylor Higginbotham
GW Engineering
Trussville, Alabama

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Automotive Facility	6613	0.75	4960
		Total Allowed Watts =	4960

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Automotive Facility				
LED: L1: Other:	1	28	100	2800
LED: L2: Other:	1	22	50	1100
LED: L3/L3E: Other:	1	8	36	288
			Total Proposed Watts =	4188

Interior Lighting PASSES: Design 16% 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 2021 IECC 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
10/30/2024 — Date

Project Title: Express Oil Change & Tire Engineers - Baton Rouge, LA
Data filename:
Report date: 10/30/24
Page 1 of 6

COMcheck Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Express Oil Change & Tire Engineers - Baton Rouge, LA
Project Type: New Construction
Exterior Lighting Zone 2 (Neighborhood business district (LZ2))

Construction Site:
Baton Rouge, Louisiana

Owner/Agent:
Express Oil Change & Tire Engineers
Birmingham, Alabama

Designer/Contractor:
Taylor Higginbotham
GW Engineering
Trussville, Alabama

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Illuminated area of facade wall or surface	1700 ft2	0.07	No	128
Entry canopy	9 ft2	0.25	Yes	2
			Total Tradable Watts (a) =	2
			Total Allowed Watts =	130
			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.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Illuminated area of facade wall or surface (1700 ft2): Non-tradable Wattage				
LED: L4: Other:	1	6	36	216
Entry canopy (9 ft2): Tradable Wattage				
LED: L4E/L5: Other:	1	5	36	180
			Total Tradable Proposed Watts =	180

Exterior Lighting PASSES: Design 43% 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 2021 IECC 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
10/30/2024 — Date

Project Title: Express Oil Change & Tire Engineers - Baton Rouge, LA
Data filename:
Report date: 10/30/24
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No.	Description	Date

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Project number	24036
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