


RENDERING FOR CONCEPTUAL REFERENCE ONLY; IMAGE MAY NOT REFLECT LATEST DESIGN. REFERENCE ELEVATIONS AND SCHEDULES FOR FINISHES.

# CCW - LEE'S SUMMIT, MO

**PROJECT ADDRESS**
1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

**PROJECT NUMBER**
20015.155

**RELEASE DATE**
07/25/2025

**ISSUED FOR**
PERMIT

**CURRENT REVISION**

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## **PROJECT** TEAM


**ARCHITECT**
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TBD

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TIMBERLAKE ENGINEERING
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**LANDSCAPE**
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Wentzville, MO 63385
PH. 636.332.4574

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TIMBERLAKE ENGINEERING
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**STRUCTURAL**
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912 South Old Highway 63
Columbia, MO 65201
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FINKLE+ WILLIAMS
ARCHITECTURE

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C0_ COVER.dwg LAYOUT TAB: 24x36 COVER PLOTTED ON: Aug 15, 2025 - 10:46am PLOTTED BY: KFarrell

## CONTACT INFORMATION

**OWNER / DEVELOPER**

OWNER: CLUB CARWASH OPERATING, LLC
REPRESENTATIVE: JUSTIN BARNES
ADDRESS: 1591 E. PRATHERSVILLE RD; COLUMBIA, MO 65202
PHONE: (573) 999-5178

**SEWER**

OWNER: CITY OF LEE'S SUMMIT WATER
REPRESENTATIVE: JEFF THORN
ADDRESS: 1200 SE HAMBLEN RD, LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

**WATER**

OWNER: CITY OF LEE'S SUMMIT WATER
REPRESENTATIVE: JEFF THORN
ADDRESS: 1200 SE HAMBLEN RD, LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

**ELECTRIC**

OWNER: EVERGY
REPRESENTATIVE:
ADDRESS: 1300 SE HAMBLEN RD, LEE'S SUMMIT, MO 64081
PHONE: (888) 471-5275

**GAS**

OWNER: SPIRE MO WEST
REPRESENTATIVE: THERESA GARZA
ADDRESS: 3025 SE CLOVER DR, LEE'S SUMMIT, MO 64082
PHONE: (816) 509-1033

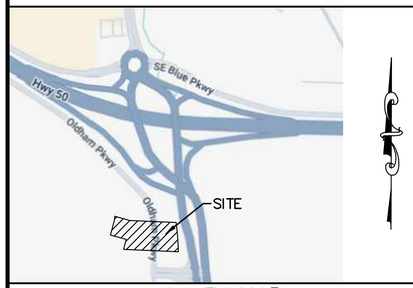
**TELEPHONE**

OWNER: AT&T DISTRIBUTION
REPRESENTATIVE:
ADDRESS:
PHONE: (800) 924-9420

**SPECIAL NOTES :**

PROJECT BENCHMARK:
THE SURVEYED BEARINGS SHOWN ON THE TOPOGRAPHIC SURVEY WERE ESTABLISHED FROM GRID NORTH OF THE "MISSOURI COORDINATE SYSTEM OF 1983" AND ELEVATIONS REFERENCED TO NAVD 1988 BY UTILIZING GNSS RECEIVER INSTRUMENTATION AND THE MODOT GNSS RTK NETWORK.

SITE BENCHMARK:
ELEV.=1037.91 (NAVD88)
THE SITE BENCHMARK IS SQUARE CUT IN THE SW CORNER OF A CURB INLET ON THE WEST SIDE OF THE SOUTHBOUND LANE OF STATE HIGHWAY 291. APPROXIMATELY 185 FEET NORTH OF THE INTERSECTION WITH SW OLDHAM PARKWAY.




VICINITY MAP
NO SCALE

# FINAL DEVELOPMENT PLANS
# CLUB CARWASH
# LEE'S SUMMIT, MISSOURI

PROJECT ADDRESS
1021 JEFFERSON CROSSING
LEE'S SUMMIT, MISSOURI 64081

PROJECT NO. M24-8767A


• CIVIL ENGINEERING
• LAND SURVEYING
• ARCHITECTURE
• SITE DEVELOPMENT
• MASTER PLANNING
• GENERAL CONSULTING

8 EAST MAIN STREET, WENTZVILLE, MISSOURI 63385
TELEPHONE (636) 332-4574
FAX (636) 327-0760
E-MAIL wentmail@cochraneng.com


**MAY, 2025**
**REVISED JUNE 23, 2025**
**REVISED JULY 3, 2025**
**REVISED AUGUST 15, 2025**

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All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

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www.mo1call.com

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
REGISTERED PROFESSIONAL ENGINEER
8/15/2025
DATE

Eric S. Kirchner No. E-2001004618
Registered Professional Engineer
State of Missouri
for Cochran Engineering & Surveying

## SITE NOTES

1. PROJECT BENCHMARK:
   THE SURVEYED BEARINGS SHOWN ON THE TOPOGRAPHIC SURVEY WERE ESTABLISHED FROM GRID NORTH OF THE "MISSOURI COORDINATE SYSTEM OF 1983" AND ELEVATIONS REFERENCED TO NAVD 1988 BY UTILIZING GNSS RECEIVER INSTRUMENTATION AND THE MODOT GNSS RTK NETWORK.

   SITE BENCHMARK:
   ELEV.=1037.91 (NAVD88)
   THE SITE BENCHMARK IS SQUARE CUT IN THE SW CORNER OF A CURB INLET ON THE WEST SIDE OF THE SOUTHBOUND LANE OF STATE HIGHWAY 291. APPROXIMATELY 185 FEET NORTH OF THE INTERSECTION WITH SW OLDHAM PARKWAY.

2. ZONED: PLANNED MIXED USE, PMIX
   FRONT YARD 20 FT.
   SIDE YARD 0 FT.
   REAR YARD 20 FT.

3. FLOODZONE:
   THIS SITE FALLS WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE ANNUAL 0.2% CHANCE FLOOD. PER FIRM, FLOOD INSURANCE RATE MAP, FOR JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS, MAP NUMBER 29095C0419G, MAP REVISED DATE OF JANUARY 20, 2017. FLOOD ZONES SHOWN HEREON ARE DETERMINED BY SCALING.

4. EFFORTS WILL BE MADE TO DIRECT DRAINAGE TO EXISTING DISCHARGE POINTS.

5. ALL STORM WATER RUNOFF SHALL MEET GOVERNING AUTHORITY CURRENT STANDARDS.

6. THE SITE SHALL CONFORM TO CITY OF LEES SUMMIT CURRENT STANDARDS.

7. THE TOPOGRAPHIC INFORMATION AS SHOWN HEREON PER INFORMATION PROVIDED BY ENGINEERING SOLUTIONS.

8. TOTAL SITE ACREAGE 1.08 AC (47,242 SF.)

9. THIS SITE IS SERVED BY:
   WATER – CITY OF LEES SUMMIT WATER
   SANITARY SEWER – CITY OF LEES SUMMIT WATER
   FIRE – LEES SUMMIT FIRE STATION #1
   TELEPHONE – AT&T DISTRIBUTION
   ELECTRIC – EVERGY
   GAS – SPIRE MO WEST
   FIBEROPTIC – AT&T DISTRIBUTION, EVERGY FIBER, GOOGLE FIBER

10. THE DEVELOPMENT SHALL BE SERVED BY UNDERGROUND ELECTRIC.

11. BOUNDARY INFORMATION IS PER SURVEY PERFORMED BY ENGINEERING SOLUTIONS.

12. THIS SITE WILL DEVELOP IN ONE PHASE.

13. ALL UTILITIES ARE TO BE LOCATED UNDERGROUND.

14. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR.

15. NO INVESTIGATION WAS PERFORMED REGARDING HAZARDOUS WASTE, UNDERGROUND CONDITIONS OR UTILITIES AFFECTING THE TRACT.

16. ALL GREEN SPACE AREAS SHALL BE SODDED.

17. SIGNAGE FOR THIS SITE WILL REQUIRE A SEPARATE APPROVAL AND PERMIT.

18. ALL CONCRETE PARKING IS TO BE STRIPED WITH 4" WIDE PAINTED WHITE LINES AS INDICATED. ADA STRIPING SHALL BE BLUE.

19. CONTRACTOR SHALL SAW CUT ALL CURB AND GUTTER SECTIONS, CONCRETE MEDIANS, AND ALONG PAVEMENT WHERE PROPOSED CONSTRUCTION TIES INTO EXISTING AREAS. CONTRACTOR SHALL MAINTAIN TRAFFIC FLOW AND PROVIDE TRAFFIC CONTROL THROUGHOUT CONSTRUCTION.

## UTILITY NOTES

1. UNDERGROUND STRUCTURES, FACILITIES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.

2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON PLANS.

3. CONTRACTOR TO CONTACT TELEPHONE, ELECTRIC, GAS, WATER AND CABLE COMPANIES TO HAVE UNDERGROUND UTILITIES LOCATED ON THIS SITE AND ADJACENT TO THIS SITE PRIOR TO DOING ANY EXCAVATING.

4. ALL TRENCHES UNDER PAVED AREAS SHALL BE BACKFILLED WITH GRANULAR MATERIAL AND COMPACTED TO 95% STANDARD PROCTOR.

5. ALL SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI AT THE CONTRACTOR'S EXPENSE.

6. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAPPING AND TIE–IN FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS AND METERS TO THE BUILDING.

7. NEW WATER LINES SHALL BE SDR 21 PVC OR C900. ALL WATERLINES CONSTRUCTED SHALL HAVE A MINIMUM OF 42 INCHES OF COVER BELOW FINISHED GRADE, UNLESS OTHERWISE INDICATED ON PLANS.

8. CONTRACTOR SHALL COORDINATE ADJUSTMENTS TO EXISTING UTILITIES WITH APPROPRIATE UTILITY COMPANY AS WORK PROGRESSES.

9. CONTRACTOR SHALL COORDINATE THE SCHEDULING AND LOCATION OF THE DEMOLITION AND INSTALLATION OF ALL UTILITIES, INCLUDING STAKEOUT, CONDUIT REQUIRED, TRENCHING REQUIRED, ETC. CONTRACTOR SHALL CONTACT EACH UTILITY PROVIDER WITH AT LEAST 30 DAYS ADVANCE NOTICE OF ANY WORK TO BE DONE.

10. ALL UNDERGROUND ELECTRIC AND TELEPHONE WIRE THAT LIE BENEATH PAVED AREAS SHALL BE INSTALLED IN CONDUIT. CONTRACTOR SHALL COORDINATE WITH EACH UTILITY SERVICE PROVIDER FOR SIZE AND TYPE OF CONDUIT REQUIRED. CONDUIT SHALL BE PROVIDED AT THE CONTRACTORS EXPENSE.

11. CONTRACTOR SHALL PROVIDE A MINIMUM OF 18" OF VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATERLINES AND A MINIMUM OF 18" VERTICAL OF CLEARANCE BETWEEN STORM SEWERS AND WATERLINES. THIS MAY MEAN THAT LOWERING OF WATERLINES MAY BE NECESSARY.

12. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY CONTRACTOR FROM THE PROPER UTILITY COMPANY PROVIDING SERVICE.

13. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.

14. UTILITY CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.

15. ALL NECESSARY INSPECTIONS, TESTING, AND/OR CERTIFICATIONS REQUIRED BY CODES, THE CITY, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

16. ALL DRAINAGE STRUCTURES, STORM SEWER PIPES, AND THE WATER METER LID SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING REQUIREMENTS.

17. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES THAT ARE REQUIRED TO BE REMOVED OR RELOCATED.

18. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.

19. UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE ARCHITECT/MEP.

20. ALL SEWERS AND STRUCTURES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD CONSTRUCTION SPECIFICATIONS OF THE GOVERNING AGENCY.

21. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.

22. CONTRACTOR SHALL OBTAIN AND FOLLOW INSTALLATION REQUIREMENTS FOR STORM SEWER, SANITARY SEWER, & WATER MAIN FROM PIPE MANUFACTURER FOR EACH TYPE OF PIPE MATERIAL.

23. CONTRACTOR SHALL INSTALL A FACTORY CAP EQUAL TO THE SIZE OF UTILITY STUB TO BE SEALED OFF, AND BLOCK THE CAP WITH CONCRETE AT UTILITIES NOTES TO BE "CAPPED AND MARKED."

24. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE, OR IN RIGHT–OF–WAY, 30 DAYS PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO START OF GRADING.

## GRADING NOTES

1. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

2. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS, MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

3. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

4. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN.

5. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

6. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

7. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT THAT MAY HAVE COLLECTED IN ANY STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

8. ON–SITE & OFF–SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

9. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

10. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES TO PREVENT EROSION.

11. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD.

12. ALL GRADING AND MATERIAL PLACEMENT ON THE SITE SHALL BE COMPACTED TO 95% STANDARD PROCTOR UNLESS A GEOTECHNICAL REPORT FOR THE SITE HAS DIFFERING REQUIREMENTS. IF A GEOTECHNICAL REPORT IS AVAILABLE THEN THE REPORT SHALL GOVERN.

## PAD PREPARATION NOTE

CFS ENGINEERING PREPARED A GEOTECHNICAL INVESTIGATION FOR THIS PROJECT SITE AND THE REPORT IS DATED NOVEMBER 19, 2024. THE CONTRACTOR SHALL REVIEW THIS REPORT AND FOLLOW THE RECOMMENDATIONS INCLUDED IN THE REPORT.

## OIL AND GAS WELLS

MDNR REPORTS DO NOT SHOW THE PRESENCE OF ANY ACTIVE ,INACTIVE OR CAPPED OIL AND/OR GAS WELLS ON THE PROJECT SITE

## LANDSCAPE NOTES

1. ALL AREAS ON SITE THAT ARE DISTURBED SHALL BE SODDED.

2. ALL LANDSCAPE BEDS TO HAVE SHREDDED OAK BARK MULCH UNLESS OTHERWISE NOTED.

3. ANY LANDSCAPE BED NOT EDGED BY CONCRETE CURBING SHALL HAVE A SPADE–CUT EDGE.

4. ALL AREAS ARE TO BE IRRIGATED.

## ADA COMLIANCE

ALL ADA PARKING SPACES SHALL HAVE A 2% OR LESS SLOPE IN ANY DIRECTION. ALL WALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% (1.5% PREFERRED). ALL WALKS SHALL HAVE A 5% OR LESS LONGITUDINAL SLOPE WHERE POSSIBLE. WHERE WALKS REQUIRE A SLOPE MORE THAN 5% LONGITUDINALLY WITH MORE THAN 6" OF VERTICAL RISE, THE CONTRACTOR SHALL INSTALL HANDRAILS MEETING ADA GUIDELINES. THE LONGITUDINAL SLOPE OF ANY WALK SHALL NOT EXCEED 8.33%. ANY WALK WITH A SLOPE BETWEEN 5% AND 8.33% SHALL NOT EXCEED 30FT. HORIZONTALLY IN LENGTH WITHOUT A LANDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADA PARKING PAVEMENT, WALKS, ETC. MEETS CURRENT ADA AND MUNICIPALITY GUIDELINES.

## DRAWING LEGENDS

### EXISTING

- RIGHT–OF–WAY
- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EASEMENT
- SETBACKS
- STORM SEWER
- SANITARY LINE
- WATER LINE
- SANITARY LATERAL
- SANITARY MANHOLE
- STORM CURB INLET
- FIRE HYDRANT
- BENCHMARK
- ASPHALT PAVEMENT
- CONCRETE SIDEWALK

### NEW

- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR
- EASEMENT
- SETBACK
- GAS
- STORM SEWER
- FENCE
- WATER LINE
- SANITARY LATERAL
- SANITARY CLEAN OUT
- TRANSFORMER
- STORM MANHOLE
- STORM INLET
- GRATED INLET
- GRATED INLET WITH SIDE INTAKE
- SIGN
- WATER VALVE
- WATER METER
- LIGHT
- SPOT ELEVATION
- ACCESSIBLE PARKING SYMBOL
- NEW BUILDING
- HEAVY DUTY CONCRETE
- STANDARD DUTY CONCRETE
- CONCRETE PAVEMENT/SIDEWALKS

LOT DESCRIPTION:

A TRACT OF LAND BEING PART OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 47 NORTH, RANGE 31 WEST OF THE PRINCIPAL MERIDIAN, CITY OF LEES SUMMIT, JACKSON COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF LOT 2 OF LELANDS COMMERCIAL PARK ACCORDING TO THE PLAT THEREOF RECORDED AS I–578853 OF THE JACKSON COUNTY, MISSOURI RECORDS; THENCE SOUTH 2 DEGREES 35 MINUTES 27 SECONDS WEST 13.35 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND DESCRIBED HEREIN; THENCE NORTH 87 DEGREES 37 MINUTES 46 WEST 127.72 FEET; THENCE NORTH 15 DEGREES 39 MINUTES 50 SECONDS EAST 53.62 FEET; THENCE NORTH 74 DEGREES 20 MINUTES 10 SECONDS WEST 85.50 FEET; THENCE NORTH 15 DEGREES 39 MINUTES 50 SECONDS EAST 81.00 FEET; THENCE NORTH 02 DEGREES 38 MINUTES 14 SECONDS EAST 18.48 FEET; THENCE SOUTH 74 DEGREES 20 MINUTES 09 SECONDS EAST 80.82 FEET; THENCE SOUTH 87 DEGREES 33 MINUTES 04 SECONDS EAST 239.27 FEET TO A POINT ON A NON–TANGENT CURVE TO THE RIGHT WITH A RADIUS OF 1352.39 FEET AND A CHORD THAT BEARS SOUTH 04 DEGREES 16 MINUTES 43 SECONDS EAST 151.25 FEET; THENCE ALONG SAID CURVE 151.33; THENCE NORTH 87 DEGREES 37 MINUTES 46 SECONDS WEST 155.55 FEET TO THE POINT OF BEGINNING AND CONTAINING 47,242 SQUARE FEET, OR 1.08 ACRES.

*OWNER*:
OLDHAM INVESTORS LLC
7200 W. 132ND ST. STE. 150
OVERLAND PARK, KANSAS 66213

*DEVELOPER*:
CLUB CARWASH OPERATING, LLC
1591 E. PRATHERSVILLE RD.
COLUMBIA, MO 65202

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636–327–0760 (fax)
wentmail@ochraneng.com
• Civil Engineering
• Land Surveying
• Architecture
• Site Development
• General Consulting
• Master Planning
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall contact Missouri One Call for utility location information.

All OSHA rules & regulations established for the type of construction involved in these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
ENGINEER
6/23/2025
ERIC S. KIRCHNER
E–2001004618

# FINAL DEVELOPMENT PLANS
# CLUB CARWASH
# LEE'S SUMMIT, MISSOURI

## GENERAL NOTES AND LEGEND

| REVISIONS: | DATE: | COMMENTS | DRN. BY: | APPD. BY: |
|---|---|---|---|---|
| | 06/23/25 | PER CITY | KAF | ESK |

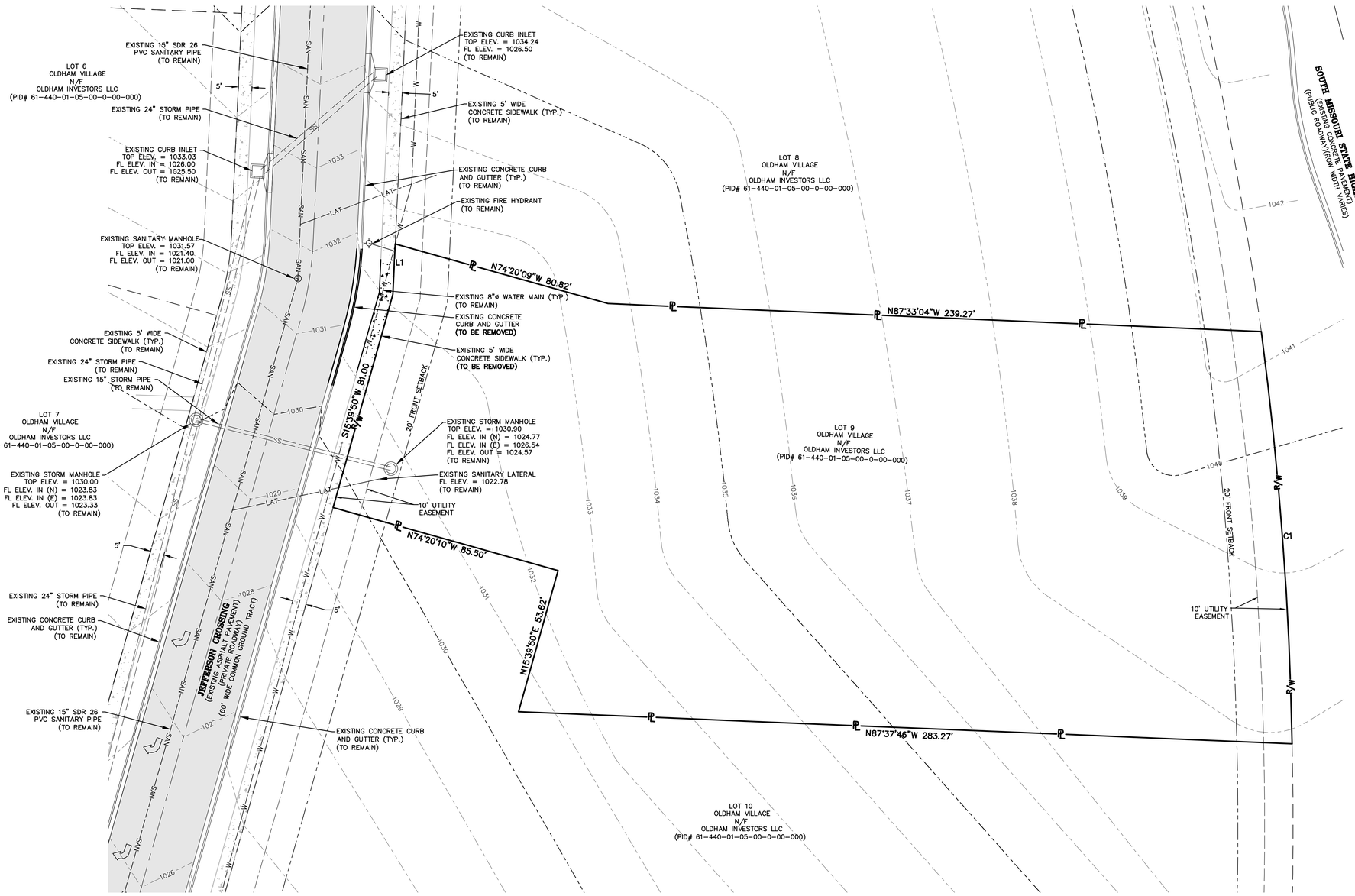
DRN. BY: KAF APPD. BY: ESK
DATE: MAY 2025
SCALE: NO SCALE
PROJ. NO: M24–8767A
DWG. NO: C1

DWG NAME: J:\2024\M24–8767 – CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24–8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24–8767A_C1_GENERAL NOTES AND LEGEND PLOTTED ON: Aug 15, 2025 – 10:46am PLOTTED BY: KFarrell

# EXISTING CONDITIONS

L1
S2°38'14"W 18.48'

C1
RADIUS=1352.39'
ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




SCALE: 1"=20'
MAY 2025

*OWNER*:
OLDHAM INVESTORS LLC
7200 W. 132ND ST. STE. 150
OVERLAND PARK, KANSAS 66213

*DEVELOPER*:
CLUB CARWASH OPERATING, LLC
1591 E. PRATHERSVILLE RD.
COLUMBIA, MO 65202

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• Master Planning
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall verify the location of all utility location information.

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STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
6/23/2025
ERIC S. KIRCHNER
E-2001004618

FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

EXISTING CONDITIONS

| REVISION: | DATE: | DRWN. BY: | APPD. BY: |
|---|---|---|---|
| PER CITY COMMENTS | 06/23/25 | KAF | ESK |

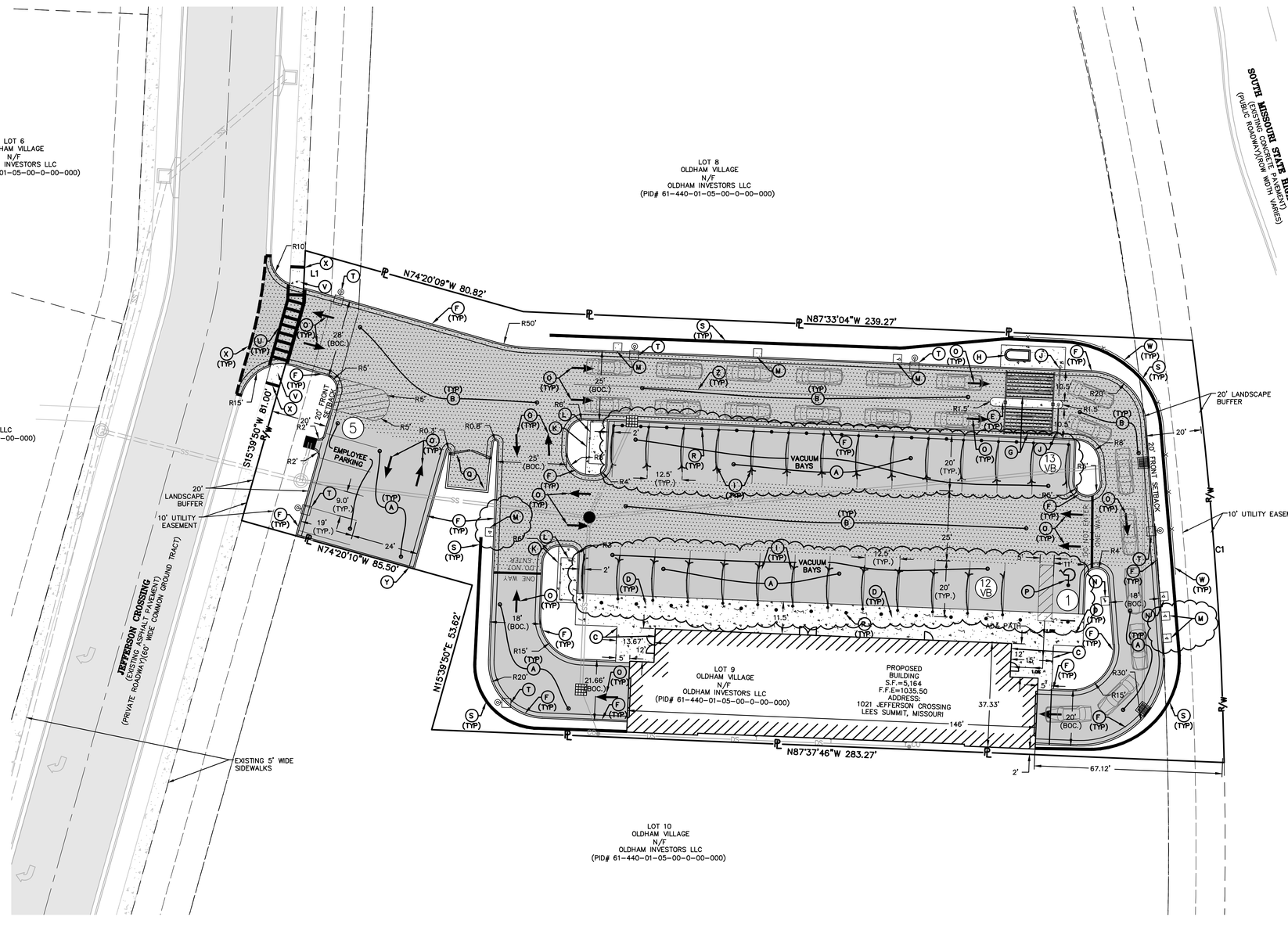
DRWN. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C2

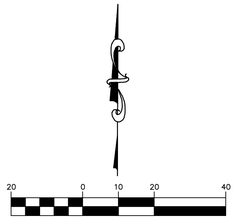
DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C2_EXISTING CONDITIONS.dwg LAYOUT TAB: SITE PLAN PLOTTED ON: Aug 15, 2025 - 10:46am PLOTTED BY: KFarrell

# SITE PLAN

L1
S2°38'14"W 18.48'

C1
RADIUS=1352.39'
ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




## SITE LEGEND

- (A) NEW STANDARD DUTY CONCRETE PAVEMENT. SEE DETAIL, SHEET C12.
- (B) NEW HEAVY DUTY CONCRETE PAVEMENT. SEE DETAIL, SHEET C12.
- (C) NEW 4" THICK CONCRETE SIDEWALK. SEE DETAIL, SHEET C12.
- (D) NEW 6" THICK CONCRETE SIDEWALK. SEE DETAIL, SHEET C12.
- (E) NEW 3' WIDE CONCRETE ISLAND, SEE DETAIL, SHEET C12.
- (F) NEW 6" VERTICAL CURB AND GUTTER. SEE DETAIL, SHEET C12.
- (G) NEW PRE-FABRICATED STRUCTURE. BY OWNER.
- (H) NEW ATTENDANT KIOSK. BY OWNER.
- (I) NEW VACUUM ARMS. BY OWNER.
- (J) NEW STOP ARM. BY OWNER.
- (K) NEW 7'x17' CONCRETE PAD FOR VACUUM TURBINE. SEE MEP PLANS.
- (L) NEW METAL TURBINE SCREENING. SEE DETAIL, SHEET C12.
- (M) NEW 3'X3'X4" CONCRETE PADS FOR SIGNS AND TRASH CANS.
- (N) NEW 3'X3'X6" CONCRETE PADS FOR CAMERA ARCH.
- (O) NEW TRAFFIC FLOW ARROWS. SEE DETAIL, SHEET C12.
- (P) NEW ACCESSIBLE PARKING STALL WITH SIGNAGE AND STRIPING. SEE DETAILS, SHEET C12.
- (Q) NEW TRASH ENCLOSURE. SEE DETAIL, SHEET C12.
- (R) NEW BOLLARD. SEE DETAIL, SHEET C12.
- (S) NEW RETAINING WALL. SEE DETAIL, SHEET C13.
- (T) NEW LIGHT STANDARD. SEE DETAIL, SHEET C16.
- (U) NEW CROSSWALK. SEE DETAIL, SHEET C12.
- (V) NEW ADA RAMP. SEE DETAIL, SHEET C5.
- (W) NEW 4' BLACK METAL FENCE. SEE DETAIL, SHEET C12.
- (X) CONTRACTOR TO SAW CUT EXISTING PAVEMENT FULL DEPTH TO ENSURE A SMOOTH JOINT
- (Y) TEMPORARY ASPHALT CURB. SEE DETAIL, SHEET C12.
- (Z) NEW 12" BLACK STACKING LANE STRIPING WITH 4" RED CENTER STRIPE.

VACUUM STATIONS:
PROVIDED = 25 VACUUM STATIONS

NOTE:
SEE PLAN SHEET C16 FOR SITE LIGHTING PHOTOMETRICS.

NOTE:
ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED. ALL RADIUS CALLOUTS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.

MINIMUM PARKING DIMENSIONS:
REGULAR PARKING – 9'x19'
ADA PARKING – 11'x19'
ADA VAN PARKING – 11'x19'
ADA ACCESSIBLE STRIPING – 5'x19'
PARKING DRIVE AISLES (TWO-WAY) – 24'W MIN.
PARKING DRIVE AISLES (ONE-WAY) – 24'W MIN.
DRIVE AISLES (TWO-WAY) – 20'W MIN.
DRIVE AISLES (ONE-WAY) – 10'W MIN.

PARKING REQUIREMENTS:
1 SPACE/ EMPLOYEE ON MAX SHIFT

| | |
|---|---|
| TOTAL SPACES REQUIRED: | = 5 SPACES |
| TOTAL SPACES PROVIDED: | = 5 SPACES |
| ADA TOTAL SPACES REQUIRED: | = 1 SPACES |
| ADA TOTAL SPACES PROVIDED: | = 1 SPACES |
| TOTAL STACKING SPACES REQUIRED: | = 5 SPACES |
| TOTAL STACKING SPACES PROVIDED: | = 22 SPACES |

NOTE:
ALL SIGNS MUST COMPLY WITH THE SIGN REQUIREMENTS AS OUTLINED IN THE SIGN SECTION OF THE ORDINANCE.

LOT COVERAGE PERCENTAGE:
GREEN SPACE = 11,812 SF (25.11%)
PAVEMENT AND BUILDING = 35,233 SF (74.89%)

NOTE:
LOT AREA:
47,242 SF
BUILDING AREA:
5,164 SF
FAR = 0.11

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*DEVELOPER*:
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STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
8/15/2025
ERIC S. KIRCHNER
E-2001004618

# FINAL DEVELOPMENT PLANS
## CLUB CARWASH
## LEE'S SUMMIT, MISSOURI

| DATE: | REVISIONS: | DRN. BY: | APPD. BY: |
|---|---|---|---|
| 06/23/25 | PER CITY COMMENTS | KAF | ESK |
| 07/25/25 | PER CITY COMMENTS | KAF | ESK |
| 08/15/25 | PER CLIENT REQUEST | KAF | ESK |

DRN. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C3

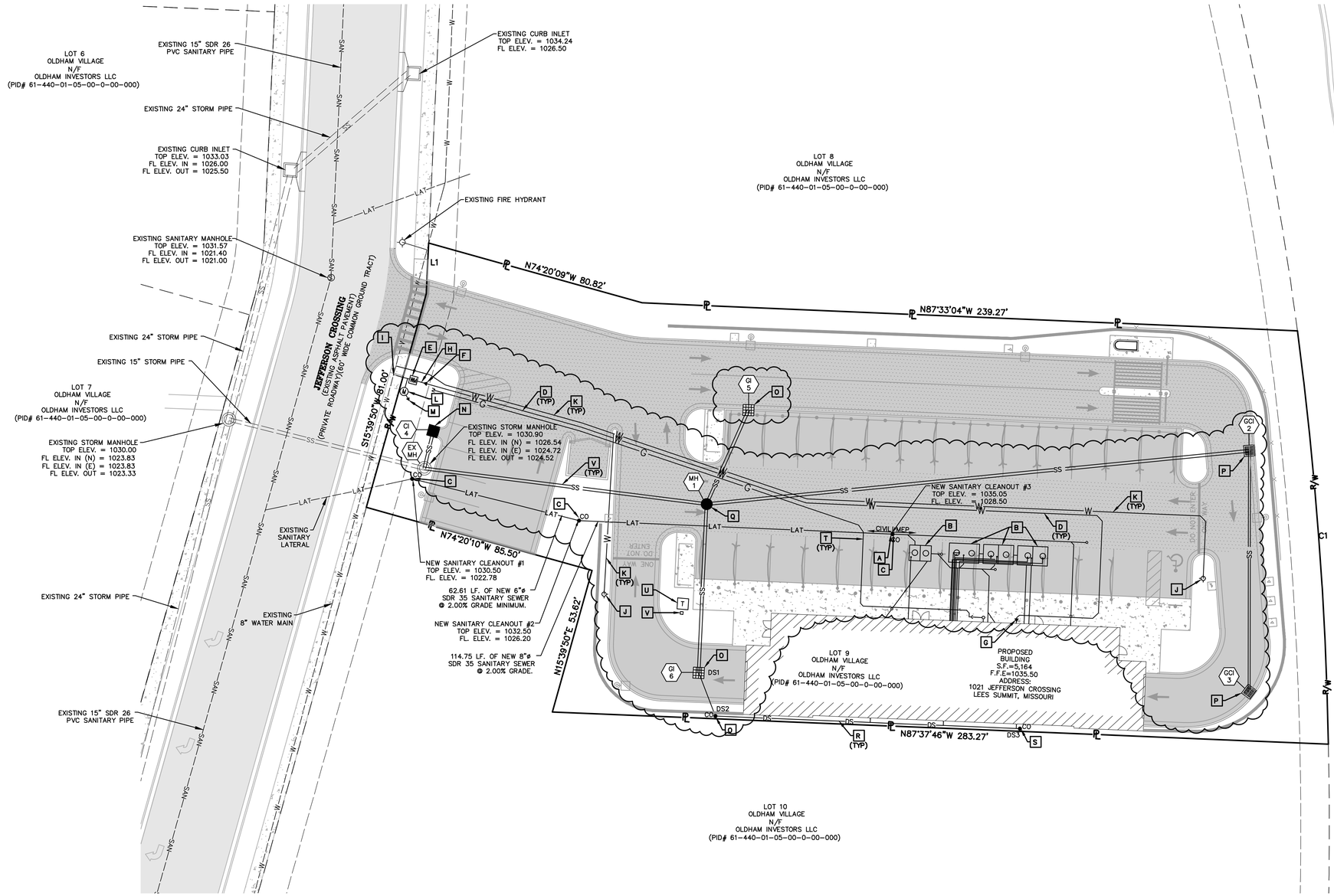
SITE PLAN

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C3_SITE PLAN.dwg LAYOUT TAB: SITE PLAN PLOTTED ON: Aug 15, 2025 - 10:46am PLOTTED BY: KFarrell

# UTILITY PLAN

L1
S2°38'14"W 18.48'

C1
RADIUS=1352.39'
ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




SCALE: 1"=20'
MAY 2025

## UTILITY LEGEND

| | |
|---|---|
| A | REFER TO ARCHITECTURAL AND MEP PLANS FOR CONTINUATION OF SANITARY SEWER CONNECTION TO THE BUILDING. SEE DETAIL FOR SANITARY LATERAL ON SHEET C13. FL. ELEV. = 1028.50. |
| B | NEW SANITARY SEWER LATERAL AND GREASE INTERCEPTORS. SEE ARCHITECTURAL AND MEP PLANS. |
| C | NEW SANITARY CLEANOUT. SEE DETAIL, SHEET C13. |
| D | NEW 4"ø C900 PVC WATER SERVICE LINE. |
| E | NEW 2" WATER METER. SEE DETAIL, SHEET C14. |
| F | NEW 2"X4" INCREASER. |
| G | NEW 4"X2" REDUCER. |
| H | 2" COPPER SERVICE LINE (10' MIN. LENGTH) |
| I | 2" SADDLE TAP, PER CITY REQUIREMENTS. |
| L | NEW FIRE HYDRANT. SEE DETAIL, SHEET C13. |
| K | NEW 6" C900 PVC WATER MAIN. |
| L | NEW IRRIGATION METER. |
| M | IRRIGATION LINE TO IRRIGATION SYSTEM. |
| N | NEW CURB INLET. SEE DETAIL SHEET C13. |
| O | NEW GRATED INLET. SEE DETAIL SHEET C13. |
| P | NEW GRATED INLET WITH SIDE INTAKE. SEE DETAIL SHEET C13. |
| Q | NEW STORM MANHOLE. SEE DETAIL, SHEET C14. |
| R | NEW 8"ø SDR 26 PVC DOWNSPOUT COLLECTOR. SEE DETAIL, SHEET C13. |
| S | NEW DOWNSPOUT CLEAN-OUT. SEE DETAIL SHEET C13. |
| T | NEW GAS LINE. CONTRACTOR SHALL COORDINATE WITH MEP AND UTILITY PROVIDER. |
| U | NEW TRANSFORMER PAD, CONTRACTOR SHALL COORDINATE WITH MEP AND UTILITY PROVIDER. |
| V | NEW TELEPHONE PEDESTAL. SEE MEP PLANS. |

| DOWNSPOUT COLLECTOR FLOWLINE TABLE | |
|---|---|
| DS1 FL ELEV. = | 1030.14 |
| DS2 FL ELEV. = | 1030.48 |
| DS3 FL ELEV. = | 1033.00 |

NOTE:
BACKFLOW PREVENTER LOCATED INSIDE THE BUILDING.

| *OWNER*: | *DEVELOPER*: |
|---|---|
| OLDHAM INVESTORS LLC<br>7200 W. 132ND ST. STE. 150<br>OVERLAND PARK, KANSAS 66213 | CLUB CARWASH OPERATING, LLC<br>1591 E. PRATHERSVILLE RD.<br>COLUMBIA, MO 65202 |

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Missouri State Certificate of Authority Numbers: 2010000046


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STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
8/15/2025
ERIC S. KIRCHNER
E-2001004618

# FINAL DEVELOPMENT PLANS
## CLUB CARWASH
## LEE'S SUMMIT, MISSOURI

| DATE: | REVISIONS: | DRN. BY: | APPD. BY: |
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| 07/03/25 | PER CITY COMMENTS | KAF | ESK |
| 08/15/25 | PER CLIENT REQUEST | KAF | ESK |

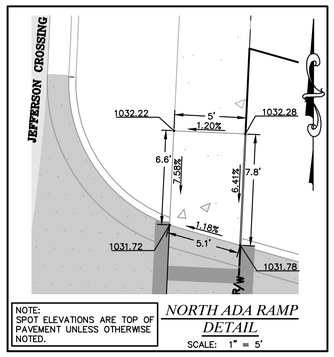
DRN. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DRWG. NO: C4
UTILITY PLAN

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C4_UTILITY PLAN.dwg LAYOUT TAB: UTILITY PLAN PLOTTED ON: Aug 15, 2025 - 10:46am PLOTTED BY: KFarrell

# GRADING PLAN

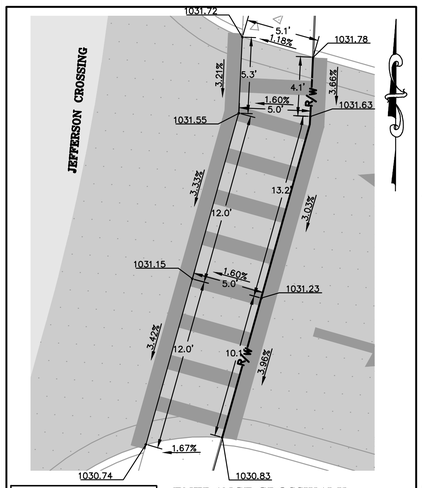
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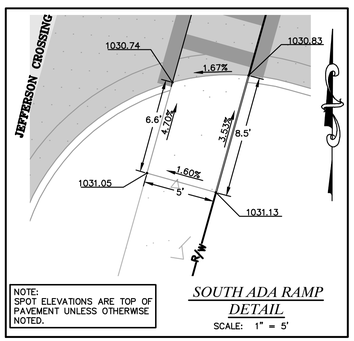

NOTE:
SPOT ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

NORTH ADA RAMP DETAIL
SCALE: 1" = 5'



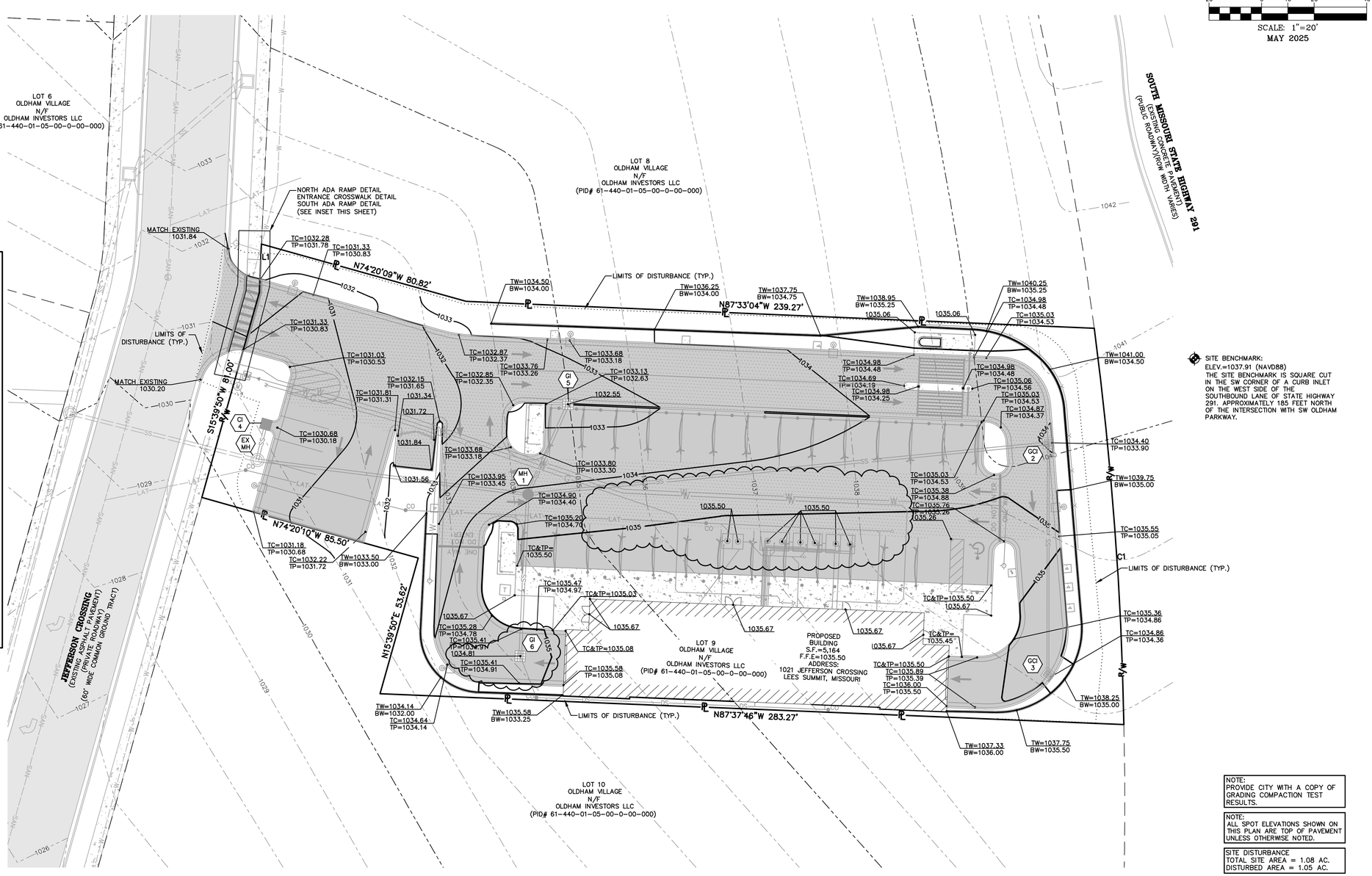

NOTE:
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ENTRANCE CROSSWALK DETAIL
SCALE: 1" = 5'




NOTE:
SPOT ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

SOUTH ADA RAMP DETAIL
SCALE: 1" = 5'




SCALE: 1"=20'
MAY 2025

SITE BENCHMARK:
ELEV.=1037.91 (NAVD88)
THE SITE BENCHMARK IS SQUARE CUT IN THE SW CORNER OF A CURB INLET ON THE WEST SIDE OF THE SOUTHBOUND LANE OF STATE HIGHWAY 291, APPROXIMATELY 185 FEET NORTH OF THE INTERSECTION WITH SW OLDHAM PARKWAY.

NOTE:
PROVIDE CITY WITH A COPY OF GRADING COMPACTION TEST RESULTS.

NOTE:
ALL SPOT ELEVATIONS SHOWN ON THIS PLAN ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

SITE DISTURBANCE
TOTAL SITE AREA = 1.08 AC.
DISTURBED AREA = 1.05 AC.

GRADING QUANTITY:

CUT - 2,865 CY.
FILL - 260 CY.

NOTE:
THESE QUANTITIES ARE RAW NUMBERS. THE CONTRACTOR SHALL NOT USE THESE NUMBERS AS THEIR BID QUANTITIES. THE CONTRACTOR SHALL DETERMINE THEIR OWN QUANTITIES.

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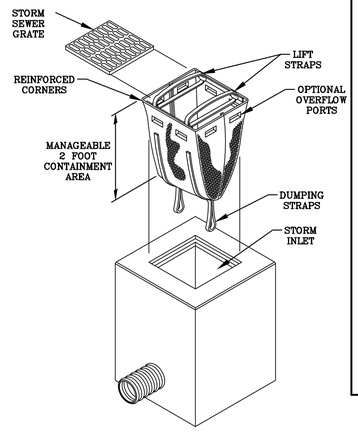
FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

| DATE: | REVISIONS: | DRN. BY: | APPD. BY: |
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| 08/15/25 | PER CLIENT REQUEST | | |

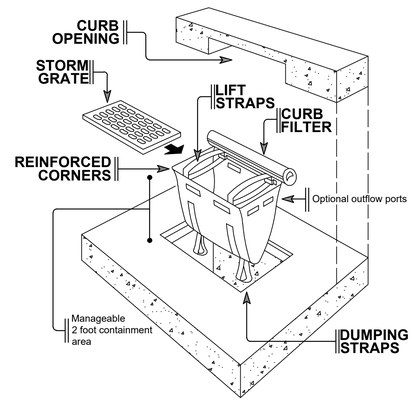
GRADING PLAN
DRN. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DRWG. NO: C5

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C5_GRADING PLAN.dwg LAYOUT TAB: UTILITY PLAN PLOTTED ON: Aug 15, 2025 - 10:46am PLOTTED BY: KFarrell

# EROSION AND SEDIMENT CONTROL PLAN



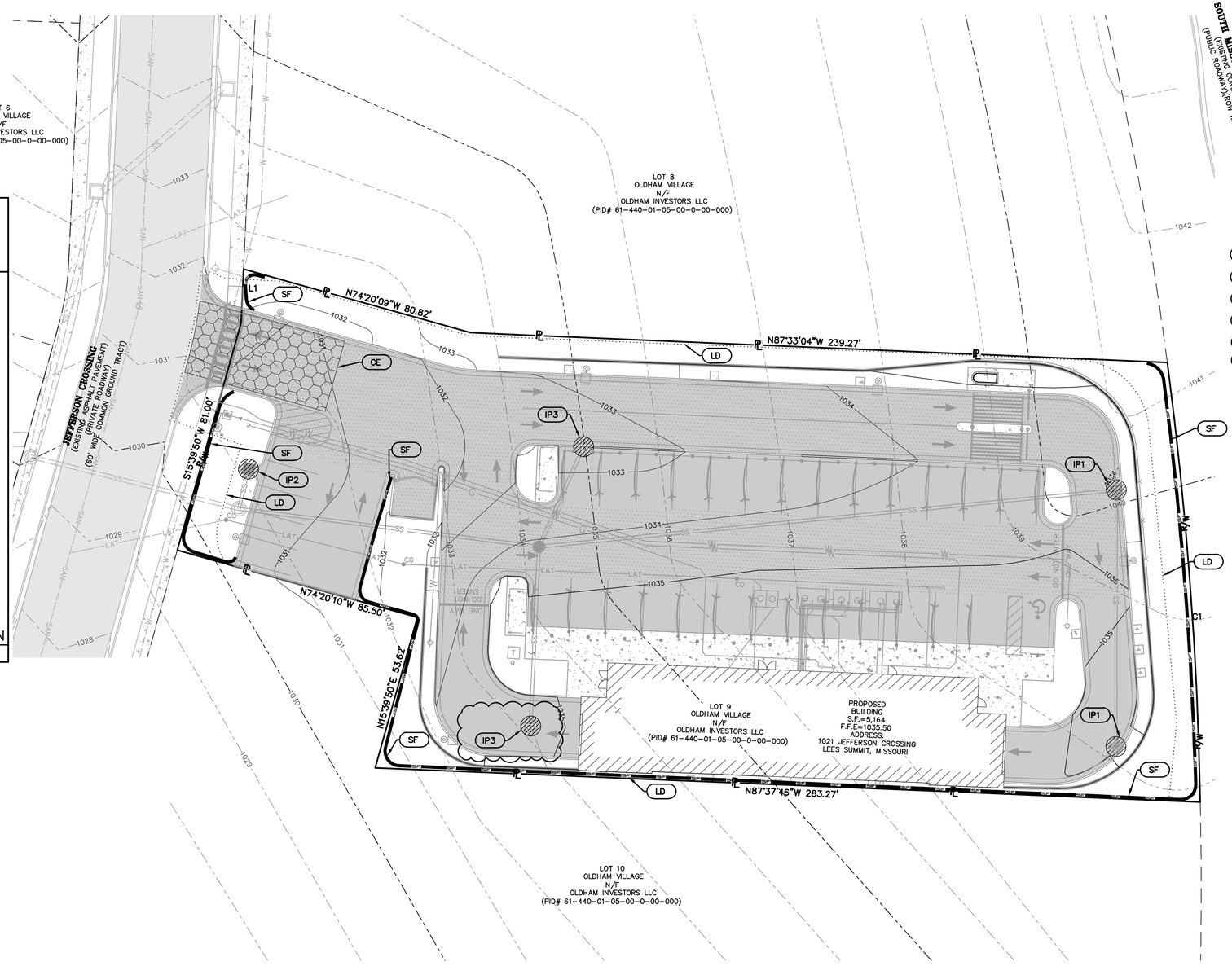

IP3 DANDY SACK GRATED INLET PROTECTION
NO SCALE




IP1 DANDY CURB SACK GRATED CURB INLET PROTECTION
NO SCALE

L1
S2°38'14"W 18.48'

C1
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ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




20 0 10 20 40
SCALE: 1"=20'
MAY 2025

## SWPPP LEGEND

- SF NEW SILT FENCE. SEE DETAIL, SHEET C7.
- IP1 NEW DANDY SACK GRATED CURB INLET PROTECTION. SEE DETAIL, THIS SHEET.
- IP2 CURB INLET PROTECTION. SEE DETAIL, SHEET C7.
- IP3 NEW SACK GRATED INLET PROTECTION SEE DETAIL, THIS SHEET.
- CE TEMPORARY CONSTRUCTION ENTRANCE. SEE DETAIL, SHEET C7.
- LD LIMITS OF DISTURBANCE.

NOTE:
ALL TRUCKS SHALL BE WASHED DOWN BEFORE LEAVING SITE.

NOTE:
ALL INLETS ARE TO RECEIVE INLET SILT FENCE PROTECTION (SEE DETAIL, THIS SHEET AND SHEET C7)

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

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

| CONSTRUCTION SEQUENCE | SEP. | OCT. | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEMPORARY CONTROL MEASURES | | | | | | | | | | | | |
| ROUGH GRADE / SEDIMENT CONTROL | | | | | | | | | | | | |
| PERMENANT CONTROL MEASURES | | | | | | | | | | | | |
| SEED AND FINAL STABILIZATION | | | | | | | | | | | | |

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*DEVELOPER*:
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FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

EROSION AND SEDIMENT CONTROL PLAN

| DATE: | REVISIONS: | DRW. BY: | APPD. BY: |
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DRW. BY: KAF APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C6

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C06_EROSION AND SEDIMENT CONTROL PLAN.dwg LAYOUT TAB: SWPPP PLAN PLOTTED ON: Aug 15, 2025 - 10:46am PLOTTED BY: KFarrell

# S.W.P.P.P. GENERAL NOTES AND DETAILS

GENERAL EROSION NOTES:

1. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MISSOURI NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
2. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
4. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS.
5. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
6. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
7. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
8. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
9. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
10. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
11. THE LOCAL AGENCY(IES) MUST BE NOTIFIED AT LEAST FORTY-EIGHT HOURS PRIOR TO THE COMMENCEMENT OF ANY GRADING OPERATIONS.
12. NO GRADED AREA IS TO REMAIN WITHOUT VEGETATIVE GROUND COVER FOR MORE THAN THIRTY (30) DAYS WITHOUT BEING SEEDED AND MULCHED OR SODDED.
13. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
14. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
15. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
16. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
17. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
18. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES) TO PREVENT EROSION.
19. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING.
20. THE CONTRACTOR SHALL FIELD INVESTIGATE THE ENTIRE SITE PRIOR TO HIS BID SUBMITTAL NOTING THE EXISTING VEGETATION AND TREES AND INCLUDING THE REMOVAL AND DISPOSAL IN HIS BID.
21. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. LOCATION, RELOCATION AND CONNECTION OF THE UTILITIES SHALL BE COORDINATED WITH THE UTILITY COMPANIES.
22. UNDERGROUND STRUCTURES, FACILITIES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.
23. FLOOD ZONE: THIS SITE FALLS WITHIN THIS SITE FALLS WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE ANNUAL 0.2% CHANCE FLOOD. PER FIRM, FLOOD INSURANCE RATE MAP, FOR JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS, MAP NUMBER 29095C0419G, MAP REVISED DATE OF JANUARY 20, 2017. FLOOD ZONES SHOWN HEREON ARE DETERMINED BY SCALING.
24. THE BOUNDARY INFORMATION AND CONTOURS AS SHOWN IS FROM A TOPOGRAPHIC SURVEY AS PROVIDED BY ENGINEERING SOLUTIONS.
25. TEMPORARY SILTATION CONTROL STRUCTURES SHALL BE MAINTAINED UNTIL A VEGETATIVE COVER OF AREA DISTURBED IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE, AS DETERMINED BY THE CITY ENGINEER.
26. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED VEGETATIVE COVER OF AREA DISTURBED AS TO PREVENT EROSION. PERMANENT TYPE GRASSES SHALL BE ESTABLISHED AS SOON AS POSSIBLE OR DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.
27. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN THIRTY (30) DAYS, PERMANENT GRASS MUST BE ESTABLISHED TO VEGETATIVE COVER TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE CITY ENGINEER'S RECOMMENDATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENTS) IN TWENTY (20) PERCENT SLOPES (5 HORIZONTAL TO 1 VERTICAL) SHALL BE MULCHED.
28. ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSPECTED FOLLOWING EACH RAINSTORM CAUSING SIGNIFICANT RUNOFF, OR BEING OF SUFFICIENT INTENSITY OR DURATION AS TO STOP CONSTRUCTION OR GRADING PROGRESS. THE SEDIMENT CONTROL FACILITIES SHALL BE CLEANED OF SEDIMENT, REPAIRED IF DAMAGED AND RESTORED TO SERVICEABLE CONDITIONS IF:
    1. EROSION SEDIMENT HAS ACCUMULATED IN SILT DEVICES,
    2. SEDIMENT EROSION CONTROL DEVICES HAVE BEEN DAMAGED,
    3. OBVIOUS GULLIES OR SEDIMENT DEPOSITS HAVE BEEN FORMED ON THE DOWNSTREAM SIDE OF CONTROL DEVICES, OR
    4. SEDIMENT HAS BEEN CARRIED BEYOND THE WORKING SITE.
29. THE DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH ALL COPIES OF INTERIM SOIL TESTING REPORTS.
30. ALL FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED OR FUTURE PAVED AREAS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD COMPACTION TEST. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACK FILLING OPERATIONS.
31. AREA SHALL BE TEMPORARILY RESEEDED AT A RATE OF 6-8 LBS. OF RYE GRASS PER 1000 SQ. FT. FERTILIZER SHALL BE APPLIED AT A RATE OF 50 LBS. PER 10,000 SQ. FT.

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE FROM BUILDINGS FOR ALL NATURAL & PAVED AREAS.
2. ALL UNSURFACED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL. CONTRACTOR TO SEED, MULCH, AND FERTILIZE ALL AREAS OUTSIDE OF PAVED AREAS THAT WERE DISTURBED DURING CONSTRUCTION UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED.
3. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
4. SHOULD CONSTRUCTION STOP FOR LONGER THAN 15 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED BY TEMPORARY SEEDING MIX.
5. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN AND AT LEAST ONCE A WEEK.
6. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
7. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
8. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
9. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
10. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
11. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
12. EFFORTS WILL BE MADE TO DIRECT DRAINAGE TO EXISTING DISCHARGE POINTS.
13. ALL STORM WATER RUNOFF SHALL MEET LOCAL AGENCY(IES) STANDARDS.
14. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO KEEP ALL MUD AND SILT ON SITE AND OFF OF STREETS.
15. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STORM WATER RUN-OFF AND SILTATION UNDER CONTROL DURING CONSTRUCTION.
16. CONTRACTOR SHALL MAINTAIN THE SITE IN A WELL-DRAINED MANNER IN ORDER TO ASSUME THE SHORTEST POSSIBLE DRYING TIME AFTER EACH RAINFALL. THIS WILL MEAN THAT PUMPING OF STANDING WATER IN LOW AREAS ON THE SITE WILL MOST LIKELY BE REQUIRED DURING CONSTRUCTION.

MAINTENANCE:
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND 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 AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

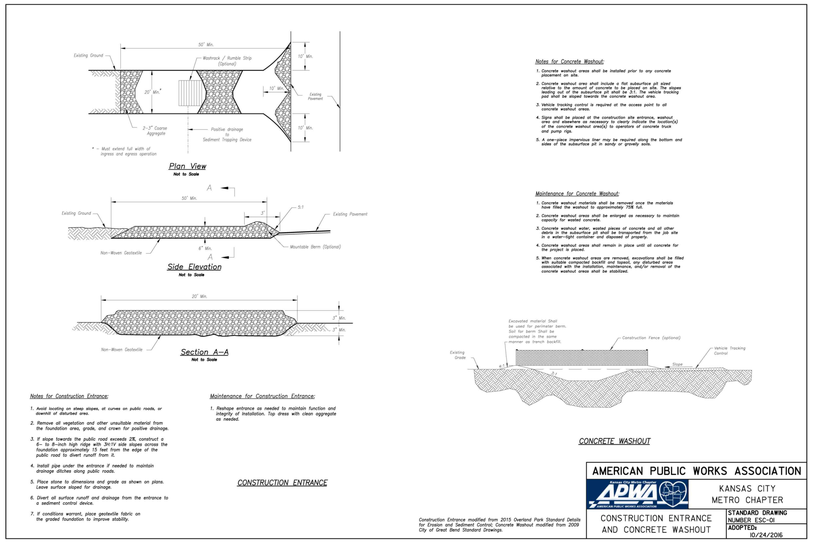
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
6. ALL CURB AND AREA INLETS SHALL HAVE INLET PROTECTION SUFFICIENT TO PREVENT TRANSPORTED SOIL FROM BEING DEPOSITED IN THE FORM OF SILT IN THE STORM DRAINAGE SYSTEMS ON-SITE OR OFF-SITE.
7. ALL FINISHED GRADES THAT EXCEED 20% (5 HORIZONTAL TO 1 VERTICAL) SHALL BE MULCHED.

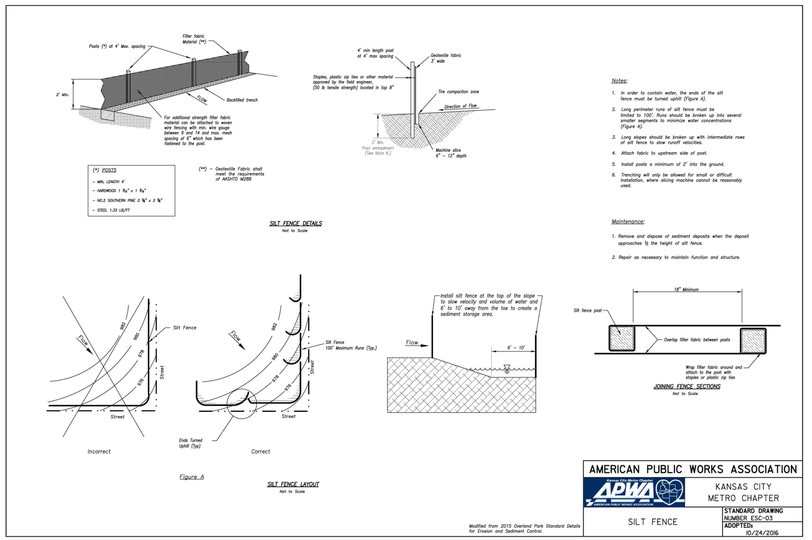
## SEQUENCE OF CONSTRUCTION

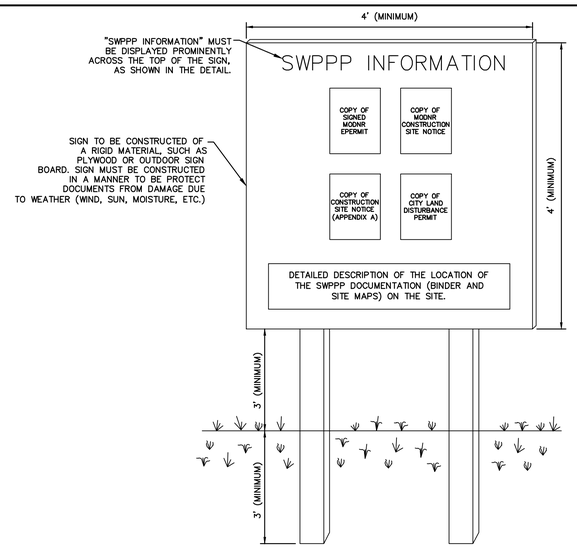
INSTALL EROSION CONTROL ITEMS.

1. INSTALL TEMPORARY CONTROL MEASURES
2. PERFORM GRADING ACTIVITIES.
3. TEMPORARY SEED DENUDED AREAS.
4. PAVE SITE.
5. FINAL SEEDING/SOD.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).

| *OWNER*: | *DEVELOPER*: |
|---|---|
| OLDHAM INVESTORS LLC<br>7200 W. 132ND ST. STE. 150<br>OVERLAND PARK, KANSAS 66213 | CLUB CARWASH OPERATING, LLC<br>1591 E. PRATHERSVILLE RD.<br>COLUMBIA, MO 65202 |



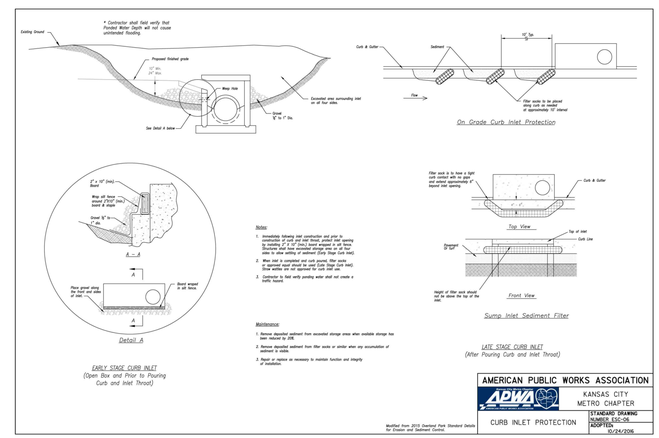




NOTES:

1. THE SWPPP INFORMATION SIGN MUST BE LOCATED IN A PROMINENT, PUBLICLY ACCESSIBLE LOCATION NEAR THE MAIN ENTRANCE OF THE SITE. SUCH THAT THE DOCUMENTATION CAN BE READ WITHOUT ACCESSING THE JOBSITE, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A TRAFFIC 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. ALL PAGES OF NOTICES OF INTENT AND PERMIT AUTHORIZATIONS MUST BE POSTED. THE CONTRACTOR MAY UTILIZE ACCESSIBLE WATERPROOF FOLDERS TO STORE THESE DOCUMENTS IF IT WILL BE DIFFICULT TO POST ALL PAGES INDIVIDUALLY.
4. CONTRACTOR SHALL POST OTHER STORMWATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCIES.
5. SUBSEQUENT PERMIT MODIFICATION REQUESTS OR RENEWAL APPLICATIONS AND THEIR ASSOCIATED AUTHORIZATIONS OR RESPONSES SHALL BE POSTED ON THE SWPPP SIGN.
6. SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.
7. CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.

SWPPP INFORMATION SIGN
NO SCALE




Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 2" (min.) board wrapped in silt fence. Secure board to inlet with gravel placed around the sides to allow setting of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks shall be installed in front of the inlet (Late Stage Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage area when available storage has been reduced by 25%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-08
ADOPTED 10/24/2016


OCHRAN
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1401 Laurel Street
Wentzville, Missouri 63385
636-332-4574 (tel.)
636-327-0760 (fax)
wentmail@ochraneng.com
• Civil Engineering
• Land Surveying
• Architecture
• Site Development
• General Consulting
• Master Planning
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall contact Missouri one utility location information.

All OSHA rules & regulations established for the type of excavation performed on these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
4/29/2025
ERIC S. KIRCHNER
E-2001004618

FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

| DRWN. BY: | APPD. BY: |
|---|---|
| KAF | ESK |

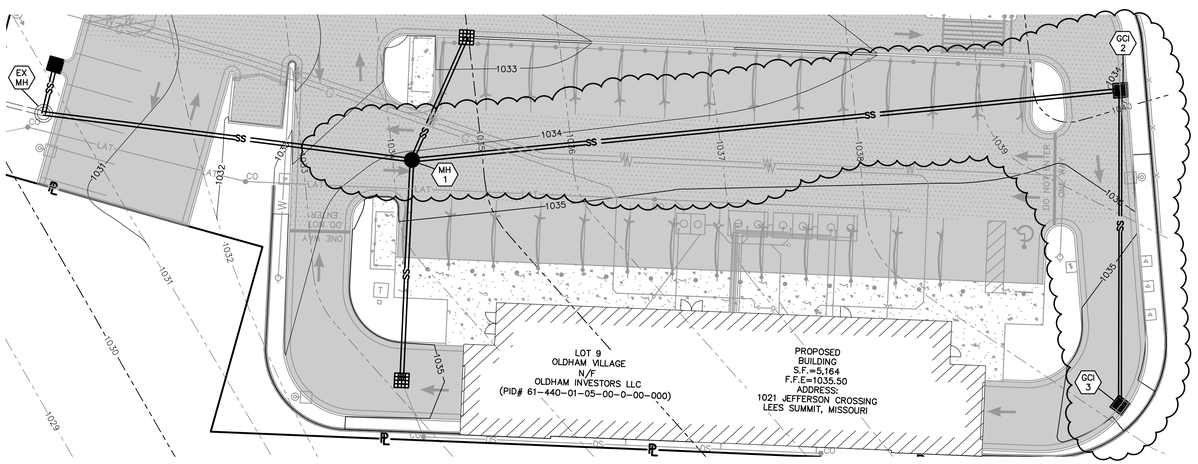
DATE: MAY 2025
SCALE: NO SCALE
PROJ. NO: M24-8767A
DRWG. NO: C7

SWPPP GENERAL NOTES AND DETAILS

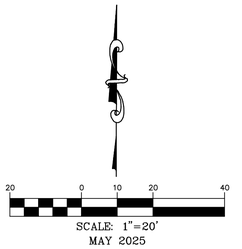
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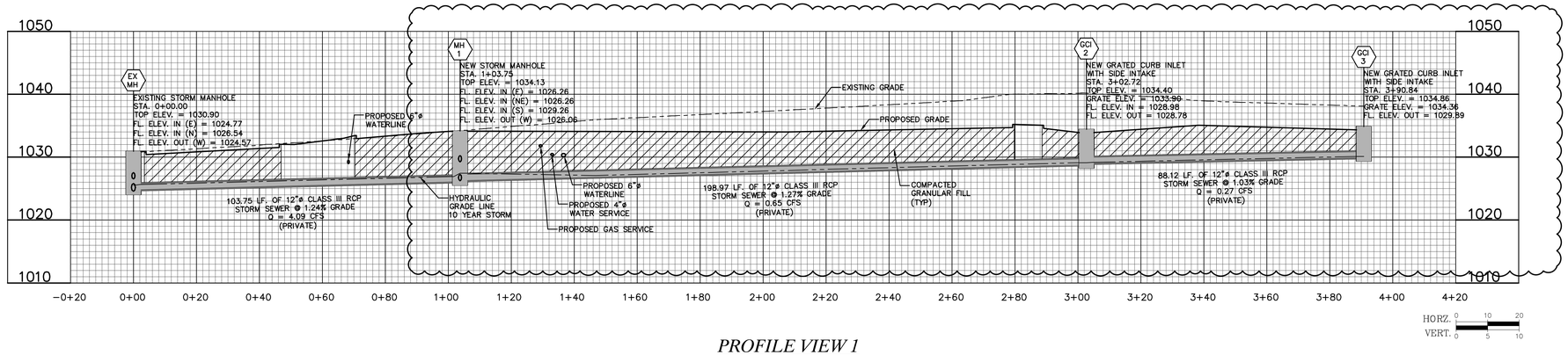
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# STORM SEWER PLAN AND PROFILE




*PLAN VIEW 1*




*PROFILE VIEW 1*

NOTE:
HP STORM POLYPROPYLENE PIPE MEETING ASTM F2881 MAY BE USED AS AN ALTERNATE TO RCP PIPE ON STORM SEWERS. CONTRACTOR SHALL VERIFY WITH GOVERNING AUTHORITY THAT THIS IS AN ACCEPTABLE ALTERNATE. IF HP STORM PIPE IS UTILIZED IT SHALL BE INSTALLED ACCORDING TO MANUFACTURES SPECIFICATIONS.

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*DEVELOPER*:
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Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall call Missouri One Call System for utility location information.

All OSHA rules & regulations established for the type of construction involved, shall at all times be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
8/15/2025
ERIC S. KIRCHNER
E-2001004618

FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

STORM SEWER PLAN AND PROFILE

| REVISION | DATE: | DWN. BY: | APPD. BY: |
|---|---|---|---|
| PER CITY COMMENTS | 06/23/25 | KAF | ESK |
| PER CITY COMMENTS | 07/25/25 | KAF | ESK |
| PER CLIENT REQUEST | 08/15/25 | KAF | ESK |

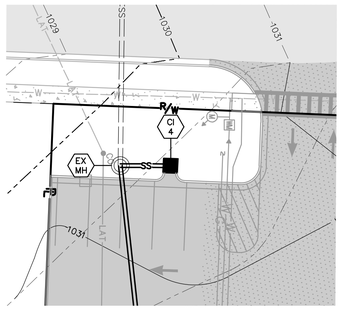
DWN. BY: KAF APPD. BY: ESK
DATE: MAY 2025
HOR. SCALE: 1:20
VERT. SCALE: 1:10
PROJ. NO: M24-8767A
DRG. NO: C8

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C8_STORM SEWER PLAN AND PROFILE.dwg LAYOUT TAB: STORM SEWER PLAN AND PROFILE PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell

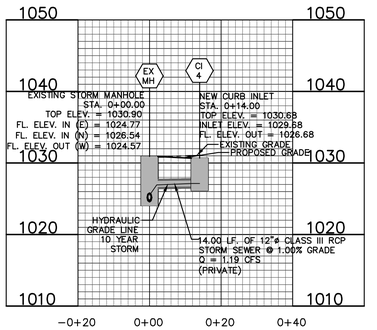
# STORM SEWER PLAN AND PROFILE

SCALE: 1"=20'
MAY 2025

**JEFFERSON CROSSING**



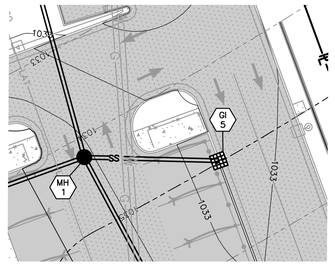

*PLAN VIEW 2*



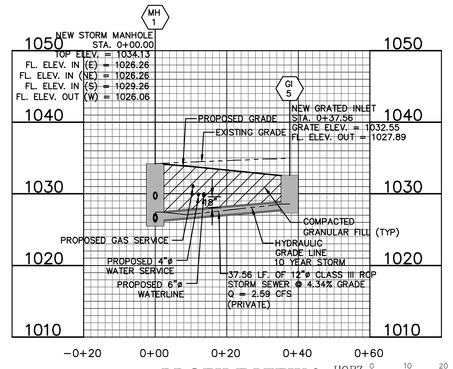

*PROFILE VIEW 2*

HORZ. 0 10 20
VERT. 0 5 10

SCALE: 1"=20'
MAY 2025




*PLAN VIEW 3*

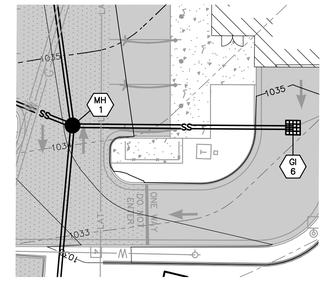



*PROFILE VIEW 3*

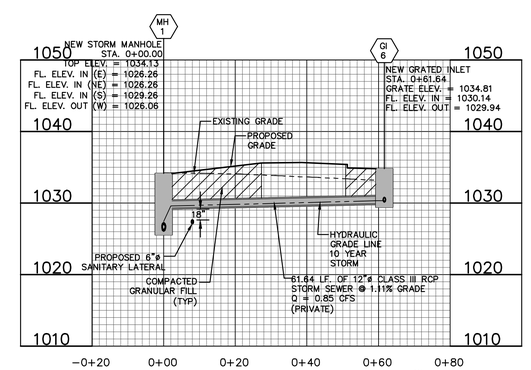
HORZ. 0 10 20
VERT. 0 5 10

SCALE: 1"=20'
MAY 2025

PROPOSED BUILDING
S.F.=5,164
F.F.E=1035.50
ADDRESS:
1021 JEFFERSON CROSSING
LEES SUMMIT, MISSOURI




*PLAN VIEW 4*




*PROFILE VIEW 4*

HORZ. 0 10 20
VERT. 0 5 10

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E-2001004618
REGISTERED PROFESSIONAL ENGINEER
8/15/2025
ERIC S. KIRCHNER
E-2001004618

*FINAL DEVELOPMENT PLANS*
*CLUB CARWASH*
*LEE'S SUMMIT, MISSOURI*

*STORM SEWER PLAN AND PROFILE*

| REVISION | DATE: | DRN. BY: | APPD. BY: |
|---|---|---|---|
| PER CITY COMMENTS | 06/23/25 | KAF | ESK |
| PER CITY COMMENTS | 07/25/25 | KAF | ESK |
| PER CLIENT REQUEST | 08/15/25 | KAF | ESK |

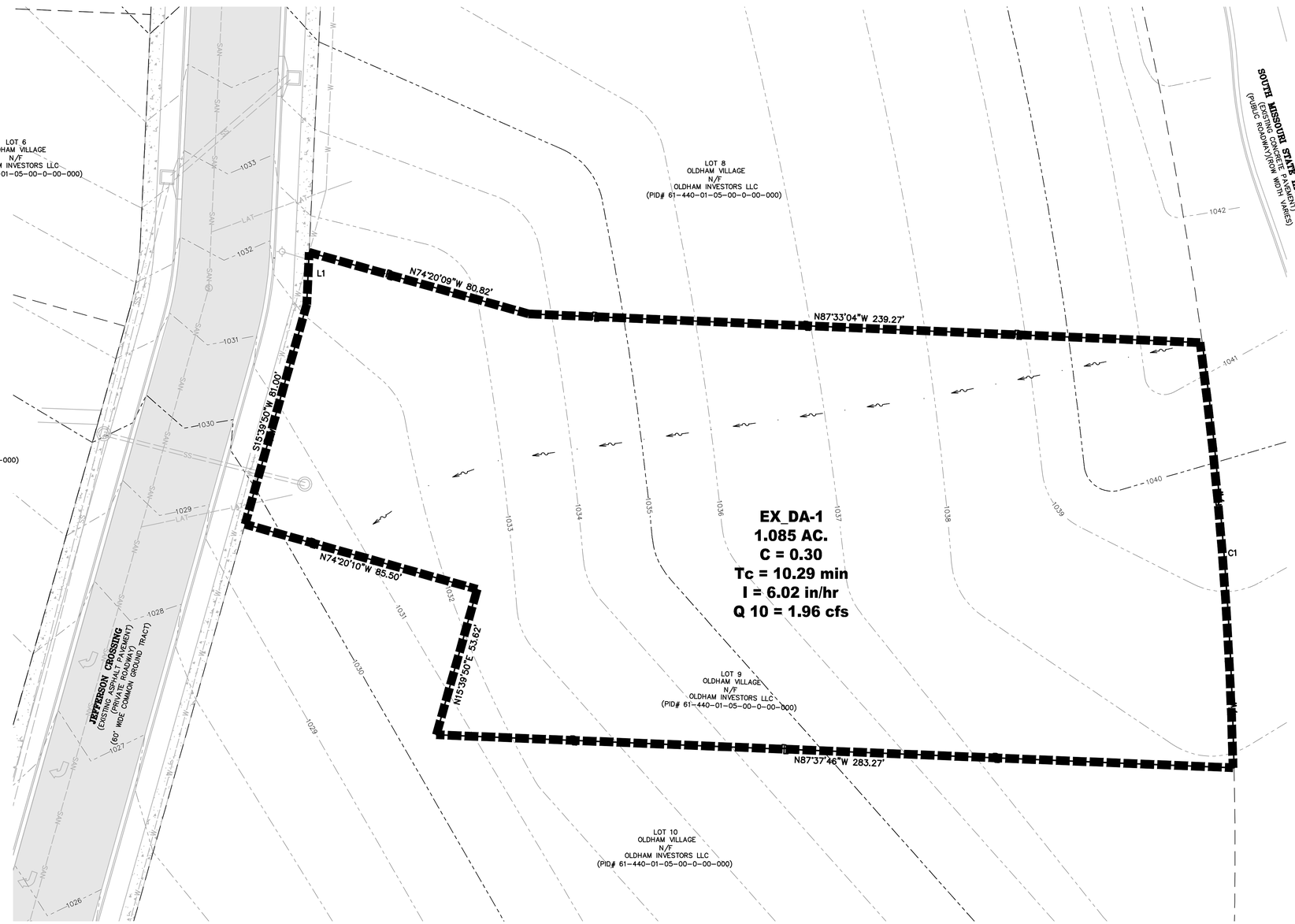
DRN. BY: KAF APPD. BY: ESK
DATE: MAY 2025
HOR. SCALE: 1:20
VERT. SCALE: 1:10
PROJ. NO: M24-8767A
DRWG. NO: C9

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C9_STORM SEWER PLAN AND PROFILE.dwg LAYOUT TAB: STORM SEWER PLAN AND PROFILE PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell

# EXISTING DRAINAGE AREA MAP

L1
S2°38'14"W 18.48'

C1
RADIUS=1352.39'
ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




20 0 10 20 40
SCALE: 1"=20'
MAY 2025

NOTE:
SITE IS LOCATED IN THE CEDAR CREEK WATERSHED.

| PROPOSED RATIONAL METHOD CALCULATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PERVIOUS | IMPERVIOUS | TOTAL AREA | COMPOSITE C | Tc | INTENSITY | 10 YR. FLOW |
| 1 | 1.085 | 0.00 | 1.085 | 0.30 | 10.29 | 6.02 | 1.96 |

| ONSITE RATIONAL METHOD FLOW DIFFERENTIAL | |
|---|---|
| EXISTING 10 YR. | 1.96 |
| PROPOSED 10 YR. | 5.45 |
| DIFFERENCE | +3.49 |

| RUNOFF COEFFICIENT | |
|---|---|
| EXISTING | 0.30 |
| PROPOSED | 0.74 |

*OWNER*:
OLDHAM INVESTORS LLC
7200 W. 132ND ST. STE. 150
OVERLAND PARK, KANSAS 66213

*DEVELOPER*:
CLUB CARWASH OPERATING, LLC
1591 E. PRATHERSVILLE RD.
COLUMBIA, MO 65202

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636-327-0760 (fax)
wentmail@cochraneng.com
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• Architecture
• Site Development
• General Consulting
• Master Planning
COCHRAN
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall verify the location of all utility location information.

All OSHA rules & regulations established for the type of construction and methods these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
REGISTERED ENGINEER
6/23/2025
ERIC S. KIRCHNER
E-2001004618

FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

| DATE: | REVISIONS: | DRWN. BY: | APPD. BY: |
|---|---|---|---|
| 06/23/25 | PER CITY COMMENTS | KAF | ESK |

EXISTING DRAINAGE AREA MAP

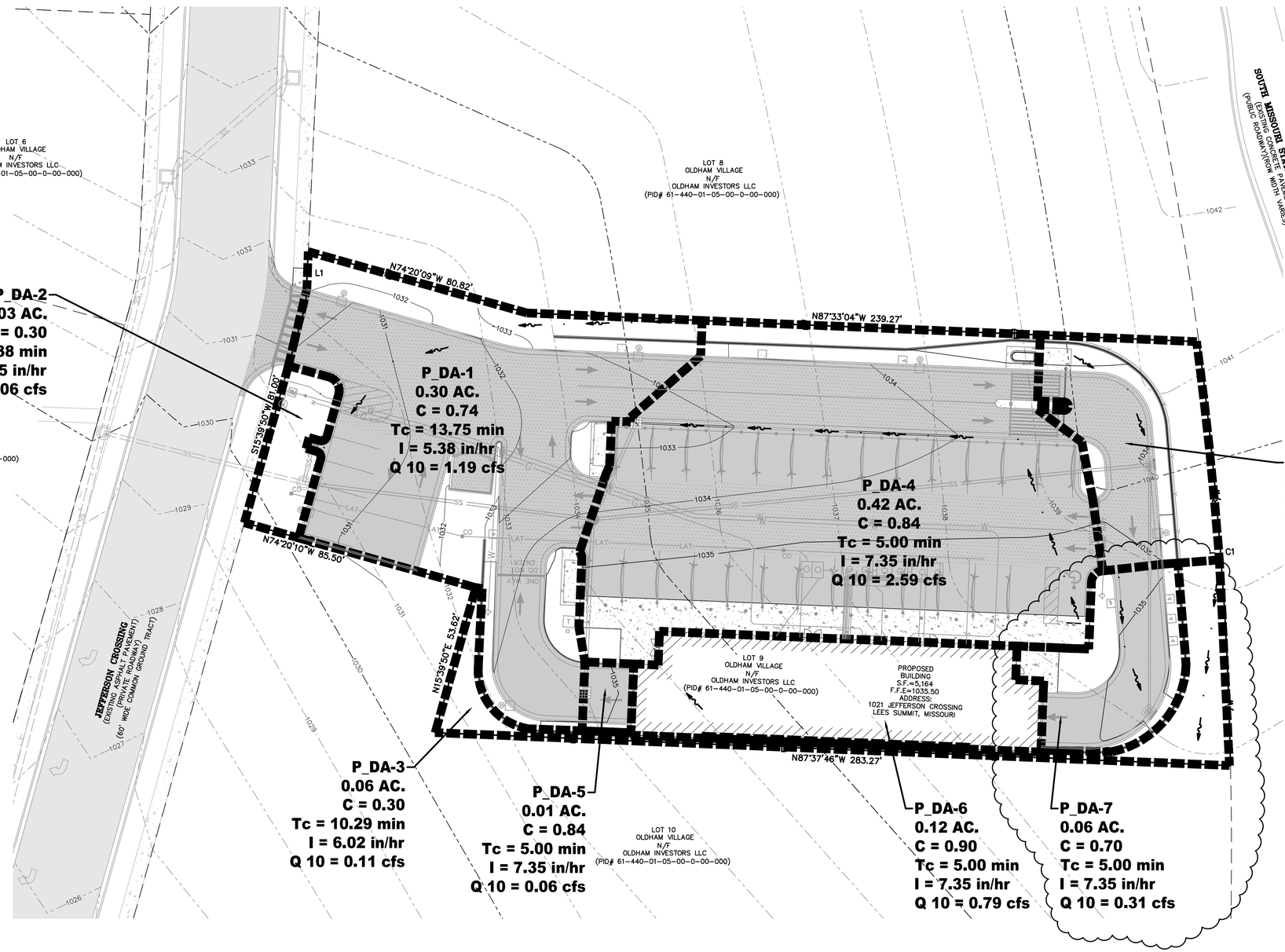
DRWN. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C10


DWG NAME: a:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C10_EXISTING DRAINAGE AREA MAP.dwg LAYOUT TAB: EXISTING DRAINAGE AREA MAP PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell

# PROPOSED DRAINAGE AREA MAP

L1
S2°38'14"W 18.48'

C1
RADIUS=1352.39'
ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




PROPOSED RATIONAL METHOD CALCULATIONS

| | PERVIOUS | IMPERVIOUS | TOTAL AREA | COMPOSITE C | Tc | INTENSITY | 10 YR. FLOW |
|---|---|---|---|---|---|---|---|
| 1 | 0.08 | 0.22 | 0.30 | 0.74 | 13.75 | 5.38 | 1.19 |
| 2 | 0.03 | 0 | 0.03 | 0.30 | 6.38 | 6.95 | 0.06 |
| 3 | 0.06 | 0 | 0.06 | 0.30 | 10.29 | 6.02 | 0.11 |
| 4 | 0.04 | 0.38 | 0.42 | 0.84 | 5.00 | 7.35 | 2.59 |
| 5 | 0.001 | 0.009 | 0.01 | 0.84 | 5.00 | 7.35 | 0.06 |
| 6 | 0 | 0.12 | 0.12 | 0.90 | 5.00 | 7.35 | 0.79 |
| 7 | 0.02 | 0.04 | 0.04 | 0.70 | 5.00 | 7.35 | 0.31 |
| 8 | 0.05 | 0.04 | 0.09 | 0.57 | 5.00 | 7.35 | 0.38 |

| ONSITE RATIONAL METHOD FLOW DIFFERENTIAL | |
|---|---|
| EXISTING 10 YR. | 1.96 |
| PROPOSED 10 YR. | 5.49 |
| DIFFERENCE | +3.53 |

| RUNOFF COEFFICIENT | |
|---|---|
| EXISTING | 0.30 |
| PROPOSED | 0.75 |

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• General Consulting
• Master Planning
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall verify the location of all utility location information.

All OSHA rules & regulations established for the type of construction performed on these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
8/15/2025
ERIC S. KIRCHNER
E-2001004618

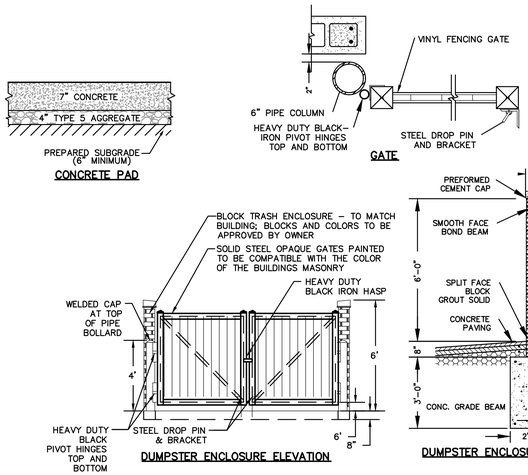
FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

PROPOSED DRAINAGE AREA MAP

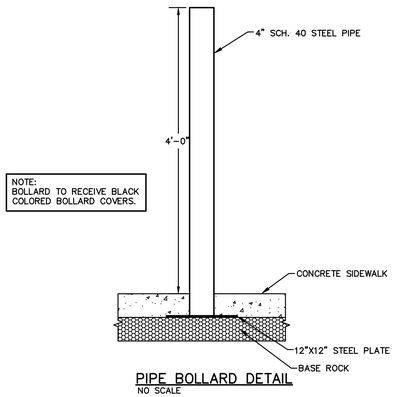
| REVISIONS: | DATE: | DRN. BY: | APPD. BY: |
|---|---|---|---|
| PER CITY COMMENTS | 06/23/25 | KAF | ESK |
| PER CLIENT REQUEST | 08/15/25 | KAF | ESK |

DRN. BY: KAF APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C11

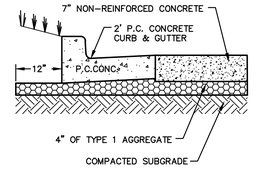
DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C11_PROPOSED DRAINAGE AREA MAP.dwg LAYOUT TAB: C11 PROPOSED DRAINAGE AREA MAP PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell



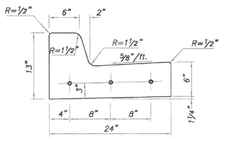

TRASH ENCLOSURE DETAIL
NO SCALE




PIPE BOLLARD DETAIL
NO SCALE

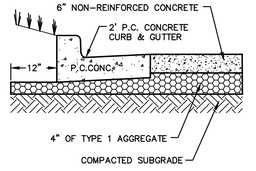



HEAVY DUTY CONCRETE PAVING
NO SCALE

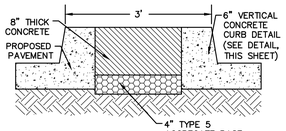



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)

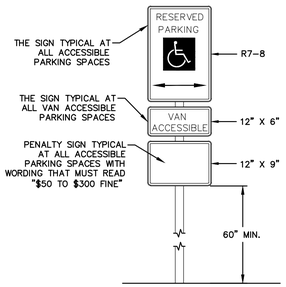
APWA TYPE "CG-1" CONCRETE CURB AND GUTTER
NO SCALE



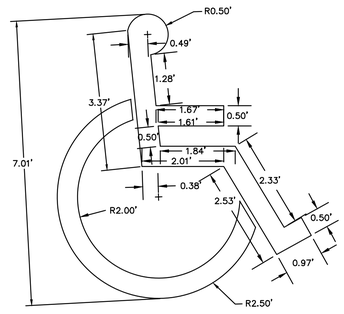

STANDARD DUTY CONCRETE PAVING
NO SCALE



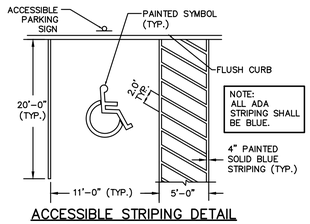

CONCRETE ISLAND DETAIL
NO SCALE



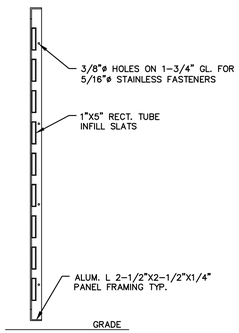

ACCESSIBLE PARKING SIGN DETAIL
NO SCALE



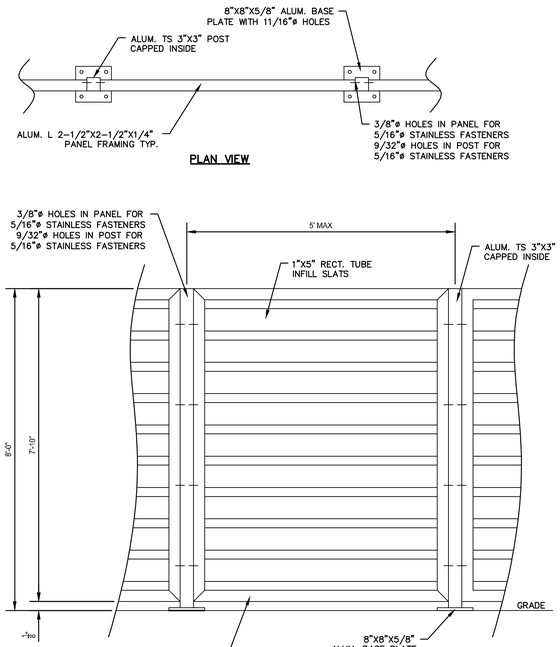

ACCESSIBLE PARKING SYMBOL DETAIL
NO SCALE

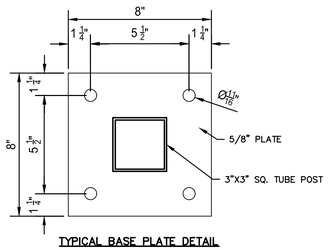



ACCESSIBLE STRIPING DETAIL
NO SCALE



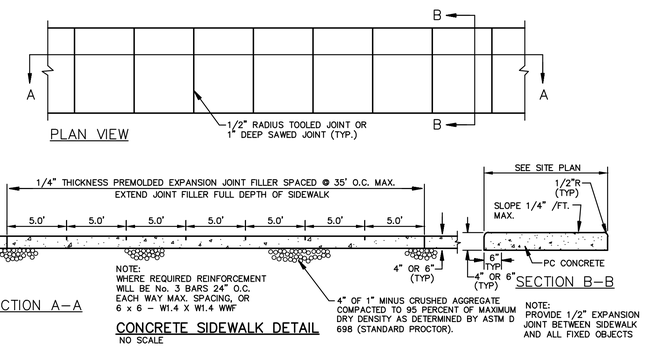

TYPICAL PANEL SECTION



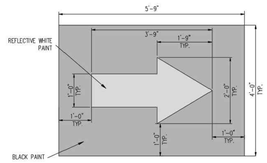




NOTE:
PANELS SHIPPED FULLY FABRICATED AND ASSEMBLED. PANEL FRAMEWORK AND ILFILL COLOR TO BE DETERMINED. PANEL FRAME WORK AND INFILL COMPOSITE COLOR TO BE DETERMINED.

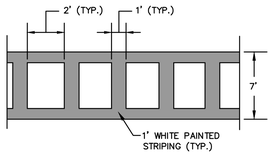
TYPICAL METAL TURBINE SCREENING DETAIL
NO SCALE



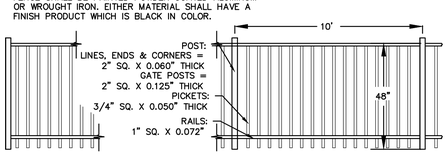

CONCRETE SIDEWALK DETAIL
NO SCALE



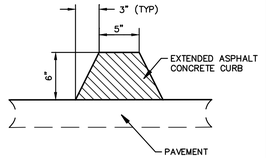

TRAFFIC FLOW ARROW DETAIL
NO SCALE




CROSSWALK DETAIL
NO SCALE




METAL FENCE DETAIL
NO SCALE




TEMPORARY ASPHALT CURB
NO SCALE

*OWNER*:
OLDHAM INVESTORS LLC
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*DEVELOPER*:
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1591 E. PRATHERSVILLE RD.
COLUMBIA, MO 65202


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• Master Planning
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall contact Missouri One Call for utility location information.

All OSHA rules & regulations established for the type of excavation shown on these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
ENGINEER
6/23/2025
ERIC S. KIRCHNER
E-2001004618

# FINAL DEVELOPMENT PLANS
# CLUB CARWASH
# LEE'S SUMMIT, MISSOURI

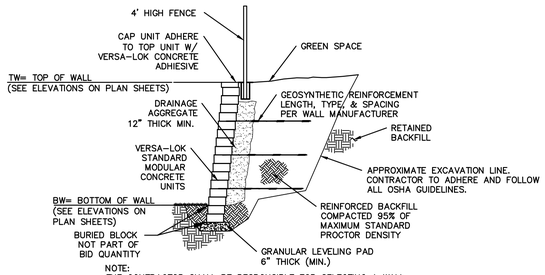
| DATE: | REVISIONS: | DRW. BY: | APPD. BY: |
|---|---|---|---|
| 06/23/25 | PER CITY COMMENTS | KAF | ESK |

DRW. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: NO SCALE
PROJ. NO: M24-8767A
DWG. NO: C12
DETAILS

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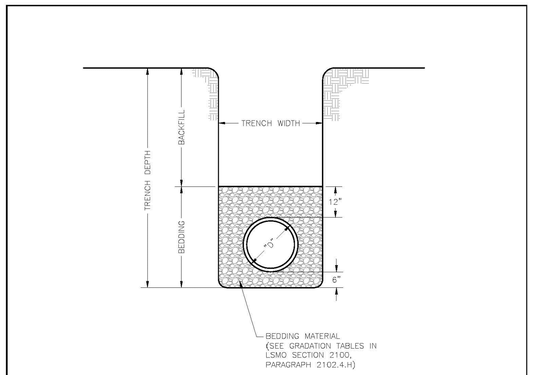
DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C12_DETAILS.dwg LAYOUT TAB: DETAILS PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell

NOTE:
THE QUANTITIES OF WALL SHOWN IN THE BID FORM ARE BASED UPON SQUARE FEET OF EXPOSED WALL ACCORDING TO THE TW AND BW ELEVATIONS SHOWN ON THE PLANS. ANY BLOCK OR FOOTING BELOW THE BW ELEVATION SHOWN ON THE PLANS ARE DEPENDENT ON THE CONTRACTOR AND SELECTED WALL MANUFACTURER/DESIGNER AND SHOULD BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR THE WALL. THE CONTRACTOR SHALL NOT RECEIVE UNIT PRICE PAYMENT FOR ANY BLOCK BELOW FINISH GRADE OR ANY ADDITIONAL PAYMENT FOR THE WALL FOOTING.




NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING A WALL MANUFACTURER WHO WILL BE RESPONSIBLE FOR THE WALL DESIGN ACCORDING TO SITE CHARACTERISTICS AND SUBMIT TO THE CITY FOR WALL PERMIT INDEPENDENT OF THE PERMIT ASSOCIATED WITH THIS SET OF PLANS.

## TYPICAL SECTION REINFORCED RETAINING WALL DETAIL
NO SCALE



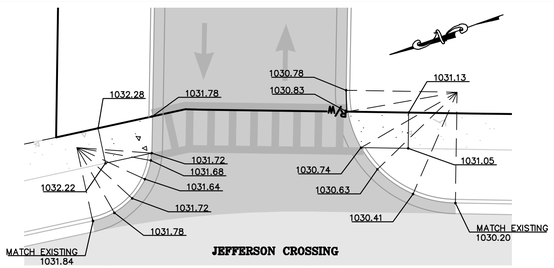

NOTES:

1. FOR TRENCHING AND PAVEMENT PATCHING REPAIRS WITHIN EXISTING OR FUTURE STREETS SEE STANDARD DETAIL GEN-5.
2. EXCAVATION DEPTH, SLOPES, SHORING, AND STOCKPILE LOCATIONS SHALL COMPLY WITH OSHA REGULATIONS.

**LEE'S SUMMIT**
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

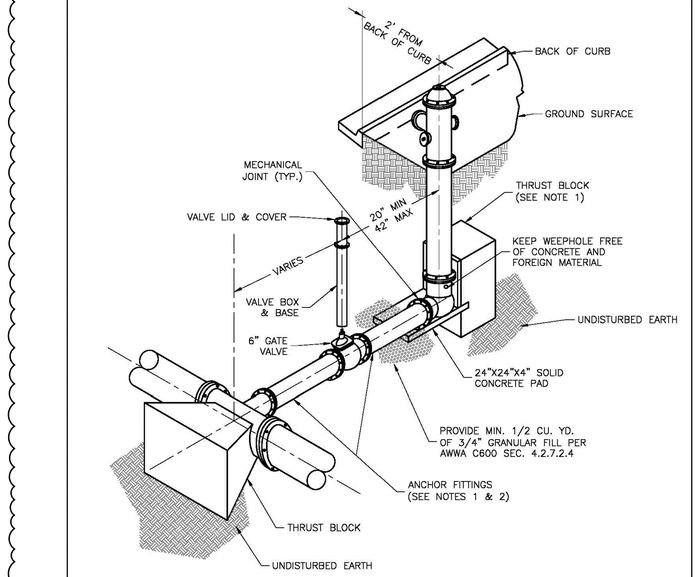
PIPE BEDDING DETAIL — GEN-6

Date: 08/2023
Drawn By: MJF
Checked By: GMB




NOTE:
SPOT ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

*ENTRANCE*
SCALE: 1" = 10'



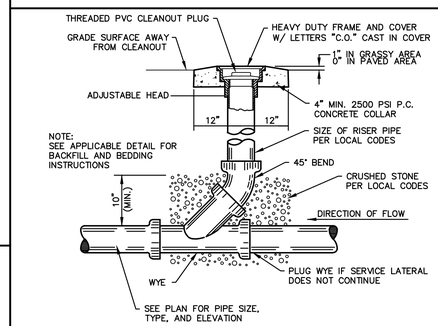

NOTES:

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF ANCHOR FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO ANCHOR TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

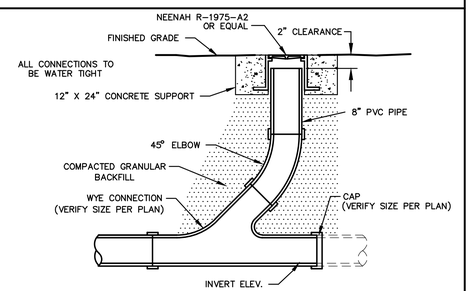
**LEE'S SUMMIT**
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT - STRAIGHT SET — WAT-7

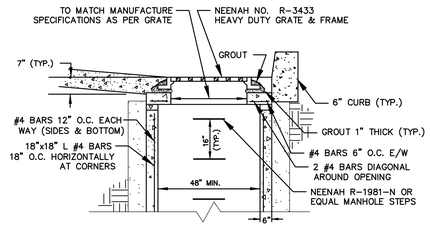
Date: 08/2023
Drawn By: MJF
Checked By: KLY



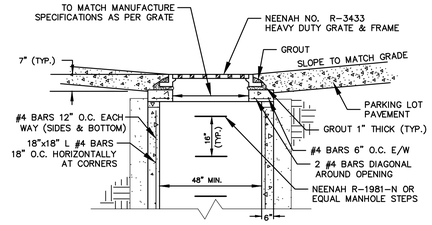

## SANITARY SEWER CLEAN-OUT DETAIL
NO SCALE




## DOWNSPOUT CLEANOUT DETAIL
NO SCALE

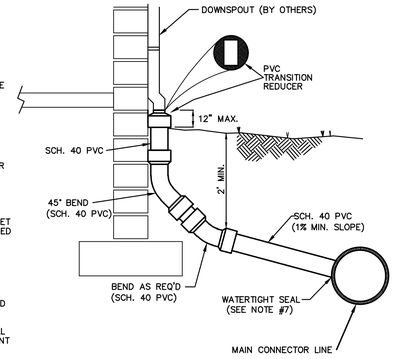



## GRATED CURB INLET DETAIL
NO SCALE



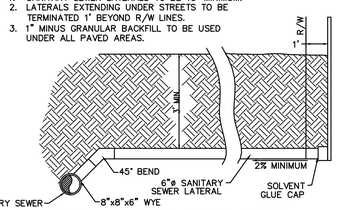

## GRATED INLET DETAIL
NO SCALE

1. ALL TRENCHES SHALL HAVE A BEDDING OF WELL GRADED, 1" MINUS, GRANULAR MATERIAL FROM 4" BELOW THE BOTTOM OF THE PIPE TO 1/2 THE DIAMETER OF THE PIPE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
2. IN AREAS TO BE PAVED OVER, ENTIRE TRENCH TO BE BACKFILLED WITH WELL GRADED 1" MINUS GRANULAR MATERIAL & COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY.
3. IN AREAS OF CLEAN DIRT CUTS OUTSIDE OF PAVED AREAS, TRENCH MAY BE BACKFILLED WITH SAME MATERIAL AND COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY.
4. IN AREAS OF ROCK CUT, THE TRENCH SHALL BE BACKFILLED WITH WELL GRADED 1" MINUS GRANULAR MATERIAL TO 6" ABOVE TOP OF PIPE.
5. BACKFILL SHALL BE HOLLOWED OUT FOR PIPE JOINTS AND FITTINGS. PIPE JOINTS ARE TO BE UNSUPPORTED.
6. IN ALL CASES TRENCHING & BACKFILLING SHALL MEET OR EXCEED THE PIPE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS
7. WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
8. THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.
9. DOWNSPOUT SIZE WILL CONTROL SCH 40 SIZE TO MAIN COLLECTOR LINE

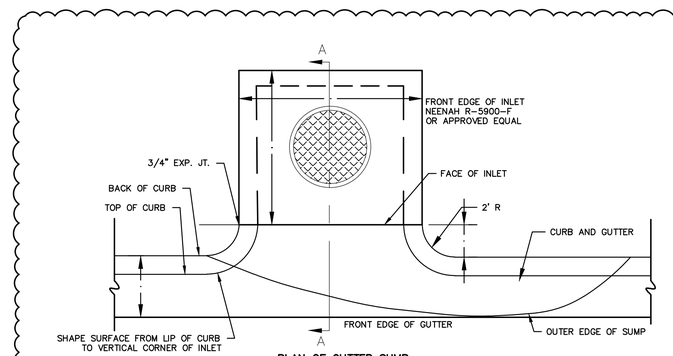



## DOWNSPOUT COLLECTOR DETAIL
NO SCALE

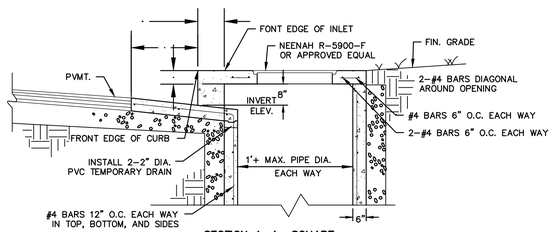
NOTE:
1. SANITARY SEWER LATERALS TO BE 13' MINIMUM.
2. LATERALS EXTENDING UNDER STREETS TO BE TERMINATED 1' BEYOND R/W LINES.
3. 1" MINUS GRANULAR BACKFILL TO BE USED UNDER ALL PAVED AREAS.




## SANITARY SEWER LATERAL DETAIL
NO SCALE




PLAN OF GUTTER SUMP




SECTION A-A SQUARE

## CURB INLET DETAIL
NO SCALE

*OWNER:*
OLDHAM INVESTORS LLC
7200 W. 132ND ST. STE. 150
OVERLAND PARK, KANSAS 66213

*DEVELOPER:*
CLUB CARWASH OPERATING, LLC
1591 E. PRATHERSVILLE RD.
COLUMBIA, MO 65202


North Office
Lee's Summit
Wentzville, Missouri 63385
636-332-4574 (tel.)
636-327-0760 (fax)
wentmail@cochraneng.com


• Civil Engineering
• Land Surveying
• Architecture
• Site Development
• General Consulting
• Master Planning

Missouri State Certificate of Authority Numbers: 2010000046

Two working days prior to the start of any excavation on this site, contractor shall call Missouri One Call for utility location information.

All OSHA rules & regulations established for the type of construction involved in these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
8/13/2025
ERIC S. KIRCHNER
E-2001004618

*FINAL DEVELOPMENT PLANS*
*CLUB CARWASH*
*LEE'S SUMMIT, MISSOURI*

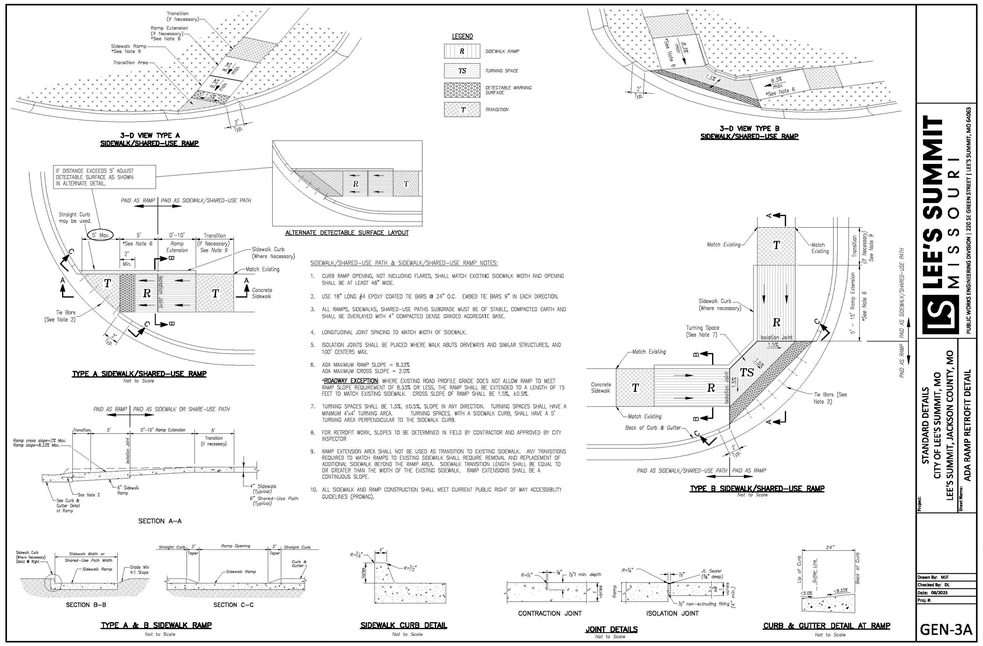
| DATE: | REVISIONS: | DRN. BY: | APPD. BY: |
|---|---|---|---|
| 06/23/25 | PER CITY COMMENTS | KAF | ESK |
| 08/15/25 | PER CLIENT REQUEST | KAF | ESK |

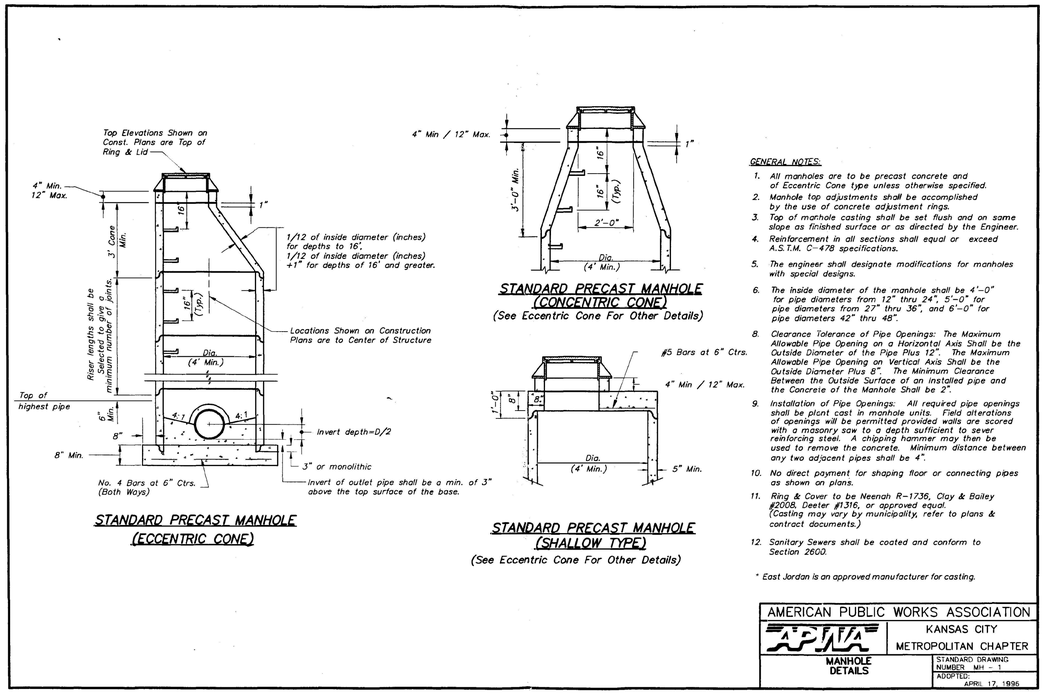
DRN. BY: KAF — APPD. BY: ESK
DATE: MAY 2025
SCALE: NO SCALE
PROJ. NO: M24-8767A
DWG. NO: C13

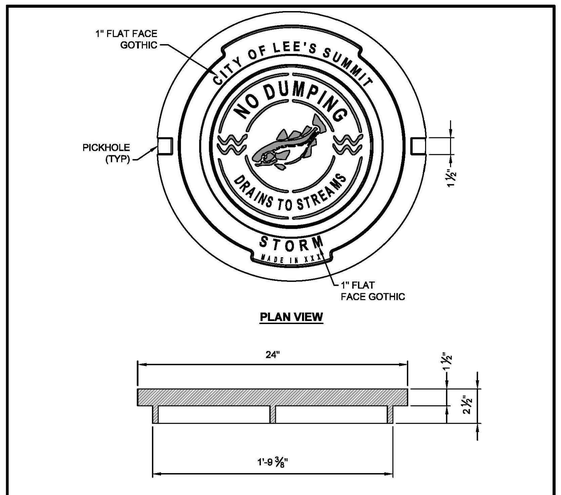
DETAILS

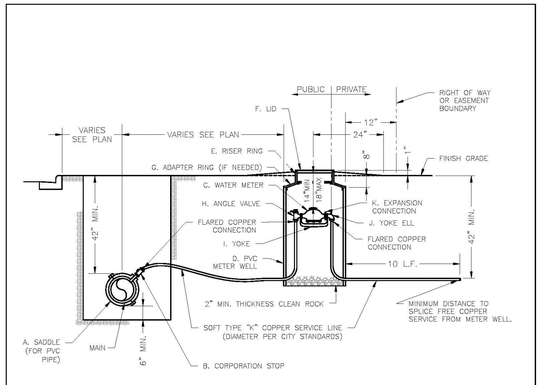
CALL OR CLICK 3 DAYS BEFORE YOU DIG!
MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE OR 811
www.mo1call.com

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C13_DETAILS.dwg LAYOUT TAB: DETAILS PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell




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7200 W. 132ND ST. STE. 150
OVERLAND PARK, KANSAS 66213

*DEVELOPER*:
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Missouri State Certificate of Authority Numbers: 2010000046

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STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
4/28/2025
ERIC S. KIRCHNER
E-2001004618

# FINAL DEVELOPMENT PLANS
## CLUB CARWASH
## LEE'S SUMMIT, MISSOURI

| DRN. BY: | APPD. BY: |
|---|---|
| KAF | ESK |

DATE: MAY 2025
SCALE: NO SCALE
PROJ. NO: M24-8767A
DWG. NO: C14
DETAILS

CALL OR CLICK 3 DAYS BEFORE YOU DIG!
MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE OR 811
www.mo1call.com

DWG NAME: J:\2024\W24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\W24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\W24-8767A_C14_DETAILS.dwg LAYOUT TAB: DETAILS PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell

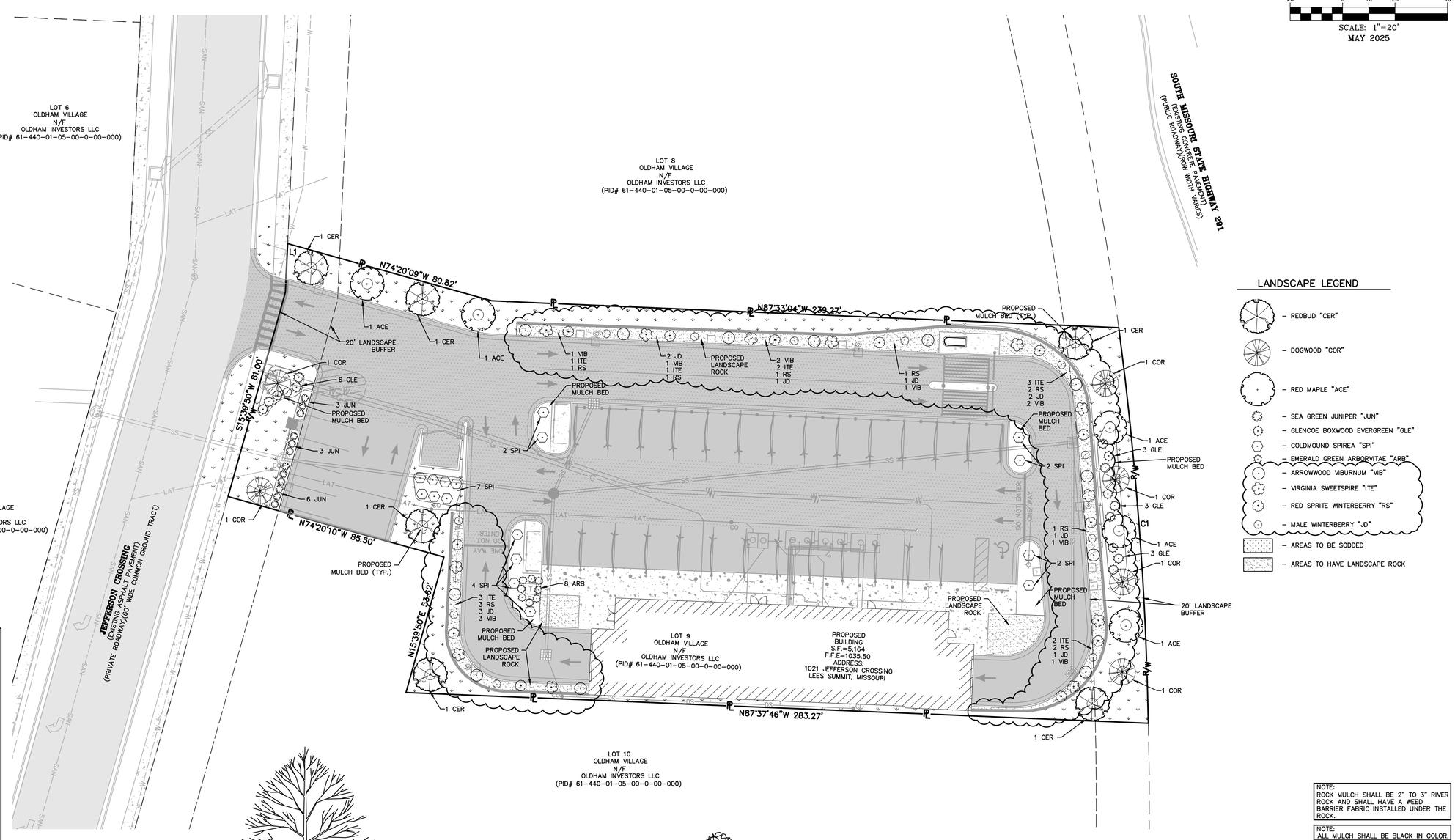
# LANDSCAPE PLAN

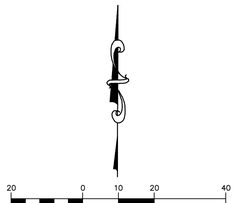
L1
S2°38'14"W 18.48'

C1
RADIUS=1352.39'
ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'

## NOTES:

1. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES. PLANT QUANTITIES ON PLANS PREVAIL OVER THOSE LISTED IN PLANT LIST.
2. CONTRACTOR SHALL VERIFY SITE CONDITIONS, INCLUDING UNDERGROUND UTILITIES PRIOR TO START OF WORK. REPORT TO OWNER'S REPRESENTATIVE ANY CONDITION THAT MAY AFFECT CONTRACT. CONTRACTOR SHALL REPAIR ANY DAMAGE TO SITE ELEMENTS DUE TO CONTRACTOR'S ACTIVITY AT NO EXTRA COST TO OWNER.
3. CONTRACTOR SHALL COORDINATE SCHEDULE AND INSTALLATION OF LANDSCAPING WITH THE OWNER'S REPRESENTATIVE.
4. MULCH ENTIRE SHRUB PLANTING AREAS WITH 3" DEPTH OF SHREDDED BARK MULCH. ALL SHRUBS BEDS IN LAWN AREAS TO HAVE SPADE CUT EDGE. PROVIDE 4' DIA. MULCH RING AROUND ALL NEW TREES WITH MIN. 3" DEPTH OF SHREDDED BARK MULCH. GROUND COVER BEDS TO RECEIVE MIN. 2" DEPTH OF SHREDDED BARK MULCH.
5. FORMAL LINES AND GROUPINGS OF A SPECIES OF TREE SHALL BE MATCHED FOR SIZE AND FORM.
6. CONTRACTOR SHALL COORDINATE SCHEDULE AND STAKING/LOCATION OF BED EDGES WITH IRRIGATION CONTRACTOR.
7. ALL DISTURBED AREAS SHALL BE SODDED.
8. ALL SEEDED AREAS ON SLOPES OF 3:1 OR GREATER SHALL HAVE EROSION CONTROL BLANKETS AS SPECIFIED.




SCALE: 1"=20'
MAY 2025

## LANDSCAPE LEGEND

- REDBUD "CER"
- DOGWOOD "COR"
- RED MAPLE "ACE"
- SEA GREEN JUNIPER "JUN"
- GLENCOE BOXWOOD EVERGREEN "GLE"
- GOLDMOUND SPIREA "SPI"
- EMERALD GREEN ARBORVITAE "ARB"
- ARROWWOOD VIBURNUM "VIB"
- VIRGINIA SWEETSPIRE "ITE"
- RED SPRITE WINTERBERRY "RS"
- MALE WINTERBERRY "JD"
- AREAS TO BE SODDED
- AREAS TO HAVE LANDSCAPE ROCK

LANDSCAPE REQUIREMENTS:

ONE TREE SHALL BE PLANTED FOR 30 LF OF STREET FRONTAGE.
HWY 291:
151.38 LF/ 30 = 5.05
REQUIRED TREES = 5
PROVIDED TREES = 5

SW JEFFERSON ST:
99.48 LF/ 30 = 3.32
REQUIRED TREES = 3
PROVIDED TREES = 3

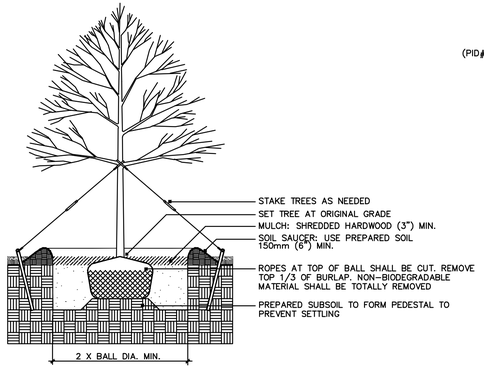
ONE SHRUB SHALL BE PLANTED FOR 20 LF OF STREET FRONTAGE.
HWY 291:
151.38 LF/ 20 = 7.57
REQUIRED SHRUBS = 8
PROVIDED SHRUBS = 9

SW JEFFERSON ST:
99.48 LF/ 20 = 4.97
REQUIRED SHRUBS = 5
PROVIDED SHRUBS = 6

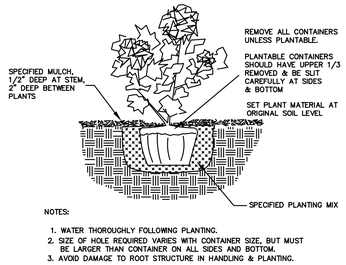
TWO SHRUBS SHALL BE PLANTED EVERY 5,000 SF OF TOTAL LOT AREA (EXCLUDING BUILDING FOOTPRINT).
42,079.10 SF/ 5,000 SF = 8.4
8.4 X 2 = 16.8
REQUIRED SHRUBS = 17
PROVIDED SHRUBS = 17

ONE TREE SHALL BE PLANTED EVERY 5,000 SF OF TOTAL LOT AREA (EXCLUDING BUILDING FOOTPRINT).
42,079.10 SF/ 5,000 SF = 8.4
REQUIRED TREES = 9
PROVIDED TREES = 9

LANDSCAPE ISLANDS ARE TO BE LOCATED IN PARKING LOTS & SHALL CONSTITUTE 5% OF THE PAVED AREA.
28,681.19 X 5% = 1,171.74 SF
REQUIRED ISLAND SPACE = 1,171.74 SF
PROVIDED ISLAND SPACE = 1,271.92 SF




DECIDUOUS TREE PLANTING




NOTES:
1. WATER THOROUGHLY FOLLOWING PLANTING.
2. SIZE OF HOLE REQUIRED VARIES WITH CONTAINER SIZE, BUT MUST BE LARGER THAN CONTAINER ON ALL SIDES AND BOTTOM.
3. AVOID DAMAGE TO ROOT STRUCTURE IN HANDLING & PLANTING.

## PLANT SCHEDULE

| QTY | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | TYPE |
|---|---|---|---|---|---|
| DECIDUOUS TREES | | | | | |
| 6 | Cercis canadensis | Redbud | 2 IN | AS SHOWN | B&B |
| 6 | Cornus sanguinea | Dogwood | 2 IN | AS SHOWN | B&B |
| 5 | Acer rubrum | Red Maple | 2 IN | AS SHOWN | B&B |
| SHRUBS | | | | | |
| 12 | Juniperous chinensis "Sea Green" | Sea Green Juniper | 3 GAL | AS SHOWN | CONT |
| 15 | Boxus hybrid "Glencoe" | Glencoe Boxwood Evergreen | 3 GAL | AS SHOWN | CONT |
| 17 | Spirea Japonica | Goldmound Spirea | 5 GAL | AS SHOWN | CONT |
| 8 | Thuja Occidentalis 'Emerald Green' | Arborvitae | 6' MIN HEIGHT | AS SHOWN | CONT |
| 11 | Ilex Verticillata "Jim Dandy" | Male Winterberry | 5 GAL | AS SHOWN | CONT |
| 12 | Ilex Verticillata "Red Sprite" | Red Sprite Winterberry | 5 GAL | AS SHOWN | CONT |
| 12 | Itea Virginica | Virginia Sweetspire | 5 GAL | AS SHOWN | CONT |
| 12 | Virburnum Dentatum | Arrowwood Viburnum | 5 GAL | AS SHOWN | CONT |

NOTE:
ROCK MULCH SHALL BE 2" TO 3" RIVER ROCK AND SHALL HAVE A WEED BARRIER FABRIC INSTALLED UNDER THE ROCK.

NOTE:
ALL MULCH SHALL BE BLACK IN COLOR.

NOTE:
ALL MULCH SHALL BE SINGLE SHRED (COURSE) MULCH. DOUBLE SHRED MULCH WILL NOT BE ACCPTED.

NOTE:
ALL SOD TO BE TALL FESCUE.

NOTE:
THE SEA GREEN JUNIPER EVERGREENS SHALL BE PLANTED IN A MANNER TO CREATE A HEDGEROW. LANDSCAPE INSTALLER SHALL INSURE THESE SHRUBS CREATE A HEDGEROW AND SHALL BE 30" IN HEIGHT AT THE TIME OF INSTALLATION.

NOTE:
ALL DISTURBED AREAS TO BE SODDED.

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COCHRAN
Missouri State Certificate of Authority Numbers: 2010000046


Two working days prior to the start of any excavation on this site, contractor shall verify the location of all utility location information.

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STATE OF MISSOURI
ERIC SCOTT KIRCHNER
E-2001004618
PROFESSIONAL ENGINEER
8/15/2025
ERIC S. KIRCHNER
E-2001004618

# FINAL DEVELOPMENT PLANS
## CLUB CARWASH
## LEE'S SUMMIT, MISSOURI

| REVISION: | DRWN. BY: | APPD. BY: |
|---|---|---|
| DATE: | | |
| 06/23/25 PER CITY COMMENTS | KAF | ESK |
| 08/15/25 PER CLIENT REQUEST | KAF | ESK |

LANDSCAPE PLAN

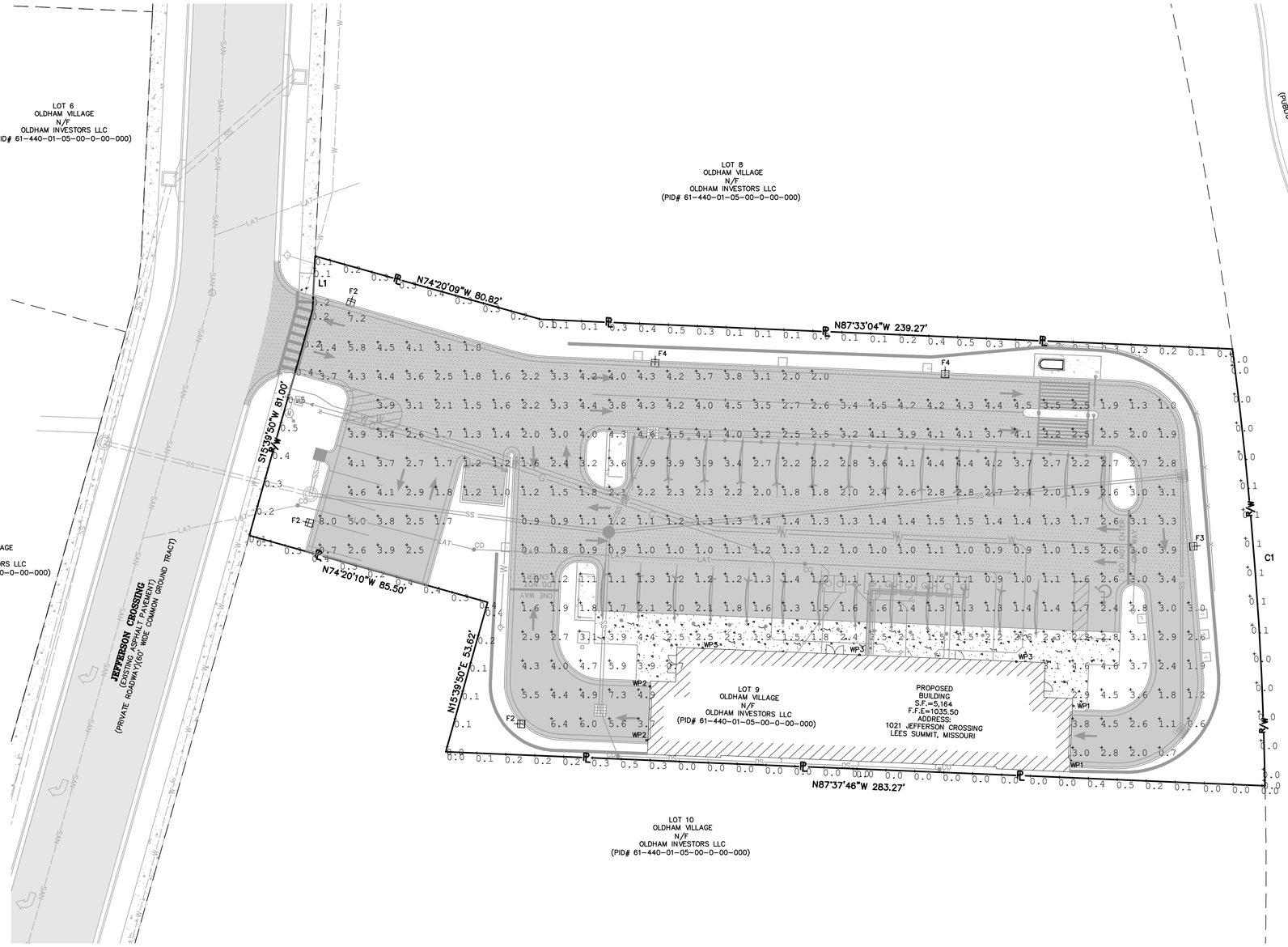
DRWN. BY: KAF
APPD. BY: ESK
DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C15

DWG NAME: J:\2024\M24-8767 - CCW 1310 SW Market St, Lot 7, Lees Summit, MO\M24-8767A Lot 9, Oldham Village\ENGINEERING\AUTOCAD DRAWINGS\02A_ Final Development Plan\M24-8767A_C15_LANDSCAPE PLAN.dwg LAYOUT TAB: SITE PLAN PLOTTED ON: Aug 15, 2025 - 10:47am PLOTTED BY: KFarrell

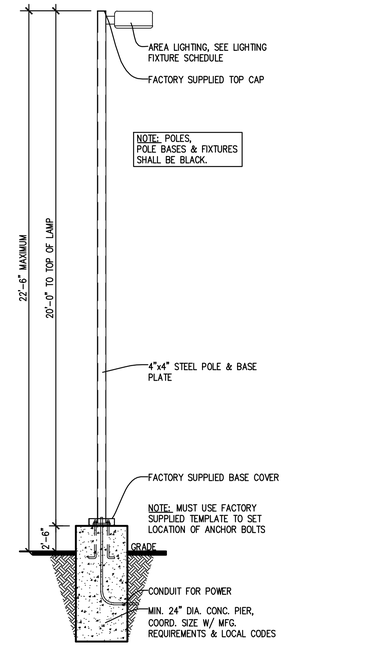
# PHOTOMETRICS PLAN

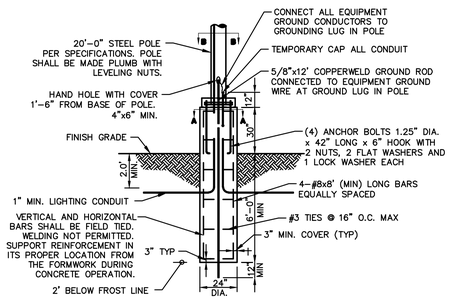
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ARC LENGTH=151.33'
CHORD BEARING= S04°16'43"E
CHORD LENGTH=151.25'




SCALE: 1"=20'
MAY 2025




NOTES:
1. 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL.
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
4. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSF.
5. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUEOF 1000 PSF.
6. FOUNDATION HAS BEEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSF, UTILIZING AASHTO FIGURE 1.8.2C(4) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS."
7. EXPOSED CONCRETE SHALL BE PAINTED TRAFFIC YELLOW.
8. DETAIL FOR 20'-0" POLE AND 22'-6" MOUNTING HEIGHT WITH MAX. FIXTURE EPA 4.6 SQ.FT.

STANDARD LIGHT DETAIL
NO SCALE

| Calculation Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| PROPERTY LINE | Illuminance | Fc | 0.2 | 0.5 | 0.0 | N.A. | N.A. |
| SITE | Illuminance | Fc | 2.6 | 8.0 | 0.6 | 4.35 | 13.33 |

| Luminaire Schedule | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Symbol | Qty | Label | Arrangement | LLF | Luminaire Lumens | Luminaire Watts | Total Watts | Description |
| | 3 | F2 | Single | 0.912 | 10153 | 108 | 324 | GALN-SA2C-740-U-SLL-HSS |
| | 1 | F3 | Single | 0.912 | 12869 | 125 | 125 | GALN-SA2D-740-U-SL3-HSS |
| | 2 | F4 | Single | 0.912 | 20119 | 213 | 426 | GALN-SA4C-740-U-T4W-HSS |
| | 2 | WP1 | Single | 0.900 | 2224 | 25 | 50 | GWS-SA1B-740-U-SLR-W-HSS |
| | 2 | WP2 | Single | 0.900 | 2170 | 25 | 50 | GWS-SA1B-740-U-SLL-W-HSS |
| | 3 | WP3 | Single | 0.900 | 4643 | 34.1 | 102.3 | GWS-SA1C-740-U-T4FTR-W |

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OVERLAND PARK, KANSAS 66213

*DEVELOPER*:
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E-2001004618
ENGINEER
6/23/2025
ERIC S. KIRCHNER
E-2001004618

FINAL DEVELOPMENT PLANS
CLUB CARWASH
LEE'S SUMMIT, MISSOURI

PHOTOMETRICS PLAN

| REVISIONS: | DRWN. BY: | APPD. BY: |
|---|---|---|
| DATE: 06/23/25 PER CITY COMMENTS | KAF | ESK |

DATE: MAY 2025
SCALE: 1:20
PROJ. NO: M24-8767A
DWG. NO: C16

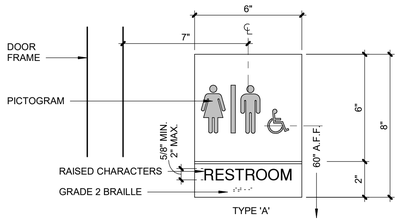
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# ACCESSIBLE SIGNAGE REQUIREMENTS

## PERMANENT ROOMS AND SPACES

SIGNAGE COMPLYING WITH THE SIGN TYPES AND REQUIREMENTS BELOW SHALL BE PROVIDED AT THE FOLLOWING INTERIOR LOCATIONS:

| LOCATION | SIGN TYPE |
|---|---|
| TOILET 104, 105 | TYPE 'A' |

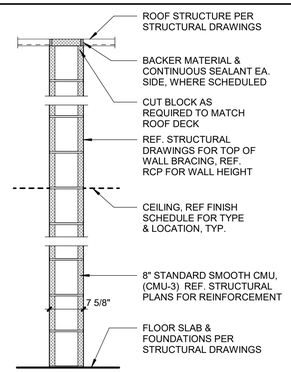



1. TACTILE & BRAILLE CHARACTERS
   a. CHARACTERS SHALL BE RAISED MINIMUM 1/32"
   b. CHARACTERS SHALL BE ACCOMPANIED BY GRADE 2 BRAILLE
2. TYPESTYLES
   a. CHARACTERS SHALL BE UPPER CASE & SANS SERIF OR SERIF TYPESTYLE
   b. CHARACTERS SHALL BE A MINIMUM OF 5/8" HIGH AND MAXIMUM 2" HIGH
3. PICTOGRAMS (SYMBOLS)
   a. PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM AS INDICATED.
   b. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6" MIN. IN HEIGHT
4. MATERIAL AND FINISH
   a. CHARACTERS AND BACKGROUND SHALL BE EGGSHELL, MATTE OR OTHER NON-GLARE FINISH AS RECOMMENDED BY THE SIGN MANUFACTURER. BACKGROUND SHALL CONSIST OF 1/4" PLASTIC
   b. CHARACTERS AND SYMBOLS SHALL ADEQUATELY CONTRAST WITH THEIR BACKGROUND, THE RECOMMENDED FINISH IS LIGHT CHARACTERS ON A DARK BACKGROUND WITH A 70% DEGREE OF CONTRAST
5. MOUNTING LOCATION AND HEIGHT
   a. MOUNT AT 60" ABOVE FINISH FLOOR TO THE CENTER OF SIGN
   b. MOUNT ON WALL ADJACENT TO THE LATCH SIDE OF THE DOOR
   c. IF NO WALL SPACE EXISTS ON THE LATCH SIDE OF THE DOOR, INCLUDING DOUBLE LEAF DOORS, MOUNT ON THE NEAREST ADJACENT WALL

## DIRECTIONAL INFORMATION

OTHER SIGNS WHICH PROVIDE DIRECTION TO OR INFORMATION ABOUT FUNCTIONAL SPACES OF THE BUILDING SHALL COMPLY WITH APPLICABLE CODES.

# PARTITION LEGEND




**51**

| Type | Fire Rating | Comments |
|---|---|---|
| 51 | | |

# DRAWING SYMBOLS LEGEND

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE DEMOLISHED

NEW CONSTRUCTION

XX — WALL TYPE DESIGNATION -
REFERENCE FLOOR PLAN(S) FOR LOCATIONS.
REFERENCE DRAWING **A0.01** FOR CONSTRUCTION REQUIREMENTS.

X / X — ROOM NAME AND NUMBER -
REFERENCE FLOOR PLAN(S) FOR LOCATIONS.
REFERENCE FINISH SCHEDULE FOR FINISHES.

XX — DOOR AND FRAME DESIGNATION -
REFERENCE FLOOR PLAN(S) FOR LOCATIONS.
REFERENCE DOOR AND FRAME SCHEDULE FOR REQUIREMENTS.

ELEVATION SYMBOL
X — REFERENCE ELEVATION
X — REFERENCE SHEET

SECTION SYMBOL
X — REFERENCE SECTION
X — REFERENCE SHEET

ENLARGED DETAIL / ENLARGED PLAN SYMBOL
X — REFERENCE DETAIL
X — REFERENCE SHEET

INTERIOR ELEVATION SYMBOL
REFERENCE ELEVATION
XXX — REFERENCE SHEET

FINISH DESIGNATION SYMBOL
XX-1 — WALL FINISH DESIGNATION
XX-1* — BASE FINISH DESIGNATION
LIMITS OF WALL AND BASE FINISHES

REFERENCE FLOOR PLAN(S) FOR LOCATIONS.
REFERENCE FINISH SCHEDULE FOR DESCRIPTIONS.

XX-# — FLOOR FINISH DESIGNATION -
REFERENCE FLOOR PLAN(S) FOR LOCATIONS.
REFERENCE FINISH SCHEDULE FOR DESCRIPTIONS.

X — REVISION NOTE

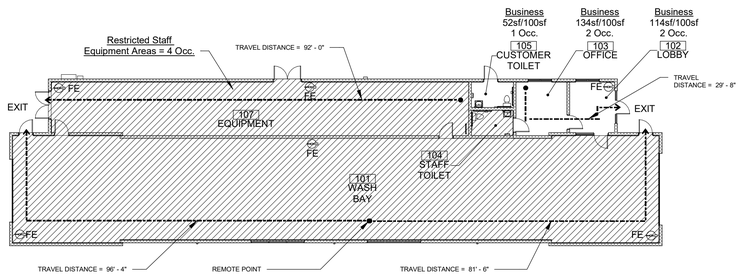
XX — CONSTRUCTION NOTE

# — DEMOLITION NOTE

# — RESTROOM ACCESSORY DESIGNATION

CJ — CONCRETE MASONRY CONTROL JOINT -
REFERENCE FLOOR PLAN(S) FOR LOCATIONS.
REFERENCE DETAIL 3/A1.01 FOR CONSTRUCTION REQUIREMENTS.

FE — WALL MOUNTED FIRE EXTINGUISHER BY LARSEN'S MANUFACTURING COMPANY, WWW.LARSENMFG.COM, MODEL MP10 W/B2 MOUNTING BRACKET, REFERENCE FLOOR PLAN(S) FOR LOCATIONS. MOUNT SO CENTERLINE OF EXTINGUISHER IS 46" A.F.F.




| | |
|---|---|
| 1 | CODE PLAN |
| A0.01 | SCALE : 1/16" = 1'-0" |

# GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE MINIMUM STANDARDS OF THE APPLICABLE CODE INDICATED IN THE BUILDING SUMMARY COLUMN AND ALL LOCAL CODES PRESENTLY IN EFFECT UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
2. ALL NEW CONSTRUCTION SHALL COMPLY W/THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) AND CHAPTER 11 OF THE INTERNATIONAL BUILDING CODE (INCLUDES ICC A117.1 PER IBC)
3. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, AND ALL UTILITY CHARGES, AND ARRANGE FOR ALL REQUIRED INSPECTIONS.
4. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING BUILDING & SITE UTILITIES BETWEEN CIVIL & MEP DRAWINGS. THE CONTRACTOR SHALL ALSO CONTACT ALL APPLICABLE UTILITY COMPANIES & PROVIDE CONDUIT & OTHER FACILITIES AS REQUIRED.
5. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS & CONDITIONS ON THE JOB SITE PRIOR TO THE BIDDING OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

   IN CASES OF DISCREPANCY CONCERNING DIMENSIONS, QUANTITIES AND LOCATION, THE CONTRACTOR SHALL, IN WRITING, CALL TO THE ATTENTION OF THE ARCHITECT ANY DISCREPANCIES BETWEEN SPECIFICATIONS, PLANS, DETAILS OR SCHEDULES. THE ARCHITECT WILL THEN INFORM THE CONTRACTOR, IN WRITING, WHICH DOCUMENT TAKES PRECEDENCE. THERE SHALL BE NO ADJUSTMENT TO THE COST OR TIME OF THE WORK RESULTING FROM CLARIFICATION OF SUCH DISCREPANCIES.
6. DIMENSIONS ON DRAWINGS ARE SHOWN TO FINISHED FACE OF WALLS AND PARTITIONS OF EXISTING OR NEW CONSTRUCTION UNLESS OTHERWISE NOTED. CEILING HEIGHT DIMENSIONS AND ALL OTHER VERTICAL DIMENSIONS ARE TO THE FINISHED FLOOR SURFACE UNLESS OTHERWISE NOTED.
7. CONTRACTOR TO FOLLOW ALL PRODUCT MANUFACTURER INSTALLATION REQUIREMENTS FOR ALL BUILDING PRODUCTS. IN THE EVENT OF A CONFLICT BETWEEN INFORMATION SHOWN ON THE CONTRACT DOCUMENTS AND PRODUCT MANUFACTURER INSTALLATION REQUIREMENTS, PRODUCT MANUFACTURER INSTALLATION REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONFLICTS BETWEEN PRODUCT MANUFACTURER INSTALLATION REQUIREMENTS AND THE CONTRACT DOCUMENTS PRIOR TO INSTALLATION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS, PRODUCT DATA, OR SAMPLES FOR CASEWORK, FINISHES, DOORS, FRAMES, HARDWARE, MECHANICAL, ELECTRICAL, AND PLUMBING FIXTURES, AND OTHER ITEMS REQUIRING ARCHITECT'S REVIEW FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND FOR ALL ITEMS WHICH ALLOWED CONTRACTOR OPTIONS. PRIOR TO FORWARDING TO THE ARCHITECT FOR REVIEW. THESE SUBMITTALS MUST BE REVIEWED BY THE CONTRACTOR FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL AFFIX A STAMP TO SUBMITTAL INDICATING HIS REVIEW. SUBMITTALS FORWARDED WITHOUT A STAMP WILL BE RETURNED. ALL SUBMITTALS MUST BE REVIEWED BY THE ARCHITECT PRIOR TO CONSTRUCTION.
9. CONTRACTOR SHALL GUARANTEE ALL WORK AGAINST FAULT OF ANY MATERIAL OR WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE YEAR AFTER COMPLETION OR ACCEPTANCE. FAULTY WORK SHALL BE REPLACED OR REPAIRED AS REQUIRED AT NO COST TO THE OWNER.
10. CONTRACTOR SHALL COORDINATE WITH OWNER ALL ITEMS TO BE SALVAGED PRIOR TO SUBMISSION OF BIDS AND START OF CONSTRUCTION. OWNER SHALL HAVE SALVAGE RIGHTS TO RETAIN ALL REMOVED ITEMS.
11. ALL CHANGES PROPOSED DURING CONSTRUCTION WHICH RESULT IN A CHANGE TO THE CONTRACT TIME AND/OR SUM SHALL BE SUBMITTED TO THE ARCHITECT IN WRITING AND APPROVED BY THE ARCHITECT AND OWNER BEFORE SUCH WORK SHALL COMMENCE.
12. CONTRACTOR SHALL COORDINATE CLEAR OPENINGS FOR ALL APPLIANCES PRIOR TO CONSTRUCTION OF CASEWORK.
13. CONTRACTOR SHALL FURNISH AND INSTALL CONCEALED FIRE-RETARDANT TREATED WOOD BLOCKING BEHIND ALL CABINETS, TOILET ACCESSORIES, PLUMBING FIXTURES, AND OTHER WALL MOUNTED ITEMS AS REQUIRED FOR ADEQUATE SUPPORT.
14. CONTRACTOR SHALL COORDINATE ALL LOCK AND LATCH SETS AND FINAL KEYING WITH OWNER. DOUBLE KEYED LOCKS ARE NOT PERMITTED ON ANY REQUIRED OR MARKED EXIT. MATCH EXISTING KEYING SYSTEM IF ONE IS EXISTING.
15. ALL DOOR HARDWARE ON EXIT DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT.
16. CONTRACTOR SHALL PREPARE ALL NEW AND EXISTING SURFACES SCHEDULED TO RECEIVE NEW FINISHES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE SUBSTRATE & FINISH BEING APPLIED.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING CONSTRUCTION INDICATED TO REMAIN AND SHALL REPAIR AND/OR REPLACE ALL AREAS AND/OR MATERIALS DAMAGED DURING CONSTRUCTION AT A MINIMUM TO THE CONDITION WHICH EXISTED PRIOR TO CONSTRUCTION.
18. CONTRACTOR SHALL COORDINATE FINAL QUANTITY AND LOCATIONS OF FIRE EXTINGUISHERS WITH THE FIRE DEPARTMENT AND/OR BUILDING DEPARTMENT. SEE SYMBOLS LEGEND FOR TYPE OF EXTINGUISHER.
19. ALL CONSTRUCTION MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND MAXIMUM SMOKE DEVELOPED RATING OF 50.
20. ALL PIPING, LOW VOLTAGE WIRE AND CABLE, OPTICAL FIBER, PNEUMATIC TUBING, AND ALL DUCT AND DUCT COVERINGS, LININGS AND CONNECTORS INSTALLED WITHIN PLENUMS MUST BE RATED FOR PLENUM USE.
21. TENANT SHALL BE RESPONSIBLE FOR COORDINATION AND INSTALLATION OF VOICE AND DATA CABLING AND EQUIPMENT.
22. ALL NEW GLASS AND GLAZING LOCATED IN HAZARDOUS LOCATIONS AS DEFINED IN IBC SECTION 2406.3 SHALL MEET THE REQUIREMENTS FOR SAFETY GLAZING AS DEFINED IN IBC SECTION 2406.
23. IF THE CONTRACTOR FAILS TO SUBMIT A MATERIAL FOR APPROVAL, THE MATERIAL MAY BE REQUIRED TO BE REMOVED BY THE CONTRACTOR EITHER BY DIRECTION OF THE OWNER OR ARCHITECT.
24. ALL HIGH-PILED STORAGE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE APPLICABLE EDITION OF THE INTERNATIONAL FIRE CODE.
25. IF REQUIRED, THE CONTRACTOR IS TO PROVIDE AS BUILT DRAWINGS IN HARD COPY & AN ELECTRONIC AUTOCAD FILE TO THE OWNER AT THE CONCLUSION OF THE PROJECT.
26. INSTALL ELASTOMERIC JOINT SEALER AROUND ALL PIPES, DUCTWORK, & STRUCTURE PASSING THRU INTERIOR NON-RATED CONCRETE AND MASONRY WALLS, GYPSUM BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS. FOR FIRE RATED INTERIOR CONCRETE AND MASONRY WALLS, GYPSUM BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS SEAL ALL PIPES, DUCTWORK, AND STRUCTURE. INSTALL FIRESTOP MATERIALS IN ALL GAPS PRIOR TO SEALANT APPLICATION. INSTALL SEALER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
27. CONTRACTOR SHALL BE RESPONSIBLE FOR PRICING RADIO COVERAGE AMPLIFIER FOR EMERGENCY RESPONDERS AS AN ALTERNATE. PRIOR TO CONSTRUCTION COMPLETION, AMPLIFIER SHALL BE PROVIDED ONLY IF REQUIRED BY AHJ .

# BUILDING SUMMARY

## GENERAL BUILDING INFORMATION

**PROJECT NAME:** CCW - LEE'S SUMMIT, MO
**ADDRESS:** 1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

**OCCUPANCY USE:** B - CAR WASH

## APPLICABLE CODES (INCLUDING ALL LOCAL AMENDMENTS)

| | |
|---|---|
| INTERNATIONAL BUILDING CODE (IBC) | 2018 EDITION |
| INTERNATIONAL MECHANICAL CODE (IMC) | 2018 EDITION |
| NATIONAL ELECTRIC CODE (NEC) | 2017 EDITION |
| INTERNATIONAL PLUMBING CODE (IPC) | 2018 EDITION |
| INTERNATIONAL FIRE CODE (IFC) | 2018 EDITION |
| INTERNATIONAL FUEL GAS CODE (IFGC) | 2018 EDITION |
| INTERNATIONAL ENERGY CONSERVATION CODE (IECC) | 2018 EDITION |
| NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) LIFE SAFETY CODE 101 | 2018 EDITION |
| ICC ANSI A117.1 | |

## GENERAL BUILDING LIMITATIONS (CHAPTER 3, 5)

**OCCUPANCY CLASSIFICATION:** Group (B)
**CONSTRUCTION TYPE:** TYPE V-B
**BASIC ALLOWABLE FLOOR AREA:** 9,000 S.F.
**BASIC ALLOWABLE HEIGHT:** 2 STORIES, 40 FT
**PROPOSED FLOOR AREA:** 5,158 S.F.
**PROPOSED HEIGHT:** 1 STORY, 28'-10 1/2"

## FIRE PROTECTION (CHAPTER 9)

**FIRE SPRINKLER SYSTEM:** NOT PROVIDED
**FIRE ALARM & DETECTION SYSTEM:** NOT PROVIDED

## BUILDING OCCUPANCY (CHAPTER 10)

1004.1.2 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2. For areas without fixed seating, the occupant load shall be not less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.1.2. Where an intended function is not listed in Table 1004.1.2, the building official shall establish a function based on a listed function that most nearly resembles the intended function. **Exception: Where approved by the building official,the actual number of occupants for whom each occupied pace, floor or building is designed, although less than those determined by calculation, shall be permitted to be used in the determination of the design occupant load.**

| | | |
|---|---|---|
| **PUBLIC ACCESS AREAS:** | | |
| LOBBY: | 114 SF /100 SF PER OCCUPANT= | 2 OCC |
| OFFICE: | 134 SF / 100 SF PER OCCUPANT= | 2 OCC |
| CUSTOMER TOILET 105: | 52 SF / 100 SF PER OCCUPANT= | 1 OCC |
| **STAFF RESTRICTED AREAS:** | | |
| STAFF TOILET 104/ EQUIPMENT 107 / WASH TUNNEL 101: | 4,598 SF | 4 OCC[a] |
| **TOTAL BUILDING OCCUPANT LOAD** | | **9 OCC** |

(a) The staff occupancy is limited to (4) staff on site. This total is consisting of (1) cashier, (2) prep attendants, and (1) manager. The public is not permitted to exit vehicles within the building or access restricted areas for safety and operational reasons.

1010.1.5 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope). **Exception: 6. Doors serving equipment spaces not required to be accessible in accordance with Section 1103.2.9 and serving an occupant load of five or less shall be permitted to have a landing on one side to be not more than 7 inches (178 mm) above or below the landing on the egress side of the door.**

## PLUMBING REQUIREMENTS (CHAPTER 29)

| OCC. LOAD | WATER CLOSET DESCRIPTION | WATER CLOSETS REQUIRED | WATER CLOSETS PROVIDED | WATER CLOSET DESCRIPTION | LAVATORIES REQUIRED | LAVATORIES PROVIDED |
|---|---|---|---|---|---|---|
| (B)- 9 Occ.[a] | 1 PER 25 FOR THE FIRST 50[b] | 9[a]/25=1[b] | 2 | 1 PER 40 FOR THE FIRST 80 | 9[a]/40 =1[b] | 2 |

(a) 2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided in the minimum number as shown in Table 2902.1 based on the actual use of the building or space.

(b) 2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex. **Exception: 2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.**

# PROFESSIONAL SERVICES DISCLAIMER

THIS DISCLAIMER SERVES NOTICE OF ACCEPTANCE OF RESPONSIBILITY AND DISCLAIMER OF RESPONSIBILITY AS TO THE CONTRACT DOCUMENTS PREPARED FOR PROJECT NUMBER:

20015.155, CCW - LEE'S SUMMIT, MO BY FINKLE + WILLIAMS, INC.

THE UNDERSIGNED ARCHITECT, AND FINKLE + WILLIAMS, INC., ARE RESPONSIBLE FOR PREPARATION OF ONLY THE NOTED CONSTRUCTION DRAWINGS BELOW:

| NO. | TITLE | DATE |
|---|---|---|
| A0.00 | COVER SHEET | 07/25/2025 |
| A0.01 | LEGENDS & GENERAL NOTES | 07/25/2025 |
| A0.10 | ARCHITECTURAL SITE PLAN | 07/25/2025 |
| A0.11 | TRASH ENCLOSURE AND DETAILS | 07/25/2025 |
| A1.01 | FIRST FLOOR PLAN | 07/25/2025 |
| A2.01 | ENLARGED PLANS AND DETAILS | 07/25/2025 |
| A3.01 | ROOF PLAN AND DETAILS | 07/25/2025 |
| A4.01 | EXTERIOR ELEVATIONS | 07/25/2025 |
| A5.01 | WALL SECTIONS | 07/25/2025 |
| A5.02 | WALL SECTIONS | 07/25/2025 |
| A5.03 | WALL SECTIONS | 07/25/2025 |
| A5.04 | WALL SECTIONS | 07/25/2025 |
| A8.01 | DOOR AND GLAZING SCHEDULES | 07/25/2025 |
| A8.02 | DOOR & WINDOW DETAILS | 07/25/2025 |
| A8.03 | DOOR & WINDOW DETAILS | 07/25/2025 |
| A9.01 | REFLECTED CEILING PLAN | 07/25/2025 |
| A11.10 | PROJECT SPECIFICATIONS | 07/25/2025 |
| A11.11 | PROJECT SPECIFICATIONS | 07/25/2025 |

THE UNDERSIGNED ARCHITECT AND FINKLE + WILLIAMS DISCLAIM RESPONSIBILITY FOR ALL OTHER CONSTRUCTION DOCUMENTS, AND ANY OTHER SPECIFICATIONS, REPORTS, ESTIMATES, SHOP DRAWINGS, ETC. RELATING TO OR INTENDED TO BE USED FOR ANY PART OF THE ARCHITECTURAL OR ENGINEERING PROJECT, INCLUDING ANY GEOTECHNICAL ENGINEERING SERVICES, OR ENVIRONMENTAL REPORTS.

THIS NOTICE IS EXECUTED BY THE UNDERSIGNED AND AUTHENTICATED BY THE ARCHITECTURAL SEAL OF THE PERSON PREPARING THIS NOTICE.

STATE OF MISSOURI · DAVID ALAN WILLIAMS · NUMBER A-5540 · REGISTERED ARCHITECT

ARCHITECT: DAVID ALAN WILLIAMS

CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

Project No.: 20015.155
Date: 07/25/2025
Issued For: PERMIT

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI · DAVID ALAN WILLIAMS · NUMBER A-5540 · REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |


FINKLE + WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

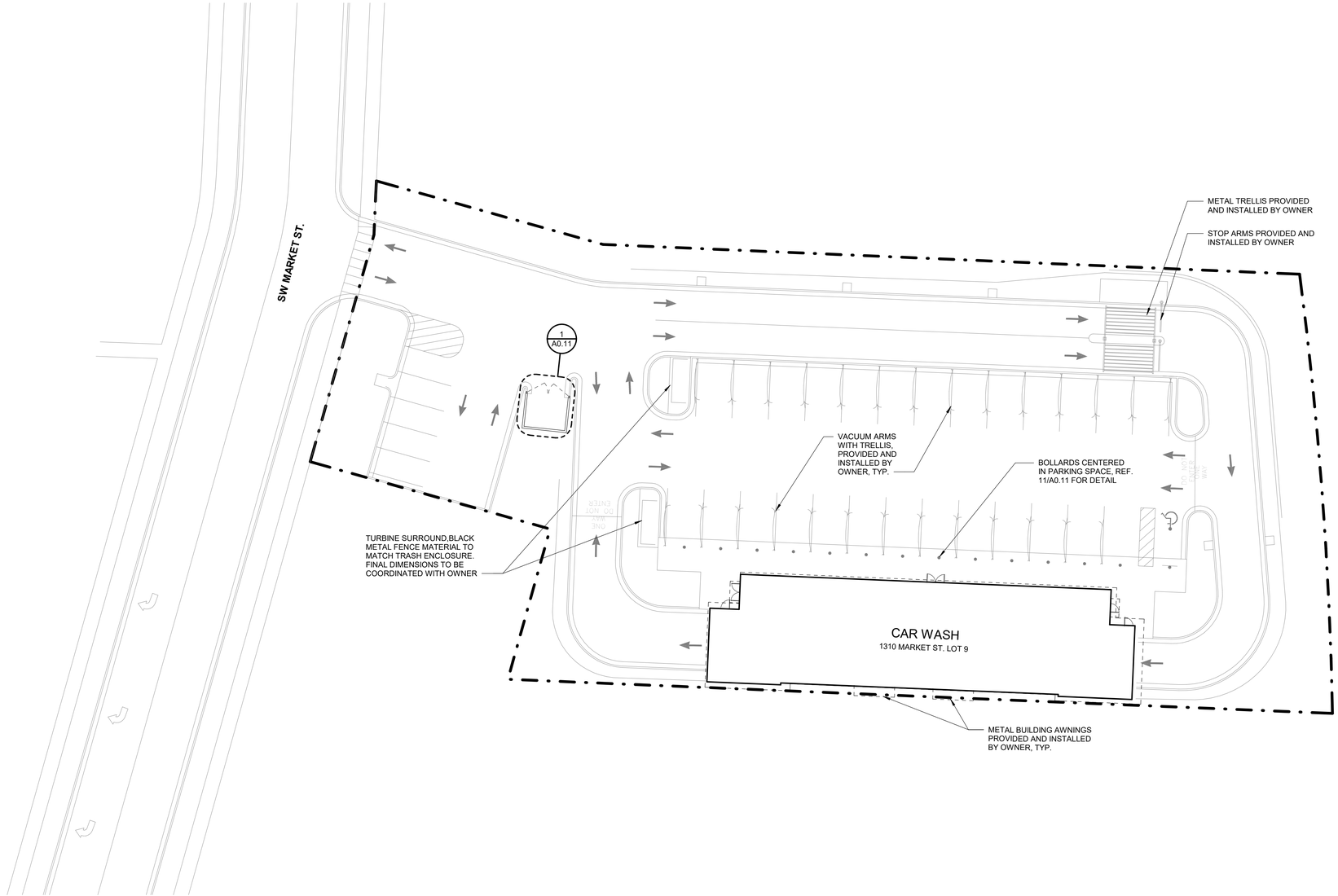

SHEET TITLE

LEGENDS & GENERAL NOTES

SHEET NUMBER

A0.01

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| 1 | ARCHITECTURAL SITE PLAN |
|---|---|
| A0.10 | SCALE : 1" = 20'-0" |

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CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

Project No.: 20015.155
Date: 07/25/2025
Issued For: PERMIT

REVISIONS

| No. | Date | Description |
|---|---|---|
| | | |

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

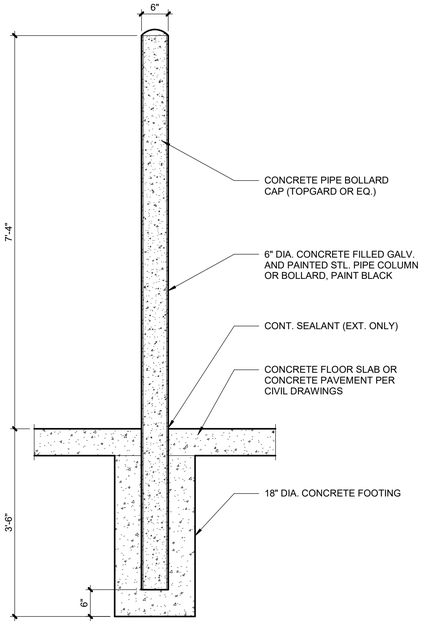
FINKLE + WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

SHEET TITLE

ARCHITECTURAL SITE PLAN

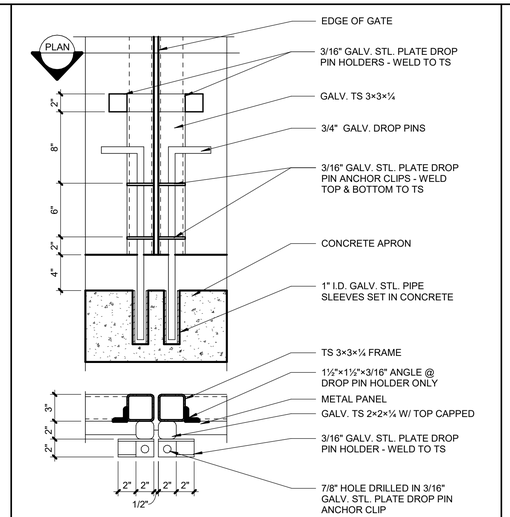
SHEET NUMBER

A0.10



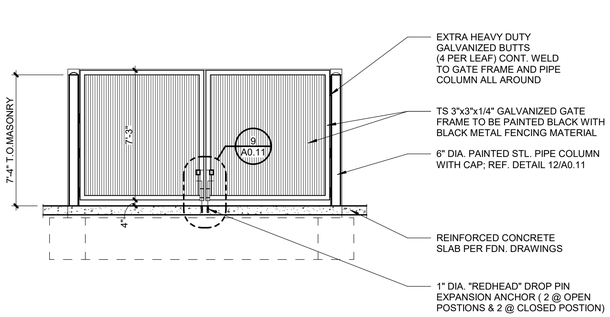

12 BOLLARD DETAIL

A0.11 SCALE : 3/4" = 1'-0"



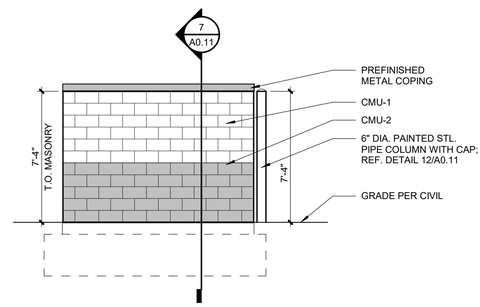

9 DROP PIN DETAILS

A0.11 SCALE : 1 1/2" = 1'-0"



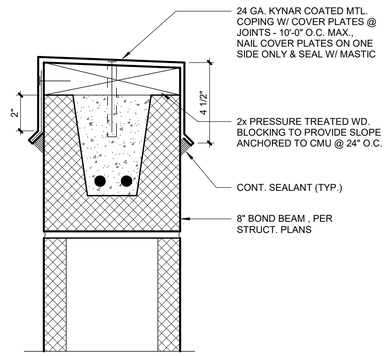

6 TRASH ENCLOSURE- ELEVATION

A0.11 SCALE : 1/4" = 1'-0"



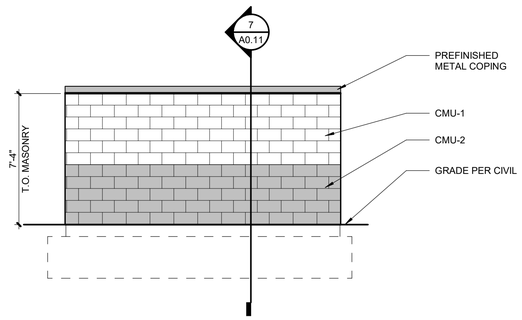

3 TRASH ENCLOSURE- ELEVATION

A0.11 SCALE : 1/4" = 1'-0"



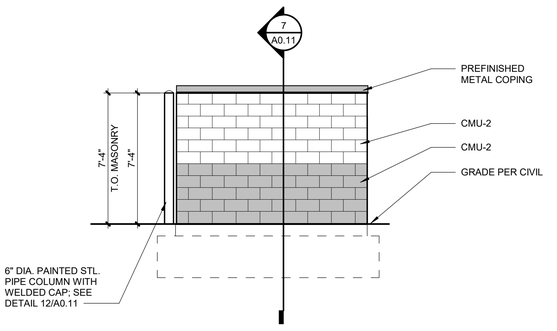

8 COPING DETAIL

A0.11 SCALE : 3" = 1'-0"



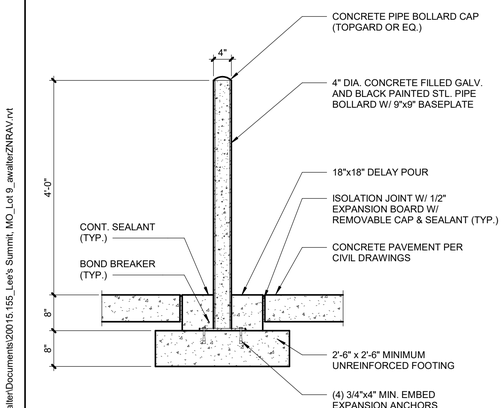

5 TRASH ENCLOSURE- ELEVATION

A0.11 SCALE : 1/4" = 1'-0"



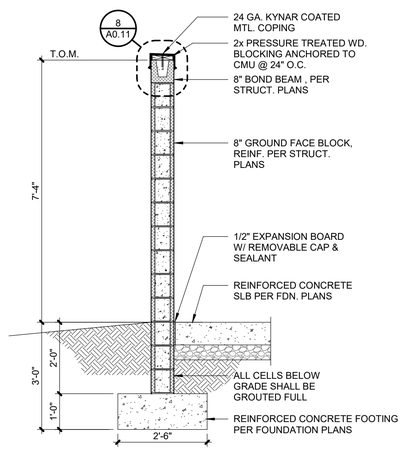

2 TRASH ENCLOSURE- ELEVATION

A0.11 SCALE : 1/4" = 1'-0"



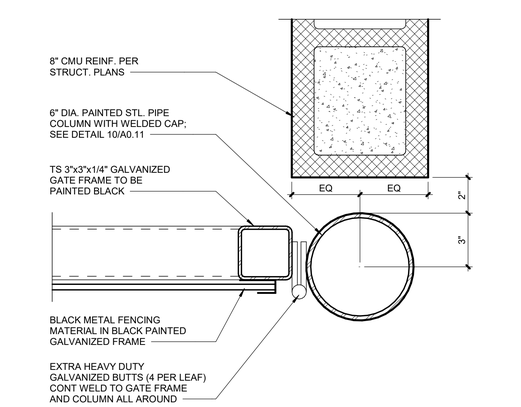

11 BOLLARD DETAIL

A0.11 SCALE : 3/4" = 1'-0"



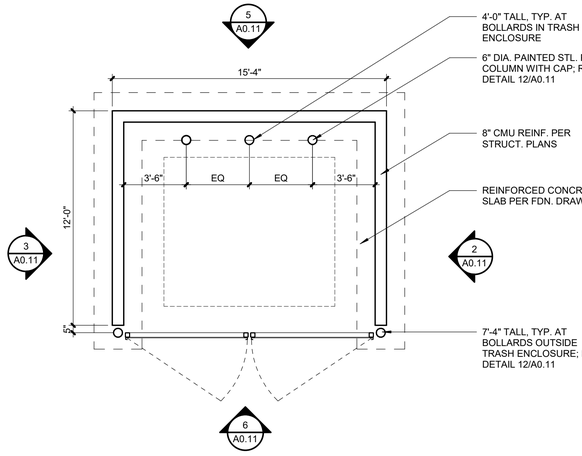

7 WALL SECTION

A0.11 SCALE : 1/2" = 1'-0"




4 JAMB DETAIL

A0.11 SCALE : 3" = 1'-0"




1 TRASH ENCLOSURE- PLAN

A0.11 SCALE : 1/4" = 1'-0"

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Club CARWASH

# CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

| | |
|---|---|
| Project No.: | 20015.155 |
| Date: | 07/25/2025 |
| Issued For: | PERMIT |

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

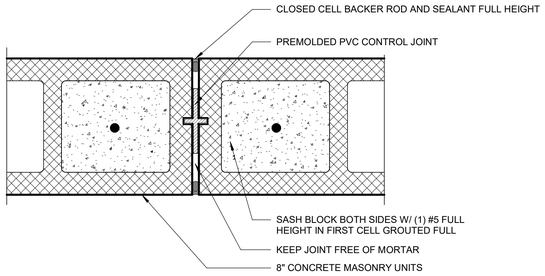

FINKLE + WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
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SHEET TITLE

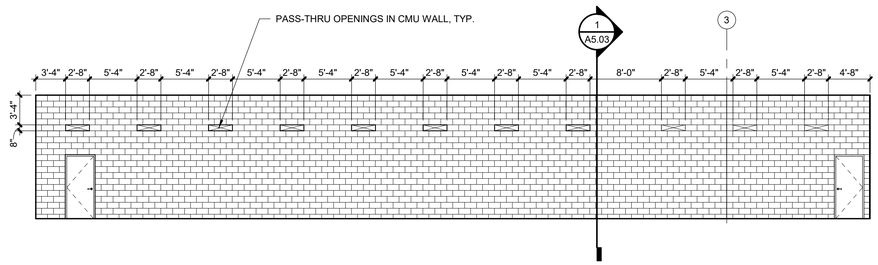
TRASH ENCLOSURE AND DETAILS

SHEET NUMBER

A0.11




3 CONTROL JOINT
A1.01 SCALE : 3" = 1'-0"



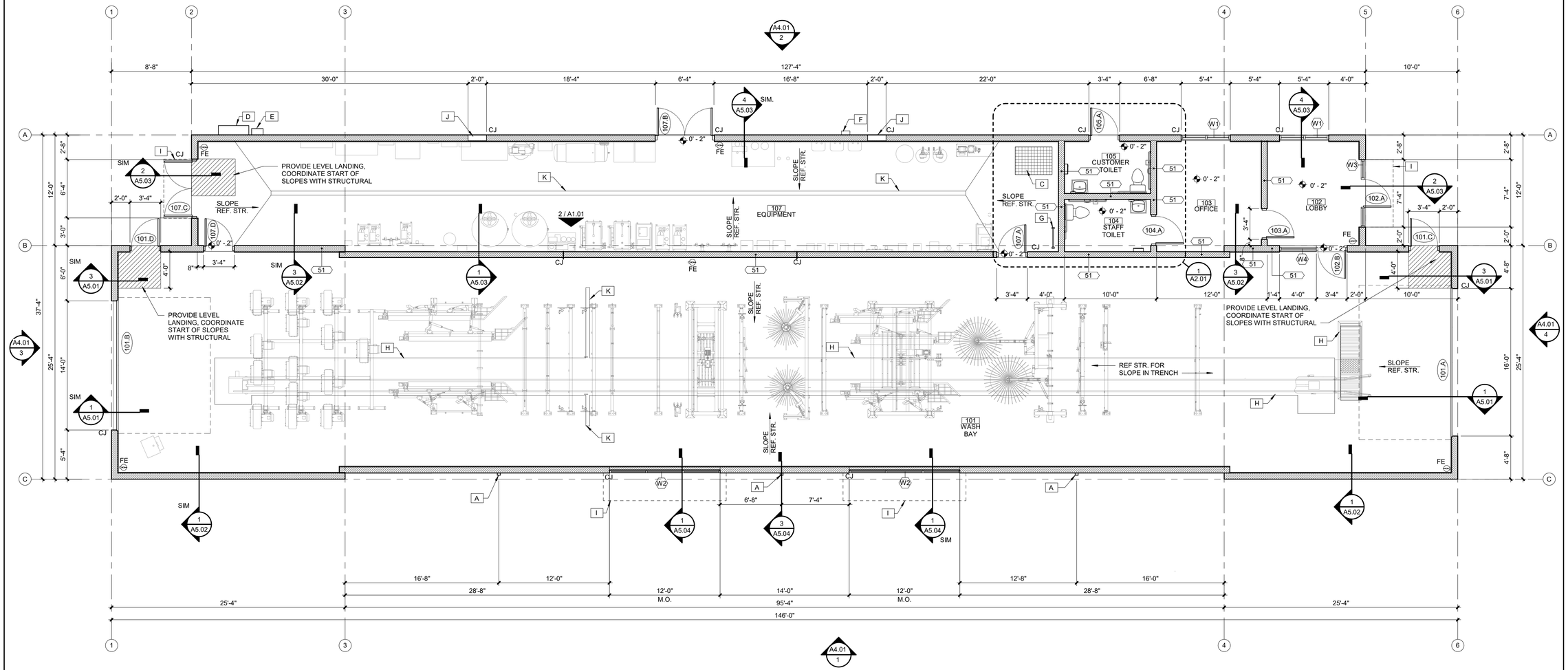

2 EQUIPMENT ROOM - PASS THROUGH DIAGRAM
A1.01 SCALE : 1/8" = 1'-0"

## CONSTRUCTION GENERAL NOTES

1. PROVIDE TERMITE CONTROL UNDER NEW FLOOR SLABS.
2. ALL STRUCTURAL STEEL TO BE FACTORY PRIMED GRAY.
3. ALL SWITCHES, RECEPTACLES, PHONE/DATA, AND CONTROLS ARE TO BE WHITE COLOR WITH WHITE COVER PLATES.
4. ALL PERIMETER CMU CELLS NOT GROUTED PER STRUCTURAL DRAWINGS ARE TO BE FILLED W/ SPRAY FOAM INSULATION.

## PLAN NOTE LEGEND

- A SCUPPER AND DOWNSPOUT, TO BE COLLECTED UNDERGROUND AND CONTINUED PER CIVIL ENGINEERING PLANS.
- B NOT USED.
- C TRASH PIT WITH METAL GRATE, REF. STRUCTURAL DRAWINGS
- D CT CABINET PER ELECTRICAL DRAWINGS
- E CT METER PER ELECTRICAL DRAWINGS
- F GAS METER PER PLUMBING DRAWINGS
- G ROOF ACCESS LADDER,COORDINATE LOCATION WITH ROOF HATCH AND PERLINS
- H LINE OF TRENCH EDGE; SEE STRUCTURAL DRAWINGS
- I LINE OF AWNING ABOVE, TYP.
- J BLACK MOTORIZED LOUVER, REF. MECH
- K TRENCH DRAIN PER PLUMBING DRAWINGS




1 FLOOR PLAN
A1.01 SCALE : 3/16" = 1'-0"

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CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
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DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

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|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
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SHEET TITLE

FIRST FLOOR PLAN

SHEET NUMBER

A1.01

# ROOM FINISH SCHEDULE

| ROOM NO. | ROOM NAME | FLR. | BASE N | BASE E | BASE S | BASE W | WALLS N | WALLS E | WALLS S | WALLS W | CEILING MAT. | CEILING HT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 | WASH BAY | CON-1 | - | - | - | - | PVC-1 | PVC-1 | PVC-1 | PVC-1 | PVC-1 | 13'-10" +/- | |
| 102 | LOBBY | EPF-1 | EPB-1 | EPB-1 | EPB-1 | EPB-1 | PNT-2 | PNT-2 | PNT-2 | PNT-2 | ACT-1 | 10'-0" | |
| 103 | OFFICE | EPF-1 | EPB-1 | EPB-1 | EPB-1 | EPB-1 | PNT-2 | PNT-2 | PNT-2 | PNT-2 | ACT-1 | 10'-0" | |
| 104 | STAFF TOILET | EPF-1 | EPB-1 | EPB-1 | EPB-1 | EPB-1 | PNT-2 | PNT-2 | PNT-2 | PNT-2 | ACT-1 | 9'-0" | |
| 105 | CUSTOMER TOILET | EPF-1 | EPB-1 | EPB-1 | EPB-1 | EPB-1 | PNT-2 | PNT-2 | PNT-2 | PNT-2 | ACT-1 | 9'-0" | |
| 107 | EQUIPMENT | CON-1 | - | - | - | - | PNT-1 | PVC-1 | PVC-1 | PNT-1 | PVC-1 | STR | |

# ROOM FINISH LEGEND

## FLOOR FINISHES

**CON:** CONCRETE

- **CON-1**: CONCRETE WITH METZGER/MCGUIRE RE 88 SEMI-RIGID POLYUREA OR EQUAL FLOOR JOINT FILLER.

**EPF:** EPOXY FLOORING INSTALLED PER MANUFACTURER'S RECOMMENDATION

- **EPF-1**: MFR: TNEMEC, STYLE: 224 DECKO FLECK , COLOR: 503

## BASE FINISHES

**EPB:** EPOXY FLOORING INSTALLED PER MANUFACTURER'S RECOMMENDATION

- **EPB-1**: MFR: TNEMEC, STYLE: 224 DECKO FLECK , COLOR: 503

## WALL FINISHES

**PNT:** ACRYLIC LATEX COATING - 2 FINISH COATS OVER PRIMER (PREPRITE PROBLOCK PRIMER/SEALER)

- **PNT-1:** SHERWIN WILLIAMS, SNOWBOUND, SW7004, SEMI-GLOSS LATEX COATING
- **PNT-2:** SHERWIN WILLIAMS, EVENING SHADOW, SW7662, SEMI-GLOSS LATEX COATING
- **PNT-3:** SHERWIN WILLIAMS, BLACK MAGIC, SW6991, SEMI-GLOSS LATEX COATING

**PVC:** PLASTIC WALL LINER PANELS

- **PVC-1:** RELINE WALL PANELS, NUFORM BUILDING TECHNOLOGIES, 12" WIDE APPLIED DIRECTLY OVER RIGID INSULATION TO CMU WALL; PANELS AND FASTENERS OWNER PROVIDED AND INSTALLED

## CEILING FINISHES

REFERENCE REFLECTED CEILING PLAN(S) FOR CEILING FINISH LOCATIONS & TRANSITIONS.

**ACT:** ACOUSTICAL CEILING TILE

- **ACT-1:** SIZE: 24" X 24" X 1/2" SQUARE EDGE (WHITE), MFR: USG SHEETROCK BRAND LAY-IN GYPSUM CEILING PANELS, STYLE: CLIMAPLUS PERFORMANCE (VINYL FACED), GRID: 15/16" DON BRAND DX/DXL (WHITE).

**EXP:** EXPOSED TO STRUCTURE

- **EXP-1:** PAINT ALL EXPOSED MECHANICAL, DUCTS, PIPES, STRUCTURE, AND DECKING PNT-1

**PVC:** PVC PLASTIC CEILING PANELS

- **PVC-1:** RELINE WALL PANELS, NUFORM BUILDING TECHNOLOGIES, 12" WIDE ON 2X4 FURRING STRIPS; PANELS AND FURRING OWNER PROVIDED AND INSTALLED

## CASEWORK FINISHES

**LAM:** HIGH PRESSURE LAMINATE

- **LAM-1:** MFR: WILSONART; PATTERN: 1595 BLACK IN MATTE FINISH

# GENERAL FINISH NOTES

1. PAINT ALL HOLLOW METAL DOORS AND FRAMES WITH PNT-3, U.N.O.
2. PAINT METAL WALL-MOUNTED ACCESS DOORS, GRILLES AND UNFINISHED COVER PLATES TO MATCH ADJACENT WALL SURFACE.

# TOILET ACCESSORY / EQUIPMENT LEGEND

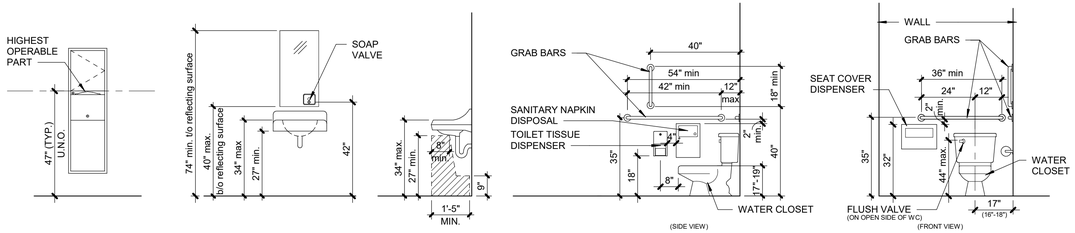
ALL ACCESSORIES SHALL BE STAINLESS STEEL UNLESS NOTED OTHERWISE.
ALL ACCESSORIES SHALL BE DESIGNED TO MEET ADA STANDARDS.

1. COMBINATION PAPER TOWEL DISPENSER/WASTE RECEPTACLE, SURFACE MOUNT (BOBRICK B-380349 OR APPROVED EQ., OWNER PROVIDED AND GC INSTALLED)
2. LIQUID SOAP DISPENSER - SURFACE MOUNT (BOBRICK B-4112 OR APPROVED EQ.) (OWNER PROVIDED AND GC INSTALLED)
3. UNFRAMED MIRROR - 24" W x 48" H (GC PROVIDED AND GC INSTALLED)
4. MULTI-ROLL TOILET TISSUE DISPENSER W/NO KEYED LOCK (BOBRICK B-2888 OR APPROVED EQ.) (OWNER PROVIDED AND GC INSTALLED)
5. GRAB BARS AS SHOWN ON PLANS AND ELEVATIONS (BOBRICK B-6806 SERIES OR APPROVED EQ.)
   - 5A GRAB BAR (BOBRICK B6806 X 42) LOCATE AS SHOWN IN ACCESSORY MOUNTING HEIGHTS (GC PROVIDED AND GC INSTALLED)
   - 5B GRAB BAR (BOBRICK B6806 X 36) LOCATE AS SHOWN IN ACCESSORY MOUNTING HEIGHTS (GC PROVIDED AND GC INSTALLED)
   - 5C GRAB BAR (BOBRICK B6806 X 18) LOCATE AS SHOWN IN ACCESSORY MOUNTING HEIGHTS (GC PROVIDED AND GC INSTALLED)
6. SANITARY NAPKIN DISPOSAL, SURFACE WALL MOUNT (BOBRICK B-254 OR APPROVED EQ.) (OWNER PROVIDED AND GC INSTALLED)
7. COAT AND HAT HOOK (BOBRICK B-6827 OR APPROVED EQ.) (OWNER PROVIDED AND GC INSTALLED)
8. A.D.A. RESTROOM SIGNAGE, REF. SHEET A0.01
9. TOILET SEAT COVER DISPENSER (BOBRICK B-221 OR APPROVED EQ.) (OWNER PROVIDED AND GC INSTALLED)

# PLAN NOTE LEGEND

- A SCUPPER AND DOWNSPOUT, TO BE COLLECTED UNDERGROUND AND CONTINUED PER CIVIL ENGINEERING PLANS.
- B NOT USED.
- C TRASH PIT WITH METAL GRATE, REF. STRUCTURAL DRAWINGS
- D CT CABINET PER ELECTRICAL DRAWINGS
- E CT METER PER ELECTRICAL DRAWINGS
- F GAS METER PER PLUMBING DRAWINGS
- G ROOF ACCESS LADDER,COORDINATE LOCATION WITH ROOF HATCH AND PERLINS
- H LINE OF TRENCH EDGE; SEE STRUCTURAL DRAWINGS
- I LINE OF AWNING ABOVE, TYP.
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- K TRENCH DRAIN PER PLUMBING DRAWINGS

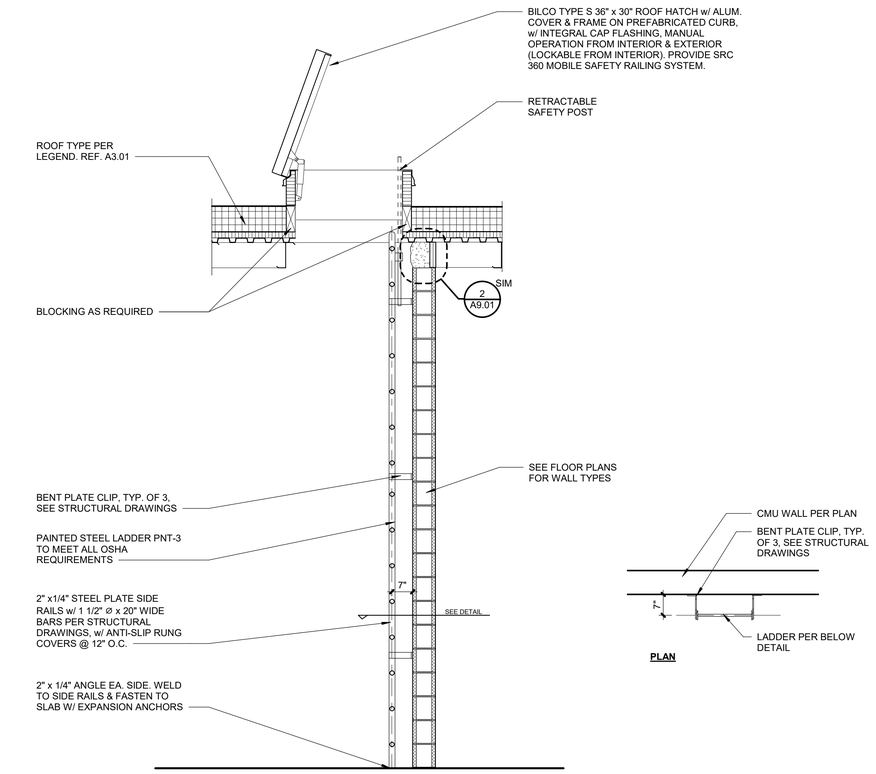
# TOILET ACCESSORY MOUNTING HEIGHTS



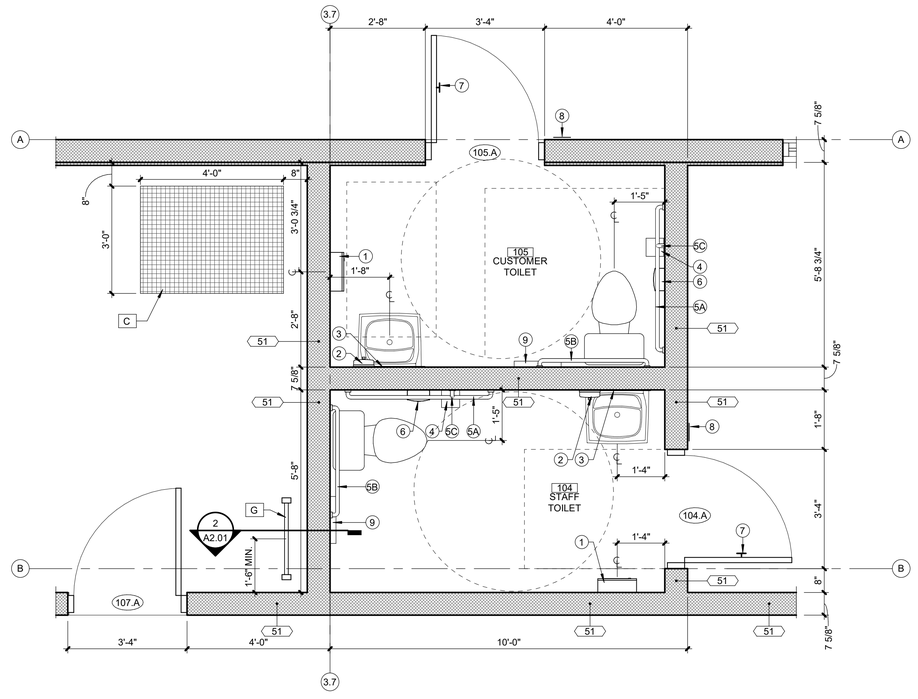

TOWEL DISPENSER/ WASTE RECEPTACLE | LAVATORY/MIRROR/ SOAP DISPENSER | LAVATORY (SIDE VIEW) | WHEELCHAIR ACCESSIBLE TOILET

| | | | | | | |
|---|---|---|---|---|---|---|
| Maximum Reach Depth | .05 inch | 2 inches | 5 inches | 6 inches | 9 inches | 11 inches |
| Maximum Reach Height | 48 inches | 46 inches | 42 inches | 40 inches | 36 inches | 34 inches |

TABLE 603.6 - ANSI-117.1-2009




2 ROOF HATCH SECTION
A2.01 SCALE : 1/2" = 1'-0"




1 ENLARGED TOILET PLAN
A2.01 SCALE : 1/2" = 1'-0"

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CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
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Project No.: 20015.155
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REGISTRATION

STATE OF MISSOURI DAVID ALAN WILLIAMS NUMBER A-5540 REGISTERED ARCHITECT

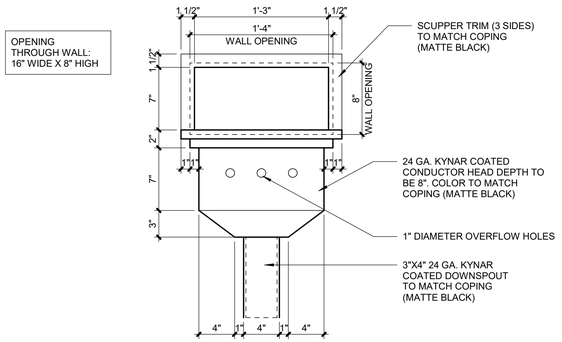
PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
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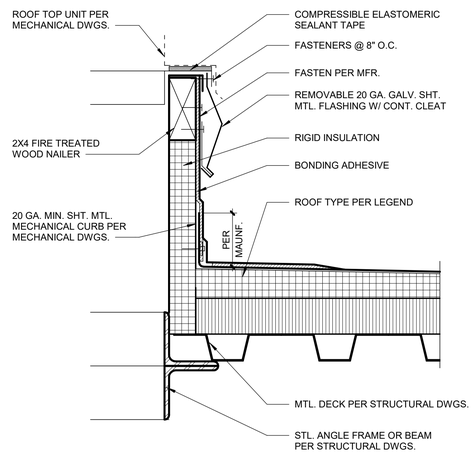

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SHEET TITLE
ENLARGED PLANS AND DETAILS

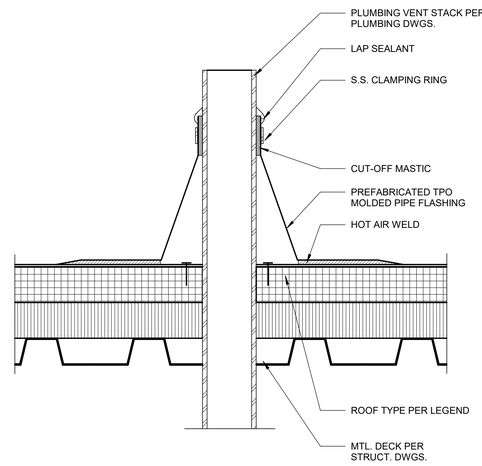
SHEET NUMBER
A2.01




4 CONDUCTOR HEAD ELEVATION
A3.01 SCALE : 1 1/2" = 1'-0"




3 TYP. MECH. CURB DETAIL
A3.01 SCALE : 3" = 1'-0"



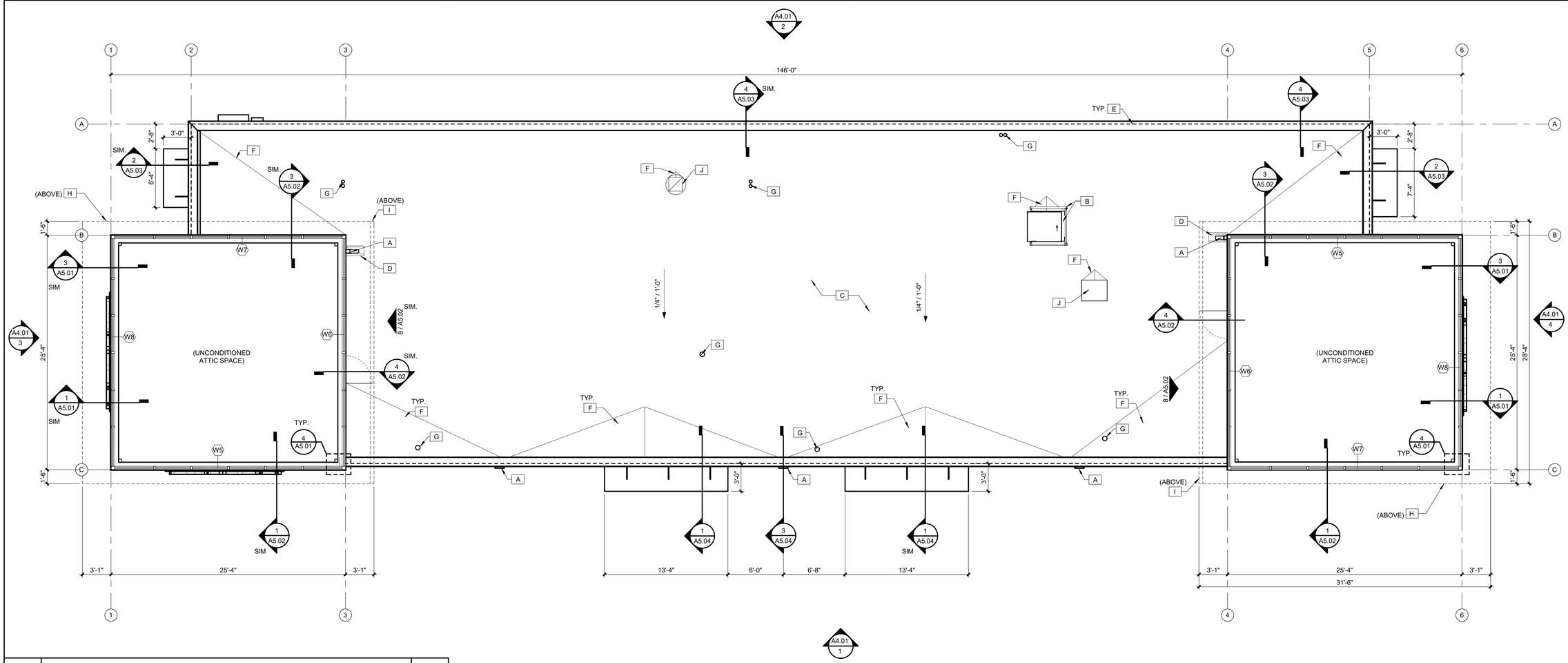

2 VENT STACK DETAIL
A3.01 SCALE : 3" = 1'-0"

## ROOF PLAN NOTE LEGEND

- A KYNAR-COATED SHEET METAL SCUPPER AND DOWNSPOUTS (MATTE BLACK)
- B ROOF HATCH; BILCO (OR APPROVED EQ.) TYPE S 36" x 30" ROOF HATCH. PROVIDE BIL-GUARD 2.0 ROOF HATCH RAILING SYSTEM
- C FULLY ADHERED SINGLE PLY 60 MIL TPO (WHITE) MEMBRANE ROOFING WITH 20 YEAR NO DOLLAR LIMIT MANUFACTURER'S WARRANTY. MECHANICALLY FASTEN TO MIN R-30 POLYISOCYANURATE RIGID INSULATION, STAGGERED SEAMS. TAPERED INSULATION ABOVE TO ACHIEVE REQUIRED SLOPES. PROVIDE ALTERNATE FOR A 30 YEAR WARRANTY.
- D CONCRETE SPLASHBLOCK TO SIT ON PROTECTION PAD
- E LINE OF CMU WALL BELOW
- F TAPERED POLYISOCYANURATE RIGID INSULATION CRICKET, TYP.
- G MISCELLANEOUS PENETRATIONS PER MEP DRAWINGS
- H STANDING SEAM METAL ROOF (MATTE BLACK) OVER 5/8" F.R.T. PLYWOOD SHEATHING WITH METAL FASCIA
- I KYNAR-COATED 5" X 5" SHEET METAL GUTTER (MATTE BLACK)
- J MECHANICAL EQUIPMENT ON ROOF, REF. MECHANICAL DRAWINGS

## ROOF PLAN GENERAL NOTES

1. ALL ROOF SLOPES ARE TO HAVE A MINIMUM 1/4" / 12" FALL.
2. SEE PLUMBING AND MECHANICAL PLANS FOR ROOF TOP EQUIPMENT AND PENETRATION LOCATIONS. ALL EQUIPMENT TO BE MOUNTED ON CURBS.
3. CONTRACTOR TO COORDINATE SCUPPERS AND DOWNSPOUTS WITH ROOF MEMBRANE SYSTEM WARRANTY.




1 ROOF PLAN
A3.01 SCALE : 3/16" = 1'-0"

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# CCW - LEE'S SUMMIT, MO

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REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5540
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
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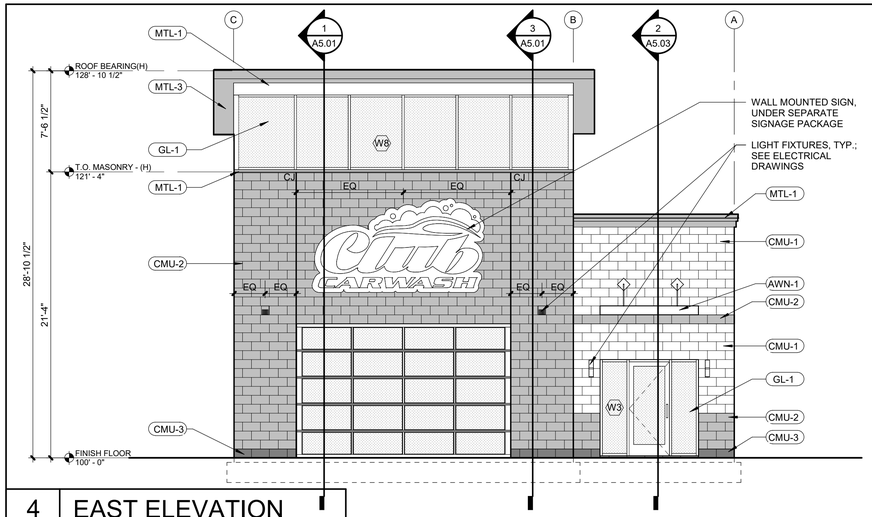
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SHEET TITLE

ROOF PLAN AND DETAILS

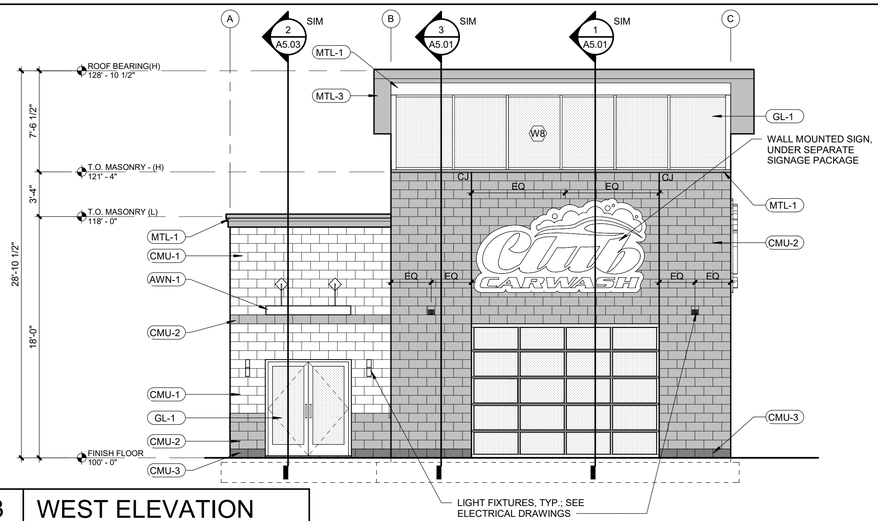
SHEET NUMBER

A3.01




## 4 EAST ELEVATION

A4.01 SCALE : 3/16" = 1'-0"



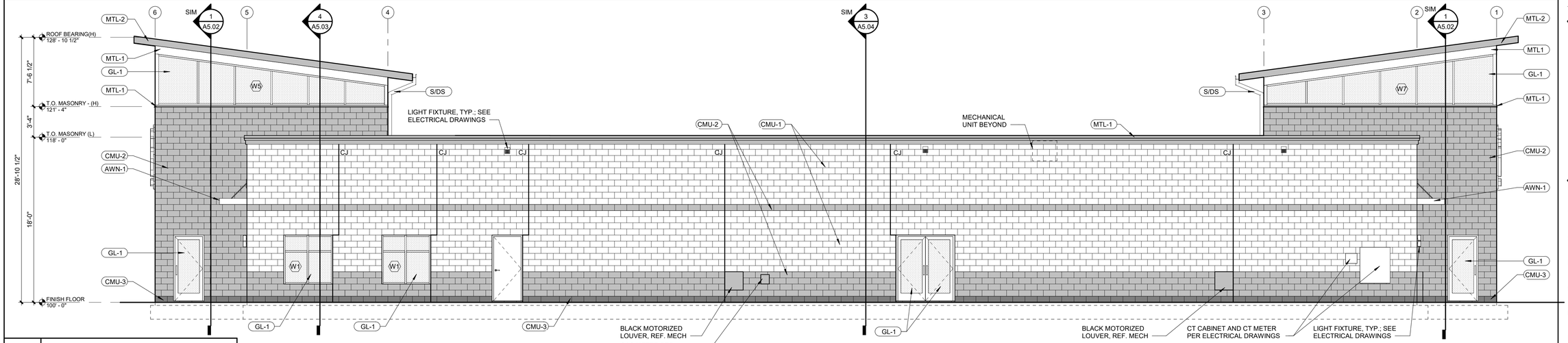

## 3 WEST ELEVATION

A4.01 SCALE : 3/16" = 1'-0"

# EXTERIOR MATERIAL LEGEND

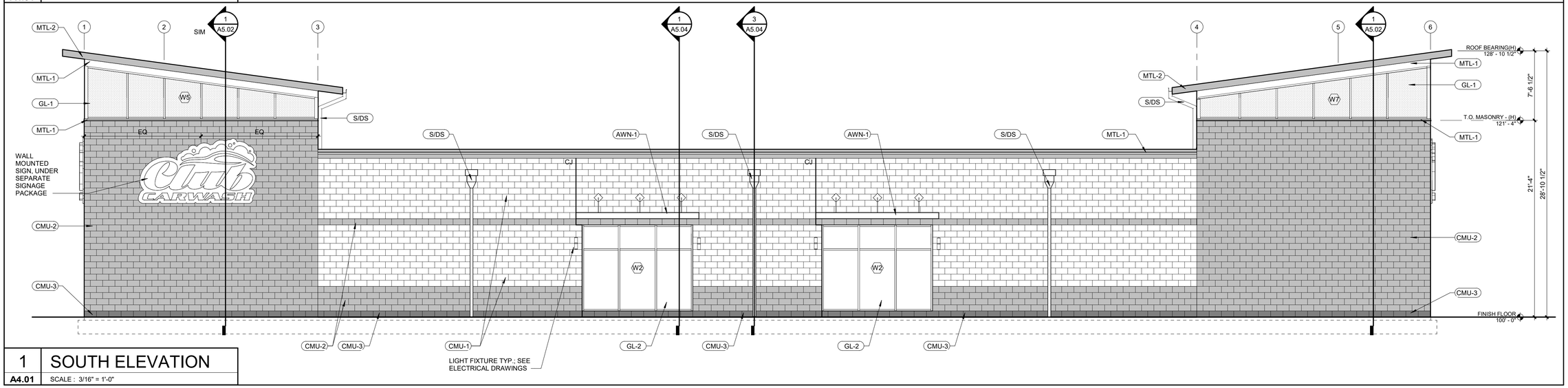
**HM DOORS PNT-3:** SHERWIN WILLIAMS, BLACK MAGIC, SW6991, SEMI-GLOSS LATEX COATING

- CMU-1 — ARCHITECTURAL 8" CMU SMOOTH STANDARD BLOCK (8" X 8" X 16") (COLOR: PAINT SW7009 PEARLY WHITE)
- CMU-2 — ARCHITECTURAL 8" CMU SPLIT FACE STANDARD BLOCK (8" X 8" X 16) (COLOR: BEST BLOCK SPLIT FACE SLATE)
- CMU-3 — ARCHITECTURAL 8" CMU SMOOTH STANDARD BLOCK (8" X 8" X 16") (COLOR: BEST BLOCK SPLIT FACE SLATE)
- GL-1 — ALUMINUM STOREFRONT GLAZING SYSTEM BASIS OF DESIGN: Exterior Glazed System, Kawneer 451T or Approved EQ. w/ 1" Insulated LOW-E Glazing Unit (Solarban 70XL Solar Control Optigray + Clear) Provide tempered glazing as required per IBC. COLOR: Black Anodized Frames
- GL-2 — ALUMINUM STOREFRONT GLAZING SYSTEM BASIS OF DESIGN: Exterior Glazed System, Trifab Versaglaze 450 or Approved EQ. w/ 1/4" LOW E BLACK SPANDREL GLASS COLOR: Black Anodized Frames
- AWN-1 — PREFABRICATED FLAT METAL AWNING PROVIDED AND INSTALLED BY OWNER COLOR: Red
- S/DS — KYNAR-COATED SHEET METAL SCUPPER, DOWNSPOUT AND BOOT BASIS OF DESIGN: SMACNA STYLE 1 GUTTER, AND RECTANGULAR DOWNSPOUTS, PER DETAIL 8/A5.04 COLOR: BLACK
- MTL-1 — KYNAR COATED METAL COPING COLOR: Matte Black
- MTL-2 — STANDING SEAM METAL ROOF BASIS OF DESIGN: Firestone Una-Clad UC-3 double-lock architectural metal roof w/ 30 year warranty COLOR: Matte Black
- MTL-3 — FLUSH LOCK METAL SOFFIT PANEL BASIS OF DESIGN: Firestone UC-500 1" Flush Panel System COLOR: Matte Black




## 2 NORTH ELEVATION

A4.01 SCALE : 3/16" = 1'-0"




## 1 SOUTH ELEVATION

A4.01 SCALE : 3/16" = 1'-0"

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2025

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| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

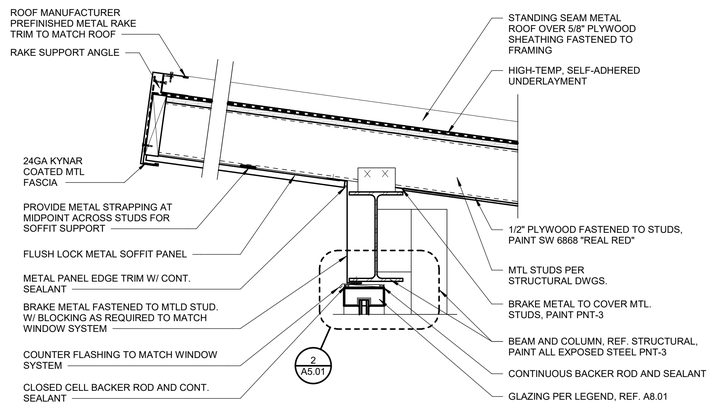
FINKLE + WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

SHEET TITLE

EXTERIOR ELEVATIONS

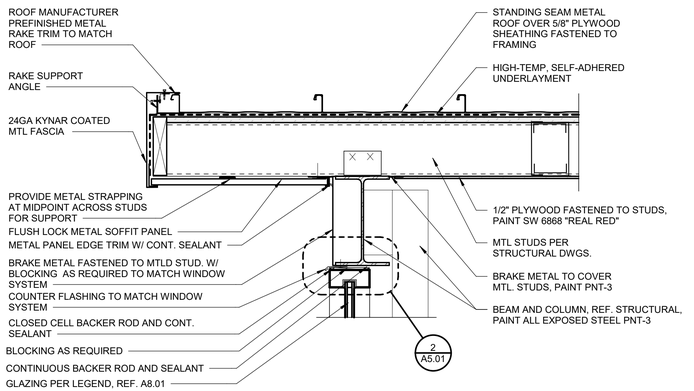
SHEET NUMBER

A4.01



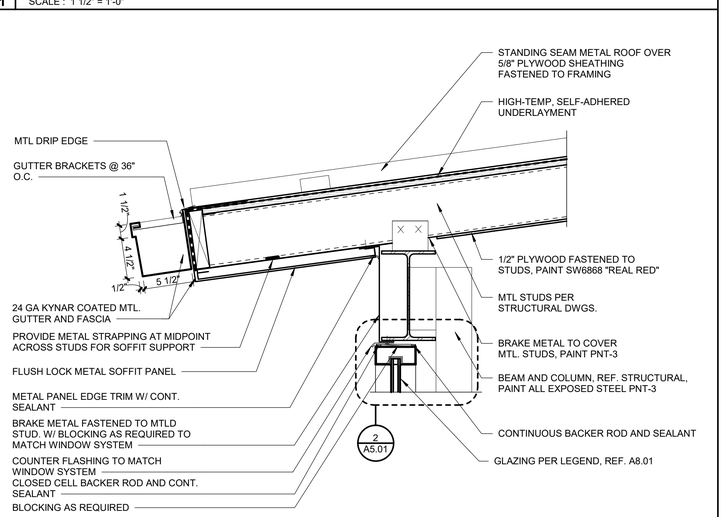

## 7 HIGH EAVE DETAIL @ TOWER

A5.01 SCALE : 1 1/2" = 1'-0"



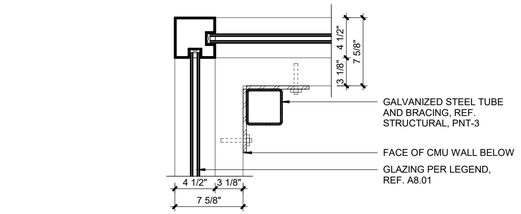

## 6 SLOPING EAVE DETAIL

A5.01 SCALE : 1 1/2" = 1'-0"



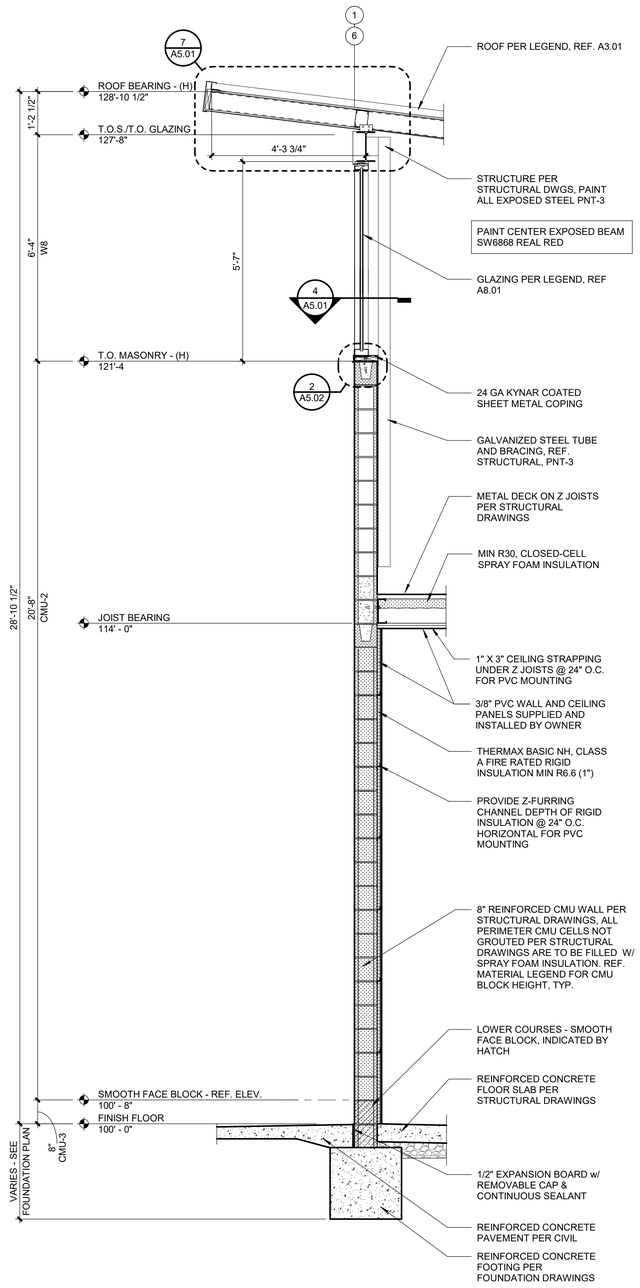

## 5 LOW EAVE GUTTER DETAIL

A5.01 SCALE : 1 1/2" = 1'-0"



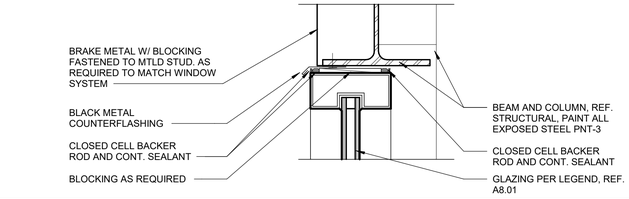

## 4 TOWER GLAZING CORNER DETAIL

A5.01 SCALE : 1 1/2" = 1'-0"



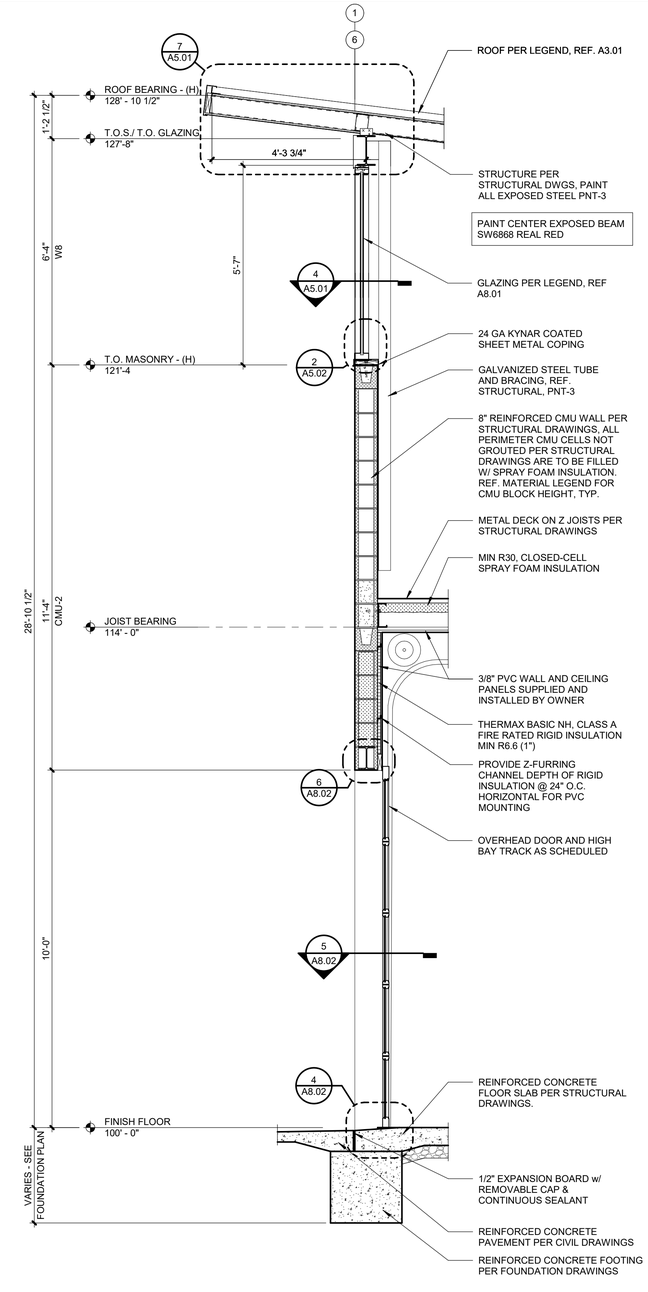

## 3 WALL SECTION

A5.01 SCALE : 1/2" = 1'-0"




## 2 TOWER GLAZING HEAD DETAIL

A5.01 SCALE : 3" = 1'-0"




## 1 WALL SECTION

A5.01 SCALE : 1/2" = 1'-0"

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CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

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|---|---|
| Project No.: | 20015.155 |
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| Issued For: | PERMIT |

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI REGISTERED ARCHITECT DAVID ALAN WILLIAMS NUMBER A-5548

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

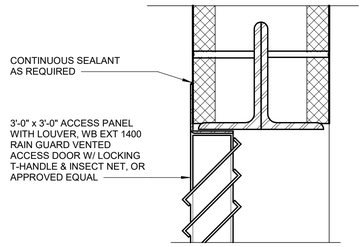
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ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

SHEET TITLE

WALL SECTIONS

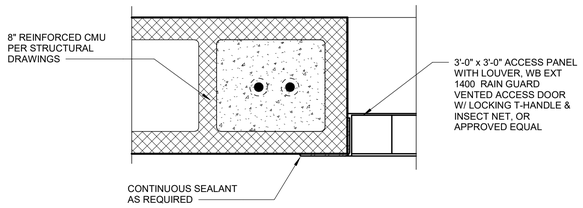
SHEET NUMBER

A5.01



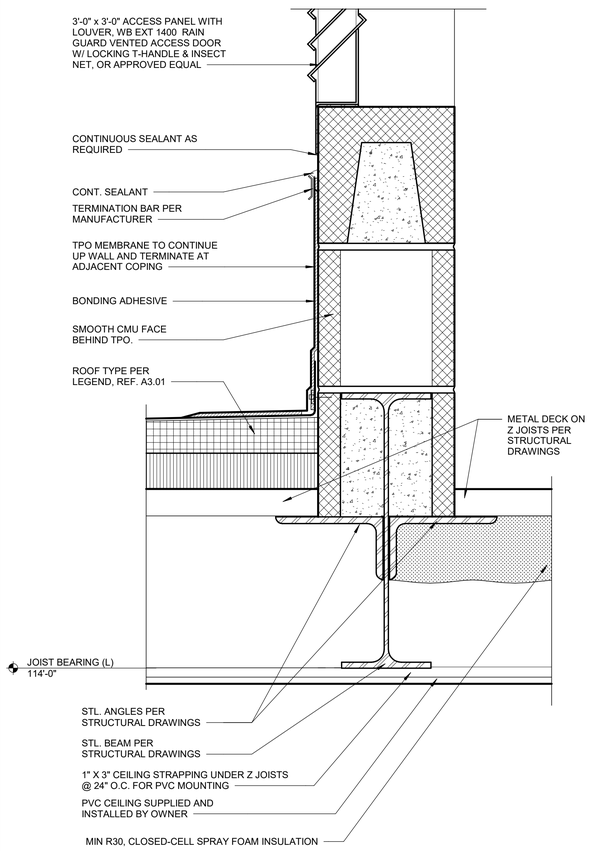

## 7 ACCESS DOOR HEAD DETAIL

A5.02 SCALE : 3" = 1'-0"



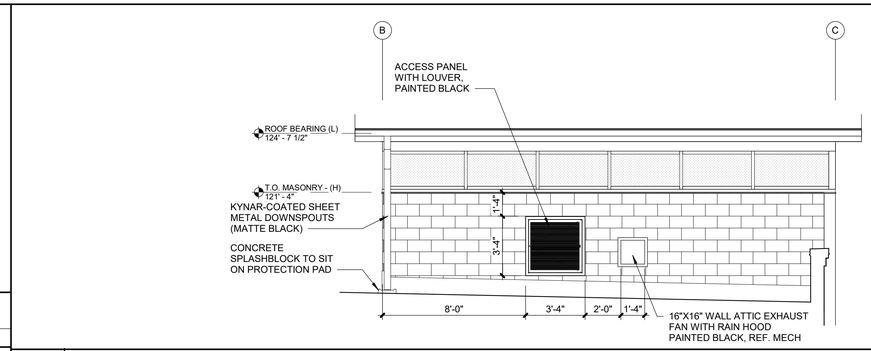

## 6 ACCESS DOOR JAMB DETAIL

A5.02 SCALE : 3" = 1'-0"



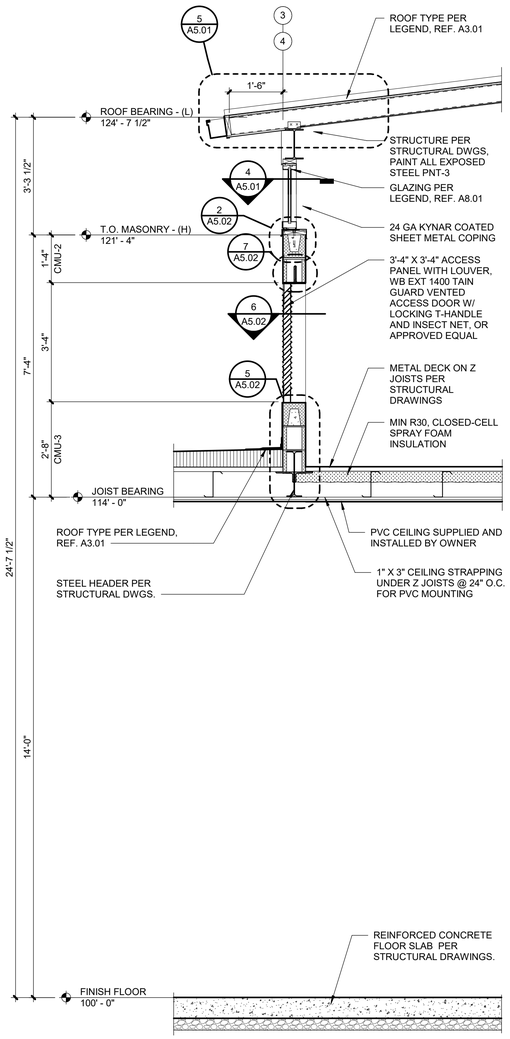

## 5 ACCESS DOOR SILL DETAIL

A5.02 SCALE : 3" = 1'-0"



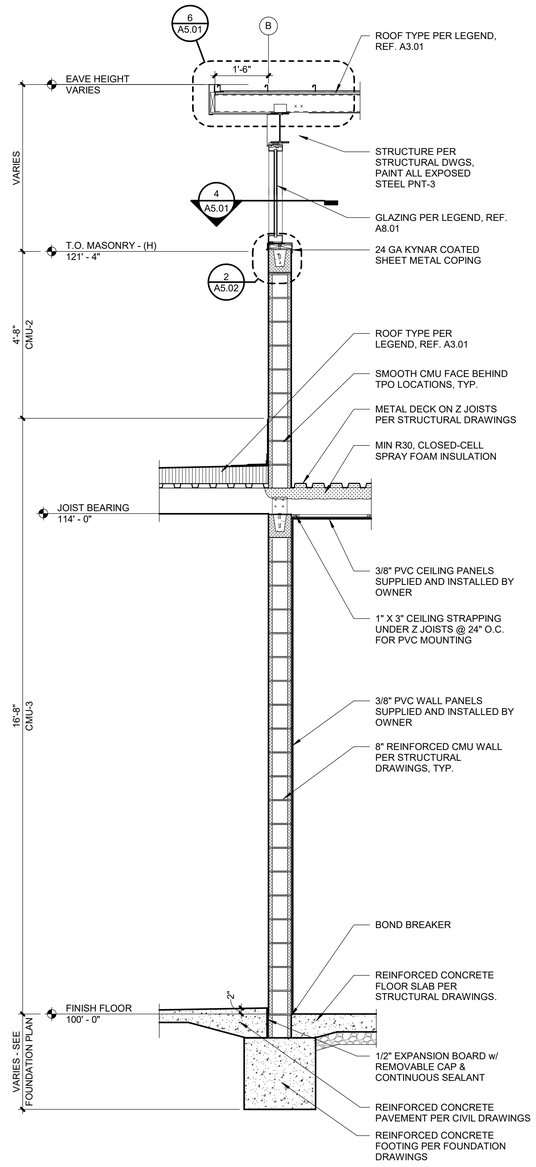

## 8 TOWER ACCESS ELEVATION

A5.02 SCALE : 1/4" = 1'-0"



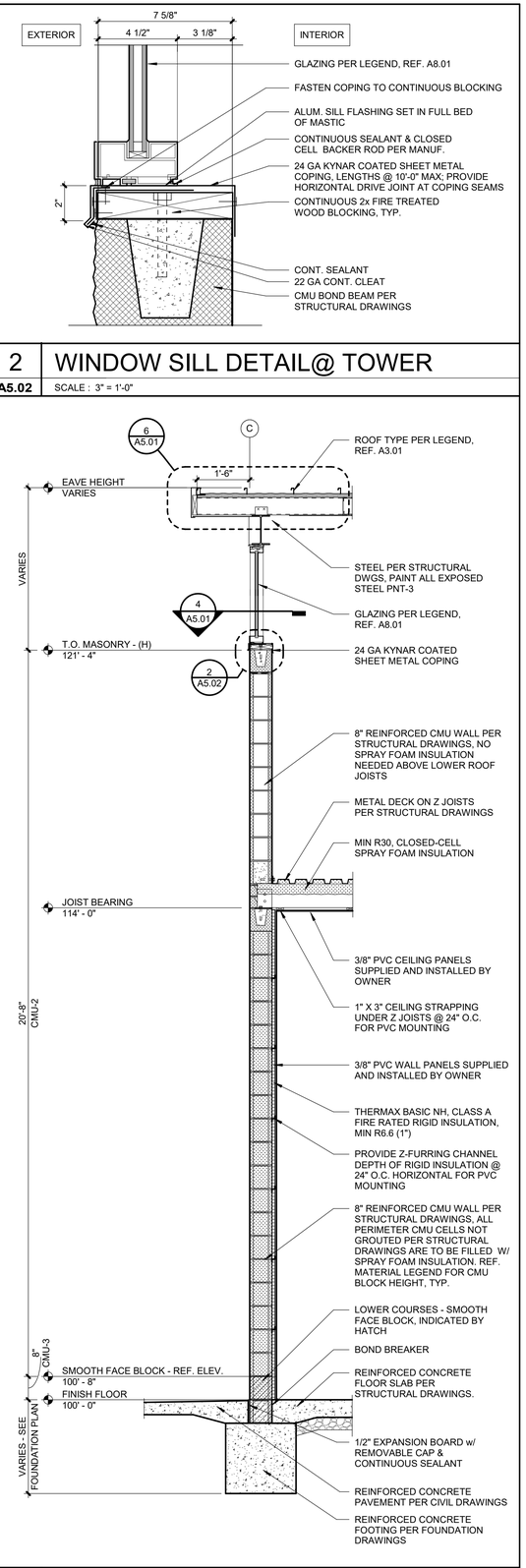

## 4 WALL SECTION

A5.02 SCALE : 1/2" = 1'-0"




## 3 WALL SECTION

A5.02 SCALE : 1/2" = 1'-0"




## 2 WINDOW SILL DETAIL@ TOWER

A5.02 SCALE : 3" = 1'-0"




## 1 WALL SECTION

A5.02 SCALE : 1/2" = 1'-0"

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CLUB CARWASH

# CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

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| Date: | 07/25/2025 |
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REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
REGISTERED ARCHITECT
DAVID ALAN WILLIAMS
NUMBER A-5540

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
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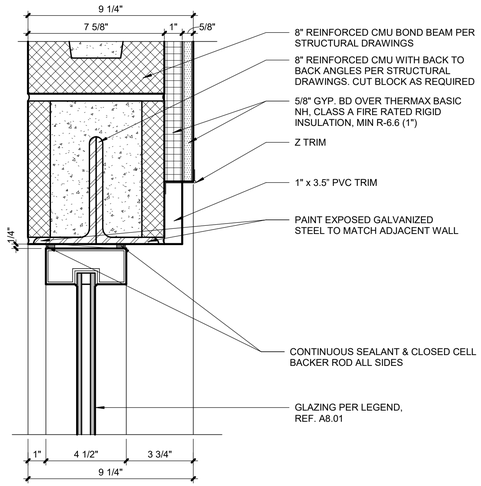
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ARCHITECTURE
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LENEXA, KANSAS 66219
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www.finklewilliams.com

SHEET TITLE

WALL SECTIONS

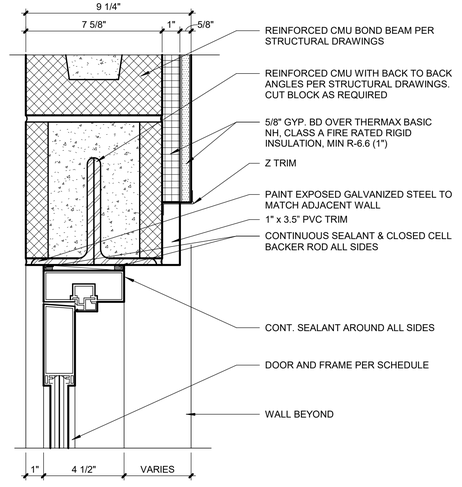
SHEET NUMBER

A5.02



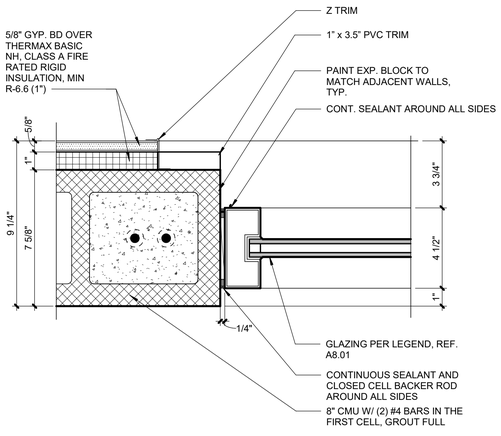

## 10 WINDOW HEAD DETAIL

A5.03 SCALE : 3" = 1'-0"



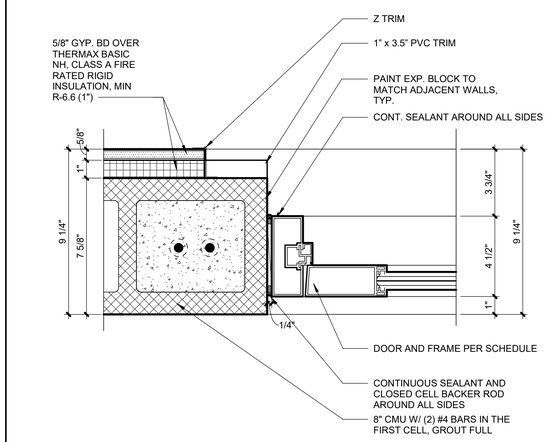

## 7 DOOR HEAD DETAIL

A5.03 SCALE : 3" = 1'-0"



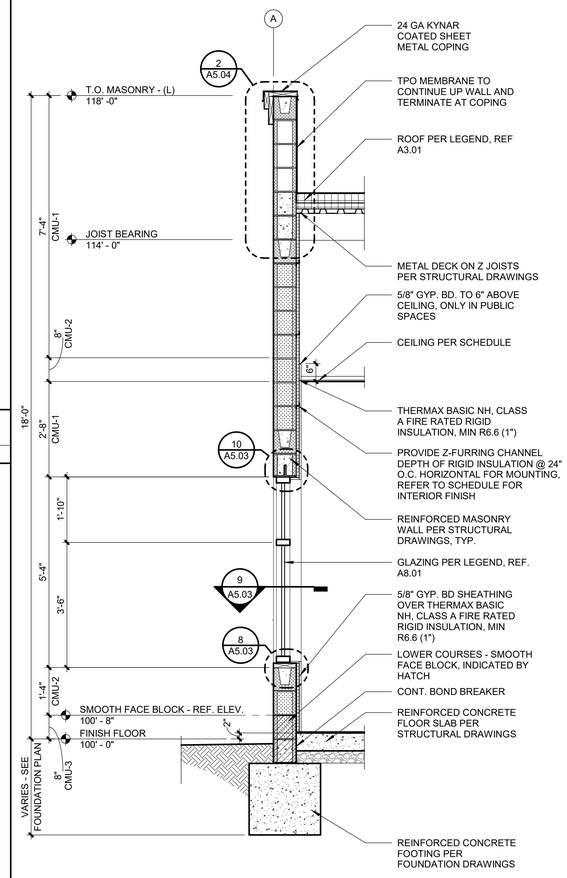

## 9 WINDOW JAMB DETAIL

A5.03 SCALE : 3" = 1'-0"



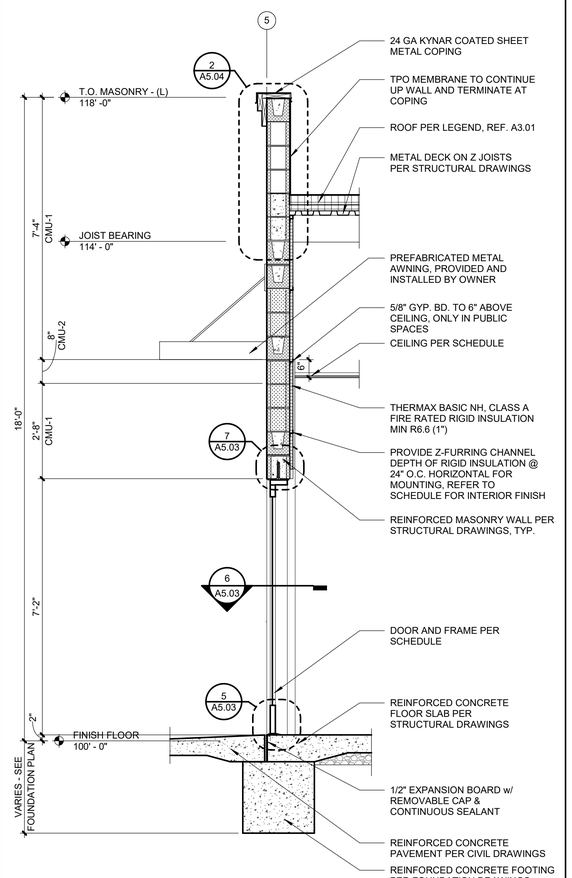

## 6 DOOR JAMB DETAIL

A5.03 SCALE : 3" = 1'-0"



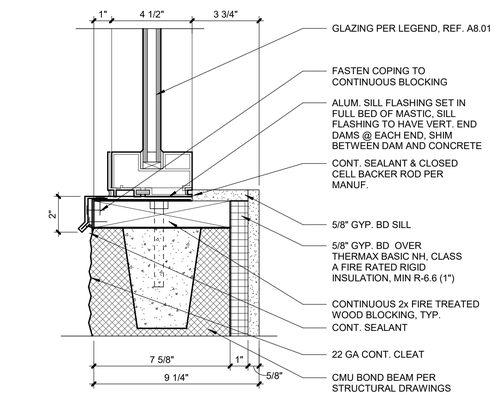

## 4 WALL SECTION

A5.03 SCALE : 1/2" = 1'-0"



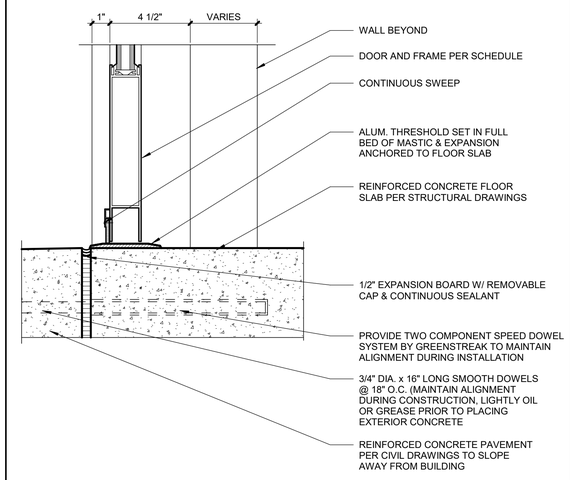

## 2 WALL SECTION

A5.03 SCALE : 1/2" = 1'-0"



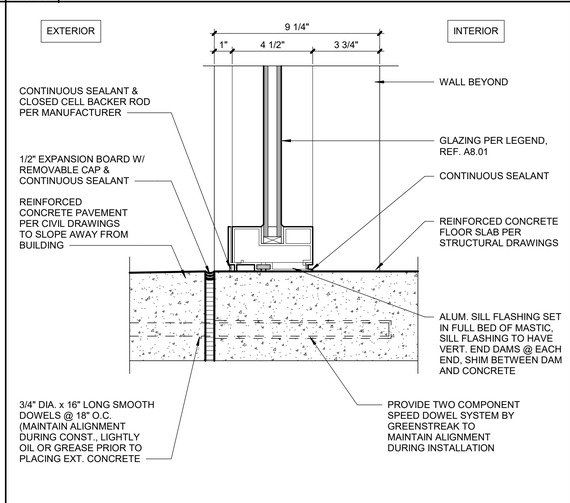

## 8 WINDOW SILL DETAIL

A5.03 SCALE : 3" = 1'-0"



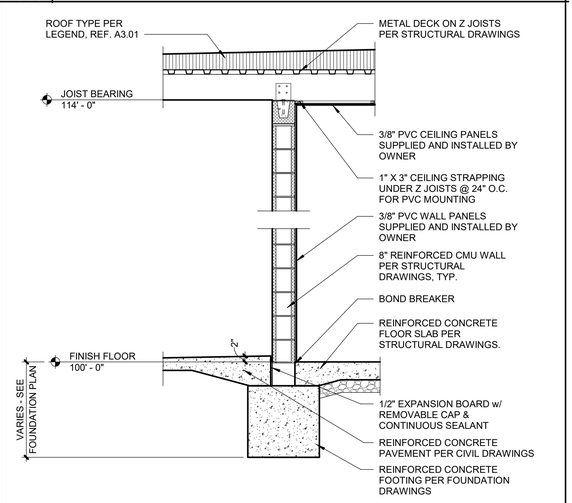

## 5 SILL DETAIL

A5.03 SCALE : 3" = 1'-0"




## 3 WINDOW SILL DETAIL

A5.03 SCALE : 3" = 1'-0"




## 1 WALL SECTION

A5.03 SCALE : 1/2" = 1'-0"

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CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

| | |
|---|---|
| Project No.: | 20015.155 |
| Date: | 07/25/2025 |
| Issued For: | PERMIT |

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
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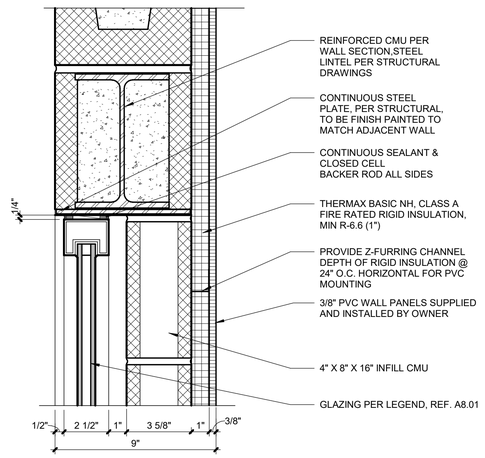
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ARCHITECTURE
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LENEXA, KANSAS 66219
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www.finklewilliams.com

SHEET TITLE

WALL SECTIONS

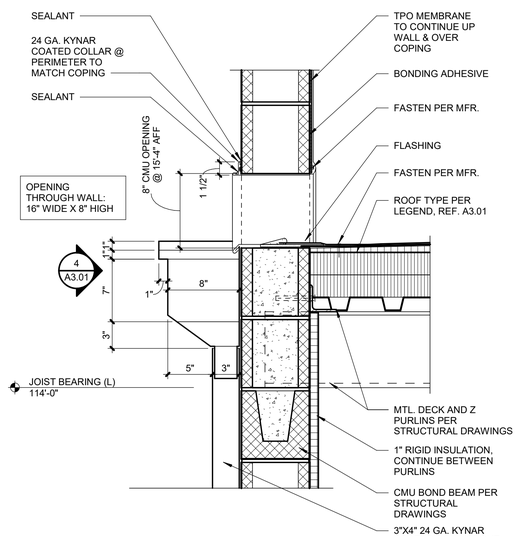
SHEET NUMBER

A5.03



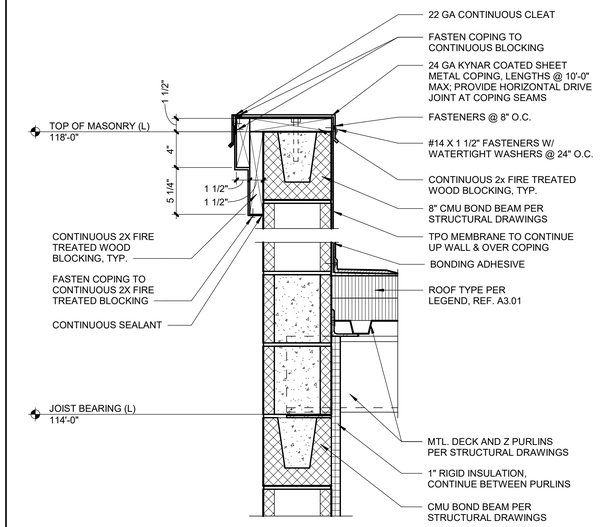

## 7 WINDOW HEAD DETAIL

A5.04 SCALE : 3" = 1'-0"




## 4 SCUPPER SECTION

A5.04 SCALE : 1 1/2" = 1'-0"




## 2 PARAPET DETAIL

A5.04 SCALE : 1 1/2" = 1'-0"




## 6 WINDOW JAMB DETAIL

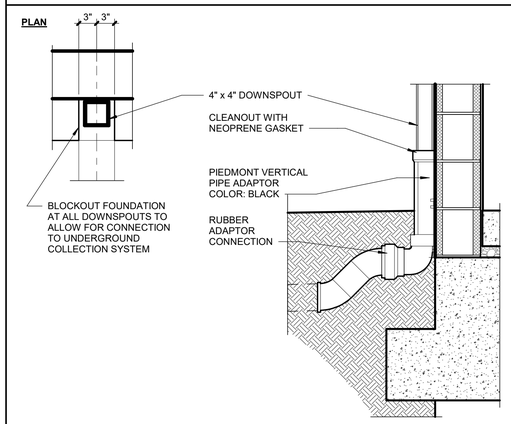
A5.04 SCALE : 3" = 1'-0"




## 3 WALL SECTION

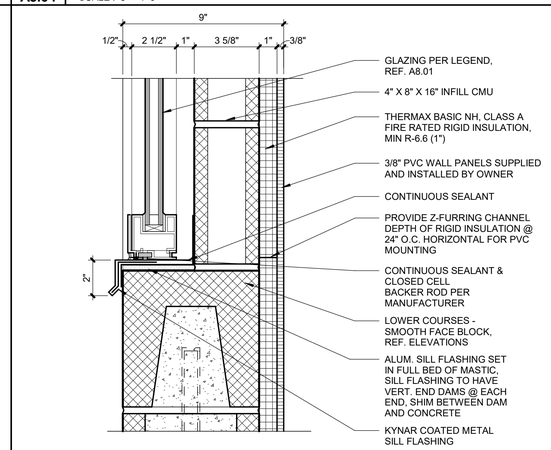
A5.04 SCALE : 1/2" = 1'-0"




## 8 DOWNSPOUT BOOT

A5.04 SCALE : 1" = 1'-0"




## 5 WINDOW SILL DETAIL

A5.04 SCALE : 3" = 1'-0"

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**CLUB CARWASH**

# CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
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REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
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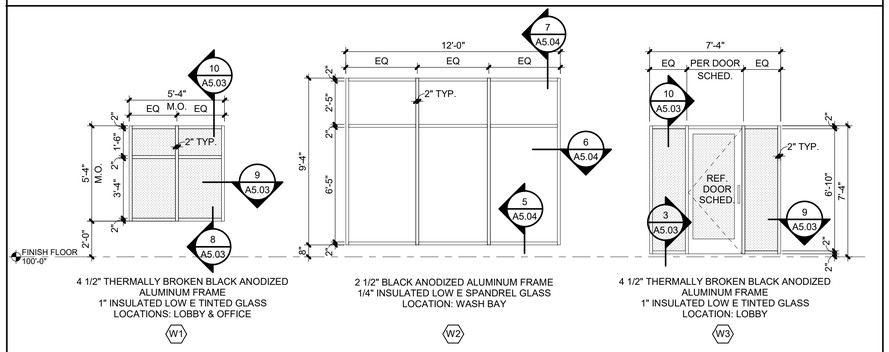

SHEET TITLE

WALL SECTIONS

SHEET NUMBER

A5.04

# GLAZING LEGEND




4 1/2" THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME
1" INSULATED LOW E TINTED GLASS
LOCATIONS: LOBBY & OFFICE

W1

2 1/2" BLACK ANODIZED ALUMINUM FRAME
1/4" INSULATED LOW E SPANDREL GLASS
LOCATION: WASH BAY

W2

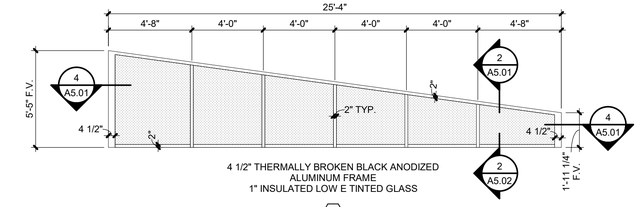
4 1/2" THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME
1" INSULATED LOW E TINTED GLASS
LOCATION: LOBBY

W3



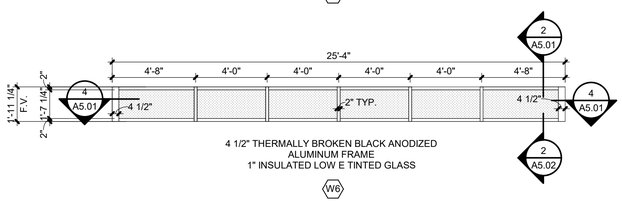

4 1/2" INTERIOR BLACK ANODIZED ALUMINUM FRAME
1/4" CLEAR TEMPERED GLASS
LOCATION: LOBBY

W4



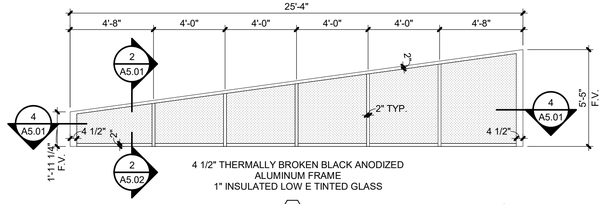

4 1/2" THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME
1" INSULATED LOW E TINTED GLASS

W5



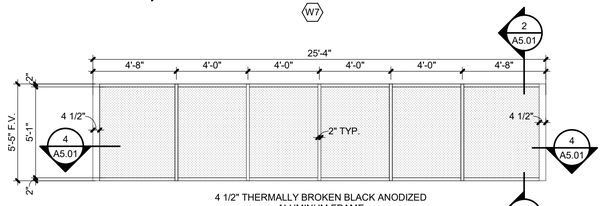

4 1/2" THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME
1" INSULATED LOW E TINTED GLASS

W6




4 1/2" THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME
1" INSULATED LOW E TINTED GLASS

W7




4 1/2" THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME
1" INSULATED LOW E TINTED GLASS

W8

# HARDWARE SETS

**GENERAL NOTES:**

1. ALL HARDWARE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL INTERIOR DOOR HARDWARE SHALL BE FINISH US26D OR EQUIVALENT.
3. ALL LATCHSETS AND LOCKSETS SHALL BE EQUIPPED WITH LEVER TYPE OPERATING TRIM W/ THE "CLUTCH" FEATURE.
4. ALL CLOSERS SHALL BE LOCATED ON ROOMS SIDES OF DOORS.
5. CONTRACTOR'S HARDWARE CONSULTANT SHALL BE RESPONSIBLE FOR DETERMINING APPROPRIATE HARDWARE FUNCTION AND OPTIONS.
6. CONTRACTOR SHALL COORDINATE FINAL KEYING WITH OWNER.

**(LA) LATCHSETS**

SET # LA.1

| | |
|---|---|
| -HINGES | ("PBB" H.W. BALL BEARING 4 1/2" X 4 1/2") |
| -PUSH/PULL PLATE | ("PDQ" 963360 PUSH/ 2C6301 PULL) |
| -WALL STOP | ("HAGER" 236 W) |
| -SILENCERS | ("HAGER" 307D) |
| -CLOSER | ("CAL ROYAL CR441 ALUM) |
| -FLOOR STOP | ("ROCKWOOD" 446) AT DOOR 107.A |

**(LK) INTERIOR LOCKSETS**

SET # LK.1

| | |
|---|---|
| -HINGES | ("PBB" H.W. BALL BEARING 4 1/2" X 4 1/2") |
| -LOCKSET | ("PDQ" XGT-PHL SPIRIT SERIES) |
| -WALL STOP | ("HAGER" 236 W) |
| -SILENCERS | ("HAGER" 307D) |

SET # LK.2

| | |
|---|---|
| -HINGES | ("PBB" H.W. BALL BEARING 4 1/2" X 4 1/2") |
| -LOCKSET | ("PDQ" XGT-PHL SPIRIT SERIES) |
| -SILENCERS | ("HAGER" 307D) |
| -FLOOR STOP | ("ROCKWOOD" 446) |

SET # LK.3

| | |
|---|---|
| -HINGES | ("PBB" H.W. BALL BEARING 4 1/2" X 4 1/2") |
| -CLOSER | ("CAL ROYAL CR441 ALUM) |
| -LOCKSET | ("PDQ" XGT-PHL SPIRIT SERIES) |
| -SILENCERS | ("HAGER" 307D) |
| -WALL STOP | ("HAGER" 236 W) |
| -THRESHOLD | ("PEMKO" 171A) |
| -WEATHERSTRIP | ("PEMKO" 303 AV) |

**(AL) ALUMINUM DOORS**

SET # AL.1

| | |
|---|---|
| -HINGES | (HEAVY DUTY - BY DOOR MFR.) |
| -CLOSERS | (HEAVY DUTY - BY DOOR MFR.) |
| -PULLS | ("KAWNEER" ARCHITECT'S CLASSIC CO-12CP w/ 622 FINISH, OR EQUAL) |
| -EXIT DEVICES | ("DOOR-O-MATIC/FALCON" 1690 TOUCHBAR CONCEALED ROD EXIT DEVICE) |
| -THRESHOLD | ("PEMKO" 2005-AS OR EQUAL) |
| -WEATHERSTRIP | ("PEMKO" 316 AV OR EQUAL) |
| -BOTTOM SWEEP | ("PEMKO" 345 2AV OR EQUAL) |

SET # AL.2

| | |
|---|---|
| -HINGES | (HEAVY DUTY - BY DOOR MFR.) |
| -CLOSERS | (HEAVY DUTY - BY DOOR MFR.) |
| -PULLS | ("KAWNEER" ARCHITECT'S CLASSIC CO-12CP w/ 622 FINISH, OR EQUAL) |
| -EXIT DEVICES | ("DOOR-O-MATIC/FALCON" 1690 TOUCHBAR CONCEALED ROD EXIT DEVICE) |
| -THRESHOLD | ("PEMKO" 2005-AS OR EQUAL) |
| -WEATHERSTRIP | ("PEMKO" 316 AV OR EQUAL) |
| -BOTTOM SWEEP | ("PEMKO" 345 2AV OR EQUAL) |
| -ASTRAGAL | (MEETING STILE) |

SET # AL.3

| | |
|---|---|
| -HINGES | (HEAVY DUTY - BY DOOR MFR.) |
| -CLOSERS | (HEAVY DUTY - BY DOOR MFR.) |
| -PULLS | ("KAWNEER" ARCHITECT'S CLASSIC CO-12CP w/ 622 FINISH, OR EQUAL) |
| -THRESHOLD | ("PEMKO" 2005-AS OR EQUAL) |
| -WEATHERSTRIP | ("PEMKO" 316 AV OR EQUAL) |
| -BOTTOM SWEEP | ("PEMKO" 345 2AV OR EQUAL) |

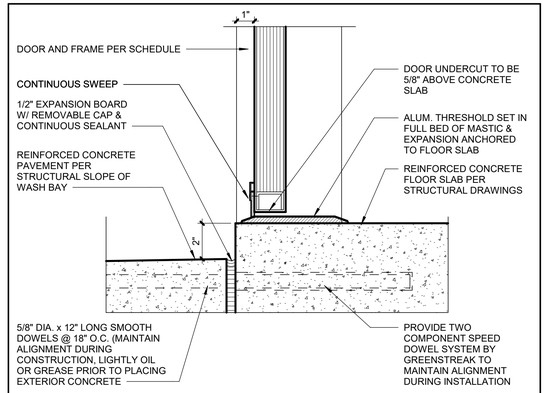
**(EL) EXTERIOR LOCKSETS**

SET # EL.1

| | |
|---|---|
| -HINGES | ("PBB" H.W. BALL BEARING 4 1/2" X 4 1/2") |
| -LOCKSET | ("PDQ" XGT SPIRIT SERIES) |
| -CLOSER | ("CAL ROYAL CR441 ALUM) |
| -THRESHOLD | ("PEMKO" 171A) |
| -WEATHERSTRIP | ("PEMKO" 303 AV) |
| -BOTTOM SWEEP | ("PEMKO" 315CN) |
| -DRIP CAP | ("PEMKO" 346C) |
| -LOCK GUARD | ("IVES" LG10) |
| -SILENCERS | ("HAGER" 307D) |

# LEVER FUNCTION

| | | |
|---|---|---|
| EN. | - | ENTRY, ANSI NO. F82 |
| PA | - | PASSAGE, ANSI NO. F75 |
| PR | - | PRIVACY, ANSI NO. F22 |




| | |
|---|---|
| 1 | INTERIOR SILL DETAIL |
| **A8.01** | SCALE : 3" = 1'-0" |

# DOOR AND FRAME SCHEDULE

| NO. | DOOR SIZE W. | DOOR SIZE H. | DOOR SIZE Th. | TYPE | MAT. | FRAME TYPE | FRAME MAT. | RATING | DETAILS JAMB | DETAILS HEAD | DETAILS SILL | HARDWARE SET | HARDWARE LVR. FCTN. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101.A | 16' - 0" | 10' - 0" | - | O1 | AL | - | - | - | 5/A8.02 | 6/A8.02 | 4/A8.02 | MFR | - | |
| 101.B | 14' - 0" | 10' - 0" | - | O1 | AL | - | - | - | 5/A8.02 | 6/A8.02 | 4/A8.02 | MFR | - | |
| 101.C | 3' - 0" | 7' - 0" | 1 3/4" | A1 | AL | 4 | AL | - | 3/A8.03 | 4/A8.03 | 5/A5.03 | - | - | (2) |
| 101.D | 3' - 0" | 7' - 0" | 1 3/4" | A1 | AL | 4 | AL | - | 3/A8.03 | 4/A8.03 | 5/A5.03 | - | - | (2) |
| 102.A | 3' - 0" | 7' - 0" | 1 3/4" | A1 | AL | W3 | AL | - | 6/A5.03 | 7/A5.03 | 5/A5.03 | AL.1 | - | |
| 102.B | 3' - 0" | 7' - 0" | 1 3/4" | A2 | AL | W4 | AL | - | 10/A8.02 / 8A8.02 | 11/A8.02 / 9/A8.02 | 5/A5.03 / 7/A8.02 | AL.3 | - | (1) |
| 103.A | 3' - 0" | 7' - 0" | 1 3/4" | W1 | WD | 2 | HM | - | 2/A8.02 | 3/A8.02 | - | LK.2 | EN | |
| 104.A | 3' - 0" | 7' - 0" | 1 3/4" | W1 | WD | 2 | HM | - | 2/A8.02 | 3/A8.02 | - | LK.2 | PR | (3) |
| 105.A | 3' - 0" | 7' - 0" | 1 3/4" | H1 | HM | 1 | HM | - | 5/A8.03 | 6/A8.03 | 1/A8.02 | EL.1 | EN | (3) |
| 107.A | 3' - 0" | 7' - 0" | 1 1/2" | P1 | PL | 3 | PL | - | 2/A8.02 | 3/A8.02 | 1/A8.01 | LA.1 | PA | |
| 107.B | 6' - 0" | 7' - 0" | 1 3/4" | A1 | AL | 4 | AL | - | 3/A8.03 | 4/A8.03 | 5/A8.03 | AL.2 | - | |
| 107.C | 6' - 0" | 7' - 0" | 1 3/4" | A1 | AL | 4 | AL | - | 3/A8.03 | 4/A8.03 | 5/A8.03 | AL.2 | - | |
| 107.D | 3' - 0" | 7' - 0" | 1 1/2" | P1 | PL | 3 | PL | - | 2/A8.02 | 3/A8.02 | 1/A8.01 | LA.1 | PA | |

# DOOR SCHEDULE REMARKS

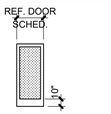
(1) DOOR SYSTEM TO WEEP TO CAR WASH TUNNEL.
(2) PROVIDE EGRESS PANIC BARS, NO EXTERNAL ACCESS HARDWARE
(3) PROVIDE DEADBOLT PRIVACY INDICATORS AT RESTROOMS

## OVERHEAD DOOR NOTE

GENERAL NOTE: OVERHEAD DOOR SIZES SHOWN REFERENCE ROUGH OPENING. OVERHEAD DOORS SHOULD OVERLAP OPENING BY 1" EA. SIDE. REFERENCE DETAILS (FOR INSTANCE, THE 16'-0" x 10'-0" DOOR WILL BE 16'-2" x 10'-2" ACTUAL).

# DOOR TYPES

ALL HOLLOW METAL DOORS TO BE FACTORY PRIMED. FINISH PAINT TO BE SPRAYED



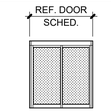

MED. STILE BLACK ANODIZED ALUMINUM DOOR W/ 1" PREFINISHED TEMPERED TINTED GLASS

A1




MED. STILE BLACK ANODIZED ALUMINUM DOOR W/ 1" PREFINISHED TEMPERED CLEAR GLASS

A2




PREFINISHED BLACK ANODIZED ALUMINUM SLIDING DOOR W/ 1" PREFINISHED TEMPERED CLEAR GLASS (PELLA IMPERVIA OR EQUAL)

A3



EXT. DOOR TO BE GRADE III EXTRA HEAVY DUTY, MODEL 4 INSUL., MIN. 16 GA. GALV. STL. (FINISH W/ 2 COATS SEMI-GLOSS EPT-3)

H1



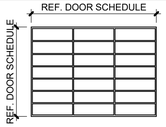
SOLID PLASTIC DOOR; TIGER DOOR HEAVY DUTY FIBERGLASS DOOR (FACTORY FINISH: POLAR WHITE)

P1



SOLID CORE FLUSH WOOD DOOR: EDPCUF CORE, AWI PREMIUM GRADE WHITE BIRCH VENEER, ROTARY CUT. PROVIDE BOOKED MATCH GRAIN. FIELD STAIN: MINWAX GOLDEN OAK W/ CLEAR POLYURETHANE FINISH

W1

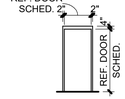



ALUMINUM SECTIONAL DOOR C.H.I. FULL-VIEW ALUMINUM SERIES #3295 WITH 1/8" PLAIN POLYCARBONATE; HIGH LIFT TRACK; MANUAL OPERATION. (FACTORY FINISH = BLACK ANODIZED FRAMES)

O1

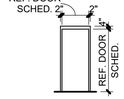
# FRAME TYPES

ALL HOLLOW METAL FRAMES TO BE FACTORY PRIMED. FINISH PAINT TO BE SPRAYED



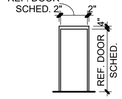

14 GA. GALV. WELDED HOLLOW METAL FRAMES, FINISH TO BE SPRAYED W/ 2 COATS SEMI-GLOSS ACRYLIC LATEX PAINT

1



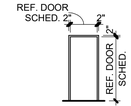

16 GA. WELDED HOLLOW METAL FRAMES, FINISH TO BE SPRAYED W/ 2 COATS SEMI-GLOSS ACRYLIC LATEX PAINT

2




SOLID PLASTIC EXTRUDED K/D FIBERGLASS FRAMES (FACTORY FINISH: POLAR WHITE)

3



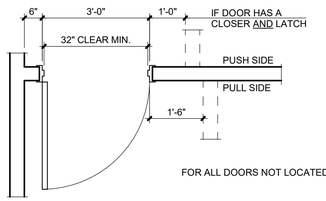

STOREFRONT; FACTORY FINISH: BLACK ANODIZED ALUMINUM, EXTERIOR TO BE THERMALLY BROKEN FRAME.

4

# MATERIAL LEGEND

| | | |
|---|---|---|
| GL | - | GLASS |
| HM | - | HOLLOW METAL |
| WD | - | WOOD |
| STL | - | STEEL |
| AL | - | ALUMINUM |
| MFR | - | PER MANUFACTURER |
| POLY | - | POLYETHYLENE |
| P | - | POLYCARBONATE |
| PL | - | PLASTIC |

# DOOR LOCATION PLAN




FOR ALL DOORS NOT LOCATED ON PLAN

CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

Project No.: 20015.155
Date: 07/25/2025
Issued For: PERMIT

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5540
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |


FINKLE+ WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

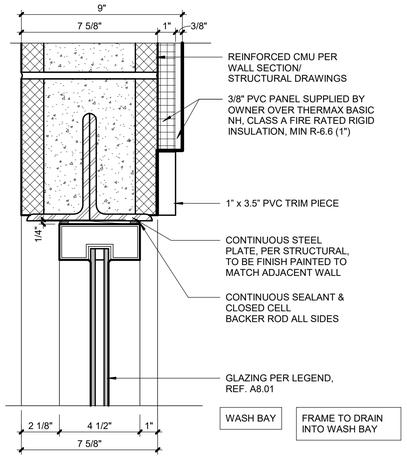

SHEET TITLE

DOOR AND GLAZING SCHEDULES

SHEET NUMBER

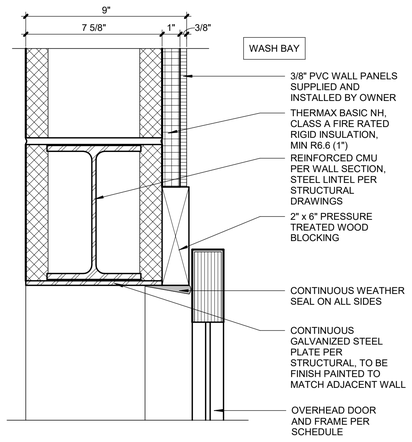
A8.01

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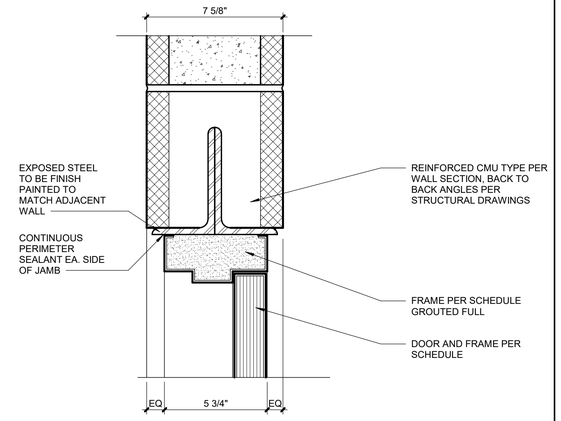

9 WINDOW HEAD DETAIL

A8.02 SCALE : 3" = 1'-0"



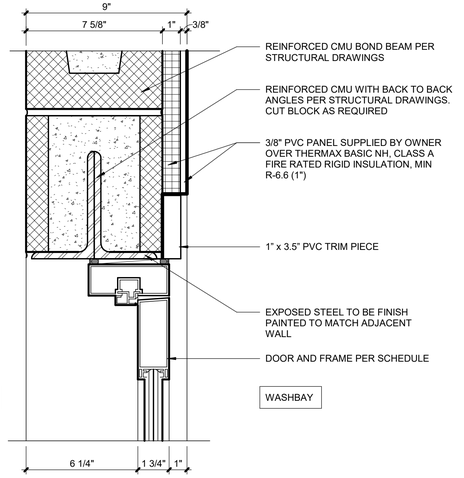

6 DOOR HEAD DETAIL

A8.02 SCALE : 3" = 1'-0"



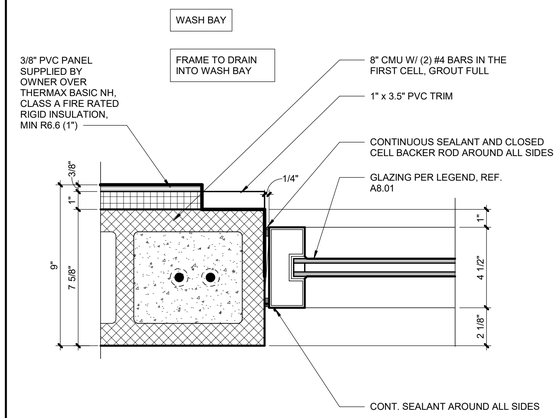

3 DOOR HEAD DETAIL

A8.02 SCALE : 3" = 1'-0"



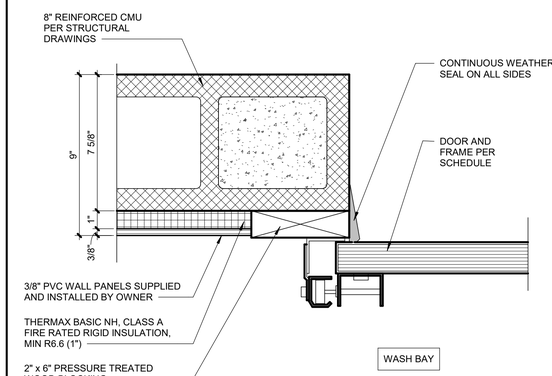

11 DOOR HEAD DETAIL

A8.02 SCALE : 3" = 1'-0"



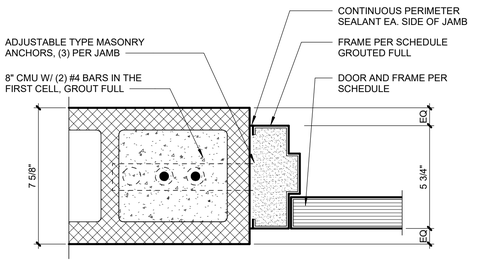

8 WINDOW JAMB DETAIL

A8.02 SCALE : 3" = 1'-0"



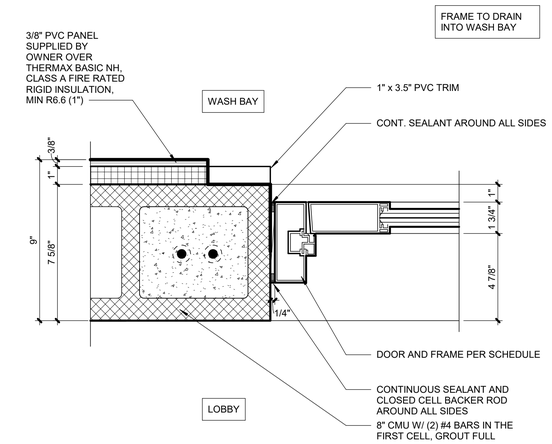

5 DOOR JAMB DETAIL

A8.02 SCALE : 3" = 1'-0"



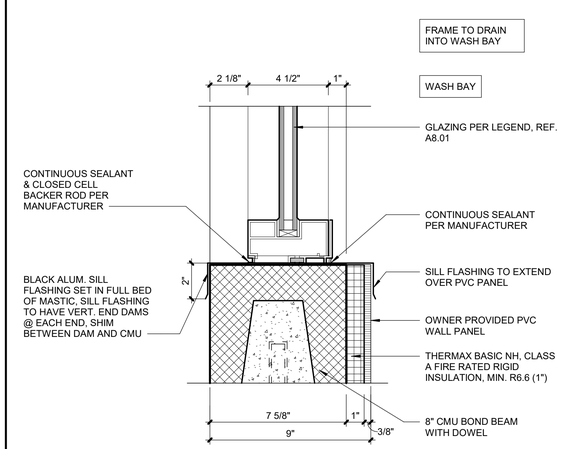

2 DOOR JAMB DETAIL

A8.02 SCALE : 3" = 1'-0"



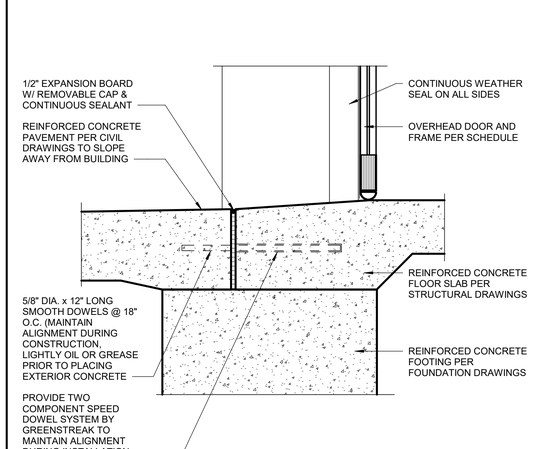

10 DOOR JAMB DETAIL

A8.02 SCALE : 3" = 1'-0"



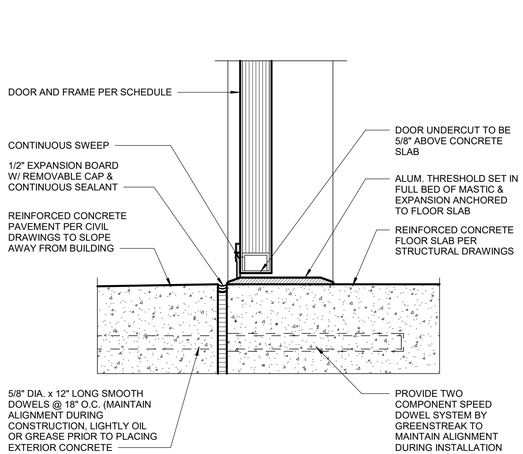

7 WINDOW SILL DETAIL

A8.02 SCALE : 3" = 1'-0"




4 SILL DETAIL

A8.02 SCALE : 1 1/2" = 1'-0"




1 SILL DETAIL

A8.02 SCALE : 3" = 1'-0"

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CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

Project No.: 20015.155
Date: 07/25/2025
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REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

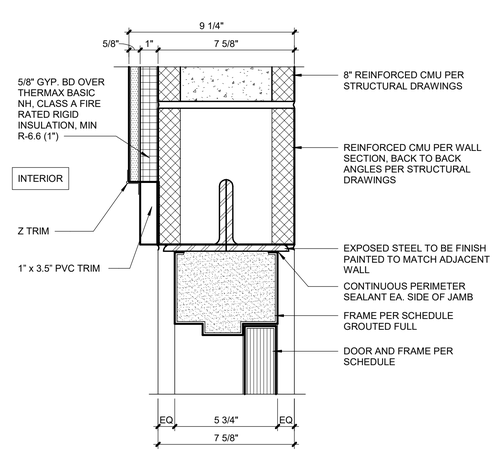
FINKLE+ WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

SHEET TITLE

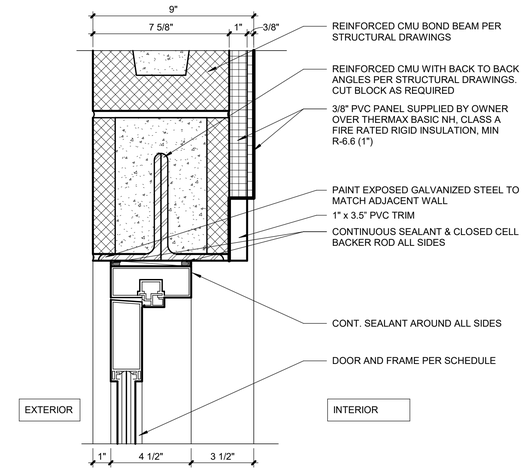
DOOR & WINDOW DETAILS

SHEET NUMBER

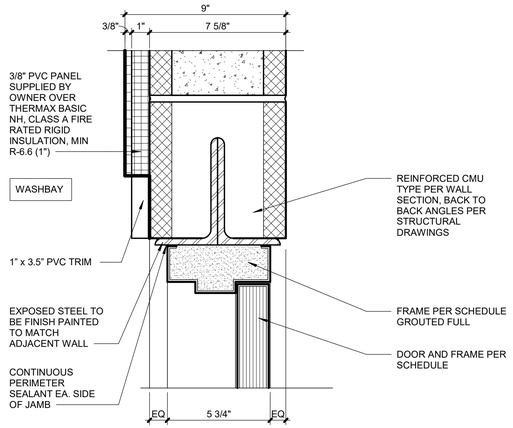
A8.02



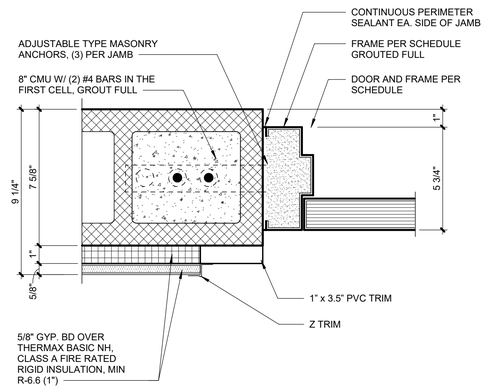

6 DOOR HEADS DETAIL
A8.03 SCALE : 3" = 1'-0"



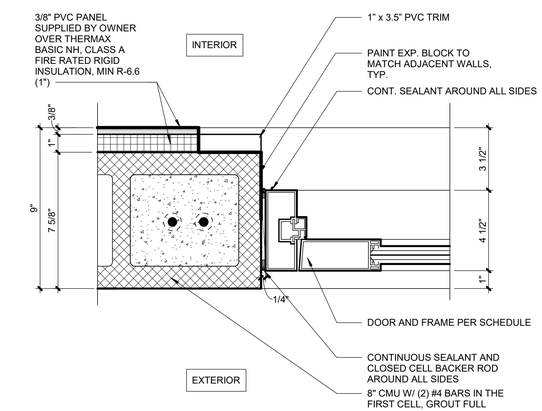

4 DOOR HEAD DETAIL
A8.03 SCALE : 3" = 1'-0"



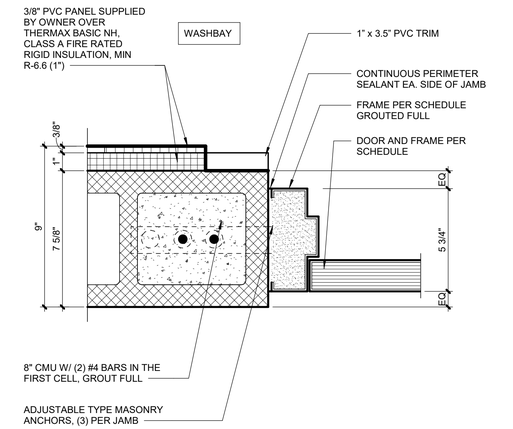

2 DOOR HEAD DETAIL
A8.03 SCALE : 3" = 1'-0"




5 DOOR JAMB DETAIL
A8.03 SCALE : 3" = 1'-0"




3 DOOR JAMB DETAIL
A8.03 SCALE : 3" = 1'-0"




1 DOOR JAMB DETAIL
A8.03 SCALE : 3" = 1'-0"

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Club CARWASH

# CCW - LEE'S SUMMIT, MO

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LEE'S SUMMIT, MO 64081

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NUMBER A-5548
REGISTERED ARCHITECT

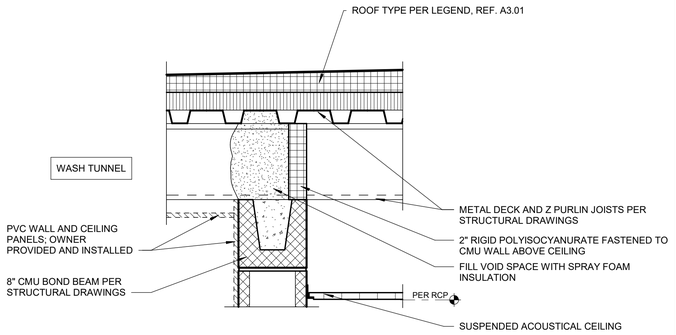
PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

FINKLE + WILLIAMS
ARCHITECTURE
8787 RENNER BLVD., SUITE 100
LENEXA, KANSAS 66219
913.498.1550
www.finklewilliams.com

SHEET TITLE
DOOR & WINDOW DETAILS

SHEET NUMBER
A8.03




## 2 INTERIOR WALL DETAIL

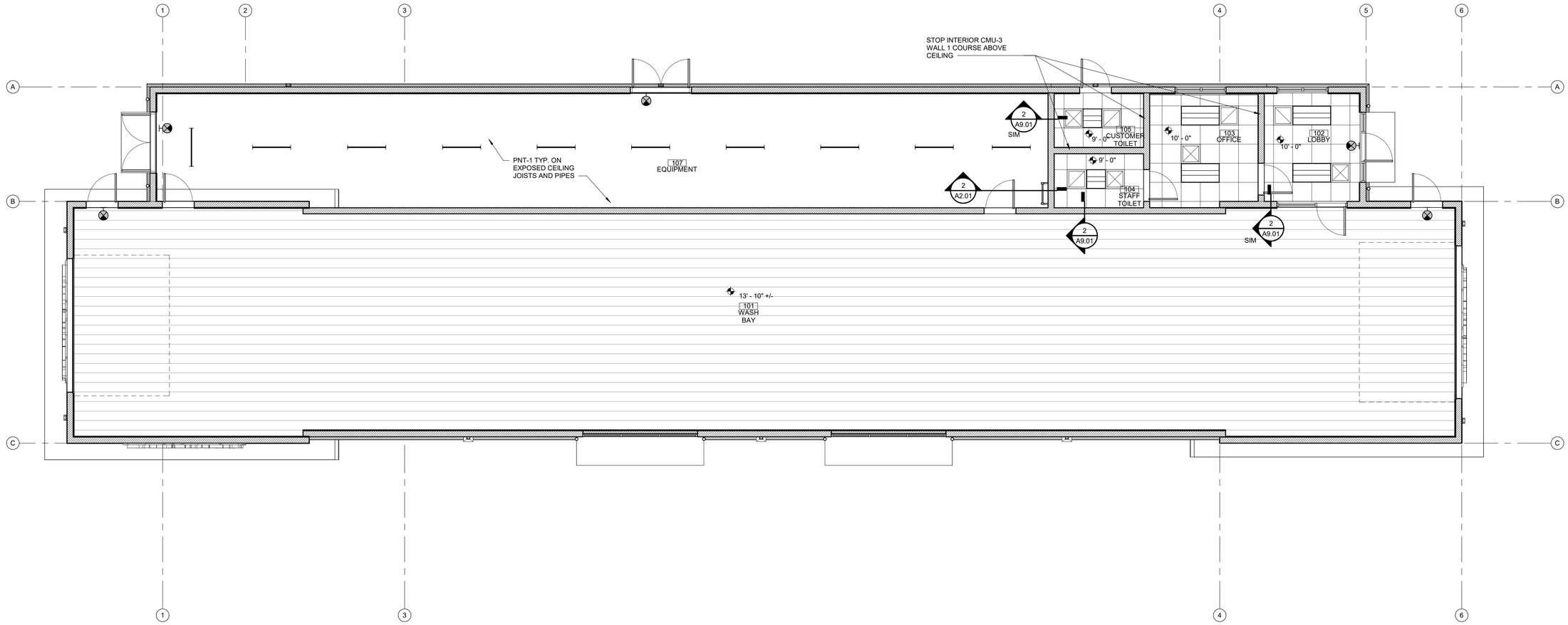
A9.01 SCALE : 1 1/2" = 1'-0"

## REFLECTED CEILING PLAN GENERAL NOTES

1. SUSPENDED ACOUSTICAL TILE NOTE: NO CEILING EDGE TILE IS TO BE UNDER 6" WIDE. USE MATCHING STYLE 2'X4' CEILING TILE CUT TO THE PERIMETER SIZE AS NEEDED.
2. NO BUILDING ELEMENTS SHALL BE CONNECTED TO OR SUSPENDED FROM DUCTWORK. ALL MATERIALS SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE.

## REFLECTED CEILING PLAN LEGEND

- 2'x2' SUSPENDED ACOUSTICAL CEILING. REFERENCE FINISH SCHEDULE FOR TYPE.
- PVC PLASTIC CEILING PANELS PROVIDED AND INSTALLED BY OWNER. REFERENCE FINISH SCHEDULE FOR TYPE.
- 2'x4' OR 2'x2' DIRECT INDIRECT LIGHT TROFFER PER ELECTRICAL DRAWINGS
- 8' STRIP FIXTURE WITH STEEL HOUSING PER ELECTRICAL DRAWINGS
- 6" ROUND LED CAN LIGHT FIXTURE PER ELECTRICAL DRAWINGS
- SUPPLY AIR DIFFUSER PER MECHANICAL DRAWINGS
- RETURN AIR DIFFUSER PER MECHANICAL DRAWINGS
- EXIT SIGN PER ELECTRICAL DRAWINGS




## 1 REFLECTED CEILING PLAN

A9.01 SCALE : 3/16" = 1'-0"

C:\Users\AustinWalter\Documents\20015.155_Lee's Summit, MO_Lot 9_awalterZNRAV.rvt

CLUB CARWASH

# CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

| | |
|---|---|
| Project No.: | 20015.155 |
| Date: | 07/25/2025 |
| Issued For: | PERMIT |

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

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SHEET TITLE

REFLECTED CEILING PLAN

SHEET NUMBER

A9.01

**DIVISION 1 - GENERAL REQUIREMENTS**

1.1 ALTERNATES
- A. IF ANY ALTERNATES ARE INDICATED IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL FURNISH A SEPARATE PRICE FOR ALL MATERIAL, TAXES, FREIGHT, MARKUP, DELIVERY, LABOR, OVERHEAD AND PROFIT FOR THAT PORTION OF THE WORK. THE PROPOSED ALTERNATE MAY THEN BE ADDED OR DEDUCTED FROM THE CONTRACT SUM IF THE OWNER ACCEPTS THE ALTERNATE.

1.2 CHANGE ORDERS
- A. WHEN CHANGES TO THE CONTRACT SUM OR SCHEDULE ARE NECESSARY, CONTRACTOR SHALL SUBMIT A PDF COPY TO ARCHITECT FOR REVIEW IN A FORMAT AGREED UPON BETWEEN THE OWNER, ARCHITECT, AND CONTRACTOR. BEFORE PROCEEDING WITH WORK RELATED TO CHANGE ORDERS, CONTRACTOR SHALL OBTAIN OWNER'S WRITTEN APPROVAL.

1.3 SUBMITTALS
- A. CONTRACTOR SHALL PREPARE AND SUBMIT SUBMITTALS REQUIRED BY INDIVIDUAL SPEC SECTIONS AS A PDF UPLOADED TO ON-LINE PROJECT SOFTWARE WEBSITE OR A PDF SENT VIA EMAIL FOR ARCHITECT'S REVIEW.
- B. PROCESSING TIME:
  1. INITIAL REVIEW: MIN. TEN (10) BUSINESS DAYS
  2. RESUBMITTAL REVIEW (AS REQUIRED): MIN. FIVE (5) BUSINESS DAYS
- C. CERTIFICATES AND CERTIFICATIONS SUBMITTALS: INCLUDES SIGNATURE OF ENTITY RESPONSIBLE FOR PREPARING CERTIFICATION. PROVIDE DIGITAL SIGNATURE ON ELECTRONICALLY SUBMITTED CERTIFICATES AND CERTIFICATIONS WHERE INDICATED.
- D. DELEGATED-DESIGN SERVICES CERTIFICATION: IN ADDITION TO OTHER REQUIRED SUBMITTALS, SUBMIT DIGITALLY SIGNED PDF ELECTRONIC FILE, SIGNED AND SEALED BY THE RESPONSIBLE DESIGN PROFESSIONAL.
- E. CONTRACTOR'S SUBMITTAL REVIEW: CONTRACTOR SHALL REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO ARCHITECT.
  1. ARCHITECT WILL NOT REVIEW SUBMITTALS THAT DO NOT HAVE CONTRACTOR'S REVIEW AND APPROVAL

1.4 CONSTRUCTION PERIOD TESTING
- A. THE OWNER SHALL ENGAGE AN INDEPENDENT TESTING AGENCY TO PERFORM CODE-REQUIRED "SPECIAL INSPECTIONS" AND QUALITY CONTROL TESTING. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING TIMES FOR TESTS, INSPECTIONS, AND OBTAINING SAMPLES AND NOTIFYING TESTING AGENCY.

1.5 REFERENCE STANDARDS
- A. CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE MOST RECENT STANDARDS IN EFFECT AS OF THE DATE OF THE CONSTRUCTION DOCUMENTS, UNLESS INDICATED OTHERWISE.

**DIVISION 2 - SITE WORK**

SEE CIVIL AND LANDSCAPE PLANS AND SPECIFICATIONS

**DIVISION 3 - CONCRETE**

SEE STRUCTURAL PLANS AND SPECIFICATIONS FOR MORE INFORMATION

**DIVISION 4 - MASONRY**

**042000 UNIT MASONRY**

A. SUBMITTALS:
1. PRODUCT DATA FOR EACH TYPE OF PRODUCT, SHOP DRAWINGS FOR REINFORCING STEEL, AND ONE SAMPLE FOR EACH TYPE AND COLOR OF MASONRY UNIT UPON ARCHITECT'S REQUEST.

B. MATERIALS:
1. CONCRETE MASONRY UNITS (CMU'S): ASTM C90, NORMAL WEIGHT, SPECIAL SHAPES FOR LINTELS, CORNERS, JAMBS, SASH, CONTROL JOINTS, AND OTHER SPECIAL CONDITIONS. BULLNOSE UNITS FOR OUTSIDE CORNERS, DOOR AND WINDOW JAMBS, AND SILLS, UNLESS OTHERWISE INDICATED.
   a. UNITS MADE WITH INTEGRAL WATER REPELLENT FOR EXPOSED UNITS AND WHERE INDICATED
   b. DECORATIVE CMU'S: NORMAL WEIGHT WITH FINISH SPECIFIED ON DRAWINGS (GROUND FACE, SPLIT FACE, ETC). SEE EXTERIOR MATERIALS LEGEND FOR MFR, STYLE, AND COLOR
   c. INSULATED CMU'S
2. MORTAR AND GROUT:
   a. MORTAR: ASTM C 270, TYPE N ABOVE GRADE, TYPE S BELOW GRADE.
   b. GROUT: ASTM C 476 WITH A SLUMP OF 8-11 INCHES, 28-DAY COMPRESSIVE STRENGTH OF 2,000 PSI MINIMUM.
   c. COLOR TO BE SELECTED FROM MANUFACTURER'S FULL RANGE.
3. REINFORCEMENT: SEE STRUCTURAL CONSTRUCTION DOCUMENTS FOR SPECIFICATIONS ON REINFORCEMENT.
4. ACCESSORIES:
   a. COMPRESSIBLE FILLER: PREMOLDED STRIPS ASTM D 1056. GRADE 2A1
   b. PREFORMED CONTROL JOINT GASKETS: SBR OR PVC DESIGNED TO FIT STANDARD SASH BLOCK.
   c. BOND-BREAKER STRIPS: ASPHALT-SATURATED FELT COMPLYING W/ ASTM D 226.
5. MASONRY-CELL FILL:
   a. LIGHTWEIGHT AGGREGATE
   b. INSULATION AS SPECIFIED IN DIVISION 7

C. INSTALLATION:
1. MIX MASONRY UNITS FROM DIFFERENT PALLETS FOR UNIFORM BLEND OF COLOR AND TEXTURE. INSTALL MASONRY UNITS W/ UNIFORM BED AND HEAD JOINTS IN FULL BED OF MORTAR WITH FULL HEAD JOINTS IN RUNNING BOND (UNLESS NOTED OTHERWISE) KEEPING CAVITIES CLEAN OF MORTAR AND DEBRIS. TOOL MORTAR JOINTS SLIGHTLY CONCAVE.
2. LINTELS: INSTALL LINTELS ABOVE ALL OPENINGS AND WHERE INDICATED WITH MINIMUM 8" BEARING AT EACH JAMB AND FILL CORES IN MASONRY UNDER EACH LINTEL BEARING FULL HEIGHT OF JAMB.
3. EXPANSION JOINTS: PROVIDE CLOSED CELL PREMOLDED FILLER STRIP, FOAM BACKER ROD AND SEALANT COMPLYING WITH ASTM C920, GRADE NS, USE M, CLASS 50.

D. CLEANING: CLEAN MASONRY AS THE WORK PROGRESSES AND WHEN MORTAR IS THOROUGHLY SET AND CURED, CLEAN WITH A PROPRIETARY CLEANER APPROVED BY BRICK MANUFACTURER TO REMOVE EXCESS MORTAR.

**047200 CAST STONE**

A. QUALITY ASSURANCE:
1. MANUFACTURER QUALIFICATIONS: A PLANT CERTIFIED BY THE CAST STONE INSTITUTE.

B. MATERIALS:
1. CAST STONE UNITS: SEE EXTERIOR MATERIALS LEGEND FOR MFR, STYLE, AND COLOR
   a. COMPLY WITH ASTM C1364
   b. SHALL BE RESISTANT TO FREEZING AND THAWING
   c. SLOPE EXPOSED HORIZONTAL SURFACES 1:12 TO DRAIN
   d. PROVIDE DRIPS ON PROJECTING ELEMENTS UNLESS OTHERWISE NOTED.
   e. COLORS & TEXTURES: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE INCLUDING PREMIUM COLORS.
   f. JOINTS TO ALIGN WITH ADJACENT MULLIONS
2. MORTAR: TYPE N
   a. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE, INCLUDING PREMIUM COLORS

C. ACCESSORIES:
1. ANCHORS: TYPE 304 STAINLESS STEEL
2. DOWELS: 1/2" DIA. ROUND BARS, TYPE 304 STAINLESS STEEL.

D. INSTALLATION: UNITS SHALL BE FULLY CURED PRIOR TO INSTALLATION.
1. INSTALL CAST STONE UNITS SET IN FULL BED OF MORTAR WITH FULL HEAD JOINTS. RAKE OUT ALL JOINTS TO MINIMUM 3/4"
2. INSTALL SEALANT TO MATCH CAST STONE (COLOR TO BE SELECTED FROM MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND SHALL BE VERIFIED FROM A 12" LONG FIELD APPLIED SAMPLE PRIOR TO COMPLETE INSTALLATION).

E. CLEANING AND PATCHING:
1. EXPOSED FACES OF CAST STONE UNITS SHALL BE PROTECTED FROM MORTAR AND STAINING DURING CONSTRUCTION. AFTER MORTAR IS THOROUGHLY SET AND CURED, CAST STONE SHALL BE CLEANED WITH A PRODUCT EXPRESSLY APPROVED FOR USE BY CLEANER MANUFACTURER AND CAST STONE MANUFACTURER. EXCESSIVE STAINING AND AN UNEVEN APPEARANCE SHALL BE CAUSE FOR REJECTION. MINOR PATCHING SHALL BE ALLOWED PROVIDED PATCH CAN BE BLENDED TO MATCH UNITS. UNITS WITH SIGNIFICANT CHIPS OR BREAKAGE SHALL BE PREFABRICATED.

**DIVISION 5 - METALS**

**051200 STRUCTURAL STEEL FRAMING**

A. SEE STRUCTURAL CONSTRUCTION DOCUMENTS FOR STRUCTURAL STEEL SPECIFICATIONS.

B. FINISH:
1. EXTERIOR FABRICATIONS: ALL STRUCTURAL STEEL EXPOSED TO THE EXTERIOR INCLUDING MASONRY LINTELS SHALL BE GALVANIZED AND FACTORY PRIMED READY FOR FINISH PAINTING, UNLESS NOTED OTHERWISE.
2. INTERIOR FABRICATIONS: FACTORY PRIMED, UNLESS NOTED OTHERWISE.

**DIVISION 6 - WOOD AND PLASTICS**

**061000 ROUGH CARPENTRY**

SEE STRUCTURAL CONSTRUCTION DOCUMENTS FOR SPECIFICATIONS RELATED TO STRUCTURAL LUMBER, ENGINEERED WOOD PRODUCTS, PANEL PRODUCTS, FASTENERS, AND ACCESSORIES

A. LUMBER: PROVIDE S4S, 19 PERCENT MAXIMUM MOISTURE CONTENT FOR 2-INCH NOMINAL THICKNESS OR LESS, MARKED WITH GRADE STAMP OF INSPECTION AGENCY OF THE FOLLOWING GRADE:
1. EXPOSED FRAMING: NO. 1 OR NO. 2.
2. MISCELLANEOUS LUMBER FOR NAILERS, BLOCKING, AND SIMILAR CONSTRUCTION: STUD, OR NO. 3 GRADE

B. PANEL PRODUCTS: DOC PS 2. PROVIDE PLYWOOD COMPLYING WITH DOC PS 1 WHERE PLYWOOD IS INDICATED AND AS FOLLOWS:
1. ROOF SHEATHING, WHERE INDICATED ON DRAWINGS:
   a. PLYWOOD: EXTERIOR OR EXPOSURE 1, STRUCTURAL I

C. PRESERVATIVE-TREATED MATERIALS: APWA C2 LUMBER AND APWA C9 PLYWOOD, LABELED BY AN INSPECTION AGENCY APPROVED BY ALSC'S BOARD OF REVIEW. AFTER TREATMENT, KILN-DRY LUMBER TO 19 PERCENT MOISTURE CONTENT AND PLYWOOD TO 15 PERCENT. TREAT INDICATED ITEMS AND THE FOLLOWING:
1. WOOD MEMBERS IN CONNECTION WITH ROOFING, FLASHING, VAPOR BARRIERS, AND WATERPROOFING
2. CONCEALED MEMBERS IN CONTACT WITH MASONRY OR CONCRETE
3. WOOD FRAMING LESS THAN 18" ABOVE GRADE
4. WOOD FLOOR PLATES INSTALLED OVER CONCRETE SLABS DIRECTLY IN CONTACT WITH EARTH.

D. FIRE-RETARDANT TREATED MATERIALS: COMPLY WITH PERFORMANCE REQUIREMENTS IN AWPA C20 FOR LUMBER AND AWPA C27 FOR PLYWOOD, LABELED BY TESTING AND INSPECTING AGENCY. USE INTERIOR TYPE A HIGH TEMPERATURE (HT). TREAT INDICATED ITEMS AND THE FOLLOWING:
1. EXTERIOR RATED: PLYWOOD SHEATHING AS DETAILED AT ROOF SOFFIT.

E. MISCELLANEOUS PRODUCTS:
1. FASTENERS: SIZE AND TYPE INDICATED, GALVANIZED WHEN EXPOSED TO WEATHER, GROUND CONTACT, OR AREAS OF HIGH HUMIDITY, STAINLESS STEEL WHEN FASTENING PRESERVATIVE-TREATED MATERIALS (CONTRACTOR SHALL CONFIRM COMPATIBILITY OF FASTENER MATERIAL WITH PRESERVATIVE).
2. METAL FRAMING ANCHORS: HOT-DIP GALVANIZED STEEL OF STRUCTURAL CAPACITY, TYPE, AND SIZE INDICATED.
3. AIR BARRIERS: AIR-RETARDER SHEETING OR FLUID APPLIED COATING DESIGNED TO PREVENT WATER INTRUSION FROM EXTERIOR TO INTERIOR BUT TO ALLOW WATER VAPOR TO PASS FROM INTERIOR TO EXTERIOR. AN AIR BARRIER MUST HAVE AIR PERMEANCE THAT IS NOT GREATER THAN 0.02 L/(S·M²) AT A PRESSURE DIFFERENCE OF 75 PA (0.004 CFM/FT2 AT A PRESSURE DIFFERENCE OF 1.56 LB/FT2) WHEN TESTED IN ACCORDANCE WITH ASTM E 2178.
4. SILL-SEALER: GLASS-FIBER INSULATION, 1" THICK, COMPRESSIBLE TO 1/32".
5. ADHESIVE FOR FIELD GLUING PANELS TO FRAMING: APA AFG-01.

F. INSTALLATION:
1. SET ROUGH CARPENTRY TO REQUIRED LEVELS AND LINES WITH MEMBERS PLUMB, TRUE TO LINE, CUT AND FITTED. DISCARD PIECES WITH DEFECTS THAT WOULD LOWER STRENGTH OR RESULT IN UNACCEPTABLE APPEARANCE OF EXPOSED MEMBERS.
2. INSTALL STRUCTURAL MEMBER FULL LENGTH WITHOUT SPLICES UNLESS OTHERWISE SPECIFICALLY DETAILED.
3. COMPLY WITH MEMBER SIZES, SPACING, CONFIGURATION, AND FASTENER SIZE AND SPACING AS INDICATED ON THE STRUCTURAL DRAWINGS, BUT NOT LESS THAN REQUIRED BY APPLICABLE CODES AND AFPA WCD 1 T11.
4. CONSTRUCT DOUBLE JOIST HEADERS AT FLOOR AND CEILING OPENINGS AND UNDER WALL STUD PARTITIONS THAT ARE PARALLEL TO FLOOR JOISTS.
5. FRAME OPENINGS WITH TWO OR MORE STUDS AT EACH JAMB AND SUPPORT HEADERS ON CRIPPLE STUDS.
6. FURNISH CONCEALED BLOCKING AND NAILERS WHERE INDICATED AND AT ALL LOCATIONS WHERE WALL HUNG ITEMS WILL REQUIRE A SUBSTRATE FOR FASTENING OR SUPPORT.
7. INSTALL ROOF SHEATHING PERPENDICULAR TO FRAMING MEMBERS WITH ENDS STAGGERED AND SHEET ENDS OVER FIRM BEARING. PROVIDE PANELS CLIPS BETWEEN ROOF FRAMING MEMBERS AND SOLID EDGE BLOCKING BETWEEN SHEETS.
8. INSTALL WALL SHEATHING PERPENDICULAR TO WALL STUDS WITH ENDS OVER FIRM BEARING AND STAGGERED.
9. INSTALL FLOOR SHEATHING PERPENDICULAR TO FLOOR JOISTS WITH ENDS OVER FIRM BEARING. GLUE AND NAIL SHEATHING TO EACH JOIST.

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION**

**072100 THERMAL INSULATION**

A. SURFACE BURNING CHARACTERISTICS:
1. FLAME SPREAD INDEX: 25 OR LESS
2. SMOKE DEVELOPED INDEX: 50 OR LESS IN EXPOSED AREAS AND PLENUMS; 450 OR LESS WHERE CONCEALED.

B. INSULATION PRODUCTS:
1. POLYISOCYANURATE (POLYISO) FOAM RIGID BOARD INSULATION:
   a. PRODUCT: DOW "THERMAX" (CI) EXTERIOR INSULATION OR APPROVED EQUAL
   b. CLASSIFICATION: ASTM C1289, TYPE 1, CLASS 2
   c. FIRE PROPAGATION: MEETS NFPA 285 IN APPROVED WALL ASSEMBLIES

C. ACCESSORIES:
1. FOILSCRIM AT PLENUMS AND EXPOSED AREAS - FLAME SPREAD 25/ SMOKE DEVELOPED 50

D. INSTALLATION:
1. INSTALL PER MANUFACTURER'S RECOMMENDATION AND AS FOLLOWS:
   a. INSTALL INSULATION IN AREAS AND IN THICKNESSES INDICATED OR REQUIRED TO PRODUCE R-VALUES WHERE INDICATED. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS AND FILL VOIDS WITH INSULATION

**074113 METAL ROOF PANELS**

A. SUBMITTALS:
1. PRODUCT DATA
2. SHOP DRAWINGS INCLUDING FABRICATION AND INSTALLATION LAYOUTS, EDGE CONDITIONS, JOINTS, PANEL PROFILES, CORNERS, ANCHORAGE, ATTACHMENT SYSTEM, TRIM, FLASHINGS, CLOSURES, AND ACCESSORIES.
3. COLOR AND FINISH SAMPLES
4. SAMPLE WARRANTY: MANUFACTURER'S STANDARD WRITTEN WARRANTY, WITHOUT MONETARY LIMITATION, SIGNED BY MANUFACTURER AGREEING TO PROMPTLY REPAIR OR REPLACE METAL ROOF PANELS THAT FAIL TO REMAIN WATERTIGHT WITHIN 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

B. QUALITY ASSURANCE: INSTALLER QUALIFICATIONS: INSTALLERS WHO ARE TRAINED AND APPROVED BY MANUFACTURER.

C. PRODUCTS:
1. PERFORMANCE REQUIREMENTS:
   a. PROVIDE ROOF ASSEMBLIES THAT COMPLY WITH UL 580 FOR CLASS 90 WIND-UPLIFT RESISTANCE.
2. METAL ROOF PANELS:
   a. ROOF PANEL TYPE: PER DRAWINGS
   b. METALLIC COATED STEEL ROOF PANELS: FABRICATED FROM GALVANIZED STRUCTURAL STEEL SHEET ASTM A 653/A 653M, G90 (Z275), OR ALUMINUM-ZINC ALLOY-COATED STRUCTURAL STEEL SHEET. ASTM A 792/A 792M, CLASS AZ50 COATING DESIGNATION, GRADE 40 (CLASS AZM150 COATING DESIGNATION GRADE 275)
      - METAL THICKNESS: PER DRAWINGS
      - FINISH: MANUFACTURER'S STANDARD FLUOROPOLYMER 2-COAT SYSTEM WITH TOPCOAT CONTAINING NOT LESS THAN 70 PERCENT POLYVINYLIDENE (PVDF) FLUORIDE RESIN BY WEIGHT; COMPLYING WITH AAMA 2604.
   c. ALUMINUM ROOF PANELS: FABRICATED FROM ALUMINUM SHEET, ASTM B 209 (ASTM B 209M) FOR ALCLAD ALLOY 3003, 3004, OR 3105.
      - METAL THICKNESS: PER DRAWINGS
      - FINISH: MANUFACTURER'S STANDARD FLUOROPOLYMER 2-COAT SYSTEM WITH TOPCOAT CONTAINING NOT LESS THAN 70 PERCENT POLYVINYLIDENE FLUORIDE (PVDF) RESIN BY WEIGHT; COMPLYING WITH AAMA 2604.

D. ACCESSORIES:
1. PROVIDE COMPONENTS REQUIRED FOR A COMPLETE ROOF PANEL ASSEMBLY INCLUDING TRIM, FASCIA, CLIPS, SEAM COVERS, FLASHINGS, SEALANTS, GASKETS, FILLERS, CLOSURE STRIPS, AND SIMILAR ITEMS.
2. FLASHING AND TRIM: FORMED FROM ZINC-COATED (GALVANIZED) STEEL SHEET OR ALUMINUM-ZINC ALLOY-COATED STEEL SHEET, ONE GAUGE HEAVIER THAN FINISH PANELS. PROVIDE FLASHING AND TRIM AS REQUIRED TO SEAL AGAINST WEATHER AND TO PROVIDE FINISHED APPEARANCE. FINISH FLASHING AND TRIM WITH SAME FINISH SYSTEM AS ADJACENT METAL ROOF PANELS.
3. UNDERLAYMENT: SELF-ADHERING POLYETHYLENE-FACED, POLYMER-MODIFIED, BITUMINOUS SHEET ASTM D 1970; 40 MILS (1mm) THICK OR ASPHALT SATURATED ORGANIC FELT ASTM D 226, TYPE II (NO. 30)
4. SLIP SHEET: RESIN-SIZED BUILDING PAPER, 5lb/100 sq. ft. (2.4 kg/sq. m)
5. THERMAL SPACERS: WHERE PANELS ATTACH DIRECTLY TO PURLINS, PROVIDE THERMAL SPACERS RECOMMENDED BY PANEL MANUFACTURER.
6. BITUMINOUS COATING: COLD-APPLIED ASPHALT MASTIC, SSPC-PAINT 12, COMPOUNDED FOR 15-MIL (0.4mm) DRY FILM THICKNESS PER COAT.

E. INSTALLATION:
1. INSTALL UNDERLAYMENT ON ROOF SHEATHING UNDER METAL ROOF PANELS, UNLESS OTHERWISE RECOMMENDED BY METAL ROOF PANEL MANUFACTURER AND APPLY SLIP SHEET OVER UNDERLAYMENT.
2. ANCHOR PANELS SECURELY IN PLACE WITH PROVISIONS FOR THERMAL AND STRUCTURAL MOVEMENT. INSTALL WITH CONCEALED FASTENERS UNLESS OTHERWISE INDICATED USING STAINLESS STEEL FOR SURFACES EXPOSED TO THE EXTERIOR AND GALVANIZED FOR SURFACES EXPOSED TO THE INTERIOR.
3. INSTALL MANUFACTURER RECOMMENDED GASKETS, JOINT FILLERS, AND SEALANTS WHERE REQUIRED FOR WEATHERPROOF PERFORMANCE OF ASSEMBLIES.
4. USE BITUMINOUS COATING TO SEPARATE DISSIMILAR METALS AND WHERE ALUMINUM PANELS WILL CONTACT WOOD, FERROUS METAL OR CONCRETE

**075423 THERMOPLASTIC POLYOLEFIN (TPO) ROOFING**

A. SUBMITTALS:
1. PRODUCT DATA FOR ALL MATERIALS, AND SHOP DRAWINGS OF TAPERED INSULATION

B. QUALITY ASSURANCE:
1. PROVIDE TWENTY (20) YEAR MANUFACTURER'S STANDARD WRITTEN WARRANTY, WITHOUT MONETARY LIMITATION, SIGNED BY MANUFACTURER AGREEING TO REPAIR LEAKS DUE TO DEFECTS IN MATERIALS OR WORKMANSHIP AND A (3) YEAR LABOR AND MATERIAL WARRANTY FROM THE ROOFING SUBCONTRACTOR.
2. EXTERIOR FIRE TEST EXPOSURE: ASTM E 108, CLASS B.

C. ROOFING MATERIALS:
1. TPO SHEET: ASTM D 6878, TYPE II, SCRIM OR FABRIC INTERNALLY REINFORCED 60 MILS (1.5 mm) THICK; COLOR: WHITE.
   a. *BASIS OF DESIGN PRODUCT*: FIRESTONE ULTRAPLY TPO OR APPROVED EQUAL.
2. AUXILIARY MATERIALS: RECOMMENDED BY ROOFING SYSTEM MANUFACTURER FOR INTENDED USE AND AS FOLLOWS:
   a. SHEET FLASHING: SAME THICKNESS AND COLOR AS SHEET MEMBRANE.
   b. BONDING ADHESIVE: TYPE AS RECOMMENDED BY MANUFACTURER
   c. MISCELLANEOUS ACCESSORIES: PROVIDE POURABLE SEALERS, PREFORMED CONE AND VENT SHEET FLASHINGS, PREFORMED INSIDE AND OUTSIDE CORNER SHEET FLASHINGS, T-JOINT COVERS, LAP SEALANTS, TERMINATION REGLETS, AND OTHER ACCESSORIES.

D. ROOF INSULATION:
1. POLYISOCYANURATE BOARD INSULATION: ASTM C 1289, TYPE II
   a. MINIMUM R-VALUE: R-25
   b. UTILIZE (2) LAYERS OF 2.3" MINIMUM THICKNESS, STAGGER JOINTS.
2. FABRICATE TAPERED INSULATION WITH SLOPE OF 1/4"/FOOT UNLESS OTHERWISE INDICATED.
3. PROVIDE PREFORMED SADDLES, CRICKETS, TAPERED EDGE STRIOS, AND OTHER INSULATION SHAPES WHERE INDICTED FOR SLOPING TO DRAIN. FABRICATE TO SLOPES INDICATED.
4. COVER BOARD: *WHERE INDICATED ON DRAWINGS*. ASTM C 208, TYPE II, GRADE 2, CELLULOSIC-FIBER INSULATION BOARD, 1/2" THICK.

E. INSTALLATION:
1. FULLY ADHERE EACH LAYER OF INSULATION TO DECK. INSTALL TPO SHEET ACCORDING TO ROOFING MANUFACTURER'S WRITTEN INSTRUCTIONS AND AS FOLLOWS:
   a. ALIGN SHEETS TO MAINTAIN UNIFORM SIDE AND END LAPS OF MINIMUM DIMENSIONS REQUIRED. STAGGER END LAPS. INSTALL LAPS SHINGLED WITH SLOPE OF DECK WHERE POSSIBLE. INSTALL FLASHING CONCURRENTLY WITH DECK SHEET. HOT AIR WELD TO ENSURE WATERTIGHT SEAM INSTALLATION. THE ENTIRE LAP EDGE SHALL BE PROBED WITH AN APPROVED SEAM PROBING TOOL AFTER THE SEAM HAS COOLED COMPLETELY TO VERIFY SEAM CONSISTENCY. ENSURE LAPS LAY FLAT AND ARE FREE OF VOIDS, FISHMOUTHS OR WRINKLES.
   b. APPLY SURFACE CONDITIONER AT REQUIRED RATE TO SUBSTRATES TO RECEIVE WATERPROOFING. APPLY ONLY AT TEMPERATURES GREATER THAN 25 DEG. F. AND RISING. APPLY AND FIRMLY ADHERE SHEETS TO SUBSTRATE; BUTT ADJOINING SHEETS TIGHTLY. APPLY ONLY WHEN THE MEMBRANE, AIR AND SUBSTRATE TEMPERATURES ARE GREATER THAN 40 DEG. F. AND RISING.
   c. HOT-AIR WELD THREE-WAY OVERLAPS OR T-JOINTS WITH A 4 INCH ROUND OR SQUARE PATCH.
   d. UNLESS TERMINATIONS AND DECK-SHEET WATERPROOFING PERIMETER ARE SEALED WITH FLASHINGS, SECURE THEM WITH MECHANICALLY ANCHORED METAL TERMINATION BAR. SEAL EDGE OF TERMINATION BAR WITH SEALANT.
2. INSTALL SHEET FLASHINGS AND PREFORMED FLASHING ACCESSORIES AND ADHERE TO SUBSTRATES. PROTECT ROOFING FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.

**076200 SHEET METAL FLASHING AND TRIM**

A. FABRICATION STANDARD: COMPLY WITH SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL". CONFORM TO DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

B. COORDINATION: COORDINATE INSTALLATION OF SHEET METAL FLASHING AND TRIM WITH INTERFACING AND ADJOINING CONSTRUCTION TO PROVIDE A LEAKPROOF, SECURE, AND NONCORROSIVE INSTALLATION.

C. SHEET METAL:
1. ALUMINUM SHEET: ASTM B 209 (ASTM B 209 M) ALLOY 3003, 3004, 3105, OR 5005, TEMPER SUITABLE FOR FORMING AND STRUCTURAL PERFORMANCE REQUIRED, BUT NOT LESS THAN H14; NOT LESS THAN 0.032 INCH (O.8 mm) THICK, FINISHED WITH MANUFACTURER'S FLUOROPOLYMER 2-COAT SYSTEM WITH TOPCOAT CONTAINING NOT LESS THAN 70% POLYVINYLIDENE FLUORIDE RESIN BY WEIGHT; COMPLYING WITH AAMA 2604.
2. STAINLESS STEEL SHEET: ASTM A 240/A 240M, TYPE 304, WITH NO. 2D FINISH; NOT LESS THAN 0.0156 INCH (0.4 mm) THICK.

D. FLASHING AND TRIM: FABRICATE FLASHING AND TRIM TO COMPLY WITH RECOMMENDATIONS OF SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" THAT APPLY TO THE DESIGN, DIMENSIONS, METAL, AND OTHER CHARACTERISTICS OF THE ITEM INDICATED OR DETAILED ON THE CONSTRUCTION DRAWINGS. FABRICATE WITH CONCEALED FASTENERS EXCEPT WHERE EXPOSED FASTENERS ARE PERMITTED.

E. ACCESSORIES:
1. SOLDER FOR STAINLESS STEEL: ASTM B 32, GRADE Sn60, WITH ACID FLUX OF TYPE RECOMMENDED BY STAINLESS STEEL MFR.
2. BUTYL SEALANT: ASTM C 1311, SOLVENT-RELEASE TYPE, FOR EXPANSION JOINTS WITH LIMITED MOVEMENT.
3. ASPHALT MASTIC: SSPC-PAINT 12, ASBESTOS FREE, SOLVENT TYPE.
4. ROOFING CEMENT: ASTM D 4586, TYPE I, ASBESTOS FREE, ASPHALT BASED
5. SLIP SHEET: RESIN-SIZED PAPER, MINIMUM 3 LB/100 S.F. (0.16 kg/sq. m)

F. INSTALLATION:
1. COMPLY WITH SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL." ALLOW FOR THERMAL EXPANSION; SET TRUE TO LINE AND LEVEL. INSTALL WORK WITH LAPS, JOINTS, AND SEAMS PERMANENTLY WATERTIGHT AND WEATHERPROOF; CONCEAL FASTENERS WHERE POSSIBLE. SECURE FLASHINGS AT ROOF EDGES ACCORDING TO FMG LOSS PREVENTION DATA SHEET 1-49 FOR SPECIFIED WIND ZONE.
2. SEALED JOINTS: FORM NON-EXPANSION, BUT MOVABLE, JOINTS IN METAL TO ACCOMMODATE ELASTOMERIC SEALANT TO COMPLY WITH SMACNA STANDARDS USING BAYONET TYPE OR INTERLOCKING HOOKED SEAMS.
3. FABRICATE NONMOVING SEAMS IN SHEET METAL WITH FLAT-LOCK SEAMS. FOR METAL OTHER THAN ALUMINUM, TIN EDGES TO BE SEAMED, FORM SEAMS AND SOLDER. FOR ALUMINUM, FORM SEAMS AND SEAL WITH EPOXY SEAM SEALER. RIVET JOINTS FOR ADDITIONAL STRENGTH.
4. SEPARATION: SEPARATE NON-COMPATIBLE METALS OR CORROSIVE SUBSTRATES WITH A COATING OF ASPHALT MASTIC OR OTHER PERMANENT SEPARATION

**077200 ROOF ACCESSORIES**

A. ROOF ACCESSORIES:
1. ROOF CURBS AND EQUIPMENT SUPPORTS: SEE MECHANICAL SPECIFICATIONS FOR MORE INFORMATION, INCLUDE MANUFACTURER'S STANDARD RIGID OR SEMIRIGID INSULATION AND PRESERVATIVE-TREATED WOOD NAILERS AT TOPS. PROVIDE UNITS WITH CANT STRIPS AND BASE PROFILE COORDINATED WITH ROOF INSULATION THICKNESS AND ROOF DECK SLOPE.
2. ROOF HATCHES: PROVIDE ROOF HATCH; BILCO (OR APPROVED EQ.) TYPE S 36" x 30" ROOF HATCH. WITH BIL-GUARD 2.0 ROOF HATCH RAILING SYSTEM

B. INSTALLATION: INSTALL ROOF ACCESSORY ITEMS ACCORDING TO CONSTRUCTION DETAILS OF NRCA'S "ROOFING AND WATERPROOFING MANUAL". COORDINATE WITH INSTALLATION OF ROOF DECK, VAPOR BARRIERS, ROOF INSULATION, ROOFING, AND FLASHING TO ENSURE COMBINED ELEMENTS ARE SECURE, WATERPROOF, AND WEATHERTIGHT.

**079200 JOINT SEALANTS**

A. SUBMITTALS: PRODUCT DATA, COLOR SAMPLES, AND SCHEDULE OF LOCATIONS FOR EACH TYPE OF SEALANT SUBMITTED.

B. ENVIRONMENTAL LIMITATIONS: DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 deg F (4.4 deg C).

C. COMPATIBILITY: PROVIDE JOINT SEALANTS, JOINT FILLERS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER SERVICE AND APPLICATION CONDITIONS.

D. JOINT SEALANTS:
1. BUILDING EXPANSION JOINTS: SINGLE COMPONENT, NEUTRAL-CURING SILICONE SEALANT, ASTM C 920, TYPE S; GRADE NS; CLASS 25; USES T, M, AND O, WITH THE ADDITIONAL CAPABILITY TO WITHSTAND 50% MOVEMENT IN BOTH EXTENSION AND COMPRESSION FOR A TOTAL OF 100% MOVEMENT
2. EXTERIOR TRAFFIC BEARING JOINTS WHERE SLOPE PRECLUDES POURABLE SEALANT: SINGLE COMPONENT, NONSAG URETHANE SEALANT, ASTM C920, TYPE S; GRADE NS; CLASS 25; USES T, NT, M, G, A, AND O.
3. EXTERIOR TRAFFIC BEARING JOINTS WHERE SLOPE PERMITS USE OF POURABLE SEALANT: SINGLE COMPONENT, POURABLE URETHANE SEALANT, ASTM C 920, TYPE S; GRADE P; CLASS 25; USES T, M, G, A, AND O.
4. INTERIOR JOINTS IN CERAMIC TILE AND OTHER HARD SURFACES IN KITCHENS, TOILET ROOMS, AND AROUND PLUMBING FIXTURES: SINGLE COMPONENT, MILDEW-RESISTANT SILICONE SEALANT, ASTM C 920, TYPE S; GRADE NS, CLASS 25; USES NT, G, A, AND O; FORMULATED WITH FUNGICIDE.
5. INTERIOR JOINTS AROUND PERIMETERS OF DOORS AND FRAMES: LATEX SEALANT, SINGLE COMPONENT, NONSAG, MILDEW-RESISTANT, PAINTABLE, ACRYLIC EMULSION SEALANT COMPLYING WITH ASTM C 834.

E. JOINT SEALANT BACKING: CYLINDRICAL CLOSED CELL PVC ROD COMPLYING WITH ASTM C330; SIZE 30% TO 50% LARGER THAN JOINT WIDTH. ALL OPEN CELL BACKINGS SUCH AS "DENVER FOAM" ARE PROHIBITED.

F. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MFR. FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT-FILLER MATERIALS OR JOINT SURFACES AT BACK OF JOINT.

G. INSTALLATION: COMPLY WITH ASTM C 1193; ASTM C 919 FOR ACOUSTICAL JOINTS; AND AS FOLLOWS:
1. REMOV

**084113 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS**

A. SUBMITTALS:
   1. PRODUCT DATA FOR EACH SYSTEM SPECIFIED, INCLUDING ACCESSORIES,SEALANTS, AND PRODUCTS TO BE SUPPLIED FOR A COMPLETE INSTALLATION.
   2. SAMPLES: FULL RANGE OF MANUFACTURERS STANDARD COLOR, FINISH AND OTHER OPTIONS REQUIRED FOR SELECTION.
   3. SHOP DRAWINGS STAMPED AND SIGNED BY LICENSED ENGINEER; INCLUDING DETAILS AT JOINTS AND PERIMETER CONDITIONS,FLASHINGS, CONNECTION AND INTERFACE WITH WORK BY OTHERS, EXPANSION AND CONTRACTION JOINT, ANY FIELD WELDING REQUIREMENTS, HARDWARE SCHEDULE.

B. DELEGATED DESIGN: DESIGN GLAZED ALUMINUM STOREFRONTS AND ENTRANCES, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.

C. QUALITY ASSURANCE:
   1. FABRICATOR: COMPANY SPECIALIZING IN MANUFACTURING ALUMINUM GLAZING SYSTEMS WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE
   2. INSTALLER: COMPANY SPECIALIZING IN INSTALLING ALUMINUM GLAZING SYSTEMS WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE
   3. MANUFACTURER'S WARRANTY: 2 YEARS

D. MATERIALS:
   1. ALUMINUM SHEET: ASTM B 209 (ASTM B 209M), ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED.
   2. ALUMINUM EXTRUSIONS: ASTM B 221 (ASTM B221M), ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED.

E. ALUMINUM FRAMED STOREFRONTS: AT INTERIOR LOCATIONS, PROVIDE MANUFACTURER'S STANDARD NON-THERMALLY BROKEN STOREFRONT SYSTEM MATCHING THE EXTERIOR SYSTEM. AT EXTERIOR LOCATIONS, PROVIDE MANUFACTURER'S STANDARD THERMALLY BROKEN, EXTRUDED ALUMINUM STOREFRONT SYSTEM CONSISTING OF FRAMING MEMBERS OF THICKNESS REQUIRED AND REINFORCED AS REQUIRED TO SUPPORT IMPOSED LOADS AND TO FIT THE DIMENSIONS AND DEPTHS INDICATED ON THE CONSTRUCTION DOCUMENTS AND COMPLYING WITH THE FOLLOWING:
   1. STRUCTURAL PERFORMANCE: PROVIDE SYSTEMS, INCLUDING ANCHORAGE, CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
      a. MAIN FRAMING MEMBER DEFLECTION: LIMITED TO 1/175 OF CLEAR SPAN OR 3/4" WHICHEVER IS SMALLER.
      b. STRUCTURAL TESTING: SYSTEMS WHEN TESTED ACCORDING TO ASTM E 330 AT 150 PERCENT OF INWARD AND OUTWARD WIND-LOAD DESIGN PRESSURE DO NOT EVIDENCE MATERIAL FAILURES, STRUCTURAL DISTRESS, DEFLECTION FAILURES, OR PERMANENT DEFORMATION OF MAIN FRAMING MEMBERS ECEEDING 0.2 PERCENT OF CLEAR SPAN.
   2. AIR INFILTRATION: LIMITED TO 0.06 CFM/SQ. FT. (0.03 L/s PER SQ. IN.) OF SYSTEM SURFACE AREA WHEN TESTED ACCORDING TO ASTM E 283 AT A STATIC-AIR-PRESSURE DIFFERENCE OF 1.57 lbf/sq. ft. (75 Pa)
   3. WATER PENETRATION: SYSTEMS DO NOT EVIDENCE WATER LEAKAGE WHEN TESTED ACCORDING TO ASTM E 331 AT MINIMUM DIFFERENTIAL PRESSURE OF 20 PERCENT OF POSITIVE WIND-LOAD DESIGN PRESSURE, BUT NOT LESS THAN 6.24 lbf/sq. ft. (300 Pa).
   4. AVERAGE U-FACTOR: NOT MORE THAN 0.69 Btu/sq. ft. x h x deg. f (3.92 W/sq. m x K) PER AAMA 1503.
   5. DOORS: 1-3/4" THICK GLAZED DOORS WITH MINIMUM 0.125" THICK EXTRUDED TUBULAR RAIL AND STILE MEMBERS. MECHANICALLY FASTENED CORNERS WITH REINFORCED BRACKETS THAT ARE DEEP PENETRATION AND FILLET WELDED OR THAT INCORPORATE CONCEALED TIE-RODS, SNAP-ON EXTRUDED ALUMINUM GLAZING STOPS, AND PREFORMED GASKETS.
      a. INTERIOR DOORS: GLAZE WITH 1/4" CLEAR TEMPERED GLASS. PROVIDE ANSI/BHMA A156.16 SILENCERS. THREE ON STRIKE JAMB OF SINGLE DOOR FRAMES AND TWO ON HEAD OF DOUBLE DOOR FRAMES.
      b. EXTERIOR DOORS: GLAZE WITH INSULATED TEMPERED GLASS UNITS MATCHING STOREFRONT GLASS OR CLEAR INSULATED GLASS PER CONSTRUCTION DRAWINGS. PROVIDE COMPRESSION WEATHERSTRIPPING AT FIXED STOPS. AT OTHER LOCATIONS, PROVIDE SLIDING WEATHERSTRIPPING RETAINED IN ADJUSTABLE STRIP MORTISED INTO DOOR EDGE.
      c. HARDWARE: PER DOOR SCHEDULE
   6. FASTENERS AND ACCESSORIES: COMPATIBLE WITH ADJACENT MATERIALS, CORROSION-RESISTANT. NONSTAINING, AND NONBLEEDING. USE CONCEALED FASTENERS EXCEPT FOR APPLICATION OF DOOR HARDWARE.
   7. FABRICATION: FABRICATE FRAMING IN PROFILES INDICATED. PROVIDE SUBFRAMES AND REINFORCING AS REQUIRED FOR A COMPLETE SYSTEM. FACTORY ASSEMBLE COMPONENTS TO GREATEST EXTENT POSSIBLE. DISASSEMBLE COMPONENTS ONLY AS NECESSARY FOR SHIPMENT AND INSTALLATION.
      a. DOORS FRAMING: REINFORCE TO SUPPORT IMPOSED LOADS. FACTORY ASSEMBLE DOOR AND FRAME UNITS AND FACTORY INSTALL HARDWARE TO GREATEST EXTENT POSSIBLE. REINFORCE DOOR AND FRAME UNITS FOR HARDWARE INDICATED. CUT, DRILL, AND TAP FOR FACTORY-INSTALLED HARDWARE BEFORE FINISHING COMPONENTS.
   8. ALUMINUM FINISH: COMPLY WITH NAAMM'S "METAL FINISHES MANUAL FOR ARCHITECTURAL AND METAL PRODUCTS"
      a. CLEAR ANODIC, ARCHITECTURAL CLASS I: AA-M12C22A41, COMPLYING WITH AAMA 611
      b. COLOR ANODIC, ARCHITECTURAL CLASS I: AA-M12C22A42/A44, COMPLYING WITH AAMA 611
      c. FLUOROPOLYMER, 2-COAT COATING SYSTEM, COMPLYING WITH AAMA 2604
      d. FLUOROPOLYMER, 3-COAT SYSTEM, COMPLYING WITH AAMA 2605
      e. COLOR: CUSTOM COLOR TO MATCH ARCHITECT'S SAMPLE

F. INSTALLATION:
   1. ISOLATE METAL SURFACES IN CONTACT WITH INCOMPATIBLE MATERIALS, INCLUDING WOOD, BY PAINTING CONTACT SURFACES WITH BITUMINUOUS COATING OR PRIMER, OR BY APPLYING SEALANT TAPE RECOMMENDED BY MANUFACTURER.
   2. INSTALL FRAMING COMPONENTS TO PROVIDE A WEATHERPROOF SYSTEM AND TRUE IN ALIGNMENT WITH ESTABLISHED LINES AND GRADES TO THE FOLLOWING TOLERANCES:
      a. VARIATION FROM PLANE: LIMIT TO 1/8" IN 12 FEET; 1/4" OVER TOTAL LENGTH
      b. ALIGNMENT: FOR SURFACES ABUTTING LINE, LIMIT OFFSET TO 1/16". FOR SURFACES MEETING AT CORNERS, LIMIT OFFSET TO 1/32".
      c. DIAGONAL MEASUREMENTS: LIMIT DIFFERENCE BETWEEN DIAGONAL MEASUREMENTS TO 1/8"
      d. PERIMETER JOINTS: 1/2" MAXIMUM.
   3. INSTALL DOORS WITHOUT WARP OR RACK. ADJUST DOORS AND HARDWARE TO PROVIDE TIGHT FIT AT CONTACT POINTS AND SMOOTH OPERATION.

**087100 DOOR HARDWARE**

A. SUBMITTALS: PRODUCT DATA AND HARDWARE SCHEDULE INDICATING HARDWARE ITEM, FINISH, AND QUANTITY LOCATED ON EACH DOOR WITH DOOR AND HARDWARE SET NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS.
B. HARDWARE: FURNISH PRODUCTS AS SPECIFIED IN THE HARDWARE SETS CONTAINED IN THE CONSTRUCTION DOCUMENTS.
C. INSTALLATION: MOUNT HARDWARE IN LOCATIONS RECOMMENDED BY THE DOOR AND HARDWARE INSTITUTE, UNLESS OTHERWISE INDICATED.

**08800 GLAZING**

A. SUBMITTALS: PRODUCT DATA
B. QUALITY STANDARDS:
   1. FIRE RESISTANCE-RATED ASSEMBLIES: PRODUCTS IDENTICAL TO THOSE TESTED PER NFPA 252 FOR DOORS AND NFPA 257 FOR WINDOW ASSEMBLIES; BOTH LABELED AND LISTED BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
   2. SAFETY GLASS: CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND ANSI Z97.1.
   3. GLAZING PUBLICATIONS: WHERE APPLICABLE, COMPLY WITH WITH THE PUBLISHED RECOMMENDATIONS OF THE FOLLOWING:
      a. GANA PUBLICATIONS: "GLAZING MANUAL" AND "LAMINATED GLASS DESIGN GUIDE".
      b. AAMA PUBLICATIONS: AAMA GDSG-1, "GLASS DESIGN FOR SLOPED GLAZING", AND AAMA TIR-A7. "SLOPED GLAZING GUIDELINES".
      c. SIGMA PUBLICATIONS: SIGMA TM-3000, "VERTICAL GLAZING GUIDELINES" AND SIGMA TB-3001, "SLOPED GLAZING GUIDELINES".

C. GLASS
   1. FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY q3
   2. HEAT-TREATED FLOAT GLASS: ASTM C 1048, TYPE I, QUALITY q3, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRED BY CODE OR INSTALLATION CONDITIONS.
   3. COATED GLASS: ASTM C 1048. CONDITION C, TYPE I, QUALITY q3, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRES BY CODE OR INSTALLATION CONDITIONS.
   4. WIRED GLASS: TYPE II, CLASS I, QUALITY q8, FORM 1 POLISHED, WITH m2 SQUARE MESH, .25" THICK.
   5. PATTERNED GLASS: ASTM C 1036, TYPE II, CLASS 1 , FORM 3, QUALITY q8, FINISH F1, PATTERN PER CONSTRUCTION DRAWINGS.
   6. TEMPERED PATTERNED GLASS: ASTM C 1048. TYPE II, CLASS 1, FORM 3, QUALITY q8, FINISH F1, PATTERN PER CONSTRUCTION DRAWINGS.
   7. MIRROR GLASS: ASTM C 1036, TYPE I, CLASS 1, QUALITY q1, SILVER COATED PER FS DDM411C, 6.0mm THICK, WITH EDGES FLAT POLISHED.

D. FABRICATED GLASS PRODUCTS:
   1. SEALED INSULATING-GLASS UNITS: PREASSEMBLED UNITS COMPLYING WITH ASTM E 774 FOR CLASS CBA UNITS WITH TWO SHEETS OF GLASS SEPARATED BY A 1/2-INCH DEHYDRATED SPACE FILLED WITH AIR.
      a. VISION GLASS: PPG SOLARBAN 70XL SOLAR CONTROL LOW-E GLASS OR APPROVED EQUAL
         • 1/4" CLEAR, 1/2" AIR SPACE, 1/4" CLEAR - PROVIDE LOW-E COATING ON 2ND SURFACE.
         • VISIBILE LIGHT TRANSMITTANCE: 64%
         • SOLAR HEAT GAIN COEFFICIENT: 0.27
      b. SPANDREL GLASS: TO MATCH VISION GLASS WITH OPACIFIER APPLIED TO FOURTH SURFACE, COLOR TO BE SELECTED FROM MFR'S FULL RANGE.
      c. WARRANTY: 10 YEAR WARRANTY TO INCLUDE REPLACEMENT OF SEALED UNITS EXHIBITING SEAL FAILURE, INTERPANE DUSTING OR MISTING.

E. INSTALLATION:
   1. COMPLY WITH COMBINED RECOMMENDATIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE CONTAINED IN GANA'S "GLAZING MANUAL".
   2. SET GLASS LITES IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS.
   3. AFTER GLASS INSTALLATION IS COMPLETE, REMOVE GLAZING MATERIALS AND LABELS FROM FINISHED SURFACES, AND THOROUGHLY CLEAN GLASS AND ADJACENT FRAMING AND SURFACES. REPEAT AS NECESSARY PRIOR TO FINAL WALK-THROUGH.

**- END DIVISION 8 -**

**092900 GYPSUM BOARD**

A. INTERIOR GYPSUM BOARD: PROVIDE IN THICKNESS AND TYPE INDICATED IN THE CONSTRUCTION DRAWINGS IN MAXIMUM LENGTHS AVAILABLE TO MINIMIZE END-TO-END BUTT JOINTS AND AS FOLLOWS:
   1. GYPSUM WALLBOARD: TYPE 'X', ASTM C 1396/C 1396M
      a. THICKNESS: 5/8" U.N.O. IN DRAWINGS
      b. LONG EDGES: TAPERED AND FEATURED (ROUNDED OR BEVELED) FOR PREFILLING
      c. SAG-RESISTANT TYPE FOR CEILING SURFACES.

B. TILE BACKING PANELS:
   1. CEMENTITIOUS BACKER UNITS: ANSI A118.9 AND ASTM C1288 OR ASTM C1325, WITH MANUFACTURER'S STANDARD EDGES.
      a. THICKNESS: AS INDICATED
      b. MOLD RESISTANCE: ASTM D3273, SCORE OF 10

C. ACCESSORIES:
   1. TRIM: ASTM C1047, FORMED FROM GALVANIZED OR ALUMINUM COATED STEEL SHEET, ROLLED ZINC, OR PLASTIC
      a. OUTSIDE CORNERS: PROVIDE CORNER BEAD UNLESS NOTED OTHERWISE
      b. EXPOSED PANEL EDGES: PROVIDE LC-BEAD (J-BEAD) UNLESS NOTED OTHERWISE; USE TEAR-AWAY BEAD WHERE GYP. BD. MEETS WINDOW FRAMES OR CEILING GRID.
      c. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. CONTACT ARCHITECT FOR LOCATIONS IF NOT INDICATED.
      d. REVEALS AND MOLDINGS: EXTRUDED ALUMINUM WITH CLASS II CLEAR ANODIZED FINISH.
   2. JOINT TREATMENT MATERIALS: ASTM C475/C475M

D. INSTALLATION:
   1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF LOADING IMPOSED BY STRUCTURAL MOVEMENT AND PROVIDE BRACING AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT.
   2. GYPSUM PANELS AND FINISH: COMPLY WITH ASTM C 840 AND GA-216. ISOLATE GYPSUM BOARD ASSEMBLIES FROM ABUTTING STRUCTURAL AND MASONRY WORK AND FINISH AS FOLLOWS:
      a. LEVEL 1 (EMBED TAPE AT JOINTS)
         • LOCATIONS: AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED FOR FIRE-RESISTANCE-RATED ASSEMBLY.
      b. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST COAT OF JOINT COMPOUND TO TAPE. FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT)
         • LOCATIONS: AT SUBSTRATES BEHIND TILE.
      c. LEVEL 4 (EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT)
         • LOCATIONS: ALL SURFACES IN FINISHED SPACES TO BE LEVEL 4 FINISH MINIMUM UNLESS NOTED OTHERWISE.
      d. LEVEL 5 (EMBED TAPE, APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY THIN SKIM COAT OF JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT)
         • LOCATIONS: AT ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, LONG HALLWAYS, CRITICAL LIGHTING AREAS ABUTTING WINDOWS OR AREAS FLOODED WITH NATURAL OR ARTIFICIAL LIGHT, ALL WALLS ADJACENT TO AND PERPINDICULAR TO EXTERIOR GLASS, AND ALL GYPSUM BOARD CEILINGS
   3. TERMINATIONS AT WINDOW MULLIONS: WHEN GYPSUM BOARD PARTITIONS TERMINATE INTO WINDOW MULLIONS, THE TERMINATIONS SHALL BE INSTALLED AS DETAILED ON THE CONSTRUCTION DOCUMENTS. IF NOT DETAILED, THE TERMINATIONS SHALL BE INSTALLED TO ALLOW PERIMETER WINDOW BLINDS TO EXTEND FULLY TO THE WINDOW MULLION, NOT CUT SHORT DUE TO THE WIDTH OF THE PARTITION.

**095123 ACOUSTICAL TILE CEILINGS**

A. ACOUSTICAL TILE PRODUCTS: PROVIDE CEILING TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS.
   1. SURFACE-BURNING CHARACTERISTICS: COMPLY WITH ASTM E 84; TESTING BY A QUALIFIED TESTING AGENCY.
      a. FLAME-SPREAD INDEX: CLASS A ACCORDING TO ASTM E 1264
      b. SMOKE-DEVELOPED INDEX: 50 OR LESS

B. METAL SUSPENSION SYSTEM: PROVIDE HEAVY DUTY, DIRECT-HUNG, SUSPENSION SYSTEMS AS INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM C 635. FURNISH ALUMINUM GRID IN SHOWERS, KITCHENS, AND OTHER HIGH-HUMIDITY AREAS
   1. ATTACHMENT DEVICES: SIZE FOR FIVE (5) TIMES THE DESIGN LOAD INDICATED IN ASTM C 635, TABLE 1, DIRECT HUNG UNLESS OTHERWISE INDICATED.
   2. WIRE HANGERS, BRACES, AND TIES: ZINC-COATED CARBON-STEEL WIRE; ASTM A 641/ (A 641 M), CLASS 1 ZINC COATING, SOFT TEMPER WITH A YIELD STRENGTH AT LEAST THREE (3) TIMES THE HANGER DESIGN LOAD (ASTM C 635, TABLE 1, DIRECT HUNG), BUT NOT LESS THAN 0.135" DIAMETER WIRE.
   3. SEISMIC STRUTS: MANUFACTURER'S STANDARD PRODUCT DESIGNED TO ACCOMMODATE SEISMIC FORCES.
   4. HOLD-DOWN CLIPS: PROVIDE HOLD-DOWN CLIPS ON CEILING TILE IN ENTRANCE VESTIBULES, COMPUTER ROOMS EMPLOYING DRY CHEMICAL FIRE-SUPPRESSION SYSTEMS, AND OTHER AREAS AS INDICATED.

C. INSTALLATION: COMPLY WITH ASTM C 636 AND CISCA'S "CEILING SYSTEMS HANDBOOK".
   1. SEQUENCE WORK TO ENSURE ACOUSTICAL CEILINGS ARE NOT INSTALLED UNTIL BUILDING IS ENCLOSED, SUFFICIENT HEAT IS PROVIDED, DUST GENERATION ACTIVITIES HAVE TERMINATED, AND OVERHEAD WORK IS COMPLETED, TESTED, AND APPROVED.
   2. INSTALL CEILING GRID AS INDICATED TO BE SYMMETRICAL ABOUT BOTH AXES OF EACH ROOM USING NOT LESS THAN HALF-SIZE TILE UNLESS INDICATED OTHERWISE ON THE REFLECTED CEILING PLAN.
   3. SUPPORT SUSPENSION SYSTEM INDEPENDENTLY OF DUCTS, PIPES, AND CONDUITS.
   4. SUPPORT FIXTURE LOADS USING SUPPLEMENTARY HANGERS LOCATED WITHIN 6" OF EACH CORNER OR SUPPORT FIXTURES INDEPENDENTLY.
   5. PROVIDE MATCHING PERIMETER MOLDING INSTALLED IN BEAD OF ACOUSTICAL SEALANT AT ALL LOCATIONS WHERE CEILING INTERSECTS VERTICAL SURFACES. USE MATCHING PRE-FORMED CLOSURES AT ROUND OR CURVED OBSTRUCTIONS.
   6. FIELD-CUT EDGES SHALL MATCH PROFILE OF FACTORY EDGES.

**SECTION 096623 RESINOUS FLOORING**

A. SUBMITTALS:
   1. PRODUCT DATA FOR EACH PRODUCT SPECIFIED.
   2. SHOP DRAWINGS SHOWING PATTERN (IF APPLICABLE), TRANSITIONS, INSTALLATION REQUIREMENTS AND RELATIONSHIP TO OTHER FLOORING MATERIALS.
   3. ONE (1) SAMPLE FOR EACH COLOR AND TEXTURE SPECIFIED, UPON ARCHITECT'S REQUEST

B. QUALITY ASSURANCE
   1. INSTALLER QUALIFICATIONS: MANUFACTURER'S AUTHORIZED REPRESENTATIVE WHO IS TRAINED AND APPROVED FOR INSTALLATION OF FLOORING SYSTEMS IS REQUIRED FOR THIS PROJECT.
   2. SOURCE LIMITATIONS: OBTAIN PRIMARY RESINOUS FLOORING MATERIALS, INCLUDING PRIMERS, RESINS, HARDENING AGENTS, GROUTING COATS, AND TOPCOATS, FROM SINGLE SOURCE FROM SINGLE MANUFACTURER. PROVIDE SECONDARY MATERIALS, INCLUDING PATCHING AND FILL MATERIAL, JOINT SEALANT, AND REPAIR MATERIALS, OF TYPE AND FROM SOURCE RECOMMENDED BY MANUFACTURER OF PRIMARY MATERIALS.

C. PRODUCTS
   1. PROVIDE RESINOUS FLOORING PRODUCT AS INDICATED IN CONSTRUCTION DOCUMENTS
   2. PROVIDE PRIMER, WATERPROOFING MEMBRANE, AND PATCHING AND FILL MATERIAL AS RECOMMENDED BY OR APPROVED BY RESINOUS FLOORING MANUFACTURER AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED

D. INSTALLATION
   1. COMPLY WITH RESINOUS FLOORING MANUFACTURER'S WRITTEN INSTRUCTIONS FOR SUBSTRATE TEMPERATURE, AMBIENT TEMPERATURE, MOISTURE, VENTILATION, AND OTHER CONDITIONS AFFECTING RESINOUS FLOORING APPLICATION
   2. PROVIDE PERMANENT LIGHTING OR, IF PERMANENT LIGHTING IS NOT IN PLACE, SIMULATE PERMANENT LIGHTING CONDITIONS DURING RESINOUS FLOORING APPLICATION
   3. PREPARE AND CLEAN SUBSTRATES ACCORDING TO RESINOUS FLOORING MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE CLEAN, DRY SUBSTRATE FOR RESINOUS FLOORING APPLICATION.
   4. PROVIDE SOUND CONCRETE SURFACES FREE OF LAITANCE, GLAZE, EFFLORESCENCE, CURING COMPOUNDS, FORM-RELEASE AGENTS, DUST, DIRT, GREASE, OIL, AND OTHER CONTAMINANTS INCOMPATIBLE WITH RESINOUS FLOORING.
   5. ROUGHEN CONCRETE SUBSTRATES TO COMPLY WITH ASTM C 811 REQUIREMENTS UNLESS MANUFACTURER'S WRITTEN INSTRUCTIONS ARE MORE STRINGENT.
   6. VERIFY THAT CONCRETE SUBSTRATES ARE DRY AND MOISTURE-VAPOR EMISSIONS ARE WITHIN ACCEPTABLE LEVELS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND VERIFY THAT CONCRETE SUBSTRATES HAVE PH WITHIN ACCEPTABLE RANGE BY MANUFACTURER
   7. USE PATCHING AND FILL MATERIAL TO FILL HOLES AND DEPRESSIONS IN SUBSTRATES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
   8. TREAT CONTROL JOINTS AND OTHER NONMOVING SUBSTRATE CRACKS TO PREVENT CRACKS FROM REFLECTING THROUGH RESINOUS FLOORING ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
   9. APPLY COMPONENTS OF RESINOUS FLOORING SYSTEM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO PRODUCE A UNIFORM, MONOLITHIC WEARING SURFACE OF THICKNESS INDICATED.
   10. INTEGRAL COVE BASE: APPLY COVE BASE MIX TO WALL SURFACES BEFORE APPLYING FLOORING. APPLY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND DETAILS INCLUDING THOSE FOR TAPING, MIXING, PRIMING, TROWELING, SANDING, AND TOPCOATING OF COVE BASE. ROUND INTERNAL AND EXTERNAL CORNERS.
   11. CURE RESINOUS FLOORING COMPONENTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. CLOSE SPACES TO TRAFFIC DURING RESINOUS FLOORING APPLICATION AND FOR NOT LESS THAN 24 HOURS AFTER APPLICATION UNLESS MANUFACTURER RECOMMENDS A LONGER PERIOD.
   12. PROTECT RESINOUS FLOORING FROM DAMAGE AND WEAR DURING THE REMAINDER OF CONSTRUCTION PERIOD. USE PROTECTIVE METHODS AND MATERIALS, INCLUDING TEMPORARY COVERING, RECOMMENDED BY RESINOUS FLOORING MANUFACTURER.

**099123 PAINTING**

A. PRODUCTS: PROVIDE MANUFACTURER'S BEST QUALITY PAINTS OF COLOR AND SHEEN AS INDICATED IN THE CONSTRUCTION DOCUMENTS THAT ARE FORMULATED AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED. PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.

B. APPLICATION:
   1. EQUIPMENT: APPLY COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATORS ACCORDING TO COATING MANUFACTURER'S WRITTEN INSTRUCTIONS. WHEN SPRAYED, EXTERIOR COATINGS SHALL BE BACK-ROLLED FOLLOWING SPRAY APPLICATION. USE ROLLERS FOR FINISH COAT ON INTERIOR WALLS AND CEILINGS.
   2. PIGMENTED (OPAQUE) FINISHES: COMPLETELY COVER SURFACES TO PROVIDE A SMOOTH, OPAQUE SURFACE OF UNIFORM APPEARANCE. PROVIDE A FINISH FREE OF CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS.
   3. TRANSPARENT (CLEAR) FINISHES: USE MULTIPLE COATS TO PRODUCE A GLASS-SMOOTH SURFACE FILM OF EVEN LUSTER. PROVIDE A FINISH FREE OF LAPS, RUNS, CLOUDINESS, COLOR IRREGULARITY, BRUSH MARKS, ORANGE PEEL, NAIL HOLES OR OTHER SURFACE IMPERFECTIONS.

C. PAINT SYSTEMS - EXTERIOR: PROVIDE THE FOLLOWING PAINT SYSTEMS FOR THE EXTERIOR SUBSTRATE INDICATED:
   1. TILT-UP CONCRETE WALL PANELS: TEXTURED CEMENT-BASED ACRYLIC COATING (SHERWIN WILLIAMS ULTRACRETE, OR EQUAL); TWO COATS OVER PRIMER. PAINTING OVER SEALANT JOINTS IS PROHIBITED.
   2. CONCRETE, STUCCO, OR MASONRY: SEMIGLOSS ACRYLIC ENAMEL: TWO COATS OVER PRIMER
   3. CONCRETE MASONRY UNITS: SEMIGLOSS ACRYLIC ENAMEL: TWO COATS OVER BLOCK FILLER
   4. EXTERIOR GYPSUM SOFFIT BOARD: HIGH PERFORMANCE LOW-GLOSS EGG SHELL ENAMEL: TWO COATS OVER PRIMER
   5. SMOOTH WOOD AND WOOD TRIM: SEMIGLOSS ALKYD ENAMEL: TWO COATS OVER PRIMER
   6. FERROUS METAL: SEMIGLOSS ALKYD ENAMEL: TWO COATS OVER RUST-INHIBITIVE PRIMER
   7. ZINC-COATED METAL: SEMIGLOSS ALKYD ENAMEL: TWO COATS OVER GALVANIZED METAL PRIMER.
   8. ALUMINUM: SEMIGLOSS ALKYD ENAMEL: TWO COATS OVER PRIMER

D. PAINT SYSTEMS - INTERIOR: PROVIDE THE FOLLOWING PAINT SYSTEMS FOR THE INTERIOR SUBSTRATE INDICATED
   1. CONCRETE AND MASONRY: ACRYLIC ENAMEL; SHEEN AS INDICATED: TWO COATS OVER PRIMER
   2. CONCRETE MASONRY UNITS: ACRYLIC ENAMEL; SHEEN AS INDICATED: TWO COATS OVER BLOCK FILLER
   3. GYPSUM BOARD: ACRYLIC ENAMEL; SHEEN AS INDICATED: TWO COATS OVER PRIMER
   4. WOODWORK: SEMI-GLOSS ALKYD ENAMEL: TWO COATS OVER PRIMER
   5. STAINED WOODWORK: ALKYD-BASED, SATIN VARNISH: TWO COATS OVER SEALER AND WOOD STAIN
   6. NATURAL FINISH WOODWORK: ALKYD-BASED, SATIN VARNISH; TWO COATS OVER SEALER
   7. FERROUS METAL: SEMIGLOSS ACRYLIC ENAMEL: TWO COATS OVER FERROUS METAL PRIMER
   8. ZINC COATED METAL: ACRYLIC ENAMEL; SHEEN AS INDICATED: TWO COATS OVER GALVANIZED METAL PRIMER

**DIVISION 10 - SPECIALTIES**

**101423 SIGNAGE**

REFERENCE CONSTRUCTION DRAWINGS FOR TYPE, SIZE, AND LOCATIONS FOR SIGNAGE.

**102800 TOILET AND BATH ACCESSORIES**

REFERENCE CONSTRUCTION DRAWINGS FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH ACCESSORIES.

**104416 FIRE EXTINGUISHERS AND CABINETS:**

REFERENCE CONSTRUCTION DRAWINGS FOR TYPE, SIZE AND LOCATIONS OF FIRE EXTINGUISHERS AND CABINETS.

**DIVISION 15 - MECHANICAL**

SEE MECHANICAL PLANS AND SPECIFICATIONS

**DIVISION 16 - ELECTRICAL**

SEE ELECTRICAL PLANS AND SPECIFICATIONS

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Club CARWASH

CCW - LEE'S SUMMIT, MO

1021 JEFFERSON CROSSING
LEE'S SUMMIT, MO 64081

Project No.: 20015.155
Date: 07/25/2025
Issued For: PERMIT

REVISIONS

| No. | Date | Description |
|---|---|---|

REGISTRATION

STATE OF MISSOURI
DAVID ALAN WILLIAMS
NUMBER A-5548
REGISTERED ARCHITECT

PROJECT TEAM

| | |
|---|---|
| ARCHITECT | FINKLE+WILLIAMS ARCHITECTURE |
| CIVIL | COCHRAN ENGINEERING |
| LANDSCAPE | COCHRAN ENGINEERING |
| STRUCTURAL | CROCKETT ENGINEERING |
| PLUMBING | TIMBERLAKE ENGINEERING |
| MECHANICAL | TIMBERLAKE ENGINEERING |
| ELECTRICAL | TIMBERLAKE ENGINEERING |

FINKLE + WILLIAMS
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8787 RENNER BLVD., SUITE 100
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SHEET TITLE

PROJECT SPECIFICATIONS

SHEET NUMBER

A11.11

# Club Car Wash

## Lee's Summit, Jackson County, Missouri

### GENERAL NOTES

ELEVATION DATUM
SEE ARCHITECTURAL DRAWINGS OR SITE PLAN FOR FINISH FLOOR ELEVATIONS

DESIGN SPECIFICATIONS
2018 INTERNATIONAL BUILDING CODE

EARTHWORK
EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL TESTING AGENCY TO ASSURE COMPLIANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT BY ALPHA-OMEGA GEOTECH DATED AUGUST 18, 2025.

### CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:
   - FOUNDATIONS – 3,000 PSI
   - CAST-IN-PLACE WALLS – 3,500 PSI
   - FLOOR SLAB – 4,000 PSI
   - EXTERIOR SLABS, WALLS AND CURBS – 4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
    - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
    - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
      - CAST AGAINST AND EXPOSED TO EARTH.....3 INCHES
      - EXPOSED TO EARTH OR WEATHER.....2 INCHES
      - NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH.....1 ½ INCHES
    - C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM ¼ OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
    - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
    - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.

### COLD-FORMED METAL FRAMING

1. ALL PRODUCTS TO BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION.
2. ALL GALVANIZED STUDS AND JOISTS SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF THE AISI STANDARDS. $f_y$= 33 KSI UNLESS NOTED OTHERWISE.
3. ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AND SHALL CONFORM TO ASTM C955.
4. FASTENING OF COMPONENTS SHALL BE WITH CORROSION RESISTANT SELF-DRILLING SCREWS, OR WELDS COMPLYING WITH AWS STANDARDS. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC-RICH PAINT. WELDERS SHALL BE QUALIFIED PER AWS D1.3.
5. SLIP TRACK IS EXPECTED AT ROOF TO WALL CONNECTIONS @ INTERIOR WHEN WALLS ARE GROUND SUPPORTED.

### MASONRY

MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 530.1 SPECIFICATIONS FOR MASONRY STRUCTURES WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. HOLLOW MASONRY BLOCK SHALL CONFORM TO ASTM C90 REGULAR WEIGHT GRADE N1.
2. COURSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI.
3. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270. AVERAGE COMPRESSIVE STRENGTH IS 2,000 PSI.
4. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF MASONRY; F'M = 2,000 PSI.
5. WIRE REINFORCING SHALL CONFORM TO ASTM A82, STANDARD TRUSS-TYPE DUR-O-WALL REINFORCING (OR APPROVED EQUAL) AND SHALL BE PLACED CONTINUOUSLY IN ALTERNATE HORIZONTAL MORTAR JOINTS.
6. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60. THE MINIMUM LAP FOR SPLICES SHALL BE 48 BAR DIAMETERS. PROVIDE DUR-O-WAL REBAR POSITIONERS.
7. ALL STEEL LINTELS TO BE A36 STEEL OR A992 GRADE 50. ALL LINTELS TO BE HOT DIPPED GALVANIZED.
8. INTERSECTING STRUCTURAL WALLS SHALL BE ANCHORED BY STEEL CONNECTORS SPACED VERTICALLY AT 48" O.C. MAXIMUM. THE CONNECTORS SHALL CONFORM TO ASTM A36 AND SHALL HAVE A MINIMUM SECTION OF ¼" X 1½". THEY SHALL BE 28" LONG WITH 2" AT EACH END BENT AT 90 DEGREES TO FORM A "U" OR "Z" SHAPE. ALL CELLS ABOVE AND BELOW THE ANCHOR SHALL BE GROUTED, AND THE BENT ENDS OF THE CONNECTORS SHALL BE EMBEDDED IN THE GROUT, 2" MIN.
9. EXPANSION JOINTS SHALL BE PROVIDED IN CMU BLOCK WALLS AT INTERVALS NOT EXCEEDING 24'-0". JOINT REINFORCING SHALL BE SEVERED AT EXPANSION JOINT LOCATIONS, HOWEVER BOND BEAM REINFORCING SHALL BE CONTINUOUS THROUGH THE JOINT.
10. BOND BEAMS OR GROUTED CELLS ARE REQUIRED AT ALL CONNECTIONS TO CMU.
11. UNITS EXPOSED TO WEATHER SHALL HAVE INTEGRAL WATER REPELLANT ALONG WITH WATER REPELLANT ADMIXTURE IN THE MORTAR.

### HEADED MASONRY ANCHORS

1. ALL HEADED CONCRETE ANCHORS SHALL MEET THE REQUIREMENTS OF THE CODE-CITED EDITION OF ACI 318 APPENDIX "D" AND AWS D1.1.
2. HEADED STUDS HAVE BEEN DESIGNED AS TYPE "B" ANCHORS ($f_{ut}$= 65,000 psi, $f_y$= 51,000 psi).
3. EMBEDMENT DEPTH IS DEFINED AS THE DISTANCE FROM THE OUTSIDE FACE OF THE EMBEDMENT PLATE TO THE INSIDE FACE OF THE STUD HEAD.
4. EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

### DEFORMED BAR ANCHORS

1. ALL DEFORMED BAR ANCHORS SHALL MEET THE REQUIREMENTS OF THE CODE-CITED EDITION OF ACI 318 APPENDIX "D" AND AWS D1.1.
2. DEFORMED BAR ANCHORS HAVE BEEN DESIGNED AS TYPE "C" ANCHORS ($f_{ut}$= 80,000 psi, $f_y$= 70,000 psi, & MANUFACTURED IN CONFORMANCE WITH ASTM A1064).
3. EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

### STRUCTURAL STEEL

1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AND CURRENT OSHA STANDARDS.
2. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. STRUCTURAL TUBES SHALL CONFORM TO ASTM A500 GRADE B. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.
3. BOLTS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM A325-N, SIZE AS PER PLAN.
4. ANCHOR BOLTS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM F1554 GRADE 36.
5. SPLICING OF STRUCTURAL STEEL IS PROHIBITED EXCEPT AS DETAILED.
6. ALL STRUCTURAL AND MISCELLANEOUS STEEL ITEMS SHALL RECEIVE ONE COAT OF "IRONCLAD RETARDO RUST INHIBITIVE PAINT 163" (BENJAMIN MOORE) OR APPROVED EQUAL UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS. ALL STEEL SURFACES EMBEDDED IN CONCRETE SHALL NOT BE PAINTED. PREPARATION OF STEEL SURFACES SHALL MEET THE REQUIREMENTS OF THE STEEL STRUCTURES PAINTING COUNCIL (SSPC-SP1) AND THE REMOVAL OF GREASE AND OIL BY SOLVENT CLEANING (SSPC-SP1) AND THE REMOVAL OF MILL SCALE, RUST, WELD FLUX AND SLAG BY HAND TOOL CLEANING (SSPC-SP2). PRIMER SHALL BE APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE BUT NOT LESS THAN ONE GALLON PER 400 SQ.FT. THEREBY DEPOSITING A DRY FILM THICKNESS OF NOT LESS THAN 1.5 MILS. ANY SCARRED AREAS SHALL BE TOUCHED UP WITH THE SAME PAINT AFTER ERECTION.
7. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS STRUCTURAL WELDING CODE. WELDING ELECTRODES SHALL BE E70XX.

### STEEL LINTELS

1. ALL STEEL LINTELS TO BE A36 STEEL, A992 GRADE 50, OR A500 GRADE B. ALL LINTELS TO BE HOT DIPPED GALVANIZED.

### STEEL ROOF DECK

1. THE DESIGN, FABRICATION AND ERECTION OF THE STEEL ROOF DECK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE SDI SPECIFICATIONS AND COMMENTARY FOR STEEL ROOF DECK AND THE SDI DIAPHRAGM DESIGN MANUAL.
2. MINIMUM END LAP SHALL BE 3".
3. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS SPECIFICATIONS FOR WELDED SHEET STEEL AND ITS COMMENTARY, WELDING ELECTRODES SHALL BE E6022. HOBART #1139, 5/32" DIAMETER WELDING ELECTRODES MEET THIS REQUIREMENT.
4. ROOF DECK SHALL RECEIVE ONE COAT OF MANUFACTURER'S STANDARD PRIMER. ALL DECK WELDS SHALL BE PAINTED WITH RUST PROHIBITIVE METAL PRIMER PRIOR TO ROOFING. COLOR TO BE DETERMINED BY OWNER OR ARCHITECT.
5. ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.
6. ROOF DECK BUNDLES SHALL BE PLACED ON JOISTS WITH EXTREME CAUTION, FOLLOWING THE JOIST MANUFACTURER'S RECOMMENDATIONS FOR PROPER PLACEMENT.
7. DECKING OR DECK ACCESSORY BUNDLES SHALL NOT EXCEED 4,000 LBS.

### METAL BUILDING COMPONENTS

1. FABRICATION AND ERECTION OF STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS, AND CURRENT OSHA STANDARDS.
2. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS STRUCTURAL WELDING CODE. WELDING ELECTRODES SHALL BE E70XX.
3. MATERIALS

| MATERIAL | ASTM DESIGNATION | MINIMUM YIELD |
|---|---|---|
| a. HOT ROLLED MILL SHAPES | A572 OR A992 | FY = 50 KSI |
| b. STRUCTURAL STEEL PLATE (BUILT-UP) | A572/A529/A1011 | FY = 55 KSI |
| c. COLD FORMED LIGHT GAGE SHAPES | A1011/A653 | FY = 55 KSI |
| d. CABLE BRACING | A475 | EXTRA HIGH STRENGTH |
| e. ROD BRACING | A572/A510 | FY = 50 KSI |
| f. ROOF & WALL SHEETS | A792 | FY = 50, 80 KSI |
| g. MACHINE BOLTS | A307, GRADE A | FY = 36 KSI |
| h. HIGH STRENGTH BOLTS( 1/2" TO 1") | A325, TYPE 1 | FY = 120 KSI |
| i. HIGH STRENGTH BOLTS ( 1-1/8" TO 1-1/2") | A325, TYPE 1 | FY = 105 KSI |
| j. ANCHOR BOLTS | F1554 GRADE 36 | FY = 36 KSI |
| k. PIPE | A500, GRADE B OR A501 | FY = 42 KSI |
| l. TUBE | A500, GRADE B OR A501 | FY = 46 KSI |

4. ALL STRUCTURAL AND MISCELLANEOUS STEEL ITEMS SHALL RECEIVE ONE COAT OF "IRONCLAD RETARDO RUST INHIBITIVE PAINT 163" (BENJAMIN MOORE) OR APPROVED EQUAL UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS. ALL STEEL SURFACES EMBEDDED IN CONCRETE SHALL NOT BE PAINTED. PREPARATION OF STEEL SURFACES SHALL MEET THE REQUIREMENTS OF THE STEEL STRUCTURES PAINTING COUNCIL (SSPC-SP1) AND THE REMOVAL OF GREASE AND OIL BY SOLVENT CLEANING (SSPC-SP2). PRIMER SHALL BE APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE BUT NOT LESS THAN ONE GALLON PER 400 SQ.FT. THEREBY DEPOSITING A DRY FILM THICKNESS OF NOT LESS THAN 1.5 MILS. ANY SCARRED AREAS SHALL BE TOUCHED UP WITH THE SAME PAINT AFTER ERECTION.

### SPECIAL INSPECTIONS

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

- a. CONCRETE GROUT DESIGN MIX (PERIODIC)
- b. PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
- c. BOLTS & ANCHORS EMBEDDED IN CONCRETE (PERIODIC)
- d. STRUCTURAL STEEL FABRICATIONS (UNLESS AISC APPROVED) (PERIODIC)
- e. STRUCTURAL STEEL BOLTING & WELDING (PERIODIC)
- f. POST INSTALLED ANCHORS IN CONCRETE (CONTINUOUS)
- g. IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)
- h. MASONRY AND REINFORCING STEEL (CONTINUOUS ON CELL GROUTING/PERIODIC ON REINFORCING)
- i. COLD-FORMED FRAMING:
  - i.a. STRAP BRACING. (PERIODIC)
  - i.b. DIAPHRAGMS (FLOOR); SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
  - i.c. FRAMING MEMBERS AND DETAILS (PERIODIC)
  - i.d. MATERIAL GRADE (PERIODIC)
  - i.e. CONNECTIONS; HANGERS, HOLD DOWNS, BUILT-UP COLUMNS, BUILT-UP BEAMS (PERIODIC)
  - i.f. PRE-ENGINEERED TRUSSES; FRAMING, CONNECTIONS, BRIDGING (PERIODIC)

THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

### DESIGN DATA

2018 INTERNATIONAL BUILDING CODE / ASCE 7-16

| | |
|---|---|
| BUILDING OCCUPANCY CATEGORY | II |
| **ROOF LOAD DATA** | |
| LIVE LOAD | 20 |
| ROOFING MEMBRANE & INSULATION | 8 |
| MECHANICAL ALLOWANCE/SOLAR | 5 |
| STEEL FRAMING | 2 |
| TOTAL TO WALLS | 35 lbs/sqft |

ROOF SNOW LOAD DATA* (*UNBALANCED & DRIFTING SNOW TO BE DETERMINED IN ADDITION TO UNIFORM LOAD, WHERE APPLICABLE)

| | |
|---|---|
| $p_g$ = | 20 lbs/sqft |
| $C_e$ = | 1.0 |
| $I_s$ = | 1.0 |
| $C_t$ = | 1.0 |
| $p_f$ = | 14 lbs/sqft |

| | |
|---|---|
| **WIND DESIGN DATA** | |
| $V_{ult}$ = | 109 M.P.H. (3-SECOND GUST) |
| RISK CATEGORY | II |
| EXPOSURE | C |
| INTERNAL PRESSURE COEFFICIENT = | ± 0.18 |
| DIRECTIONAL PROCEDURE (MWFRS - ASCE 7-10, CH 27; C&C - ASCE 7-10, CH 30, PART 4) | |
| MAXIMUM COMPONENTS & CLADDING WIND | +40/-40 lbs/sqft |
| **EARTHQUAKE DESIGN DATA** | |
| RISK CATEGORY | II |
| $I_E$ = | 1.0 |
| $S_S$ = | 0.1 |
| $S_1$ = | 0.068 |
| SITE CLASS | C |
| $S_{DS}$ = | 0.087 |
| $S_{D1}$ = | 0.068 |
| SEISMIC DESIGN CATEGORY | B |
| BASIC SEISMIC-FORCE-RESISTING SYSTEM = INTERMEDIATE REINFORCED MASONRY SHEAR BEARING WALLS | |
| $R$ = | 3.50 |
| $\Omega_o$ = | 2.50 |
| $C_d$ = | 2.25 |
| DESIGN BASE SHEAR EQUIVALENT LATERAL FORCE PROCEDURE | 0.025W |
| NET ALLOWABLE SOIL BEARING | 2,000 STRIP/2,400 PAD lbs/sqft |

### INDEX OF SHEETS


| | |
|---|---|
| COVER / GENERAL STRUCTURAL DATA | S100 |
| FOUNDATION PLAN | S200 |
| FOUNDATION DETAILS | S210 - S212 |
| LOW ROOF FRAMING PLAN | S300 |
| UPPER ROOF FRAMING PLAN | S301 |
| FRAMING DETAILS | S310 - S311 |


REVISIONS:

| No. | Date |
|---|---|
| PERMIT SET | 08/20/2025 |

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STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
8/20/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013


STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, MO 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501


CLIENT:
CLUB CAR WASH

Club Car Wash
LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GENERAL
STRUCTURAL DATA

DESIGNED: GLL
DRAWN: TGC
PROJECT NO.: 180384

SHEET:
S100

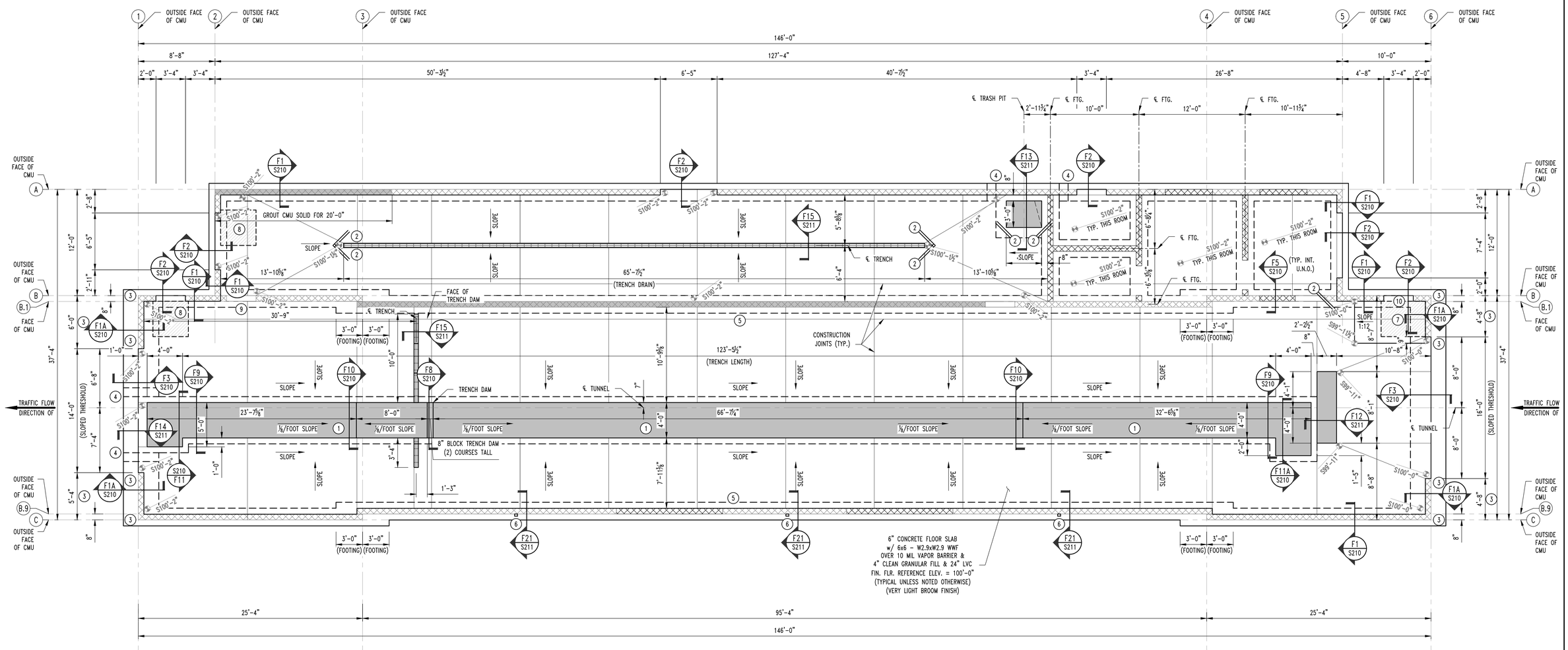
**NOTE:**
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING; EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.

S100'-0" TOP OF SLAB ELEVATION

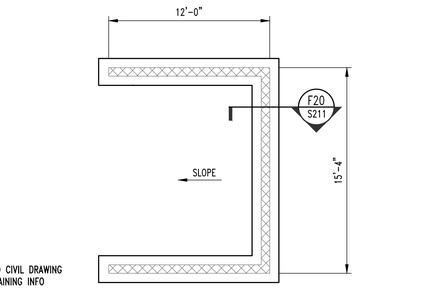
SLOPE FLOOR SLOPE DIRECTION

## FOUNDATION NOTES

1. TRENCH DRAIN (SHADED AREA).
2. PROVIDE (2) #4x4'-0" @ 3" RE-ENTRANT CORNER BARS PER TYPICAL DETAIL ON S210
3. PROVIDE #5 BAR EACH FACE FIRST THREE CELLS EACH END OF WALL SEGMENT. PROVIDE #5 x 48" DOWEL w/ 14" HILTI HY-200 EPOXY EMBEDMENT INTO FOOTING TO MATCH VERTICAL REINFORCING.
4. FOOTING STEP. REFER TO DETAIL FS1/S211.
5. 1:48 MAXIMUM FLOOR SLOPE ALONG THE NORTH AND SOUTH SIDES OF THE WASH BAY TRENCH.
6. PROVIDE 12"x12" BLOCKOUT INTO TOP OF FOOTING @ DOWN SPOUT LOCATIONS.
7. PROVIDE 4'-0" x 5'-0" FLAT SLAB AREA @ ELEVATION 100'-1¾" CENTERED ON DOOR, THEN TRANSITION TO SLOPED FLOOR.
8. PROVIDE 4'-0" x 4'-0" FLAT SLAB AREA @ ELEVATION 100'-2" CENTERED ON DOOR, THEN TRANSITION TO SLOPED FLOOR.
9. ½" LIP INTO STORAGE ROOM.
10. ½" MAX. SILL HEIGHT w/ BEVELED EDGE.

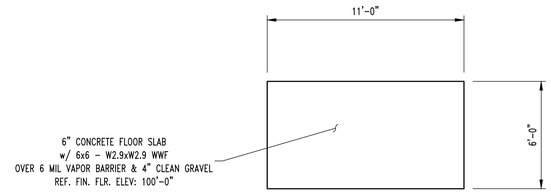



1 S200 **FOUNDATION PLAN**
SCALE: 3/16" = 1'-0"




**NOTE:**
REFER TO CIVIL DRAWING FOR REMAINING INFO

2 S200 **DUMPSTER ENCLOSURE FOUNDATION PLAN**
SCALE: 3/16" = 1'-0"




3 S200 **CASHIER SLAB PLAN**
SCALE: ¼" = 1'-0"

PLAN NORTH

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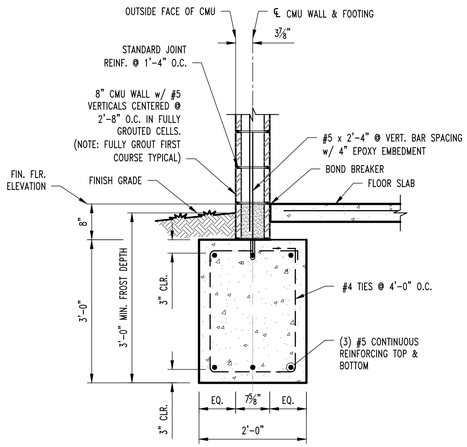
CLIENT: Club Car Wash

# Club Car Wash

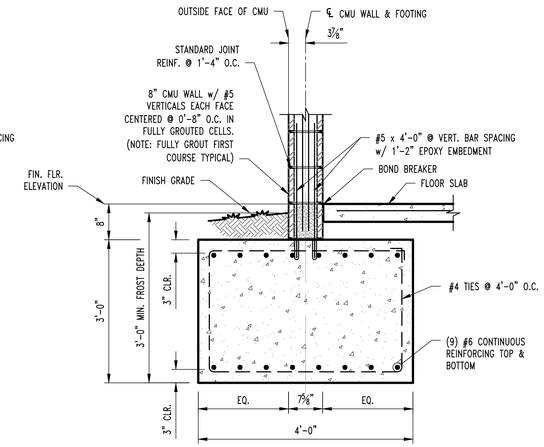
LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
FOUNDATION PLAN

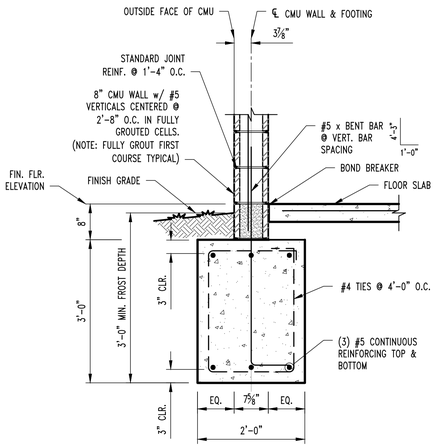
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|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |
| SHEET: | S200 |



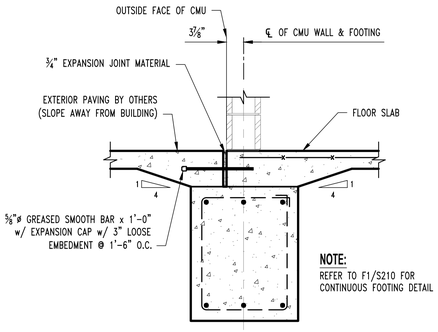

F1 S200 **CMU FOOTING SECTION**



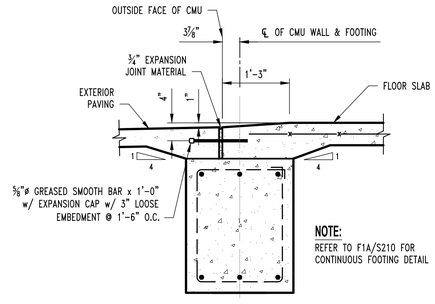

F1A S200 **CMU FOOTING SECTION**



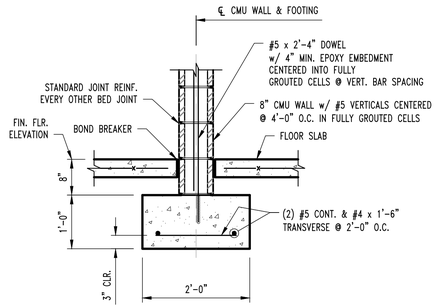

F1ALT S200 **CMU FOOTING SECTION**




F2 S200 **CONT. FOOTING SECTION @ DOOR**

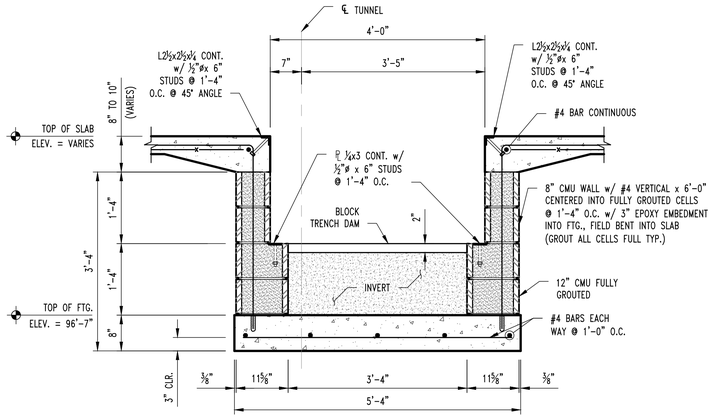



F3 S200 **SLOPED THRESHOLD SECTION @ OVHD DOOR**



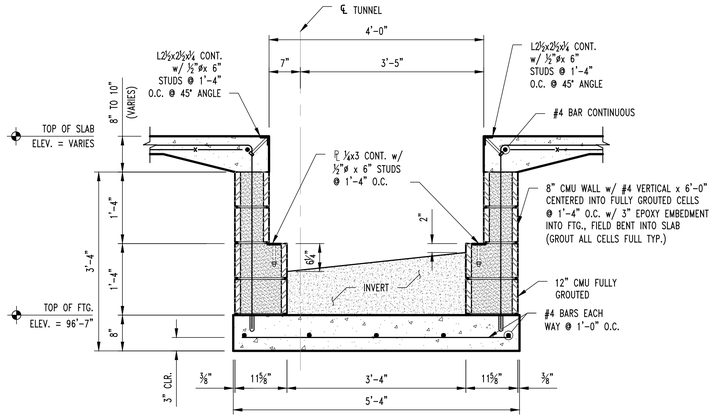

F5 S200 **INTERIOR WALL CONTINUOUS FOOTING SECTION**

SCALE: ¾" = 1'-0"



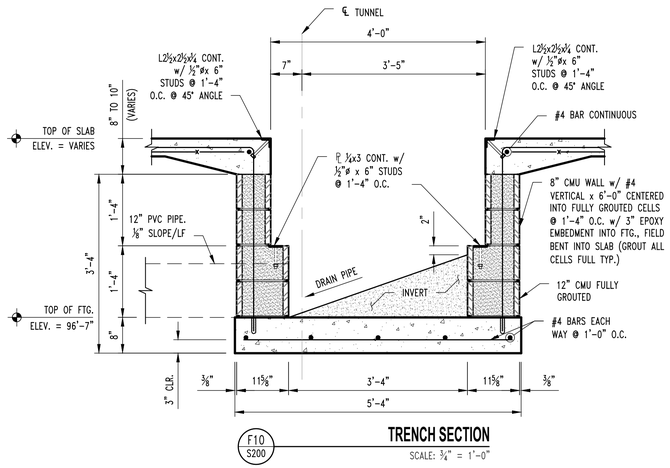

F8 S200 **TRENCH SECTION**

SCALE: ¾" = 1'-0"



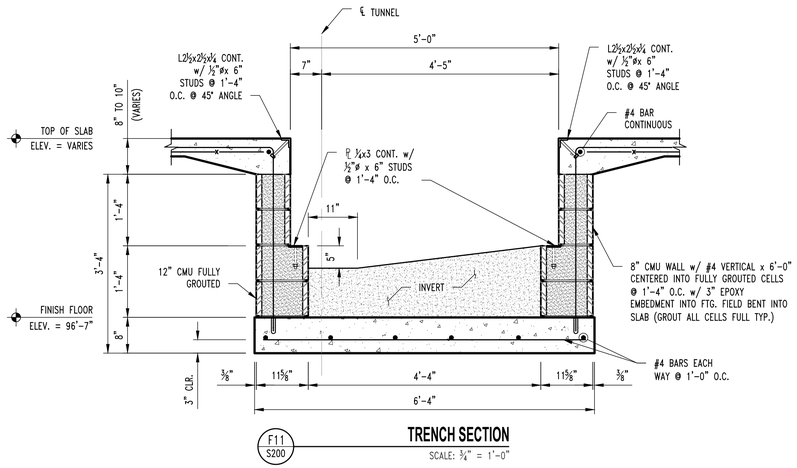

F9 S200 **TRENCH SECTION**

SCALE: ¾" = 1'-0"



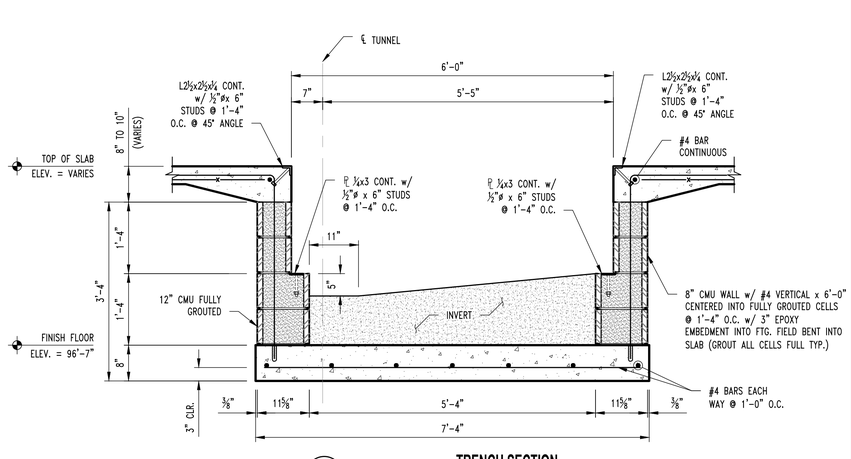

F10 S200 **TRENCH SECTION**

SCALE: ¾" = 1'-0"




F11 S200 **TRENCH SECTION**

SCALE: ¾" = 1'-0"




F11A S200 **TRENCH SECTION**

SCALE: ¾" = 1'-0"

REVISIONS:

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#2006013501


CLIENT: Club Car Wash

# Club Car Wash

LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

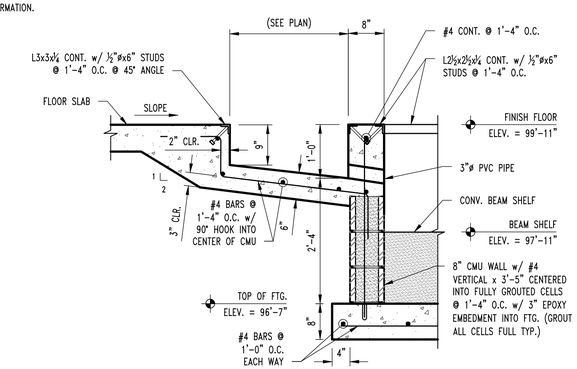
DRAWING INCLUDES:

FOUNDATION DETAILS

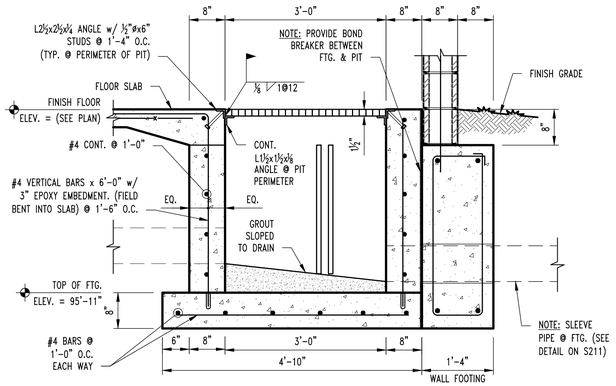
| | |
|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |

SHEET: S210

**NOTE:**
REFER TO FOOTING SCHEDULE ON SHEET S200
FOR "W", "D", AND "REINFORCING" INFORMATION.

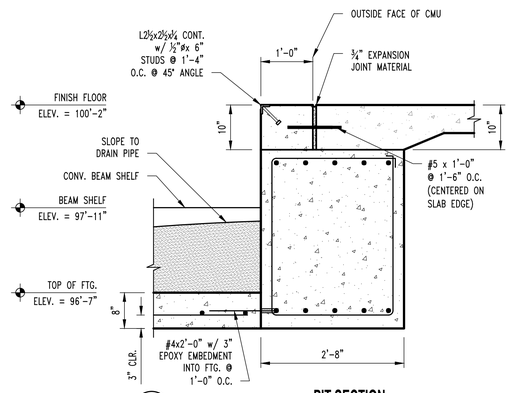



F12 S200 **TRENCH SECTION**
SCALE: ¾" = 1'-0"



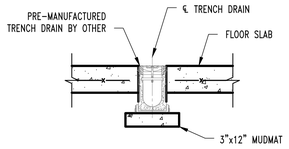

F13 S200 **TRASH PIT SECTION**
SCALE: ¾" = 1'-0"

**NOTE:**
BUILDING FOOTING SHALL EXTEND TO BOTTOM OF TRASH PIT CONCRETE OR LOWER.

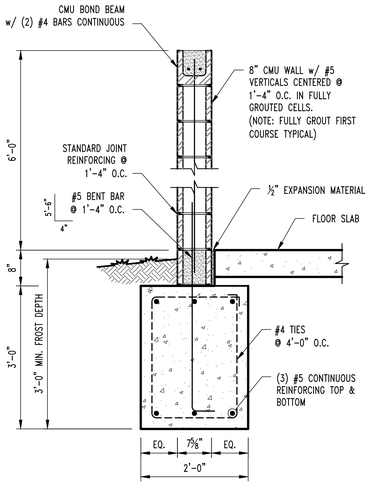



F14 S200 **PIT SECTION**
SCALE: ¾" = 1'-0"

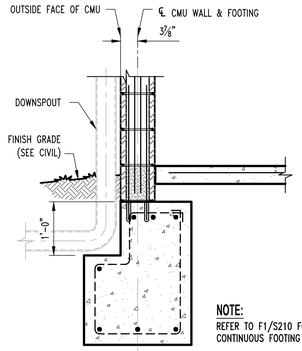
**NOTE:**
BUILDING FOOTING SHALL EXTEND TO BOTTOM OF PIT CONCRETE OR LOWER.




F15 S200 **TRENCH DRAIN SECTION**
SCALE: ¾" = 1'-0"

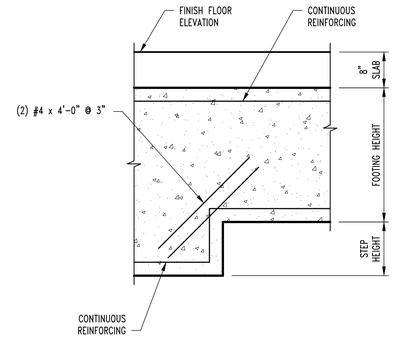



F20 S200 **DUMPSTER WALL SECTION**

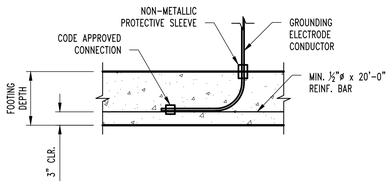



**NOTE:**
REFER TO F1/S210 FOR CONTINUOUS FOOTING DETAIL

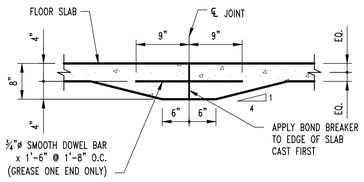
F21 S200 **CMU FOOTING SECTION @ DOWNSPOUT**



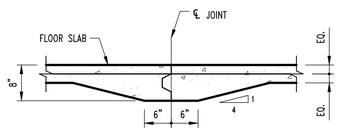

FS1 S200 **FOOTING STEP SECTION**
SCALE: ¾" = 1'-0"



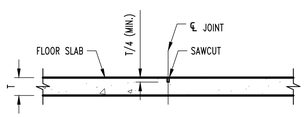

**TYP. ELECTRICAL GROUNDING DETAIL @ FOOTING**



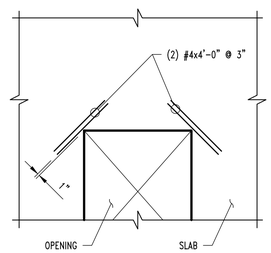

**CONSTRUCTION JOINT**




**CONSTRUCTION JOINT**

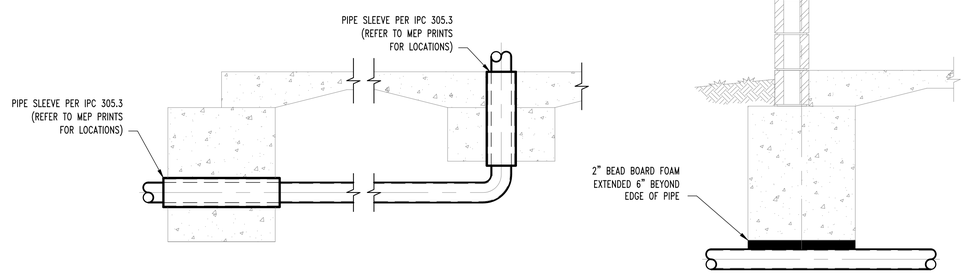



**CONTRACTION JOINT**




**NOTE:**
TYPICAL AT ALL REENTRANT CORNERS FOR SLAB-ON-GRADE & STRUCTURAL SLAB. REINFORCING TO BE CENTERED IN SLAB THICKNESS.

**CRACK CONTROL REINFORCING**




**PLUMBING COORDINATION DETAILS**

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CLIENT:
CLUB CAR WASH

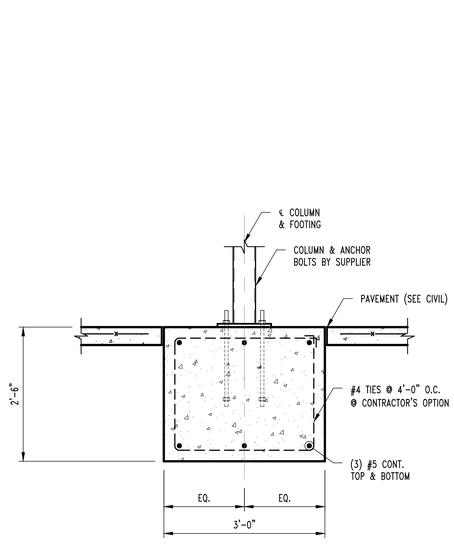
# Club Car Wash

LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
FOUNDATION DETAILS

| | |
|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |

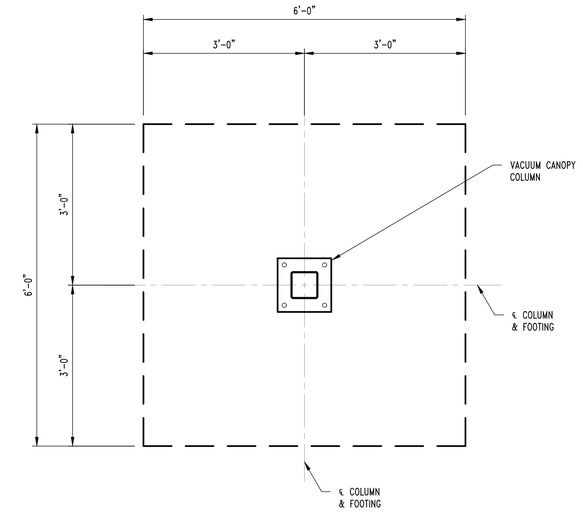
SHEET:
S211



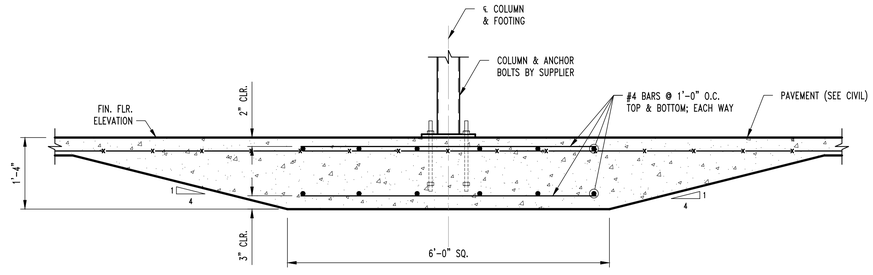

**VACUUM CANOPY FOOTING OPTION #1**

**NOTE:**

- GRADE BEAM SHALL BE CONTINUOUS BETWEEN VACUUM CANOPY COLUMNS.
- GRADE BEAM SHALL EXTEND 5'-0" MINIMUM PAST THE LAST CANOPY COLUMN ON EACH END




**PLAN VIEW**




**VACUUM CANOPY FOOTING OPTION #2**

REVISIONS:

| No. | Date |
|---|---|
| PERMIT SET | 08/20/2025 |
| | |
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| | |
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CLIENT:
Club Car Wash

# Club Car Wash

LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

FOUNDATION DETAILS

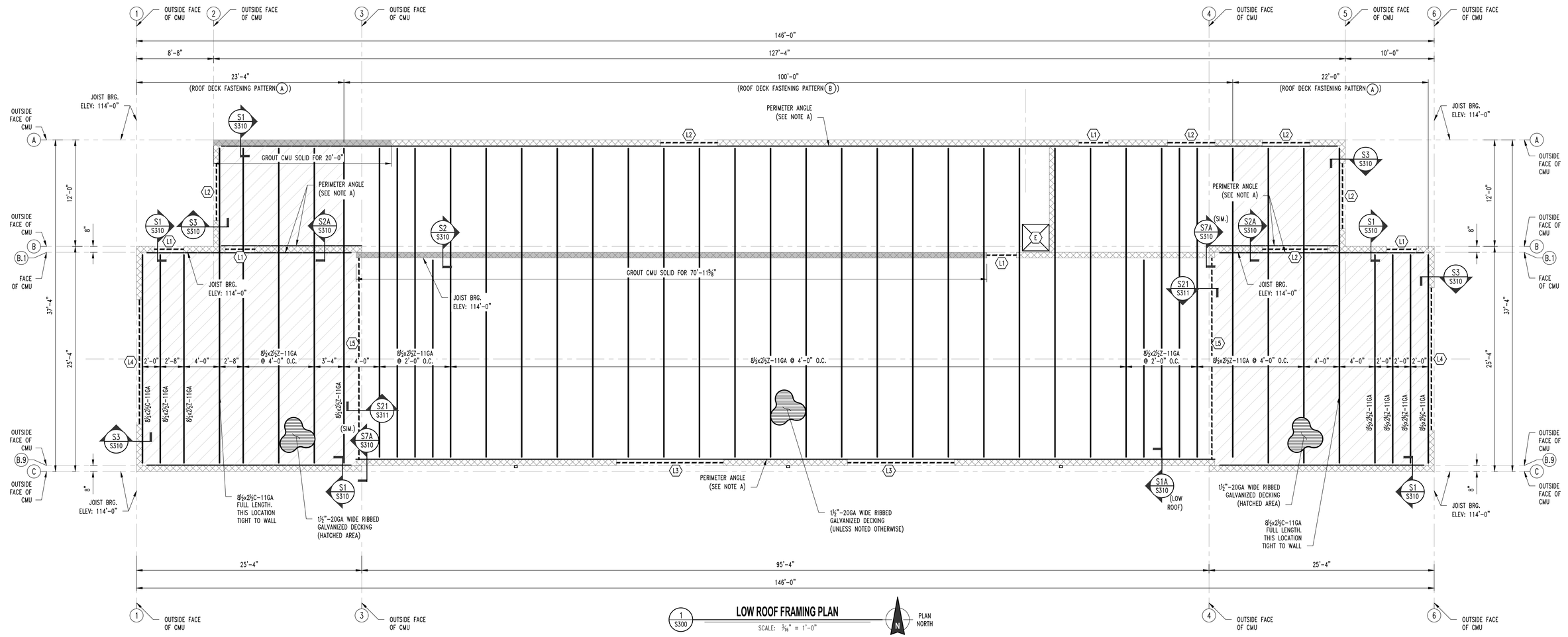
| | |
|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |

SHEET:
S212

**NOTE:**
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING; EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.

## TYPICAL ROOF FRAMING NOTES

- (A) PERIMETER ANGLE L3x3x5/16 VERTICAL LEG UP. WELD CORNERS AND BUTT WELD SPLICES TO MAKE CONTINUOUS.
- (B) ALL ELEVATIONS ARE TO JOIST BEARING UNLESS NOTED OTHERWISE.
- (C) JOISTS/PURLINS REQUIRE BLOCKING/BRIDGING @ 8'-0" O.C. MAXIMUM OR CEILING FOR UPLIFT RESISTANCE.
- (D) MECHANICAL UNITS. SEE MEP DRAWINGS FOR MORE INFORMATION.
- (E) ROOF HATCH.




1 S300 **LOW ROOF FRAMING PLAN**
SCALE: 3/16" = 1'-0"
PLAN NORTH

**NOTE:**
ALL PURLINS TO BE GALVANIZED & CONTINUOUS OVER CENTER BEARING WALL

## LINTEL SCHEDULE

| MARK | MEMBER SIZE (GALVANIZED) |
|---|---|
| "L1" | LL4x3 1/2x3/8 WITH 8" BEARING EACH END (SEE DETAIL S8/S311) |
| "L2" | LL6x3 1/2x3/8 (LLBB) WITH 8" BEARING EACH END (SEE DETAIL S8/S311) |
| "L3" | W8x18 WITH 8" BEARING EACH END & 1/4" X 7 1/2" PLATE (SEE DETAIL S6/S310) |
| "L4" | W8x28 WITH 8" BEARING EACH END & 1/4" X 7 1/2" PLATE (SEE DETAIL S6/S310) |
| "L5" | W16x31 WITH 8" BEARING EACH END (SEE DETAILS S7A/S310 FOR BEARING PLATE) |

REVISIONS:

| No. | Date |
|---|---|
| PERMIT SET | 08/20/2025 |

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
8/20/25
GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013


STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501


CLIENT: Club Car Wash

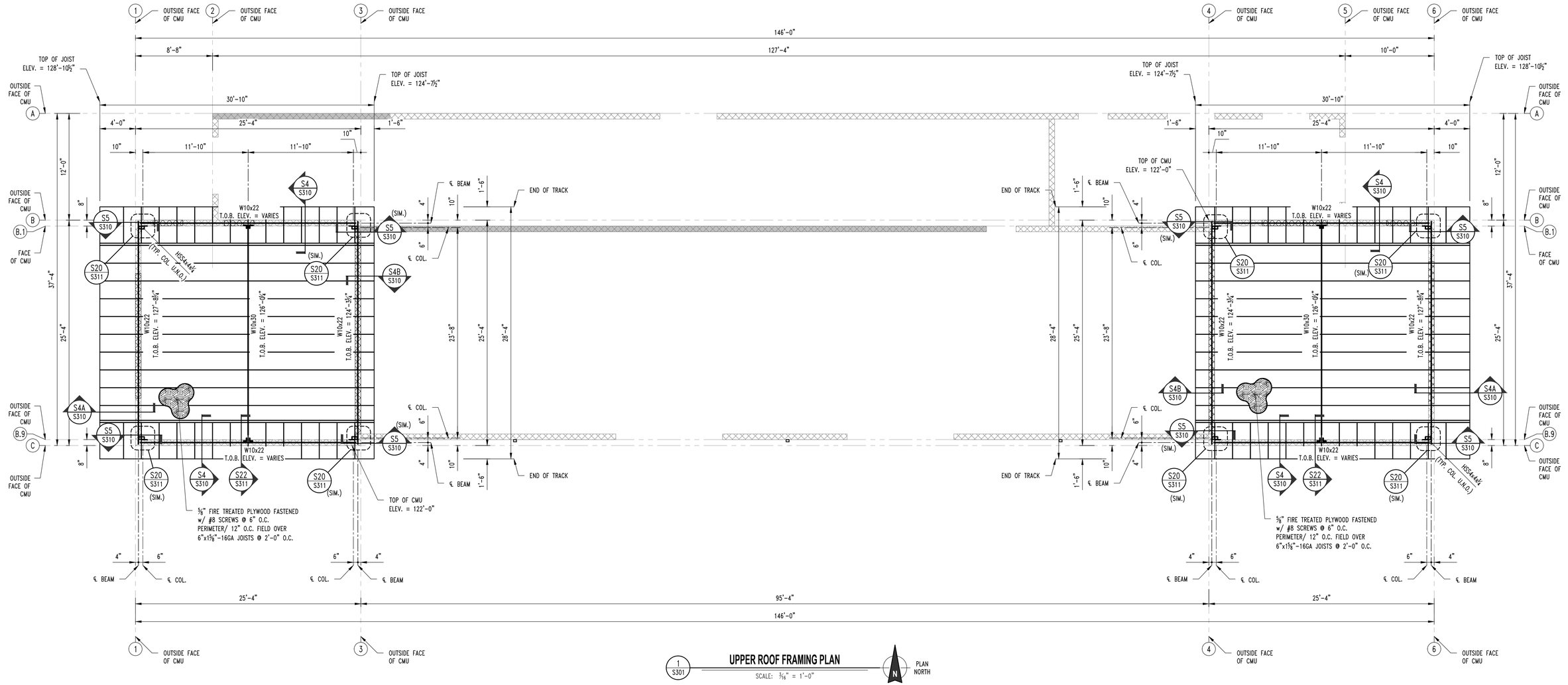
# Club Car Wash

LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
LOW ROOF FRAMING PLAN

DESIGNED: GLL
DRAWN: TGC
PROJECT NO.: 180384
SHEET: S300

**NOTE:**
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.




## UPPER ROOF FRAMING PLAN

1 / S301

SCALE: 3/16" = 1'-0"

PLAN NORTH

REVISIONS:

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|---|---|
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Club Car Wash

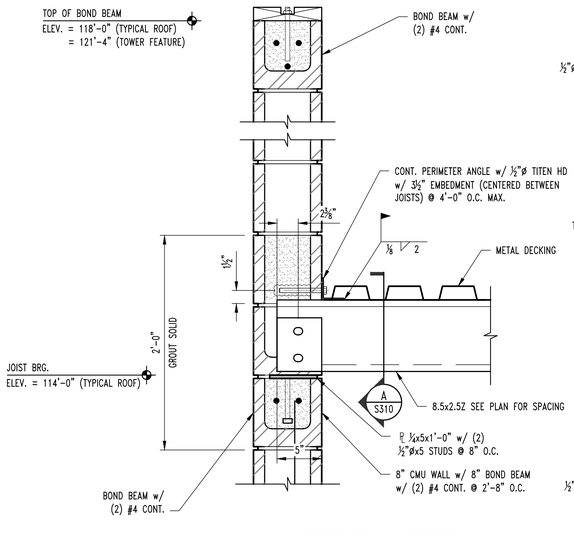
# Club Car Wash

LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

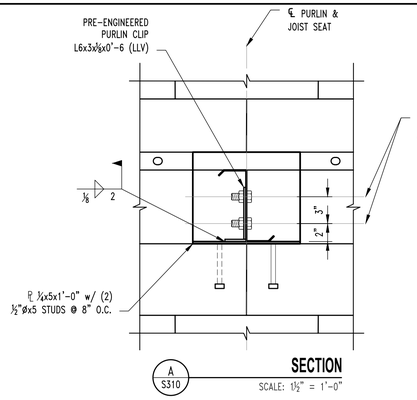
DRAWING INCLUDES:

UPPER ROOF FRAMING PLAN

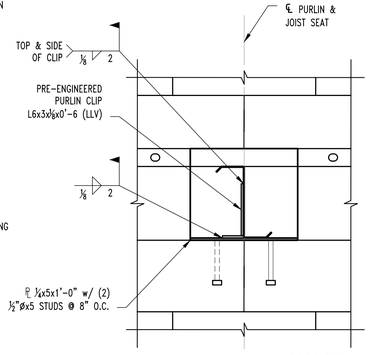
| | |
|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |
| SHEET: | S301 |



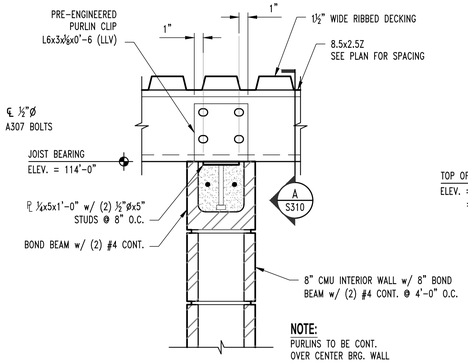

S1 S300 **EXTERIOR WALL SECTION**
SCALE: 1½" = 1'-0"




**SECTION**
SCALE: 1½" = 1'-0"

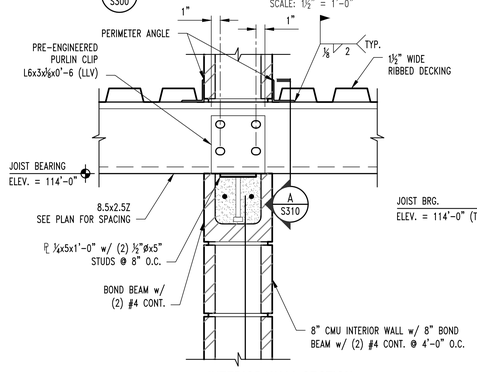



A-ALT S310 **SECTION**
SCALE: 1½" = 1'-0"



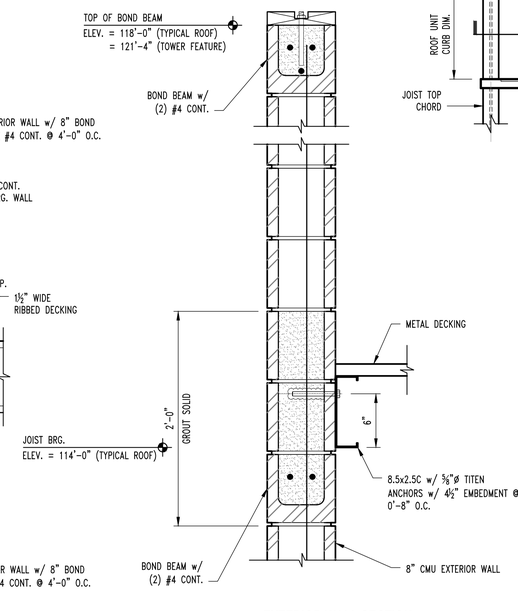

**NOTE:**
PURLINS TO BE CONT.
OVER CENTER BRG. WALL

S2 S300 **INTERIOR WALL SECTION**
SCALE: 1½" = 1'-0"

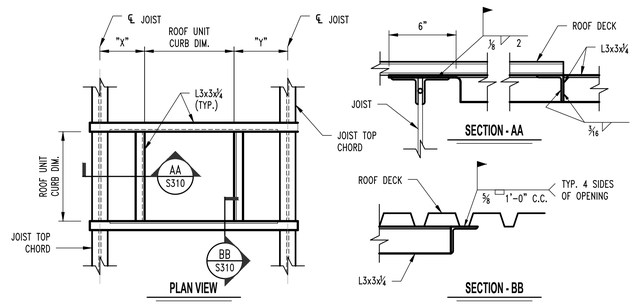



S2A S300 **INTERIOR WALL SECTION**
SCALE: 1½" = 1'-0"

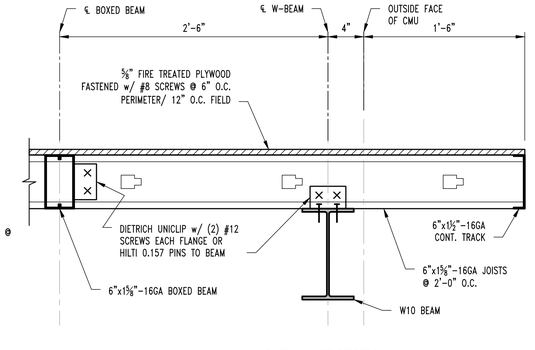
**NOTE:**
PURLINS TO BE CONT. OVER CENTER BRG. WALL



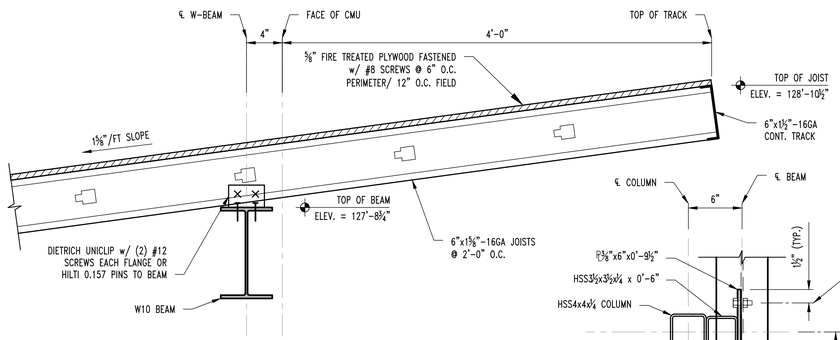

S3 S300 **EXTERIOR WALL SECTION**
SCALE: 1½" = 1'-0"



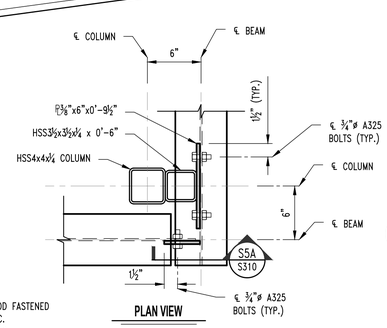

**TYP. ROOF OPENING SUPPORT DETAIL**



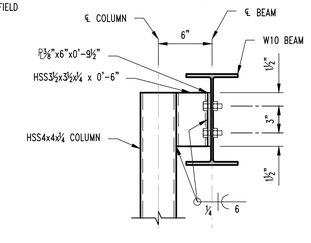

S4 S301 **LIGHT GAUGE SECTION**
SCALE: 1½" = 1'-0"



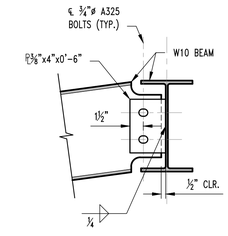

S4A S301 **LIGHT GAUGE SECTION**
SCALE: 1½" = 1'-0"



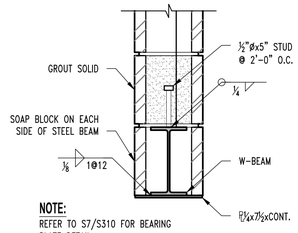

**PLAN VIEW**




S5 S301 **BEAM TO COL. CONNECTION**
SCALE: 1½" = 1'-0"

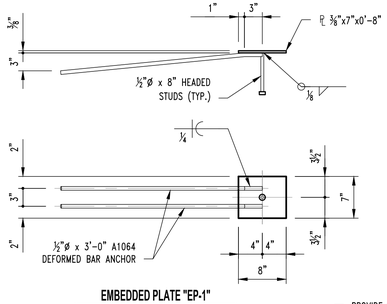



S5A S310 **BEAM TO BEAM CONNECTION**
SCALE: 1½" = 1'-0"

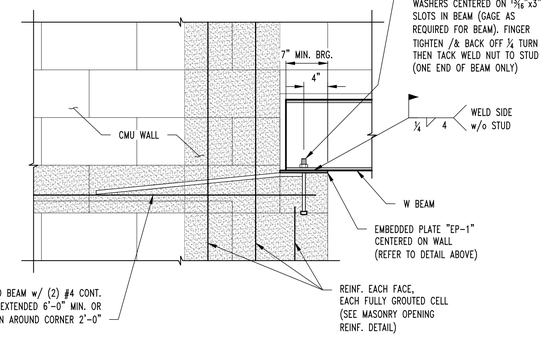



**NOTE:**
REFER TO S7/S310 FOR BEARING
PLATE DETAIL.

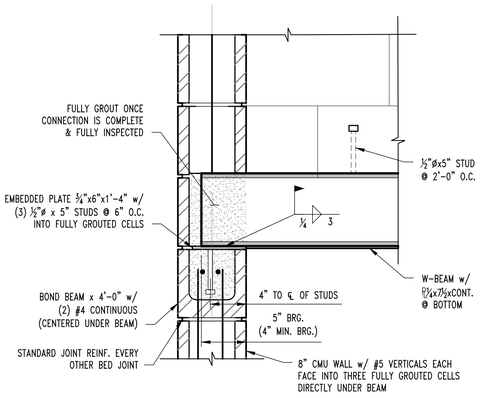
S6 S300 **LINTEL SECTION**
SCALE: 1½" = 1'-0"



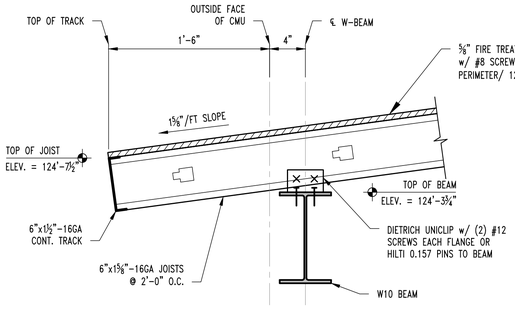

**EMBEDDED PLATE "EP-1"**




S7 S310 **BEAM BEARING DETAIL**
**@ BEAM PARALLEL TO WALL**




S7A S300 **BEAM BEARING DETAIL**
**@ BEAM PERPENDICULAR TO WALL**




S4B S301 **LIGHT GAUGE SECTION**
SCALE: 1½" = 1'-0"

REVISIONS:

| No. | Date |
|---|---|
| PERMIT SET | 08/20/2025 |

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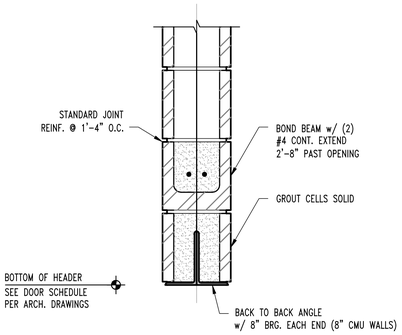
CLIENT:
Club Car Wash

# Club Car Wash
LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
FRAMING
DETAILS

| | |
|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |

SHEET:
S310

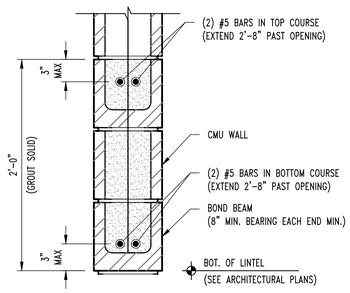



S8 / S300 **TYP. LINTEL DETAIL**

SCALE: 1½" = 1'-0"

**NOTE:**

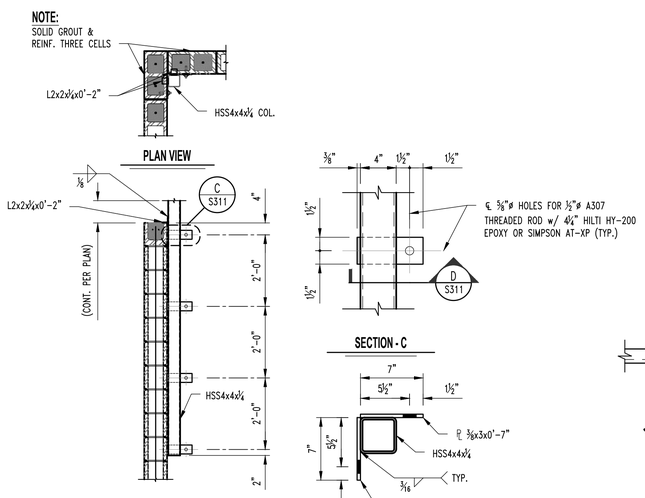
- OPTIONAL PROVIDE DETAIL S9/S311 IN PLACE OF STEEL LINTEL.
- STEEL HEADER REQUIRES THREE VERTICAL CELLS REINFORCED EACH SIDE AT OPENINGS PER DETAIL THIS SHEET




S9 / S300,S311 **TYP. LINTEL DETAIL**

SCALE: 1½" = 1'-0"

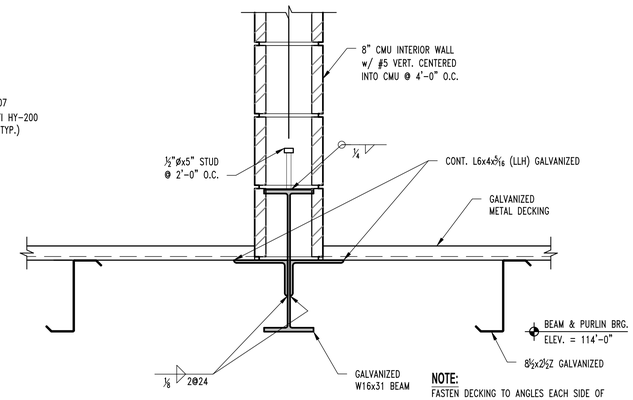
**NOTE:**
SOLID GROUT & REINF. THREE CELLS




S20 / S300 **COLUMN TO CMU CONNECTION DETAIL**

SCALE: ½" = 1'-0"

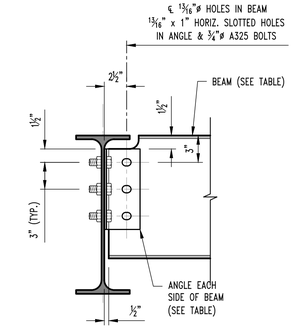
**NOTE:**
STEEL COMPONENTS TO BE GALVANIZED




S21 / S300 **FRAMING SECTION**

SCALE: 1½" = 1'-0"

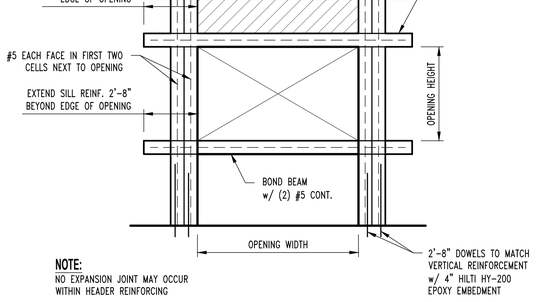
**NOTE:**
FASTEN DECKING TO ANGLES EACH SIDE OF WALL PER FASTENING PATTERN.




| BEAM SIZE | No. OF BOLTS "N" | ANGLE SIZE |
|---|---|---|
| W10 | 2 | L4x4x½x0'-6" |

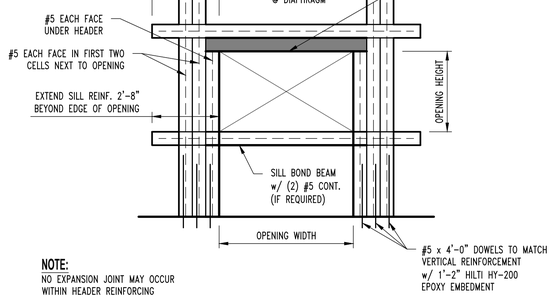
S22 / S301,S311 **TYP. BEAM TO BEAM CONNECTION**

SCALE: 1½" = 1'-0"



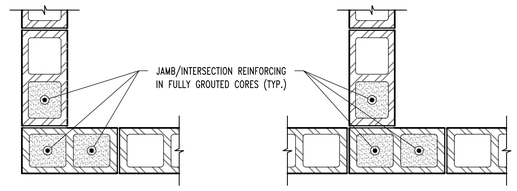

**NOTE:**
NO EXPANSION JOINT MAY OCCUR WITHIN HEADER REINFORCING

**TYPICAL MASONRY OPENING REINFORCEMENT w/ NO STEEL HEADER**

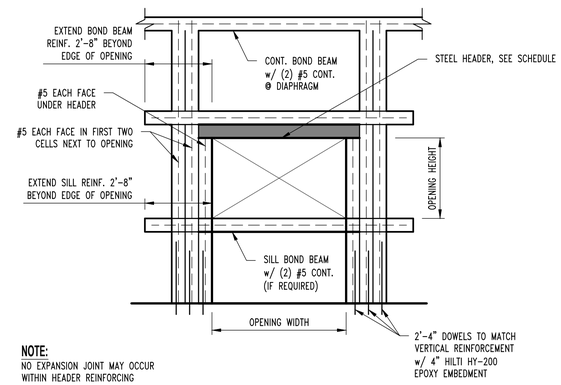



**NOTE:**
NO EXPANSION JOINT MAY OCCUR WITHIN HEADER REINFORCING

**14'-0" & 16'-0" WALL MASONRY OPENING REINFORCEMENT w/ STEEL HEADER**

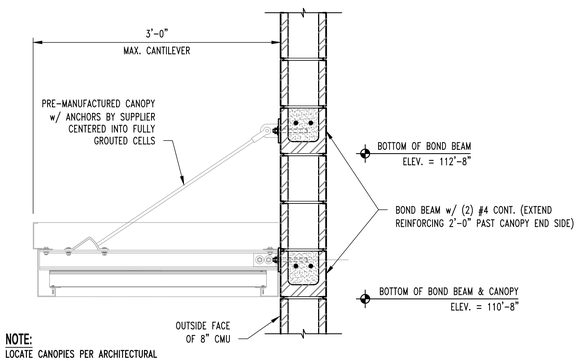



**TYPICAL CMU WALL VERT REINFORCING @ WALLS w/ SINGLE LAYER**



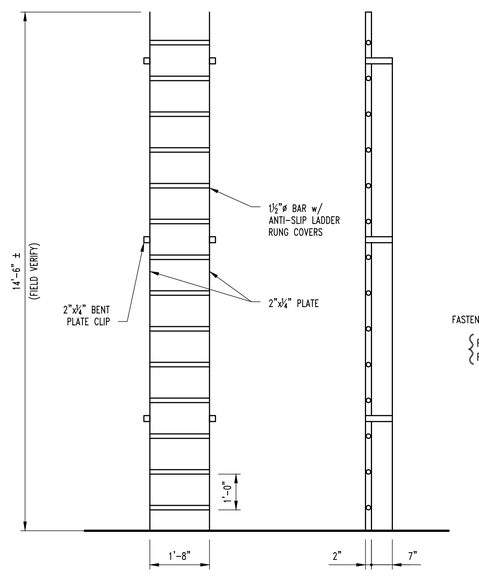

**NOTE:**
NO EXPANSION JOINT MAY OCCUR WITHIN HEADER REINFORCING

**12'-0" & SMALLER WALL MASONRY OPENING REINFORCEMENT w/ STEEL HEADER**

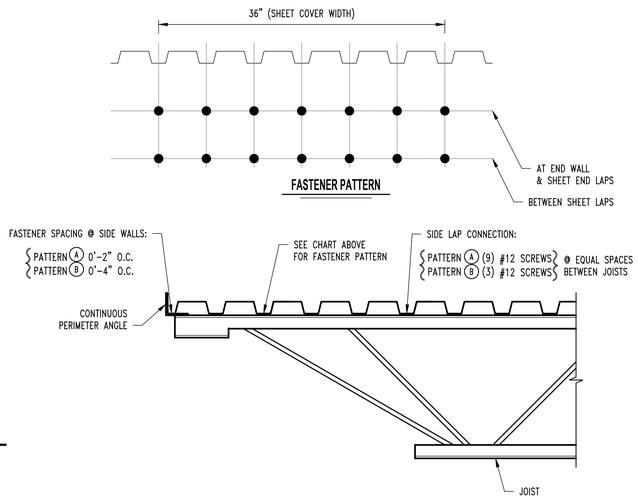



**NOTE:**
LOCATE CANOPIES PER ARCHITECTURAL DRAWINGS

**TYP. CANOPY FRAMING SECTION**




**ROOF HATCH LADDER DETAIL**




**TYPICAL METAL DECK CONNECTION**

(#12 TEK SCREWS FASTENERS)

REVISIONS:

| No. | Date |
|---|---|
| PERMIT SET | 08/20/2025 |

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STATE OF MISSOURI — GREGORY L. LINNEMAN — NUMBER PE-2005001013 — 8/20/25

GREGORY L. LINNEMAN - PE
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#2006018501

CLIENT:
CLUB CAR WASH

# Club Car Wash

LOT 9 OLDHAM VILLAGE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

FRAMING DETAILS

| | |
|---|---|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180384 |

SHEET: S311

Mechanical-Electrical-Plumbing Drawings for

# CLUB CAR WASH

1310 SW Market St
Lee's Summit, MO

## GENERAL MECHANICAL-ELECTRICAL-PLUMBING SPECIFICATIONS

1. ALL WORK SHALL BE DONE IN STRICT CONFORMANCE WITH THE LOCAL BUILDING CODES.
2. ALL MATERIALS SHALL BE NEW, FIRST CLASS, AND INSTALLED TO MANUFACTURER'S WRITTEN SPECIFICATIONS.
3. ALL SYSTEMS SHALL BE COMPLETE AND OPERABLE IN EVERY WAY.
4. DO ALL EXCAVATION, BACK FILLING, CUTTING, PATCHING, OFFSETTING, ADJUSTING, AND BALANCING AS REQUIRED TO COMPLETE THE JOB.
5. SPECIFIC MODELS ARE SPECIFIED TO ESTABLISH QUALITY ONLY. SUBSTITUTIONS MAY BE MADE WITH ENGINEER'S APPROVAL.
6. GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM FINAL ACCEPTANCE. PROVIDE FIVE YEAR AIR CONDITIONING COMPRESSOR WARRANTY.
7. INSPECT JOB SITE PRIOR TO BIDDING TO DETERMINE EXACT JOB REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR CONSTRUCTION DETAILS.
8. ARCHITECTURAL DRAWING DIMENSIONS SHALL GOVERN IN ALL CASES. COORDINATE ENGINEERING DRAWINGS WITH ARCHITECTURAL DRAWINGS FOR ALL EQUIPMENT LAYOUTS AND LOCATIONS.
9. LAYOUTS AND ROUTINGS SHOWN ON THE PLANS ARE APPROXIMATE AND GENERAL IN NATURE. CONTRACTORS ARE REQUIRED TO INSPECT THE JOBSITE FOR INTERFERENCES, OBSTRUCTIONS, AND CONFLICTS AND NOTIFY THE ENGINEER OF THE SAME, AND INCLUDE IN THEIR BID AND WORK SCOPE ALL ASSOCIATED COSTS TO MODIFY THE LAYOUTS AND ROUTINGS AS NECESSARY TO ACCOMMODATE THE INSTALLATION OF THEIR WORK AROUND SUCH INTERFERENCES, OBSTRUCTIONS, AND CONFLICTS.
10. CONTRACTOR IS TO INCLUDE COSTS FOR ALL PERMITS, INSPECTIONS, TAPS, METERS & FUEL ASSOCIATED WITH HIS WORK.
11. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND UNDERSTANDING ALL DRAWINGS AND ASPECTS OF THE PROJECT SCOPE, AND FOR INCLUDING IN HIS BID ALL WORK ASSOCIATED WITH HIS TRADE, REGARDLESS OF WHICH DRAWING OR SHEET IT IS SHOWN ON.

| BASED ON THE FOLLOWING CODES | |
|---|---|
| 2018 | INTERNATIONAL MECHANICAL CODE |
| 2018 | INTERNATIONAL PLUMBING CODE |
| 2018 | INTERNATIONAL FUEL GAS CODE |
| 2018 | INTERNATIONAL FIRE CODE |
| 2017 | NATIONAL ELECTRIC CODE |
| 2018 | INTERNATIONAL ENERGY CONSERVATION CODE |

## Sheet List Table


| Sheet Number | Sheet Title |
|---|---|
| MEP1 | MECHANICAL ELECTRICAL PLUMBING COVER SHEET |
| MEP2 | SITE UTILITIES PLAN |
| MEP3 | SITE PHOTOMETRIC |
| EQ100 | EQUIPMENT PLAN |
| M100 | HVAC PLAN |
| MD100 | HVAC DETAILS & SCHEDULES |
| EP100 | POWER PLAN |
| EP101 | POWER PLAN - UNDERGROUND CONDUITS |
| EP102 | POWER ELEVATIONS |
| EP103 | SECURITY CAMERA PLAN |
| EL100 | LIGHTING PLAN |
| ED100 | POWER DETAILS & SCHEDULES |
| ED200 | TUNNEL CONTROLLER SCHEDULES |
| PS100 | SANITARY SEWER AND VENT PLAN |
| PW100 | WATER AND GAS PIPING PLAN |
| PW101 | PLUMBING ELEVATIONS |
| PD100 | PLUMBING DETAILS & SCHEDULES |

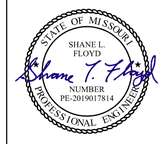


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DO NOT SCALE THIS DRAWING.
SOME DEVIATION FROM SCALE MAY OCCUR.

| ISSUE TITLE | DATE |
|---|---|
| PERMIT SET | 07-25-2025 |
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Shane Floyd, P.E.
PE-2019017814
MO Certificate of Authority #000239

JULY 25TH, 2025

Timberlake ENGINEERING
A Custom Engineering Company

912 Old 63 South Columbia, MO 65201
ph: 573.875.4365


| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

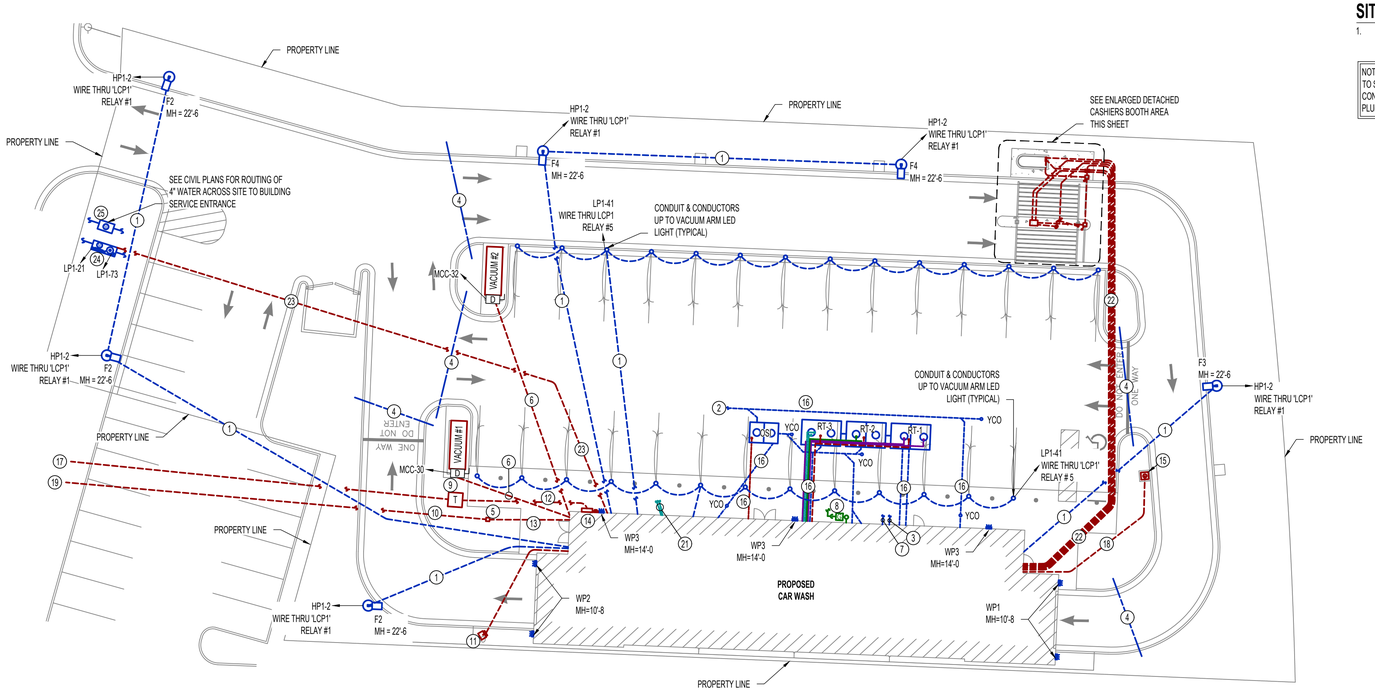
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

MECHANICAL ELECTRICAL PLUMBING COVER SHEET

SHEET NUMBER

**MEP1**




## SITE UTILITIES PLAN

SCALE : 1" = 20 ft

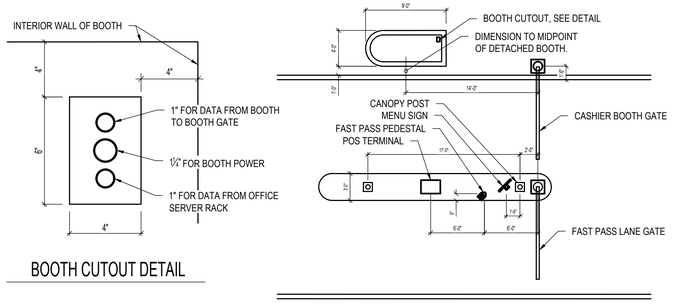
## SITE UTILITIES PLAN GENERAL NOTES

1. ALL SITE CONDUITS UNDERNEATH PAVING TO BE BACKFILLED WITH EITHER CLEAN OR COMPACTED ROCK BY ELECTRICIAN. COMPACTED DIRT IS **NOT** ACCEPTABLE UNDERNEATH PAVING.

NOTE: FINAL CONNECTION OF BUILDING SANITARY TO SANITARY LATERAL TO BE MADE BY PLUMBING CONTRACTOR. FINAL CONNECTION OF WATER SERVICE BY PLUMBING CONTRACTOR.

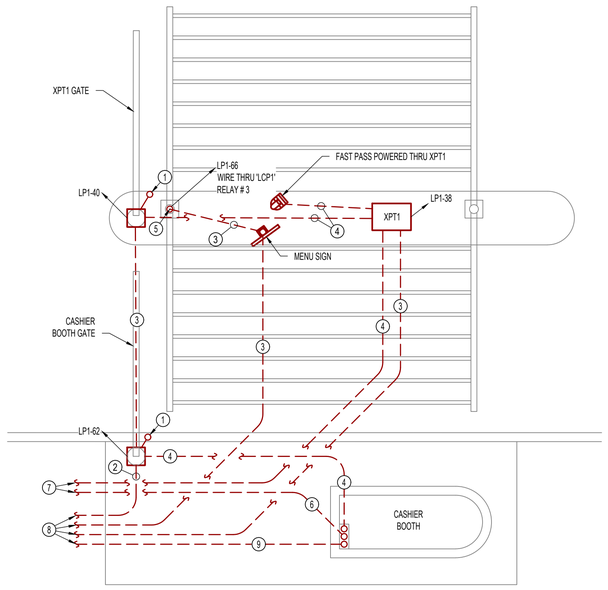
## SITE UTILITIES PLAN KEY NOTES

1. 1" PVC CONDUIT WITH (3) # 12 CU
2. TO SEWER MAIN. SEE CIVIL PLANS FOR CONTINUATION.
3. 4" CHW TO MAIN SEE CIVIL PLANS FOR CONTINUATION.
4. 3" IRRIGATION SLEEVE FOR FUTURE IRRIGATION BY IRRIGATION CONTRACTOR COORDINATE EXACT LOCATION OF SLEEVES WITH IRRIGATION CONTRACTOR. MARK ENDS OF CONDUIT WITH REBAR.
5. TELECOMMUNICATIONS PEDESTAL COORDINATE EXACT LOCATION WITH TELECOMMUNICATIONS PROVIDER.
6. (1) 1½" PVC CONDUIT WITH (3) # 3 CU & (1) #8 CU EQ GRD
7. 3" SLEEVE WITH LONG SWEEP ELBOW THRU FOOTING EXTENDING TO NEAREST GREEN SPACE (VERIFY EXACT LOCATION WITH IRRIGATION CONTRACTOR) FOR IRRIGATION PIPING / LOW VOLTAGE CONDUIT.
8. GAS METER SEE CIVIL SITE PLAN FOR CONTINUATION.
9. 480 V, 3 PH TRANSFORMER, COORDINATE WITH ELECTRICAL UTILITY. PROVIDE CONCRETE PAD PER UTILITY SPECIFICATIONS.
10. (1) 3" PVC CONDUIT WITH PULL STRING FOR TELECOMMUNICATIONS.
11. POWER THRU TUNNEL CONTROLLER, SEE TUNNEL CONTROLLER FUNCTION LIST ON SHEET ED200. VERIFY EXACT LOCATION OF STOP/ GO SIGN WITH OWNER PRIOR TO ROUGH-IN.
12. SECONDARY CONDUIT AND CONDUCTORS. SEE POWER RISER ON SHEET ED100 FOR DETAILS.
13. 3" CONDUIT (WITH PULL STRING) FOR TELECOMMUNICATIONS DEMARCATION STUBBED UP INSIDE BUILDING
14. CT METER / CABINET. COORDINATE EXACT REQUIREMENTS WITH LOCAL UTILITY.
15. SECURITY CAMERA ARCH, VERIFY EXACT LOCATION WITH OWNER.
16. SEE SHEET PS100 FOR PIPE SIZES AND DETAILS.
17. PRIMARY CONDUIT(S) TO POWER POLE. COORDINATE EXACT LOCATION OF POLE WITH UTILITY.
18. (1) 3" PVC WITH (8) CAT 5 & WITH PULL STRING FROM OFFICE DATA J-BOX. STUB UP INSIDE SUPPORT FOR SECURITY CAMERA ARCH.
19. 3" PVC CONDUIT STUBBED UP OUTSIDE CURB FOR TELECOMMUNICATIONS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH TELECOMMUNICATIONS PROVIDER.
20. NOT USED
21. (2) 2" SLEEVES THROUGH FOOTING OUT TO VACUUMS FOR CUSTOMER AIR. COMPRESSED AIR PIPING BY OWNER. COORDINATE EXACT LOCATION OF STUB-UP AT VACUUMS WITH OWNER.
22. (4) 1" CONDUITS FOR POWER AND (2) 1" DATA CONDUITS TO CASHIER BOOTH AREA. SEE ENLARGED CASHIER BOOTH AREA FOR CONTINUATION.
23. (1) 1" PVC CONDUIT WITH (3) #12 CU AND (1) #12 CU EQ. GRD. FOR IRRIGATION CONTROLS AND (3) #10 CU AND (1) #10 CU EQ. GRD. FOR IRRIGATION BOOSTER PUMP.
24. 1" IRRIGATION METER / BACKFLOW (1" BFP2) AND IRRIGATION BOOSTER PUMP. SEE CIVIL PLANS FOR DETAILS. SE PS100 FOR 'BFP1' SPECIFICATIONS.
25. 2" DOMESTIC WATER METER IN PIT PER WATER DEPARTMENT SPECIFICATIONS.




BOOTH CUTOUT DETAIL

TYPICAL DETACHED CASHIER BOOTH DETAIL




## ENLARGED DETACHED CASHIER BOOTH AREA

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

## CASHIER BOOTH AREA KEY NOTES

1. STUB UP 1" PVC CONDUIT WITH PULL STRING IN CURB FOR GATE LOOP PROVIDED BY OWNER.
2. 1" PVC CONDUIT WITH (6) #12 CU
3. 1" PVC CONDUIT WITH (3) #12 CU
4. (1) 1" PVC CONDUIT WITH (1) CAT5 FOR DATA.
5. STUB CONDUIT UP INSIDE CANOPY SUPPORT FOR CANOPY LED LIGHTS.
6. (1) 1" PVC CONDUIT WITH (2) CAT5 FOR DATA.
7. FROM OFFICE DATA J-BOX
8. FROM 'LP1'
9. POWER CONDUIT / CONDUCTORS TO CASHIER BOOTH. SEE POWER RISER, SHEET ED100 FOR DETAILS.

NOTE: CONTRACTOR SHALL VERIFY ALL CONDUIT LOCATIONS & STUB-UPS IN CASHIER BOOTH/GATE AREA W/ OWNERS REPRESENTATIVE PRIOR TO ROUGH-IN.

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STATE OF MISSOURI
SHANE L FLOYD
NUMBER PE-2019017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E. JULY 25TH, 2025
PE-2019017814
MO Certificate of Authority #000239

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ph: 573.875.4366

| PROJECT No. | DESIGNED BY |
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| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

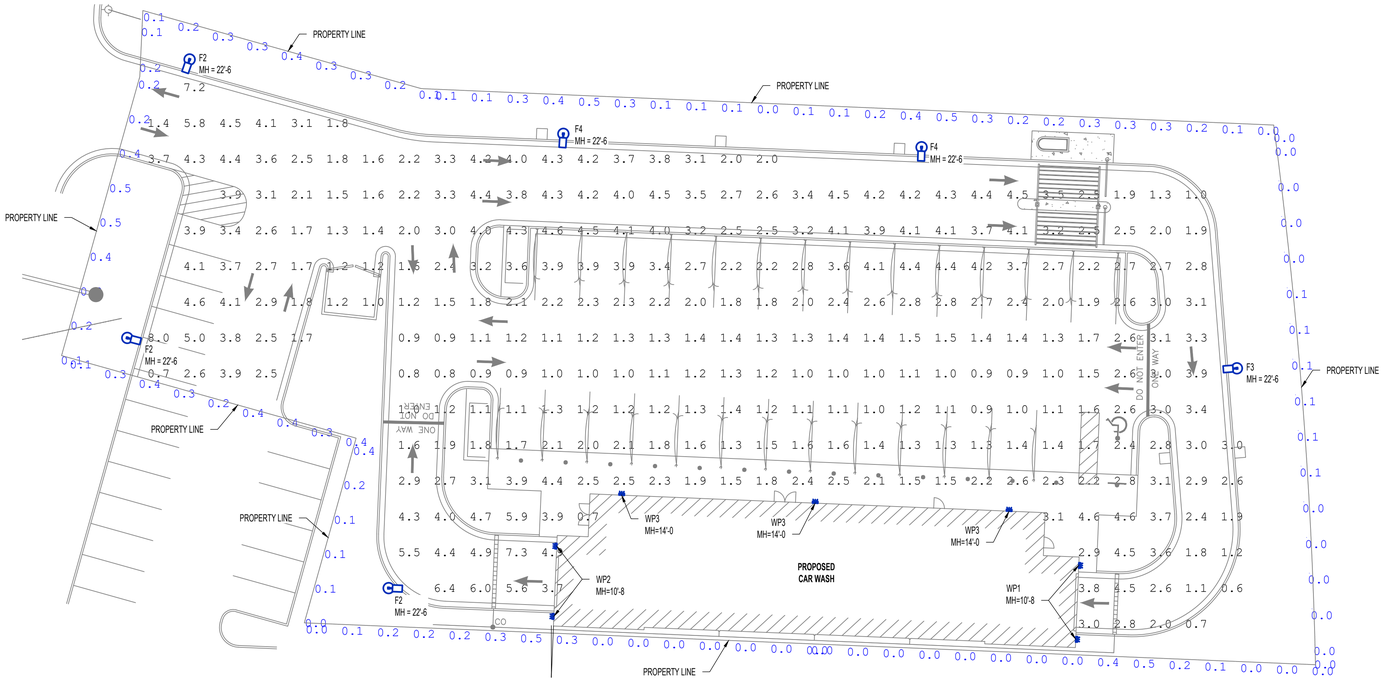
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

SITE UTILITIES PLAN

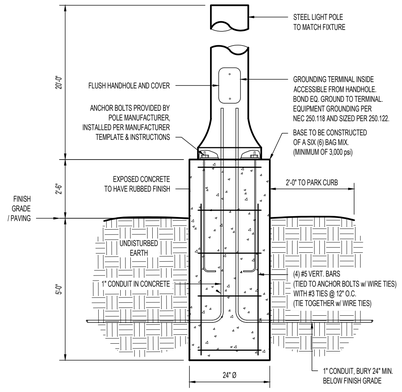
SHEET NUMBER

**MEP2**




## SITE PHOTOMETRIC

SCALE : 1" = 20 ft




## TYP. LIGHT POLE DETAIL

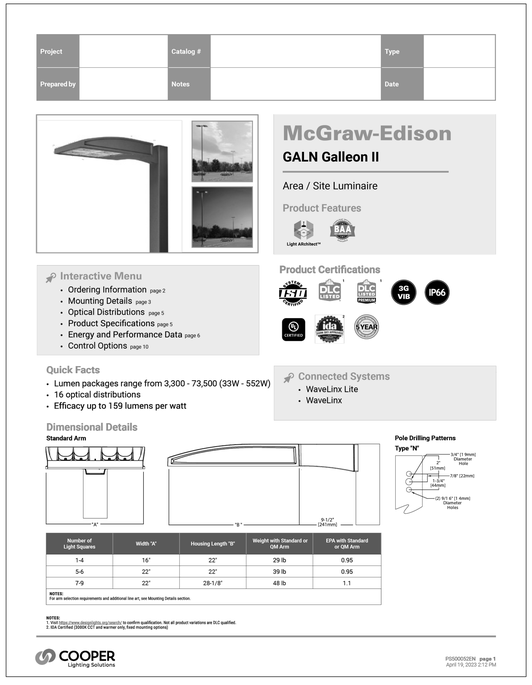
## SITE LIGHTING GENERAL NOTES

1. MAX. / MIN. RATIOS CALCULATED PER LIGHTING ORDINANCES, BASED ON 95% OF POINTS, LOWER & UPPER 2.5% EXCLUDED.
2. POLE LOCATIONS, LIGHT FIXTURES AND FIXTURE MOUNTING HEIGHTS HAVE BEEN CAREFULLY SELECTED IN ORDER TO MEET REQUIRED LIGHTING LEVELS. ANY REQUESTED CHANGES MUST BE IN WRITING TO THE ENGINEER AND ACCOMPANIED BY A PHOTOMETRIC PLAN INDICATING THE COMPLIANCE WITH THE OWNERS AND THE LOCAL ORDINANCE LIGHTING REQUIREMENTS. CHANGES MUST BE APPROVED IN WRITING BY THE ENGINEER. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE CONTRACTOR REPLACING OR RELOCATING FIXTURES AND/OR POLES AT THEIR EXPENSE.
3. VERIFY LIGHTING CONTROL PANEL SCHEDULES WITH OWNER.

## SITE LIGHTING SCHEDULE

| MARK | MANUFACTURER* | MODEL NO.* | TYPE | VOLTS | AMPS | WATTS | LUMENS | CCT (°K) | CRI | LAMPS | MOUNTING | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F2 | MCGRAW EDISON | GALN-SA2C-740-U-SLL-HSS | POLE LIGHT | 277 | 0.39 | 108 | 10153 | 4000 | 70 | LED | POLE | WITH BLACK SSS POLE AND HOUSE SIDE SHIELD |
| F3 | MCGRAW EDISON | GALN-SA2D-740-U-SL3-HSS | POLE LIGHT | 277 | 0.45 | 125 | 12869 | 4000 | 70 | LED | POLE | WITH BLACK SSS POLE AND HOUSE SIDE SHIELD |
| F4 | MCGRAW EDISON | GALN-SA4C-740-U-T4W-HSS | POLE LIGHT | 277 | 0.77 | 213 | 20119 | 4000 | 70 | LED | POLE | WITH BLACK SSS POLE AND HOUSE SIDE SHIELD |
| WP1 | MCGRAW EDISON | GWS-SA1B-740-U-SLR-W-HSS | WALL PACK | 277 | 0.09 | 25 | 2224 | 4000 | 70 | LED | WALL | WITH HOUSE SIDE SHIELD |
| WP2 | MCGRAW EDISON | GWS-SA1B-740-U-SLL-W-HSS | WALL PACK | 277 | 0.09 | 25 | 2170 | 4000 | 70 | LED | WALL | WITH HOUSE SIDE SHIELD |
| WP3 | MCGRAW EDISON | GWS-SA1C-740-U-T4FTR-W | WALL PACK | 277 | 0.12 | 34.1 | 4643 | 4000 | 70 | LED | WALL | |

* OR EQUAL



Project | | Catalog # | | Type | |
Prepared by | | Notes | | Date | |

**McGraw-Edison**

**GALN Galleon II**

Area / Site Luminaire

Product Features

Light Allchitect™ | BAA

Interactive Menu
- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 5
- Product Specifications page 5
- Energy and Performance Data page 6
- Control Options page 10

Product Certifications

DLC LISTED | DLC PREMIUM | 3G VIB | IP66 | CERTIFIED | kdk | 5 YEAR

Quick Facts
- Lumen packages range from 3,300 - 73,500 (33W - 552W)
- 16 optical distributions
- Efficacy up to 159 lumens per watt

Connected Systems
- WaveLinx Lite
- WaveLinx

Dimensional Details

Standard Arm

Pole Drilling Patterns

Type "N"

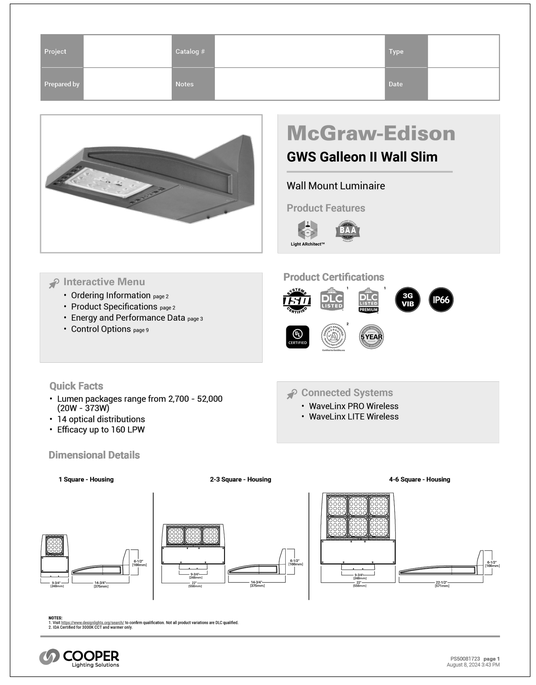
| Number of Light Squares | Width "A" | Housing Length "B" | Weight with Standard or QM Arm | EPA with Standard or QM Arm |
|---|---|---|---|---|
| 1-4 | 16" | 22" | 29 lb | 0.95 |
| 5-6 | 22" | 22" | 39 lb | 0.95 |
| 7-9 | 22" | 28-1/8" | 48 lb | 1.1 |

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified (3000K CCT and warmer only, fixed mounting options)

COOPER Lighting Solutions

PSS0003929N page 1
April 19, 2023 2:12 PM



Project | | Catalog # | | Type | |
Prepared by | | Notes | | Date | |

**McGraw-Edison**

**GWS Galleon II Wall Slim**

Wall Mount Luminaire

Product Features

Light Allchitect™ | BAA

Interactive Menu
- Ordering Information page 2
- Product Specifications page 2
- Energy and Performance Data page 3
- Control Options page 9

Product Certifications

DLC LISTED | DLC PREMIUM | 3G VIB | IP66 | CERTIFIED | 5 YEAR

Quick Facts
- Lumen packages range from 2,700 - 52,000 (20W - 373W)
- 14 optical distributions
- Efficacy up to 160 LPW

Connected Systems
- WaveLinx PRO Wireless
- WaveLinx LITE Wireless

Dimensional Details

1 Square - Housing | 2-3 Square - Housing | 4-6 Square - Housing

NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

COOPER Lighting Solutions

PSS0001723 page 1
August 8, 2024 3:43 PM

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PROJECT

**CLUB CAR WASH**

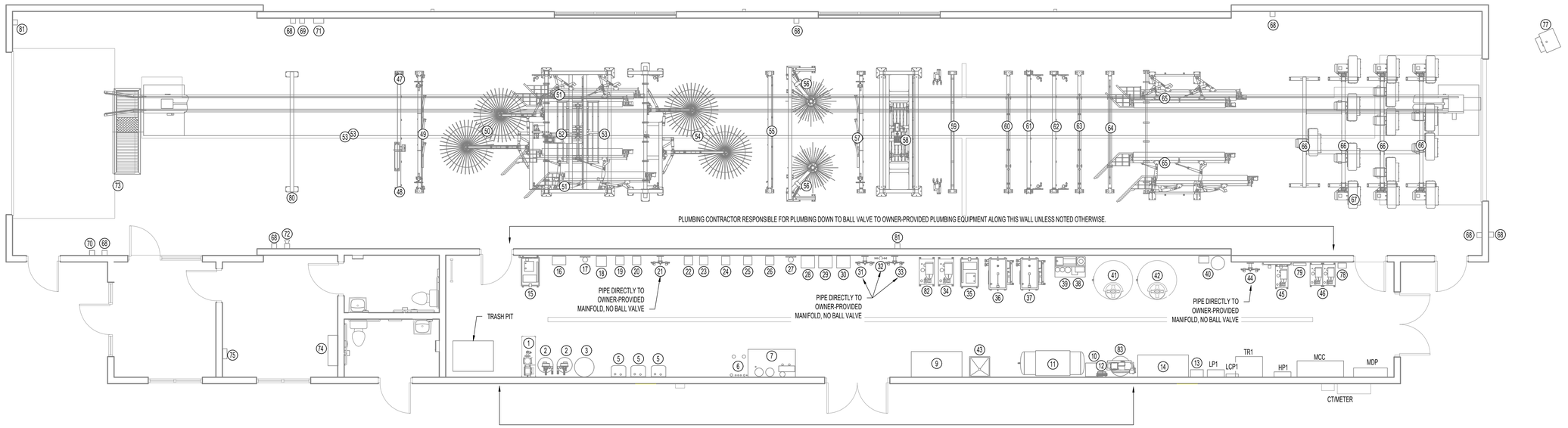
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

SITE PHOTOMETRIC

SHEET NUMBER

**MEP3**




## EQUIPMENT PLAN

SCALE : 3/16" = 1'-0"

NOTE: ALL NUMBERED ITEMS ARE CONSIDERED "CAR WASH EQUIPMENT" AND PROVIDED BY OWNER.

## GENERAL NOTES

1. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL LOW VOLTAGE (INCLUDING CAT 6, LOW VOLTAGE AND CONTROL) WIRING AND TERMINATIONS UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR SHALL PULL TUNNEL CONTROLLER WIRING, BUT FINAL TERMINATION OF TUNNEL CONTROLLER CONNECTIONS ARE MADE BY OWNER.
2. REFER TO ED100 FOR ELECTRICAL CONTRACTOR- PROVIDED TUNNEL CONTROLLER WIRING DETAILS.
3. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL WIRING AND TERMINATION (INCLUDING LOW VOLTAGE CONNECTIONS) TO MOTOR CONTROL CENTER.

## EQUIPMENT KEY

1. BOOSTER PUMP
2. SOFTENER SYSTEM TANK
3. BRINE TANK
4. NOT USED
5. TANKLESS WATER HEATERS
6. RECLAIM SYSTEM PIPES
7. RECLAIM PUMP STATION
8. NOT USED.
9. EXTRACTOR WASHER
10. AIR DRYER
11. AIR COMPRESSOR
12. HOSE HOOK
13. TELECOMMUNICATIONS TERMINATION BOX
14. WORK BENCH
15. PREP 1 & 2 (STACKED)
16. BUG GOO
17. FOAM
18. PS1
19. CTA1
20. WRAP FOAM
21. COMRESSED AIR PANEL
22. 3X RED
23. 3X BLUE
24. SCENT
25. PS2
26. CTA2
27. WAX
28. DRY 1
29. DRY 2
30. CERAMIC
31. CHW MANIFOLD
32. RW MANIFOLD
33. RORJ MANIFOLD
34. TIRE BRUSH (NINJA) / VAN HIGH MOTOR
35. PREP 3
36. WHEEL BLASTER
37. HALO 1 (HP1)
38. RORJ FILTRATION
39. REJECT PUMP
40. RORJ RE-PRESSURIZATION
41. REJECT TANK
42. RO TANK
43. SERVICE SINK
44. TIRE SHINE MANIFOLD
45. TIRE SHINE
46. CONVEYOR, CONVEYER SPARE
47. INSTRUCTIONAL CABINET
48. PACKAGE RECEIVED CABINET
49. FOAM LIGHT
50. WRAP 1
51. TIRE BRUSH
52. 3X FOAM/ 3X FOAM LIGHT/ GOBO LIGHT
53. MITTER 1
54. WRAP 2
55. PRESOAK 2 / PRESOAK 2 LIGHT
56. SIDE BRUSH
57. CTA / WAX / HOT WAX LIGHT
58. MITTER 2
59. HP RINSE / HP LIGHT
60. SET 1 RINSE
61. CERAMIC ARCH / CERAMIC LIGHTS (3)
62. DRYING AGENT ARCH / DRYING AGENT LIGHT
63. SET 2 RINSE
64. RO RINSE ARCH / RO LIGHT
65. TIRE SHINE APPLICATOR
66. BLOWER ARCH LED LIGHT
67. BLOWERS (TYPICAL)
68. E-STOP
69. PREP GUN 1 START / STOP
70. PREP GUN 2 START / STOP
71. PROGRAMMABLE PUSH BUTTON STATION
72. WARNING HORN (13'-0" A.F.F.)
73. CORRELATOR PIT
74. TUNNEL CONTROLLER
75. DATA J-BOX
76. NOT USED
77. STOP / GO SIGN
78. PULSE ACTIVATOR
79. GATOR MANIFOLD
80. PREP ARCH
81. PREP GUN 3 START / STOP
82. WRAP 1 / WRAP 2 MOTORS
83. CUSTOMER AIR COMPRESSOR

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PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**EQUIPMENT PLAN**

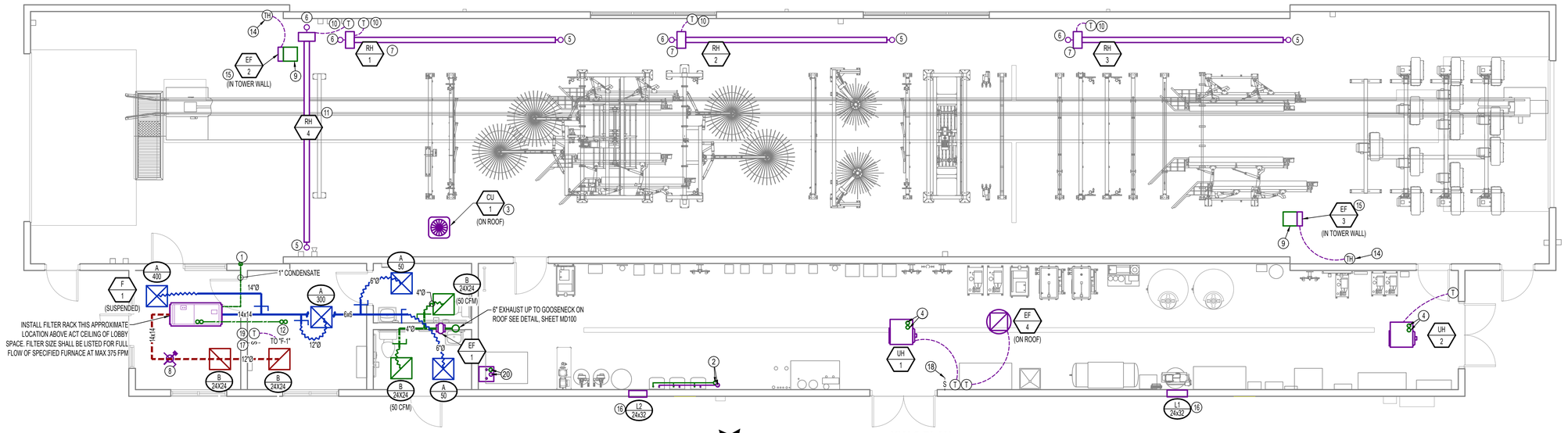
SHEET NUMBER

**EQ100**

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## HVAC PLAN

SCALE : 3/16" = 1'-0"

### HVAC EQUIPMENT SCHEDULE

| MARK | DESCRIPTION | FLOW | TONS | CFM | OA CFM (MAX/MIN) | HEATING (GAS) | | COOLING (80/67 DB/WB) | | ELECTRICAL | | | PHYSICAL | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | KBTU IN | KBTU OUT | KBTU SEN | KBTU TOT | VOLTS | AMPS | MAX CKT | DIM'S (LxW) | WEIGHT | |
| F-1 | FURNACE | HORZ | 2.5 | 1000 | 100 | 60 | 56 | - | - | 120 | 9.0 | 20 | 15x29 | 120 | 1,2,3 |
| CU-1 | CONDENSING UNIT | - | 2.5 | - | - | - | - | 21 | 30 | 208/1 | 18.0 | 30 | 37x23 | 148 | 4,5 |
| EF-1 | EXHAUST FAN | INLINE | - | 100 | - | - | - | - | - | 120 | 1.0 | 20 | - | - | 6, 9 |
| EF-2,3 | EXHAUST FAN | SIDEWALL | - | 400 | - | - | - | - | - | 120 | 1.0 | 20 | 16x16 | - | 7, 9 |
| EF-4 | EXHAUST FAN | DOWNBLAST | - | 2700 | - | - | - | - | - | 120 | 11.0 | 20 | 15.5x15.5 | 105 | 8, 9 |

HVAC NOTES:

- THE HVAC CONTRACTOR IS REQUIRED TO SEND THE ELECTRICIAN COPY OF SUBMITTAL DATA, CLEARLY INDICATING THE ELECTRICAL REQUIREMENTS FOR ALL HVAC EQUIPMENT. THIS MUST BE SENT WITHIN 1 WEEK OF RECEIPT OF SUBMITTAL APPROVAL.

1.) HONEYWELL #TH8320R1003 (VISIONPRO 8000) PROGRAMMABLE THERMOSTAT, SET TO RUN FAN CONTINUOUSLY DURING OCCUPIED HOURS. CONFIGURE TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5 DEGREES WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.
2.) 90%+ EFFICIENCY, CONDENSING FURNACE WITH CORROSION-PROOF CONDENSATE DRAIN PAN, AND LIFETIME HEAT-EXCHANGER WARRANTY.
3.) MOTORIZED OUTSIDE AIR DAMPER, PROVIDED BY OWNER, INSTALLED BY MECHANICAL CONTRACTOR.
4.) 13.4 SEER2 MIN., AND HAIL GUARDS
5.) LOW AMBIENT CONTROLS
6.) SOLER & PALAU TD INLINE SERIES (INLINE EXHAUSTER WITH BACKDRAFT DAMPER, 3/8" SP, DIRECT DRIVE, SPEED CONTROLLER)
7.) EQUAL TO GREENHECK MODEL SE1-12-426-D SIDEWALL DIRECT DRIVE PROPELLER FAN, SWITCH, SPEED CONTROLLER, .25" S.P., BIRDSCREEN, BACKDRAFT DAMPER. WITH 45 DEGREE RAINHOOD, PAINTED BLACK. PROVIDE WITH THERMOSTAT / HUMIDISAT EQUAL TO DAYTON #2 SPST. SET TO OPERATE EXHAUST FAN WHEN RELATIVE HUMIDITY EXCEEDS 60% INSIDE ATTIC OR TEMPERATURE INSIDE ATTIC EXCEEDS 110 DEGREES FARENHEIT.
8.) EQUAL TO GREENHECK DIRECT DRIVE DOWNBLAST ROOF EXHAUSTER MODEL #G-180-VG, .375" S.P., BIRDSCREEN, ROOF CURB, DISCONNECT, SPEED CONTROLLER, MOTORIZED BACKDRAFT DAMPER.
9.) HVAC EQUIPMENT (EXCLUDING FURNACE/ CONDENSING UNITS) TO BE SUPPLIED BY OWNER, INSTALLED BY CONTRACTOR. HVAC EQUIPMENT SUPPLIED BY OWNER AS PART OF A NATIONAL ACCOUNT WITH KUHLMANN SUPPLY COMPANY, INC. HVAC CONTRACTOR TO COORDINATE HVAC EQUIPMENT DELIVERY WITH GENERAL CONTRACTOR. PLEASE CONTACT GREG BIERLING AT KUHLMANN SUPPLY WITH QUESTIONS: 314-298-1114 greg@kuhlmannsupply.com

### AIR DEVICES SCHEDULE

| MARK | MFR. | MODEL | MOUNTING | SERVICE | THROW | FACE SIZE | MATERIAL | FINISH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| A | PRICE | SPD | CEILING | SUPPLY | 8' | 24X24 | STEEL | WHITE | WITH BUTTERFLY DAMPER, PROVIDE WITH INSULATED BACK / BOX |
| B | PRICE | 80 | CEILING | RETURN | -- | AS INDICATED | STEEL | WHITE | |
| L1, L2 | POTTORFF | EXA-645 | WALL | INTAKE | -- | AS INDICATED | ALUMINUM | BLACK | PROVIDE WITH 120-240V ACTUATOR EQUAL TO BELIMO F5-S SERIES (WITH BUILT-IN AUXILIARY SWITCH) |

NOTES:
AIR DEVICES TO BE SUPPLIED BY OWNER, INSTALLED BY CONTRACTOR. AIR DEVICES SUPPLIED BY OWNER AS PART OF A NATIONAL ACCOUNT WITH KUHLMANN SUPPLY COMPANY, INC. HVAC CONTRACTOR TO COORDINATE HVAC EQUIPMENT DELIVERY WITH GENERAL CONTRACTOR. PLEASE CONTACT GREG BIERLING AT KUHLMANN SUPPLY WITH QUESTIONS: 314-298-1114 greg@kuhlmannsupply.com

## GENERAL NOTES

1. REFER TO MD100 FOR REMAINING HVAC NOTES, LEGENDS, DETAILS & SCHEDULES
2. ALL HVAC DUCTWORK SHOWN SHALL ROUTE IN SPACE ABOVE CEILING(S) UNLESS NOTED OTHERWISE
3. ALL REFRIGERANT PIPING SHALL BE ROUTED IN SPACE ABOVE DROP CEILING(S) AND WITHIN WALL CAVITIES TO REMAIN CONCEALED WITHIN INTERIOR SPACE.
4. CONFIRM ALL RADIANT HEATER LOCATIONS AND REQUIRED CLEARANCES WITH CARWASH EQUIPMENT PROVIDER PRIOR TO INSTALLATION.
5. AREA ABOVE DROP CEILING IS CONSIDERED UNCONDITIONED SPACE. DUCTWORK SHALL BE INSULATED PER DUCT INSULATION DETAIL, SHEET MD100 FOR UNCONDITIONED SPACE.

## KEYED NOTES

1. 1" PVC CONDENSATE ROUTED THROUGH WALL TO WASH BAY FLOOR.
2. PVC COMMON VENT / COMBUSTION AIR UP THROUGH ROOF PER MANUFACTURER'S REQUIREMENTS (STANDARD TEMP. HEAT). WATER HEATERS PROVIDED BY OWNER, VENT / COMBUSTION AIR PIPING BY MECHANICAL CONTRACTOR. CONTRACTOR SHALL INSTALL EXACTLY PER MFR INSTALLATION INSTRUCTIONS AND DETAILS NO EXCEPTIONS. BROCHURES AND INSTALLATION INSTRUCTIONS ARE PROVIDED AND MUST BE FOLLOWED EXACTLY. IF WATER HEATERS ARRIVE WITHOUT BROCHURE AND INSTALLATION INSTRUCTIONS CONTAINING DETAILS, CONTRACTOR SHALL REQUEST THEM FROM CLUB CAR WASH REPRESENTATIVE PRIOR TO STARTING ANY WORK. ANY WORK COMPLETED THAT DOES NOT EXACTLY FOLLOW THE BROCHURE, INSTALLATION INSTRUCTIONS AND DETAILS PROVIDED WITH WATER HEATERS WILL BE REQUIRED TO BE REDONE TO FOLLOW EXACT MFR DETAILS AND REQUIREMENTS. COSTS ASSOCIATED ARE THE RESPONSIBILITY OF THE CONTRACTOR, NO CHANGE ORDER TO THE OWNER WILL BE ACCEPTED
3. CONDENSING UNIT TO BE LOCATED AT LEAST 10'-0" FROM ROOF EDGE.
4. DIRECT VENT PIPING TO CONCENTRIC VENT KIT AND THRU ROOF.
5. RADIANT HEATER FLUE THRU FLAT ROOF, NOT TOWER.
6. RADIANT HEATER COMBUSTION AIR INTAKE THRU FLAT ROOF, NOT TOWER.
7. INSTALL HEATER 12" OFF OF SIDE WALL, 12" BELOW CEILING, AND PLACE AT 45° ANGLE AWAY FROM WALL.
8. 8" O.A. UP THROUGH ROOF. SEE SHEET MD100 FOR THRU ROOF O.A. DETAIL.
9. EXHAUST FAN RAIN HOOD TO BE PRIMED & PAINTED BLACK.
10. PROVIDE WITH NEMA 4X THERMOSTAT, MOUNT THERMOSTAT AT 8'-0" A.F.F.
11. ANGLE HEATER 45 DEGREES TOWARD TUNNEL ENTRANCE.
12. FURNACE FLUE / COMBUSTION AIR INTAKE THROUGH ROOF PER MANUFACTURER'S RECOMMENDATIONS. ENSURE FLUE IS AT LEAST 10'-0" HORIZONTALLY FROM OR 3'-0" VERTICALLY ABOVE OUTSIDE AIR INTAKE.
13. PARAPET WALL TOP IS GREATER THAN 42" FROM ROOF , THEREFORE 10" MINIMUM FROM ROOF EDGE TO CONDENSING UNIT NOT REQUIRED.
14. THERMOSTAT / HUMIDISTAT MOUNTED IN TOWER ATTIC ON WALL.
15. FAN MOUNTED IN ATTIC WALL AT 16" OFF TPO (TO BOTTOM OF FAN).
16. TOP OF LOUVER TO BE ALIGNED WITH TOP OF BLACK CMU COURSE, APPROXIMATELY 3'-4" A.F.F. COORDINATE WITH ARCHITECTURAL PLANS.
17. TOWER ATTIC EXHAUST FAN OVERRIDE SWITCH. SEE **TOWER EXHAUST FAN CONTROL DETAIL THIS SHEET.**
18. EQUIPMENT ROOM EXHAUST FAN OVERRIDE SWITCH. SEE **EF-4 EXHAUST FAN CONTACTOR DETAIL SHEET EP100.**
19. THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK DURING UNOCCUPIED HOURS TO MAINTAIN ZONE TEMPERATURES IN HEATING MODE OF 55 DEGREES AND COOLING MODE OF 85 DEGREES.
20. PVC VENT / COMBUSTION AIR UP THROUGH ROOF PER MANUFACTURER'S REQUIREMENTS (STANDARD TEMP. HEAT). WATER HEATERS PROVIDED BY OWNER, VENT / COMBUSTION AIR PIPING BY MECHANICAL CONTRACTOR. CONTRACTOR SHALL INSTALL EXACTLY PER MFR INSTALLATION INSTRUCTIONS AND DETAILS NO EXCEPTIONS. BROCHURES AND INSTALLATION INSTRUCTIONS ARE PROVIDED AND MUST BE FOLLOWED EXACTLY. IF WATER HEATERS ARRIVE WITHOUT BROCHURE AND INSTALLATION INSTRUCTIONS CONTAINING DETAILS, CONTRACTOR SHALL REQUEST THEM FROM CLUB CAR WASH REPRESENTATIVE PRIOR TO STARTING ANY WORK. ANY WORK COMPLETED THAT DOES NOT EXACTLY FOLLOW THE BROCHURE, INSTALLATION INSTRUCTIONS AND DETAILS PROVIDED WITH WATER HEATERS WILL BE REQUIRED TO BE REDONE TO FOLLOW EXACT MFR DETAILS AND REQUIREMENTS. COSTS ASSOCIATED ARE THE RESPONSIBILITY OF THE CONTRACTOR, NO CHANGE ORDER TO THE OWNER WILL BE ACCEPTED

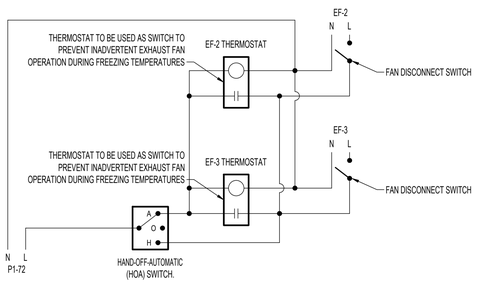
### GAS HEATER EQUIPMENT SCHEDULE

| MARK | DESCRIPTION | CFM | HEATING (GAS) | | | ELECTRICAL | | | PHYSICAL | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | KBTU IN | KBTU OUT | EFFICIENCY | VOLTS | AMPS | MAX CKT | DIM'S (LxW) | WEIGHT | |
| RH-(1,2,3,4) | RADIANT TUBE HEATER | - | 80 | 72 | 90.0% | 120 | 1.2 | 20 | 22' | 180 | 1,2,5,6,7,8,9,10,11, 12,13,14,15 |
| UH-1, UH-2 | UNIT HEATER | 961 | 75 | 61.7 | 82.3% | 120 | 3.3 | 20 | 25X27 | 72 | 4, 15 |

HVAC NOTES:

- THE HVAC CONTRACTOR IS REQUIRED TO SEND THE ELECTRICIAN COPY OF SUBMITTAL DATA, CLEARLY INDICATING THE ELECTRICAL REQUIRMENTS FOR ALL HVAC EQUIPMENT. THIS MUST BE SENT WITHIN 1 WEEK OF RECEIPT OF SUBMITTAL APPROVAL.

1. WARRANTY - 10 YEARS ON TUBES, REFLECTORS, & BURNER CABINET - 3 YEARS ON BURNER COMPONENTS.
2. RADIANT TUBE HEATER EQUAL TO ADVANCED RADIANT SYSTEMS #OUH80-S20
3. NOT USED.
4. UNIT HEATER MODINE MODEL # HDS45AS0111BAN DIRECT VENT
5. 1/2" BALL VALVE AND 1/2" STAINLESS STEEL FLEX GAS CONNECTOR.
6. 4", 16 GA. CORROSION RESISTANT ALUMINIZED STEEL TUBING (COMBUSTION CHAMBER AND RADIANT TUBES).
7. STAINLESS STEEL REFLECTORS - HIGH EFFICIENT 100% REFLECTION.
8. STAINLESS STEEL REFLECTOR END CAPS.
9. 24V, 2 STAGE, WATER TIGHT THERMOSTATS (NEMA 4X)
10. TOTALLY ENCLOSED BURNER CABINET.
11. STAINLESS STEEL BURNER CABINET.
12. 4" VENT ADAPTER.
13. STAINLESS STEEL HANGING CHAIN SETS (CHAIN, KARABINER CLIPS, BEAM CLAMPS, EYE BOLTS).
14. OUTSIDE COMBUSTION AIR ADAPTER KITS.
15. GAS HEATERS TO BE SUPPLIED BY OWNER, INSTALLED BY CONTRACTOR. GAS HEATERS SUPPLIED BY OWNER AS PART OF A NATIONAL ACCOUNT WITH KUHLMANN SUPPLY COMPANY, INC. HVAC CONTRACTOR TO COORDINATE GAS HEATER DELIVERY WITH GENERAL CONTRACTOR. PLEASE CONTACT GREG BIERLING AT KUHLMANN SUPPLY WITH QUESTIONS: 314-298-1114 greg@kuhlmannsupply.com




## TOWER EXHAUST FAN CONTROL DETAIL

### HVAC SYMBOL LEGEND

TYPE OF EQUIPMENT (SEE EQUIPMENT SCHEDULE)
REFERENCE NUMBER
TYPE OF DIFFUSER (SEE DIFFUSER SCHEDULE)
CFM / FACE SIZE
SUPPLY DIFFUSER
IF OTHER THAN 4-WAY, SHADING INDICATES NO FLOW ZONE
RETURN DIFFUSER
BALANCE DAMPER
MOTORIZED DAMPER
SUPPLY DUCT
RETURN DUCT
EXHAUST DUCT
OUTSIDE AIR DUCT
FLEX DUCT
VENT / COMBUSTION AIR
CONDENSATION LINE
REFRIGERANT LINE
THERMOSTAT

### OUTDOOR VENTILATION AIR CALCULATION (IMC 402)

| CLUB WASH MECHANICAL ROOM | |
|---|---|
| NET OCCUPIABLE AREA (SQ.FT.) | 1044 |
| 4% REQUIREMENT (IBC 1203.4.1) = | 42 |
| ACTUAL OPENABLE AREA TO OUTDOORS | 84 |
| % OUTDOOR AIR REQUIREMENT REMAINING* | 0% |

IN AFFIXING THIS SEAL, THE ENGINEER TAKES RESPONSIBILITY FOR THE WORK SHOWN ON THIS DRAWING ONLY, AND HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR OTHER PROJECT DRAWINGS NOT DIRECTLY BEARING THIS SEAL.

STATE OF MISSOURI
SHANE L FLOYD
NUMBER PE-2010017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E. JULY 25TH, 2025
PE-2010017814
MO Certificate of Authority #000239

Timberlake ENGINEERING
A Custom Engineering Company
912 Old 63 South Columbia, MO 65201
ph: 573.875.4366

| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

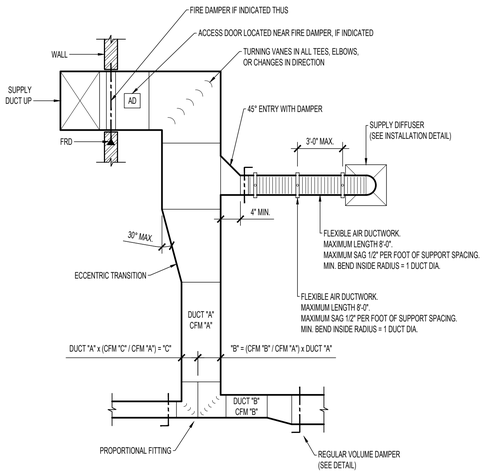
**HVAC PLAN**

SHEET NUMBER

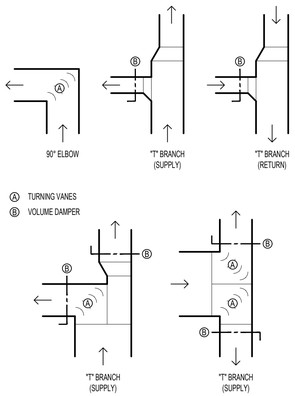
**M100**

## HVAC SPECIFICATIONS

1. INSULATION:
   - 1.1. ALL INTERNAL DUCT LINER EQUAL TO "CERTAINTEED TOUGHGUARD T".
   - 1.2. ALL DUCT WRAP WITH VAPOR BARRIER EQUAL TO "CERTAINTEED SOFTTOUCH DUCT WRAP WITH FSK JACKET" MINIMUM R8.
   - 1.3. EXHAUST AIR DUCTS IN UNCONDITIONED SPACES SHALL HAVE DUCT WRAP WITH VAPOR BARRIER EQUAL TO "CERTAINTEED SOFTTOUCH DUCT WRAP WITH FSK JACKET".
   - 1.4. OUTDOOR AIR DUCTS IN CONDITIONED SPACES SHALL HAVE DUCT WRAP WITH VAPOR BARRIER EQUAL TO "CERTAINTEED SOFTTOUCH DUCT WRAP WITH FSK JACKET".
   - 1.5. ALL EXTERIOR DUCTS SHALL HAVE 2" THICK CLOSED CELL FLEXIBLE ELASTOMERIC DUCT WRAP AND 26 GA ALUMINUM JACKET WITH OVERLAPPED SEAMS SEALED WATERTIGHT AND SLOPED TO AID DRAINAGE.
   - 1.6. REFRIGERANT PIPING:
     - 1.6.1. SPLIT SYSTEMS - SUCTION LINE ONLY TO BE 1/2" ARMAFLEX.
   - 1.7. CONDENSATE PIPING: 1/2" ARMAFLEX IN UNCONDITIONED SPACES ONLY.
2. ALL DUCTWORK SHALL BE MIN. 26 GA. UP TO 15", 24 GA UP TO 20", 22 GA. UP TO 24", 20 GA. UP TO 26", AND 18 GA. UP TO 36" OF GALVANIZED STEEL, SEALING CLASS "B", FABRICATED AND INSTALLED IN STRICT CONFORMANCE TO SMACNA SPECIFICATIONS. ALL TEES, ELBOWS, OR CHANGES IN DIRECTIONS SHALL HAVE TURNING VANES.
3. AIR CONDITIONING EQUIPMENT SHALL BE AS SPECIFIED ON DRAWINGS, UNLESS APPROVED OTHERWISE BY THE ENGINEER.
4. GRILLES AND REGISTERS SHALL BE PRICE, OR APPROVED EQUAL.
5. ALL TEMPERATURE CONTROLS SHALL BE MIN. 18 GA. COPPER, PLENUM RATED CABLE.
6. DUCTWORK DIMENSIONS ARE INSIDE DIMENSIONS.
7. ALL HORIZONTAL FURNACES MUST BE EQUIPPED WITH GALVANIZED STEEL DRAIN PAN. WITH DRAIN PIPED TO FLOOR DRAIN OR INDIRECT WASTE, IN AN OBVIOUS, VISIBLE LOCATION, PER IPC.
8. ALL SUPPLY BRANCHES TO INDIVIDUAL DIFFUSERS MUST BE SUPPLIED WITH BALANCING DAMPERS; WHERE BRANCH TAKEOFFS ARE INACCESSIBLE (ATTICS, SOFFITS, ETC) BALANCE DAMPER SHALL BE PROVIDED AT FACE OF DIFFUSER, WHERE BRANCH TAKEOFFS ARE ACCESSIBLE (ABOVE DROP CEILING, EXPOSED DUCTS, ETC) BALANCE DAMPER SHALL BE LOCATED AT BRANCH TAKEOFF.
9. ALL SYSTEMS MUST BE FIELD BALANCED TO WITHIN 10% OF THE DESIGN FLOWS INDICATED ON THE DRAWINGS. CERTIFIED AIR BALANCING IS NOT REQUIRED. CONTRACTOR MUST SUBMIT BALANCING REPORT PRIOR TO RECEIVING FINAL PAYMENT.
10. FLEX DUCT (THERMAFLEX M-KE OR EQUAL) IS ALLOWED FOR FINAL CONNECTION FROM STEEL DUCTWORK TO AIR TERMINAL DEVICES ONLY. LENGTHS NOT TO EXCEED 6'-0", AND SUPPORTED AS SHOWN ON HVAC DETAILS SHEET.
11. MINIMUM SPLIT SYSTEM EFFICIENCIES FOR HEATING AND COOLING SHALL BE:
    - 11.6. HEATING AFUE = 90%
    - 11.7. COOLING SEER = PER LATEST EDITION OF ASHRAE 90.1
12. MINIMUM ROOFTOP UNIT EFFICIENCIES SHALL MEET STANDARDS PER LATEST EDITION OF ASHRAE 90.1.
13. FINAL CONNECTIONS TO AIR HANDLING EQUIPMENT ARE NOT SHOWN. CONTRACTOR TO INCLUDE TRANSITIONS AND FITTINGS AS REQUIRED TO TRANSITION FROM EQUIPMENT DUCT CONNECTION SIZES TO TRUNK LINE SIZES SHOWN ON PLANS.
14. DUCTWORK SHALL NOT BE INSTALLED SUCH THAT IT RESTRICTS ACCESS TO ELECTRICAL JUNCTION BOXES OR DIRECTLY OVER ELECTRICAL PANELS.
15. REFRIGERANT PIPING MUST BE COPPER TYPE ACR OR TYPE L
16. AIR CONDITIONING EQUIPMENT TO BE INSTALLED LEVEL AND PLUMB. ROOFTOP UNITS AND FANS SHALL BE ON FACTORY ROOF CURBS. ROOFTOP MOUNTED CONDENSING UNITS SHALL BE MOUNTED ON TREATED 4X4'S WHICH ARE PLACED ON A WALK MAT COMPATIBLE WITH THE ROOFING SYSTEM. TO BE PURCHASED FROM THE ROOFING CONTRACTOR. ROOFTOP MOUNTED PIPING AND VRV/VRF EQUIPMENT SHALL BE ON A SUPPORT FRAME MOUNTED TO "ROOFTOP BLOX". GROUND-MOUNTED EQUIPMENT TO BE ON 4-INCH THICK, REINFORCED CONCRETE BASE THAT IS 4 INCHES LARGER, ON EACH SIDE, THAN UNIT.
17. ALL EQUIPMENT LOCATED OUTDOORS SHALL BE EQUIPPED WITH FACTORY HAIL GUARDS TO PROTECT EXPOSED COILS.
18. EQUIPMENT LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. CONTRACTOR TO CONFIRM THAT EQUIPMENT MOUNTED GREATER THAN 30" ABOVE ADJACENT GRADE, SHALL BE LOCATED MINIMUM 10'-0" FROM EDGE, UNLESS A GUARD OR PARAPET (MIN. 42" TALL) PROTECTS THE EDGE.
19. PROTECT DUCT INTERIORS FROM MOISTURE, DEBRIS, DUST & FOREIGN MATERIALS IN ACCORDANCE WITH SMACNA "DUCT CLEANLINESS FOR NEW CONSTRUCTION GUIDELINES".

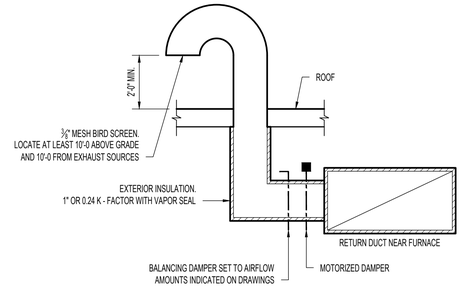



### TYP. DUCTWORK DETAIL

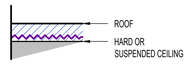



NOTE: SEE FLOOR PLAN FOR DIMENSIONS

### DUCTWORK FITTINGS DETAIL



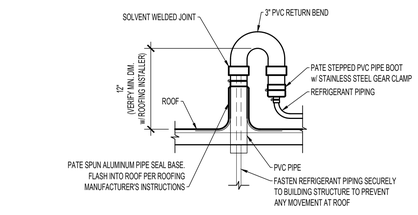

### THRU ROOF OUTSIDE AIR DETAIL



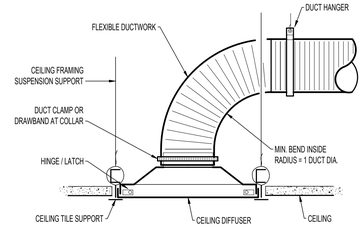

**DUCTWORK OUTSIDE THERMAL ENVELOPE INSULATION SCHEDULE**

| TYPE OF DUCTWORK | INSULATION | | | |
|---|---|---|---|---|
| | ½" LINER | 1" LINER (R-4) | 1½" WRAP (R-4.2) | 3" WRAP |
| RECTANGULAR SUPPLY | | X | X | |
| RECTANGULAR RETURN | | X | X | |
| RECTANGULAR EXHAUST | | | X | |
| RECTANGULAR OUTSIDE AIR | | | | |
| ROUND SUPPLY | | | | X |
| ROUND RETURN | | | | X |
| ROUND EXHAUST | | | X | |
| ROUND OUTSIDE AIR | | | | |
| SPIRAL SUPPLY | | | | X |
| SPIRAL RETURN | | | | X |
| SPIRAL EXHAUST | | | X | |
| SPIRAL OUTSIDE AIR | | | | |

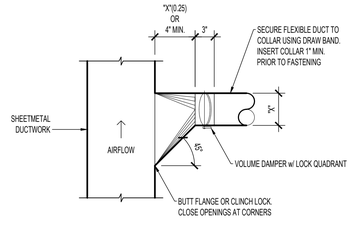
### TYP. DUCT INSULATION DETAIL



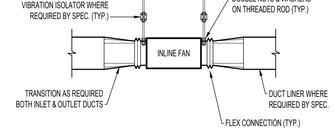

### REFRIGERANT PIPE ROOF PENETRATION MOUNTING DETAIL



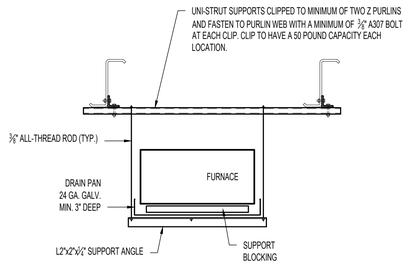

### LAY-IN SUPPLY DIFFUSER DETAIL



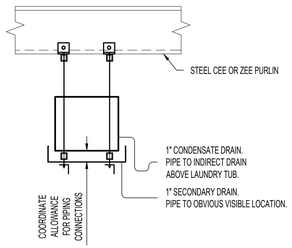

### 45° TAKEOFF DETAIL

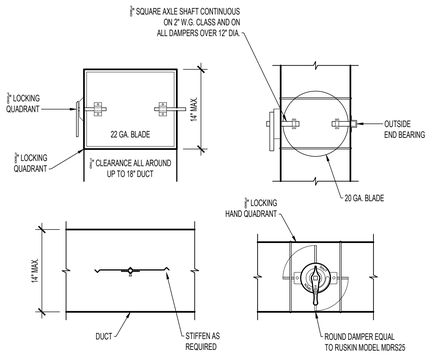



### INLINE FAN INSTALL DETAIL

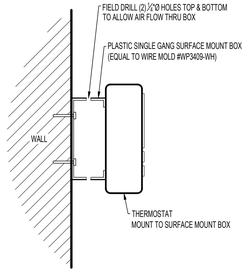



### SUSPENDED FURNACE INSTALLATION DETAIL




### RECTANGULAR & ROUND VOLUME DAMPERS




### THERMOSTAT STANDOFF DETAIL

(FOR THERMOSTAT INSTALLATIONS ON EXTERIOR WALLS)

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DO NOT SCALE THIS DRAWING.
SOME DEVIATION FROM SCALE MAY OCCUR.

| ISSUE TITLE | DATE |
|---|---|
| PERMIT SET | 07-25-2025 |
| | |
| | |
| | |
| | |
| | |

IN AFFIXING THIS SEAL, THE ENGINEER TAKES RESPONSIBILITY FOR THE WORK SHOWN ON THIS DRAWING ONLY, AND HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR OTHER PROJECT DRAWINGS NOT DIRECTLY BEARING THIS SEAL.

STATE OF MISSOURI
SHANE L. FLOYD
NUMBER PE-2019017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E. JULY 25TH, 2025
PE-2019017814
MO Certificate of Authority #000239

Timberlake ENGINEERING
A Custom Engineering Company
912 Old 63 South Columbia, MO 65201
ph: 573.875.4366

| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

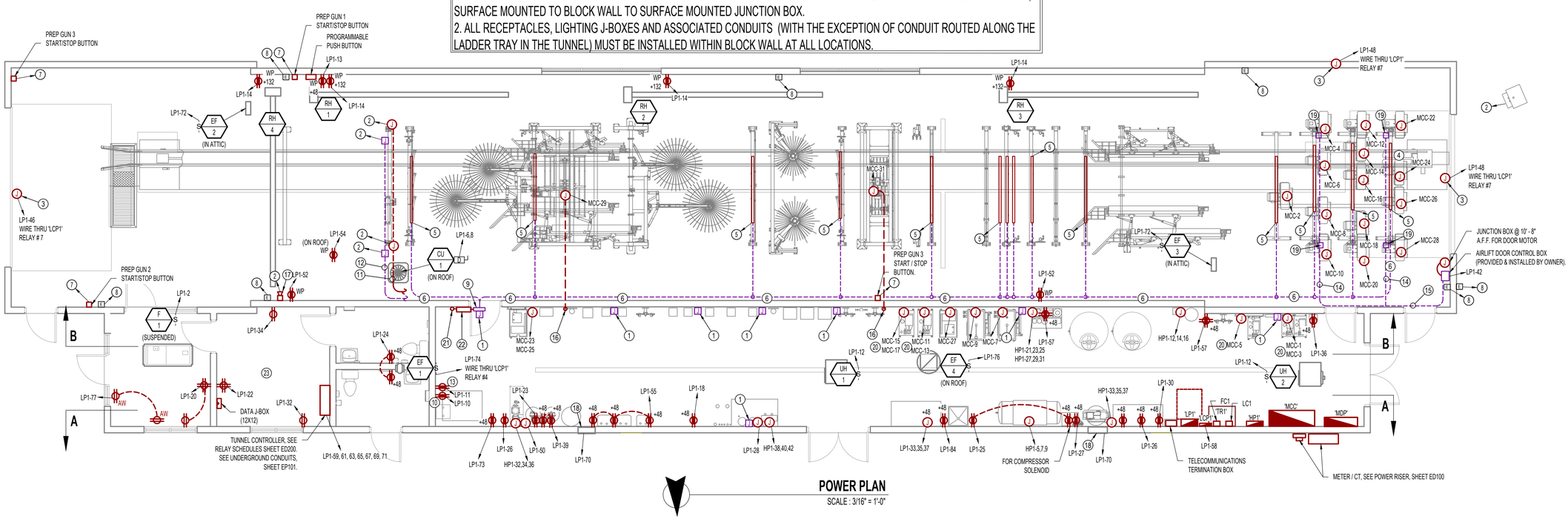
SHEET TITLE

**HVAC DETAILS & SCHEDULES**

SHEET NUMBER

**MD100**

CONDUIT PLACEMENT NOTES:
1. ALL ABOVE GRADE CONDUITS FEEDING EQUIPMENT AND MOTORS IN THE BACK ROOM / EQUIPMENT #107 SHALL STUB UP 3-4', SURFACE MOUNTED TO BLOCK WALL TO SURFACE MOUNTED JUNCTION BOX.
2. ALL RECEPTACLES, LIGHTING J-BOXES AND ASSOCIATED CONDUITS (WITH THE EXCEPTION OF CONDUIT ROUTED ALONG THE LADDER TRAY IN THE TUNNEL) MUST BE INSTALLED WITHIN BLOCK WALL AT ALL LOCATIONS.



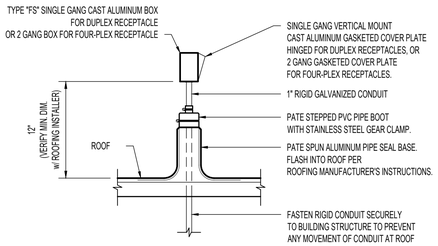

## POWER PLAN
SCALE : 3/16" = 1'-0"

## ELECTRICAL SPECIFICATIONS

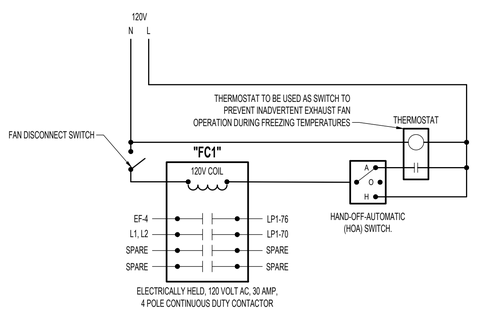
1. ALL CONDUCTORS SHALL BE THHN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
2. ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
3. CONDUIT / RACEWAY SCHEDULE:
   - 3.1. EQUIPMENT / BACK ROOM #107:
     - 3.1.1. ALL ABOVE SLAB CONDUITS IN THE WASH TUNNEL SHALL BE SCH. 40 PVC, ALL OTHER ABOVE SLAB CONDUITS SHALL BE EMT, NO EXCEPTIONS. THIS INCLUDES CONDUITS FOR LIGHTING.
     - 3.1.2. ALL BELOW SUB CONDUITS SHALL BE SCH. 40 PVC
     - 3.1.3. ALL CONDUITS SHALL STUB UP TO 3'-4" AFF, SURFACE MOUNTED TO BLOCK WALL TO SURFACE MOUNTED JUNCTION BOX.
   - 3.2. WASH BAY TUNNEL:
     - 3.2.1. ALL CONDUITS EXPOSED BELOW LINER PANEL SHALL BE IN SCH. 40 PVC.
     - 3.2.2. ALL CONDUITS THAT RUN ACROSS THE PURLINS ABOVE THE PLASTIC CAN BE EMT.
     - 3.2.3. ALL BELOW SLAB CONDUITS SHALL BE SCH. 40 PVC.
     - 3.2.4. ALL CONDUITS IN THE TOWERS ABOVE THE WASH BAY TUNNEL SHALL BE EMT.
   - 3.3. CASHIER BOOTH, OFFICE, LOBBY, RESTROOMS:
     - 3.3.1. ALL BELOW SLAB CONDUITS SHALL BE SCH. 40 PVC.
     - 3.3.2. ALL ABOVE SLAB CONDUITS SHALL BE IN EMT, SCHEDULE 40 PVC, OR MC.
4. WALL SWITCHES SHALL BE LEVITON #CS120 SERIES, OR APPROVED EQUAL, 20A, DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT LEVITON #TR580 SERIES, OR APPROVED EQUAL, 20A, GROUNDING, MATCHING COVER PLATE. USE SIDE WIRING ONLY.
5. ARC-FAULT CIRCUIT INTERRUPTER BREAKERS SHALL BE COMBINATION TYPE BY SQUARE D, AND SHALL HAVE A DEDICATED NEUTRAL WIRE THROUGHOUT THE CIRCUIT.
6. THE ENTIRE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND PROPERLY GROUNDED. EVERY FEEDER AND BRANCH CONDUIT SHALL HAVE CODE SIZED GREEN INSULATED GROUND CONDUCTOR.
7. FURNISH AND INSTALL ALL LIGHTING FIXTURES, LAMPS, FUSES, BREAKERS, ETC. TO COMPLETE THE BRANCH CIRCUITS INDICATED.
8. ALL 120V, 20A LIGHTING AND RECEPTACLE CIRCUITS REQUIRING MORE THAN 100' OF CONDUCTORS (ONE WAY) SHALL BE #10 CONDUCTORS, MINIMUM.
9. PROVIDE TYPEWRITTEN BREAKER SCHEDULE IN EACH PANELBOARD INDICATING ITEMS AND DEVICES SERVED BY ALL BREAKERS IN EACH PANEL.
10. PERMANENTLY LABEL DISCONNECTS FOR HVAC EQUIPMENT WITH EQUIPMENT SERVED, AND PANEL AND CIRCUIT NUMBER.
11. UNDERGROUND SPLICES TO BE MADE WITH DEVICES RATED FOR THAT APPLICATION.
12. ALL ELECTRICAL PANELS AND DISCONNECTS SHALL HAVE A PERMANENT ARC-FLASH LABEL AFFIXED PER NEC 110.16.

## POWER SYMBOL LEGEND

- XX / -XX — POWER RECEPTACLE; MOUNTING HEIGHT (INCHES) IF OTHER THAN 18" AFF (BOTTOM OF BOX); "WP" INDICATES WEATHERPROOF OUTDOOR RECEPTACLE, "AW" INDICATES ABOVE WINDOW RECEPTACLE, "C" INDICATES ABOVE CEILING, "E" INDICATES EXISTING RECEPTACLE TO REMAIN
- GFI DUPLEX CONVENIENCE OUTLET
- QUADPLEX CONVENIENCE OUTLET
- 208V OUTLET
- USB OUTLET EQUAL TO LEVITON #T5832 OR APPROVED EQUAL
- J — LOW VOLTAGE J-BOX. J-BOXES MUST BE PVC.
- DATA / TELEPHONE JACK (MOUNTED @ 18" AFF U.N.O.) OUTLET BOX WITH 1" CONDUIT UP TO CEILING SPACE w/ PULL STRING. PHONE / DATA CABLING TO BE PLENUM RATED. DATA CABLING TO BE CAT6.
- JUNCTION BOX
- DISCONNECT
- E — E-STOPS, EMERGENCY START/ STOP STATIONS. COORDINATE EXACT LOCATION AND HEIGHT WITH OWNER PRIOR TO ROUGH-IN




## ROOF RECEPTACLE MOUNTING DETAIL




## EF-4 EXHAUST FAN CONTACTOR DETAIL

## GENERAL NOTES

1. REFER TO ED100-ED200 FOR REMAINING POWER NOTES, LEGENDS, DETAILS & SCHEDULES
2. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL LOW VOLTAGE (INCLUDING CAT 6, LOW VOLTAGE AND CONTROL) WIRING AND TERMINATIONS UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR SHALL PULL TUNNEL CONTROLLER WIRING, BUT FINAL TERMINATION OF TUNNEL CONTROLLER CONNECTIONS ARE MADE BY OWNER.
3. ALL CAR WASH EQUIPMENT IS PROVIDED BY CAR WASH EQUIPMENT SUPPLIER & INSTALLED BY CONTRACTOR.
4. MOTOR CONTROL CENTER PROVIDES MEANS FOR LOCK-OUT / TAG-OUT PROCEDURE. ALL EQUIPMENT SUPPLIED FROM MOTOR CONTROL CENTER "MCC" SHALL HAVE DISCONNECTING MEANS BY LOCK-OUT / TAG-OUT PROCEDURE.
5. ALL ELECTRICAL ITEMS / EQUIPMENT INSTALLED EITHER IN PART OR ASSEMBLED SHALL BE UL / NRTL LISTED.
6. ELECTRICIAN TO PULL ALL CAT 6 DATA WIRING, LABEL, AND COORDINATE TERMINATION WITH OWNER.
7. ALL CONDUIT / J-BOXES / LIGHTING J-BOXES WITH THE EXCEPTION OF CONDUIT ROUTED ALONG LADDER TRAY MUST BE INSTALLED INSIDE BLOCK WALL AT ALL LOCATIONS.
8. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL WIRING & TERMINATION (INCLUDING LOW VOLTAGE CONNECTIONS) TO MOTOR CONTROL CENTER.

## KEY NOTES

1. J-BOX FOR TUNNEL CONTROLLER CONNECTIONS, SEE SHEET ED200 FOR DETAILS. J-BOXES MUST BE PVC.
2. POWER THRU TUNNEL CONTROLLER. SEE TUNNEL CONTROLLER FUNCTION LIST ON SHEET ED200.
3. J-BOX FOR SIGNAGE. COORDINATE EXACT HEIGHT AND LOCATION WITH ARCHITECTURAL PLANS PRIOR TO ROUGH IN. ALL SIGNAGE ON BUILDING SHALL BE 120V.
4. ALL FINAL CONNECTIONS TO BLOWERS IN WASH BAY TUNNEL SHALL BE MADE USING POLARIS TAPS. WIRE NUTS ARE NOT ACCEPTABLE (TYPICAL ALL BLOWERS).
5. LED LIGHTS POWERED THRU TUNNEL CONTROLLER. SEE TUNNEL CONTROLLER FUNCTION LIST, SHEET ED200.
6. 1" PVC FOR ARCH LED LIGHTS ROUTED ON UNDERSIDE OF LADDER CABLE TRAY (PROVIDED /INSTALLED BY OWNER). S.0. WHIPS ALONG LADDER TRAY TO ARCH LED LIGHTS.
7. START / STOP FOR PREP GUN POWERED THRU PANEL 'MCC'.
8. POWER THROUGH TUNNEL CONTROLLER E-STOPS MUST HAVE THEIR OWN HOME RUN BACK TO TCS. DO NOT DAISY CHAIN E-STOPS IN CLOSE PROXIMITY. CAN SHARE CONDUITS, BUT MUST HAVE THEIR OWN (2) #16 BACK TO TUNNEL CONTROLLER.
9. ARCH LED DRIVERS / LED DRIVER CONTROL J-BOX.
10. GFCI RECEPTACLE FOR TANKLESS WATER HEATER. COORDINATE LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
11. CONDUIT FROM CABLE TRAY FOR CONFIRMATION CABINET & INSTRUCTIONAL CABINET. CONDUIT / CONDUCTORS CONTINUE THROUGH BOTH SIDES OF ARCH FOR CABINET POWER. POWERED THROUGH TUNNEL CONTROLLER.
12. 1" PVC CONDUIT ROUTED ALONG LADDER TRAY AND CONTINUING ALONG ARCH FOR PHOTO EYE TRANSMITTER / RECEIVER SONAR, ROLLER UP FOOTPAD, AND WHEEL PAD, POWERED THROUGH TUNNEL CONTROLLER. SEE TUNNEL CONTROLLER SCHEDULES, SHEET ED200 FOR WIRING DETAILS.
13. GFCI RECEPTACLE FOR RECIRC PUMP. COORDINATE LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
14. 1" PVC CONDUIT (WITH PULL STRING) FOR PHOTO EYES ROUTED ALONG BLOWER ARCHES.
15. 1" PVC CONDUIT (WITH PULL STRING) FOR PHOTO EYES ROUTED ALONG LADDER TRAY & WALL TO AIRLIFT DOOR CONTROL BOX. CONDUIT BY ELECTRICAL CONTRACTOR.
16. 1" PVC CONDUIT (FOR MITTER MOTOR) UP FROM BELOW SLAB (SEE SHEET EP101 FOR CONTINUATION), ROUTED THROUGH TUNNEL WALL CHASE TO LADDER TRAY & ARCHES.
17. WARNING HORN MOUNTED AT 13'-0" A.F.F.
18. LINE VOLTAGE MOTORIZED LOUVER / DAMPER PROVIDED BY HVAC CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR. WIRE THROUGH FAN CONTACTOR, SEE 'EF-4 EXHAUST FAN CONTACTOR DETAIL', SHEET EP100.
19. PHOTO EYES (PROVIDED BY OWNER) MOUNTED ON BLOWER ARCHES.
20. ELECTRICAL CONTRACTOR TO PROVIDE HYDRAULIC FLOAT WIRES FROM MCC PER TUNNEL CONTROLLER SCHEDULE ON SHEET ED200.
21. (1) 1½" PVC (CONDUIT "B") UP FROM BELOW SLAB AND UP TO TUNNEL ARCH LIGHTING CONTACTOR (FOR SIGN / LIGHT CIRCUITS). SEE SHEET EP101 FOR CONTINUATION.
22. ARCH SIGN/ LIGHT CONTACTOR J-BOX. SEE SHEET ED200 FOR DETAILS. J-BOX MUST BE PVC.
23. ALL OUTLETS IN ALL DUPLEX RECEPTACLES THIS ROOM REQUIRE CONTINUOUS POWER. THE QUADPLEX POWERS A COMPUTER, TWO DIFFERENT MONITORS AND A PRINTER. DUPLEX ALONG TUNNEL WALL POWERS BUILDING SAFE AND SECURITY CAMERA SYSTEM. DUPLEX AT EXTERIOR WALL POWERS SERVER RACK WHICH REQUIRES BOTH OUTLETS IN THE DUPLEX.

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SHANE L. FLOYD
NUMBER PE-2019017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E. JULY 25TH, 2025
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MO Certificate of Authority #000239

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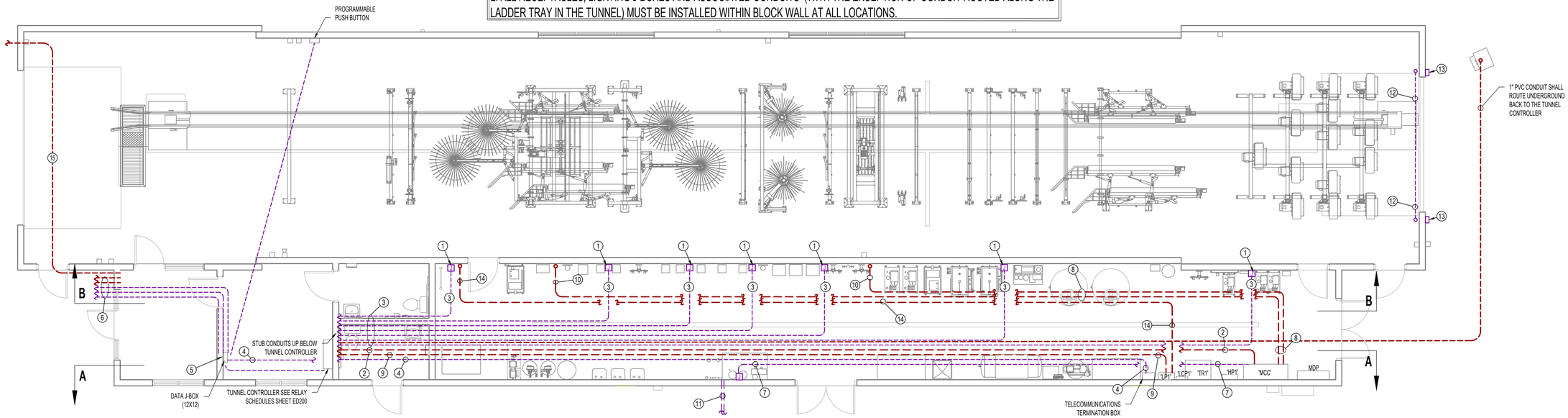
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PROJECT
**CLUB CAR WASH**
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE
**POWER PLAN**

SHEET NUMBER
**EP100**

CONDUIT PLACEMENT NOTES:
1. ALL ABOVE GRADE CONDUITS FEEDING EQUIPMENT AND MOTORS IN THE BACK ROOM / EQUIPMENT #107 SHALL STUB UP 3-4', SURFACE MOUNTED TO BLOCK WALL TO SURFACE MOUNTED JUNCTION BOX.
2. ALL RECEPTACLES, LIGHTING J-BOXES AND ASSOCIATED CONDUITS (WITH THE EXCEPTION OF CONDUIT ROUTED ALONG THE LADDER TRAY IN THE TUNNEL) MUST BE INSTALLED WITHIN BLOCK WALL AT ALL LOCATIONS.




## POWER PLAN - UNDERGROUND CONDUITS
SCALE : 3/16" = 1'-0"

## GENERAL NOTES
1. REFER TO ED100-ED200 FOR REMAINING POWER NOTES, LEGENDS, DETAILS & SCHEDULES.
2. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL LOW VOLTAGE (INCLUDING CAT 6, LOW VOLTAGE AND CONTROL) WIRING AND TERMINATIONS UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR SHALL PULL TUNNEL CONTROLLER WIRING, BUT FINAL TERMINATION OF TUNNEL CONTROLLER CONNECTIONS ARE MADE BY OWNER.
3. ALL DATA TO HOME RUN TO DATA J-BOX IN OFFICE.
4. ALL CAR WASH EQUIPMENT IS PROVIDED BY CAR WASH EQUIPMENT SUPPLIER & INSTALLED BY CONTRACTOR.
5. MOTOR CONTROL CENTER PROVIDES MEANS FOR LOCK-OUT / TAG-OUT PROCEDURE. ALL EQUIPMENT SUPPLIED FROM MOTOR CONTROL CENTER "MCC" SHALL HAVE DISCONNECTING MEANS BY LOCK-OUT / TAG-OUT PROCEDURE.
6. ALL ELECTRICAL ITEMS / EQUIPMENT INSTALLED EITHER IN PART OR ASSEMBLED SHALL BE UL / NRTL LISTED.
7. ELECTRICIAN TO PULL ALL CAT 6 DATA WIRING, LABEL, AND COORDINATE TERMINATION WITH OWNER.
8. ALL CONDUIT / J-BOXES / LIGHTING J-BOXES WITH THE EXCEPTION OF CONDUIT ROUTED ALONG LADDER TRAY MUST BE INSTALLED INSIDE BLOCK WALL AT ALL LOCATIONS.

## KEY NOTES
1. J-BOX FOR TUNNEL CONTROLLER CONNECTIONS. SEE POWER ELEVATIONS ON SHEET EP102 FOR DETAILS. J-BOXES MUST BE PVC.
2. 2" PVC (CONDUIT "C") UNDERGROUND FROM MCC TO TUNNEL CONTROLLER. SEE TUNNEL CONTROLLER SCHEDULE, SHEET ED200 FOR DETAILS ON AMOUNT & SIZE OF CONDUCTORS IN CONDUIT. PROVIDE (6) #16 SPARES IN CONDUIT.
3. 1" PVC CONDUIT UNDERGROUND FOR LOW VOLTAGE WIRES FROM TUNNEL CONTROLLER. SEE ELEVATIONS (SHEET EP102) AND TUNNEL CONTROLLER SCHEDULES (SHEET ED200) FOR DETAILS.
4. 2" PVC CONDUIT (UNDERGROUND) WITH (1) CAT6 FROM OFFICE TO TELECOMMUNICATIONS TERMINATION BOX.
5. (6) CONDUITS UP FROM BELOW TO DATA J-BOX. (1) 2" PVC CONDUIT TO TELECOMMUNICATIONS TERMINATION BOX, (1) 1" PVC CONDUIT WITH (2) CAT 6 TO CASHIER BOOTH, (1) 1" PVC CONDUIT TO PROGRAMMABLE PUSH BUTTON, (1) 1" PVC WITH (3) CAT 6 TO XPRESS PAY TERMINAL, (1) 1" PVC FROM TUNNEL CONTROLLER, AND (1) 3" PVC WITH (8) CAT 6 (AND PULL STRING) TO CAMERA ARCH STUB UP. (1) ADDITIONAL 3" CONDUIT FROM TOP OF J-BOX TO ABOVE CEILING.
6. (2) 1" DATA CONDUITS GATES / CASHIER BOOTH AREA. (4) 1" CONDUITS FOR POWER. SEE MEP2 FOR CONTINUATION.
7. 1" PVC CONDUIT UNDERGROUND FROM RECLAIM TO MCC.
8. (2) 1" PVC FOR MITTER POWER ROUTED FROM MCC TO BELOW SLAB AND UP / THRU WALL CHASE TO TUNNEL CABLE TRAY FOR TUNNEL MOTOR CIRCUITS. SEE TUNNEL CONTROL SCHEDULE, SHEET ED200 FOR DETAILS.
9. (1) 1 1/2" PVC (CONDUIT "A") FROM LP1 BELOW SLAB AND UP TO TUNNEL CONTROLLER (FOR SIGN, LIGHT, AND TCS CIRCUITS).
10. (1) 1" PVC UP FROM BELOW SLAB AND UP WALL FOR MITTER MOTOR POWER. SEE SHEET EP100 FOR CONTINUATION.
11. (2) 1" PVC CONDUIT TO RECLAIM TANKS FOR LOW WATER FLOAT POWER. SEE SHEET PS100 FOR CONTINUATION.
12. 1" PVC CONDUIT (WITH PULL STRING) ROUTED BELOW SLAB FOR EXIT PHOTO EYES. STUB UP ON BOTH SIDES OF DOOR. LOW VOLTAGE CONNECTIONS AND PHOTO EYES BY OWNER.
13. EXIT PHOTO EYES (PROVIDED / INSTALLED BY OWNER). ELECTRICAL CONTRACTOR TO STUB UP CONDUIT IN SLAB ADJACENT TO WALL AS INDICATED FOR OWNER FINAL LOW VOLTAGE CONNECTIONS.
14. (1) 1½" PVC (CONDUIT "B") FROM LP1 BELOW SLAB AND UP TO TUNNEL ARCH LIGHTING CONTACTOR (FOR SIGN / LIGHT CIRCUITS). SEE SHEET ED200 FOR DETAILS.
15. (1) 3" PVC CONDUIT WITH 8 CAT 5 AND WITH PULL STRING FOR SECURITY CAMERA ARCH, SEE MEP2 FOR CONTINUATION.

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PROJECT

**CLUB CAR WASH**

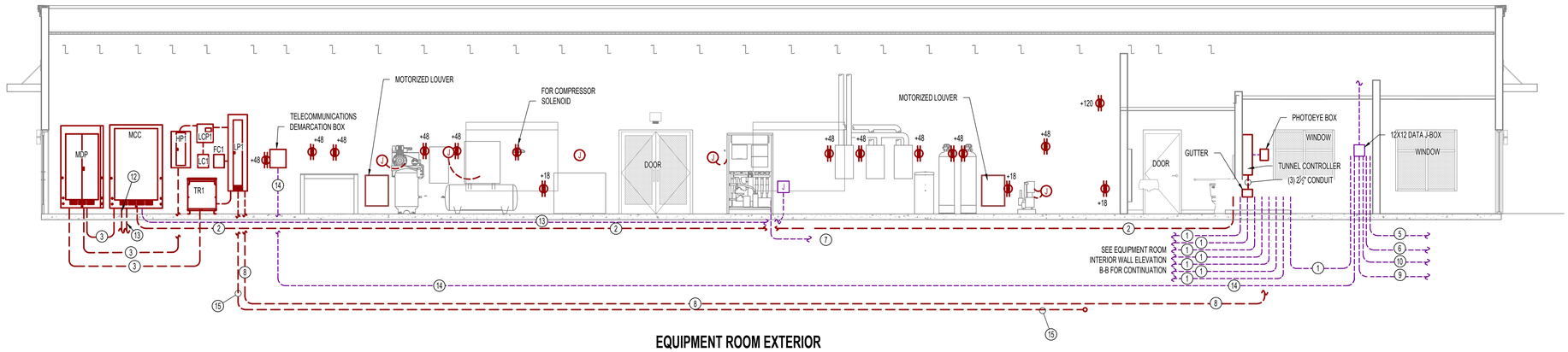
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LEES SUMMIT, MO

SHEET TITLE

**POWER PLAN - UNDERGROUND CONDUITS**

SHEET NUMBER

**EP101**




## EQUIPMENT ROOM EXTERIOR WALL ELEVATION A-A

SCALE: 3/16" = 1'

## KEY NOTES

1. 1" PVC CONDUIT UNDER GROUND FOR LOW VOLTAGE FROM TUNNEL CONTROLLER TO LOW VOLTAGE JUNCTION BOXES. JUNCTION BOXES MUST BE PVC.
2. 2" PVC (CONDUIT "C) UNDER GROUND FROM TUNNEL CONTROLLER TO MCC. SEE ED200 FOR DETAILS.
3. CONDUIT BETWEEN GEAR TO BE ROUTED UNDERGROUND. SEE POWER RISER FOR CONDUIT SIZES.
4. NOT USED
5. (1) 1" PVC CONDUIT WITH (2) CAT 6 FOR DATA TO CASHIER BOOTH.
6. (1) 1" PVC CONDUIT TO PROGRAMMABLE PUSH BUTTON.
7. 1" PVC CONDUIT UNDERGROUND TO RECLAIM TANKS. SEE 'TYPICAL RECLAIM TANK DETAIL', SHEET PD100.
8. (1) 1½" PVC (CONDUIT "A") FROM LP1 TO TCS FOR LED LIGHTS, SIGNS, AND TCS CONTROL CIRCUITS. SEE ED200 FOR DETAILS.
9. (1) 1" PVC CONDUIT WITH (1) CAT 6 TO XPRESS PAY TERMINAL FOR DATA.
10. (1) 3" PVC CONDUIT WITH (8) CAT 6 (AND PULL STRING) TO SECURITY CAMERA ARCH. SEE SHEET MEP2.
11. NOT USED.
12. 1" PVC BELOW SLAB FROM MCC TO TUNNEL FOR MITTER MOTOR CONDUCTORS (SEE EP101 FOR DETAILS).
13. 1" PVC CONDUIT UNDERGROUND FROM RECLAIM TO MCC.
14. (1) 2" CONDUIT W/ PULL STRING FOR DATA
15. ½" PVC (CONDUIT "B") FROM LP1 BELOW SLAB & UP TO LIGHTING CONTACTOR FOR ARCH SIGN / LIGHT CIRCUITS. SEE ED200 FOR DETAILS.
16. (2) SPARE 16/3, (1) NEUTRAL PER J-BOX.

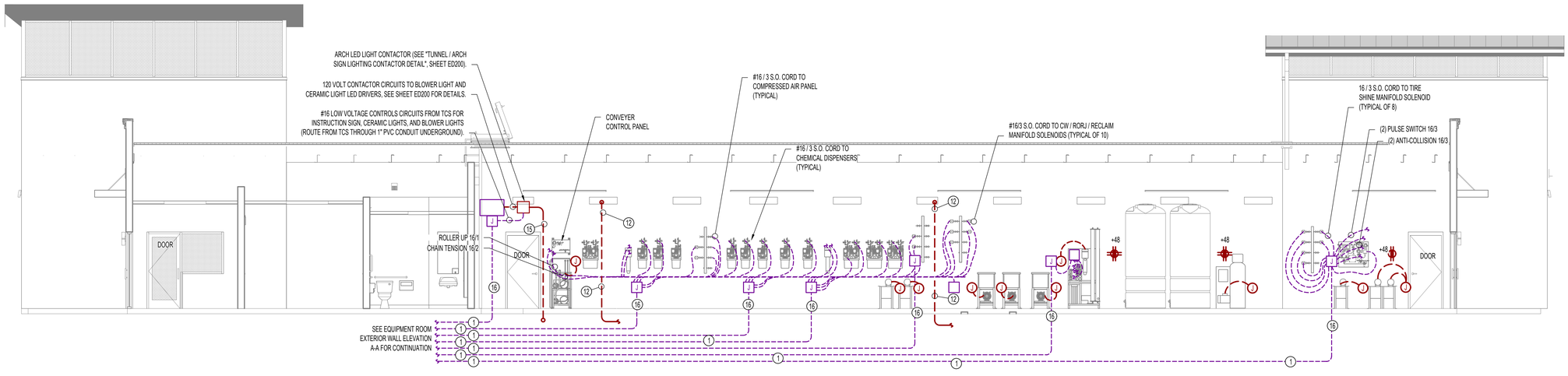
## SYMBOL LEGEND

- LINE VOLTAGE J-BOX
- LOW VOLTAGE J-BOX
- LINE VOLTAGE CIRCUIT OR CONDUIT
- LOW VOLTAGE CIRCUIT OR CONDUIT

## GENERAL NOTES

1. REFER TO ED100-ED200 FOR REMAINING POWER NOTES, LEGENDS, DETAILS & SCHEDULES
2. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL LOW VOLTAGE (INCLUDING CAT 6, LOW VOLTAGE AND CONTROL) WIRING AND TERMINATIONS UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR SHALL PULL TUNNEL CONTROLLER WIRING, BUT FINAL TERMINATION OF TUNNEL CONTROLLER CONNECTIONS ARE MADE BY OWNER.
3. ALL CAR WASH EQUIPMENT IS PROVIDED BY CAR WASH EQUIPMENT SUPPLIER & INSTALLED BY CONTRACTOR.
4. ELECTRICIAN TO PULL ALL CAT 6 DATA WIRING, LABEL, AND COORDINATE TERMINATION WITH OWNER.
5. ALL CONDUIT / J-BOXES / LIGHTING J-BOXES WITH THE EXCEPTION OF CONDUIT ROUTED ALONG LADDER TRAY MUST BE INSTALLED INSIDE BLOCK WALL AT ALL LOCATIONS.
6. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL WIRING & TERMINATION (INCLUDING LOW VOLTAGE CONNECTIONS) TO MOTOR CONTROL CENTER.

CONDUIT PLACEMENT NOTES:
1. ALL ABOVE GRADE CONDUITS FEEDING EQUIPMENT AND MOTORS IN THE BACK ROOM / EQUIPMENT #107 SHALL STUB UP 3-4', SURFACE MOUNTED TO BLOCK WALL TO SURFACE MOUNTED JUNCTION BOX.
2. ALL RECEPTACLES, LIGHTING J-BOXES AND ASSOCIATED CONDUITS (WITH THE EXCEPTION OF CONDUIT ROUTED ALONG THE LADDER TRAY IN THE TUNNEL) MUST BE INSTALLED WITHIN BLOCK WALL AT ALL LOCATIONS.




## EQUIPMENT ROOM INTERIOR WALL ELEVATION B-B

SCALE: 3/16" = 1'

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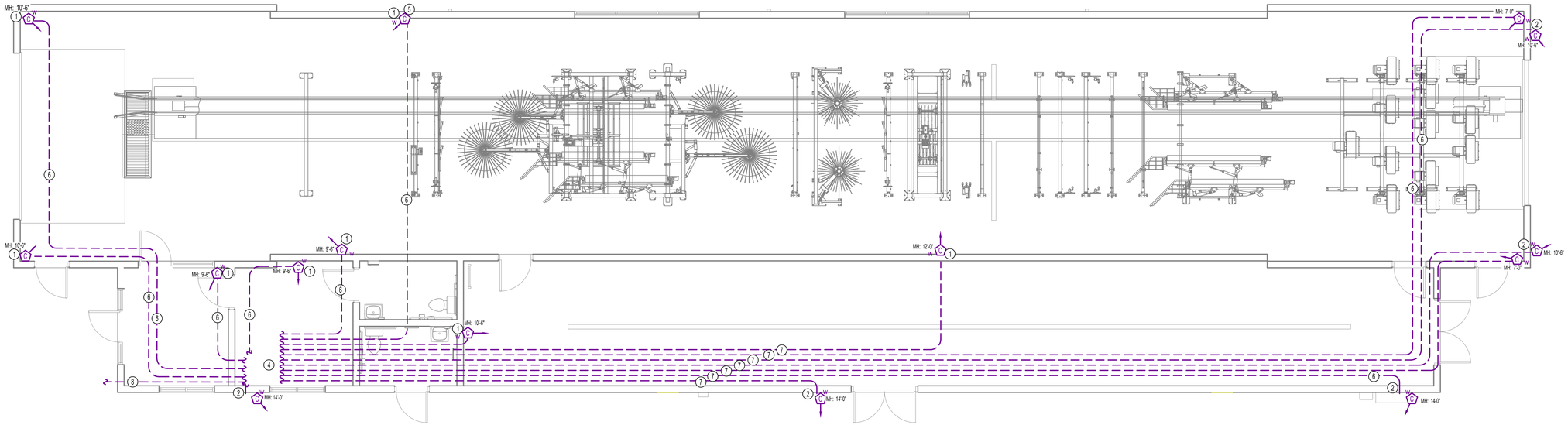
SHEET TITLE

**POWER ELEVATIONS**

SHEET NUMBER

**EP102**

ALL ABOVE-GROUND CONDUIT, J-BOXES, RECEPTACLES, LIGHTING J-BOXES (WITH THE EXCEPTION OF CONDUIT ROUTED ALONG THE LADDER TRAY IN THE TUNNEL) MUST BE INSTALLED WITHIN BLOCK WALL AT ALL LOCATIONS.




## SECURITY CAMERA PLAN

SCALE : 3/16" = 1'-0"

## KEY NOTES

1. JUNCTION BOX FOR SECURITY CAMERA MOUNTED AT INDICATED HEIGHT. PROVIDE 1'-0" OF EXCESS CAT 6 LENGTH AT J-BOXES.
2. MOUNT J-BOXES ON INTERIOR SIDE OF WALL FOR EXTERIOR CAMERAS. PROVIDE 3'-0" EXCESS CAT6 FOR CAMERA INSTALLER FINAL CONNECTION.
3. NOT USED.
4. STUB ¾" CONDUIT WITH CAT 6 TO ABOVE CEILING IN OFFICE CORNER. COIL 15' OF EXCESS CAT 6 LENGTH ABOVE CEILING.
5. COORDINATE EXACT HEIGHT OF CAMERA TO AVOID VISUAL INTERFERENCE WITH TUBE HEATER.
6. 3/4" CONDUIT WITH (1) CAT 6 FOR SECURITY CAMERA.
7. CAT 6 RUNS FOR CAMERA IN EQUIPMENT ROOM MAY BE ROUTED ALONG J-HOOKS (HUNG FROM PURLINS) HIGH UP ON THE WALL.
8. (1) 3" PVC WITH (8) CAT 6 & WITH PULL STRING FROM OFFICE DATA J-BOX TO SECURITY CAMERA ARCH. SEE SHEET MEP2 FOR CONTINUATION.

NOTE:
CONTRACTOR MUST PULL ALL CAT 6 WIRING TO EACH LOCATION. TERMINATION WILL BE DETERMINED BY OWNER.

## SECURITY SYMBOL KEY

NOTE: SYMBOLS LEGEND IS COMPREHENSIVE. SOME SYMBOLS OR VARIATIONS THEREOF MAY NOT BE USED ON PLANS. MOUNTING HEIGHTS OF ALL ACCESSIBLE ACCESS CONTROL DEVICES SHALL BE PER ADA REQUIREMENTS LISTED BELOW UNLESS NOTED OTHERWISE. MOUNTING HEIGHTS OF ALL OTHER DEVICES SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.



SECURITY SYMBOL

INDICATES MOUNTING
- C = CEILING
- W = WALL

INDICATES TYPE
- C = CAMERA
- D = DOOR / WINDOW SENSOR MOUNTED ON TOP OF DOOR FRAME / SIDE OF WINDOW FRAME
- G = GLASS BREAK DETECTOR ( CEILING MOUNTED U.N.O. )
- K = KEYPAD ( WALL MOUNTED w/ TOP ROW OF KEYS @ 48" AFF )
- M = MOTION DETECTOR
- MC = MICROPHONE ( CEILING MOUNTED U.N.O. )
- P = PUSH BUTTON ( WALL MOUNTED w/ BUTTON CENTERED @ 48" AFF )
- R = CARD READER ( WALL MOUNTED w/ READER CENTERED @ 48" AFF )
- ST = POWERED DOOR STRIKE ROUTE ½" CONDUIT FROM STRIKE IN DOOR FRAME TO ACCESSIBLE POINT ABOVE CEILING OR TO JUNCTION BOX @ 12ft AFF IF CEILING IS NOT ACCESSIBLE

INDICATES CAMERA VIEW DIRECTION

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| NCC | SLF |

PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

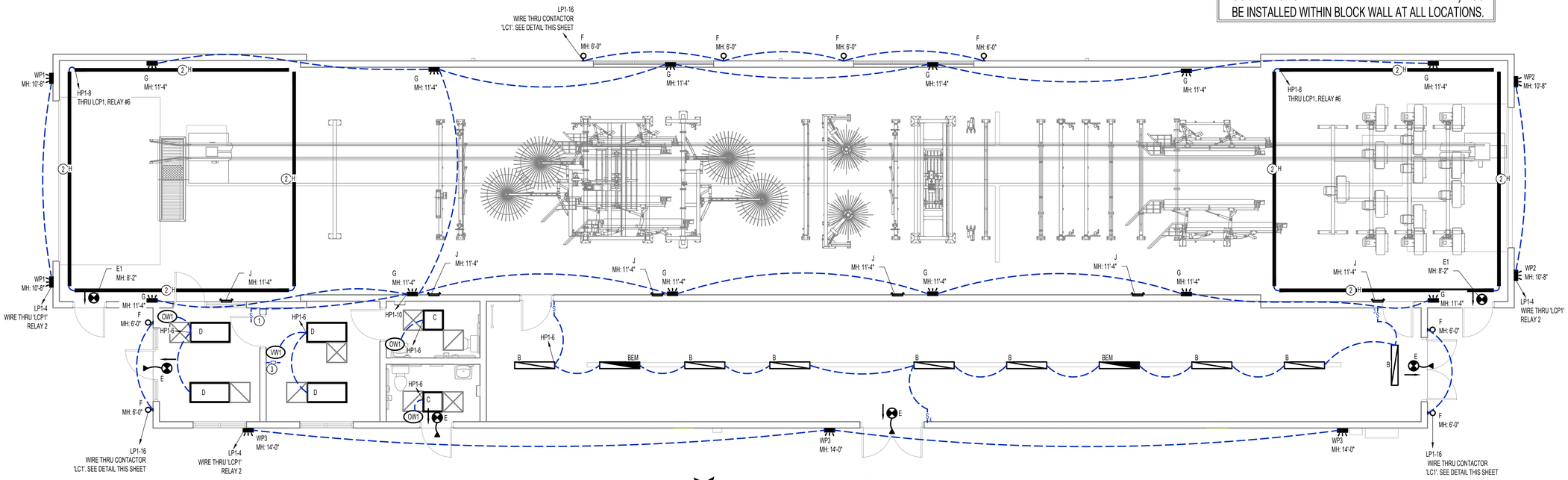
SHEET TITLE

**SECURITY CAMERA PLAN**

SHEET NUMBER

**EP103**

ALL ABOVE-GROUND CONDUIT, J-BOXES, RECEPTACLES, LIGHTING J-BOXES (WITH THE EXCEPTION OF CONDUIT ROUTED ALONG THE LADDER TRAY IN THE TUNNEL) MUST BE INSTALLED WITHIN BLOCK WALL AT ALL LOCATIONS.




## LIGHTING PLAN

SCALE : 3/16" = 1'-0"

## GENERAL NOTES

1. REFER TO ED100 FOR REMAINING LIGHTING NOTES, LEGENDS, DETAILS & SCHEDULES
2. ALL EMERGENCY & NIGHT LIGHTS SHALL BE WIRED THRU AN UN-SWITCHED CIRCUIT.
3. SEE EXTERIOR LIGHTING CONTROL DETAIL ON SHEET MEP2 FOR EXTERIOR LIGHTING CONTROL.
4. MH = MOUNTING HEIGHT ABOVE FINISHED GRADE.
5. ALL CONDUIT / J-BOXES / LIGHTING J-BOXES WITH THE EXCEPTION OF CONDUIT ROUTED ALONG LADDER TRAY MUST BE INSTALLED INSIDE BLOCK WALL AT ALL LOCATIONS.

## KEY NOTES

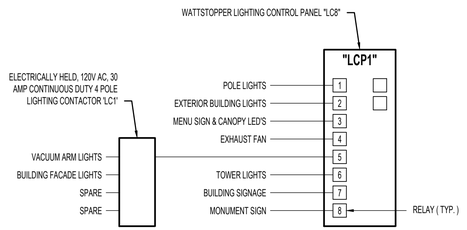
1. CONFIRM EXACT LOCATION OF SWITCH WITH OWNER PRIOR TO ROUGH-IN.
2. LINEAR LED UP LIGHTS MOUNTED BELOW TOWER WINDOWS.
3. DIMMER FOR TOWER LIGHTS.

## ELECTRICAL SPECIFICATIONS

1. ALL CONDUCTORS SHALL BE THHN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
2. ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
3. CONDUIT / RACEWAY SCHEDULE:
   - 3.1. EQUIPMENT / BACK ROOM #107:
     - 3.1.1. ALL ABOVE SLAB CONDUITS IN THE WASH TUNNEL SHALL BE SCH. 40 PVC, ALL OTHER ABOVE SLAB CONDUITS SHALL BE EMT, NO EXCEPTIONS. THIS INCLUDES CONDUITS FOR LIGHTING.
     - 3.1.2. ALL BELOW SUB CONDUITS SHALL BE SCH. 40 PVC.
     - 3.1.3. ALL CONDUITS SHALL STUB UP TO 3'-4" AFF, SURFACE MOUNTED TO BLOCK WALL TO SURFACE MOUNTED JUNCTION BOX.
   - 3.2. WASH BAY TUNNEL:
     - 3.2.1. ALL CONDUITS EXPOSED BELOW LINER PANEL SHALL BE IN SCH. 40 PVC.
     - 3.2.2. ALL CONDUITS THAT RUN ACROSS THE PURLINS ABOVE THE PLASTIC CAN BE EMT.
     - 3.2.3. ALL BELOW SLAB CONDUITS SHALL BE SCH. 40 PVC.
     - 3.2.4. ALL CONDUITS IN THE TOWERS ABOVE THE WASH BAY TUNNEL SHALL BE EMT.
   - 3.3. CASHIER BOOTH, OFFICE, LOBBY, RESTROOMS:
     - 3.3.1. ALL BELOW SLAB CONDUITS SHALL BE SCH. 40 PVC.
     - 3.3.2. ALL ABOVE SLAB CONDUITS SHALL BE IN EMT, SCHEDULE 40 PVC, OR MC.
4. WALL SWITCHES SHALL BE LEVITON #CS120 SERIES, OR APPROVED EQUAL, 20A, DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT LEVITON #T580 SERIES, OR APPROVED EQUAL, 20A, GROUNDING, MATCHING COVER PLATE. USE SIDE WIRING ONLY.
5. ARC-FAULT CIRCUIT INTERRUPTER BREAKERS SHALL BE COMBINATION TYPE BY SQUARE D, AND SHALL HAVE A DEDICATED NEUTRAL WIRE THROUGHOUT THE CIRCUIT.
6. THE ENTIRE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND PROPERLY GROUNDED. EVERY FEEDER AND BRANCH CONDUIT SHALL HAVE CODE SIZED GREEN INSULATED GROUND CONDUCTOR.
7. FURNISH AND INSTALL ALL LIGHTING FIXTURES, LAMPS, FUSES, BREAKERS, ETC. TO COMPLETE THE BRANCH CIRCUITS INDICATED.
8. ALL 120V, 20A LIGHTING AND RECEPTACLE CIRCUITS REQUIRING MORE THAN 100' OF CONDUCTORS (ONE WAY) SHALL BE #10 CONDUCTORS, MINIMUM.
9. PROVIDE TYPEWRITTEN BREAKER SCHEDULE IN EACH PANELBOARD INDICATING ITEMS AND DEVICES SERVED BY ALL BREAKERS IN EACH PANEL.
10. PERMANENTLY LABEL DISCONNECTS FOR HVAC EQUIPMENT WITH EQUIPMENT SERVED, AND PANEL AND CIRCUIT NUMBER.
11. UNDERGROUND SPLICES TO BE MADE WITH DEVICES RATED FOR THAT APPLICATION.
12. ALL ELECTRICAL PANELS AND DISCONNECTS SHALL HAVE A PERMANENT ARC-FLASH LABEL AFFIXED PER NEC 110.16.

## LIGHTING SYMBOL LEGEND

- X1 / M: LIGHTING FIXTURE
- UN-SWITCHED NIGHT LIGHT
- DARKENED INDICATES FIXTURE WITH EMERGENCY BALLAST
- INDICATES FIXTURE TYPE
- TOGGLE SWITCH
- TYPE OF SWITCH
- DIMMER SWITCH
- OW1: WALL OCCUPANCY SENSOR EQUAL TO WATTSTOPPER DSW-301 SENSOR SHALL BE SET TO OCCUPANCY MODE SUCH THAT LIGHTS AUTOMATICALLY TURN ON UPON SENSE OF OCCUPANCY. SENSOR SHALL AUTOMATICALLY TURN LIGHTS OFF AFTER 20 MINUTES. THIS SENSOR HAS A MANUAL OVERRIDE.
- VW1: WALL VACANCY SENSOR EQUAL TO WATTSTOPPER DSW-301 SENSOR SHALL BE SET TO VACANCY MODE SUCH THAT LIGHTS ARE MANUALLY TURNED ON VIA SENSOR PUSH BUTTON. SENSOR SHALL AUTOMATICALLY TURN LIGHTS OFF AFTER 20 MINUTES. THIS SENSOR HAS A MANUAL OVERRIDE.




**LIGHTING CONTROL PANEL SCHEDULE** — PANEL NO. - LCP1

| RELAY # | OVERRIDE SWITCH | OPERATIONAL SCHEUDLE |
|---|---|---|
| 1 | NO | SET TO ON DURING NIGHT HOURS w/ ASTRONOMICAL CLOCK |
| 2 | NO | SET TO ON DURING NIGHT HOURS w/ ASTRONOMICAL CLOCK |
| 3 | NO | SET TO RUN DURING OCCUPIED HOURS |
| 4 | NO | SET TO RUN DURING OCCUPIED HOURS |
| 5 | NO | SET TO ON DURING NIGHT HOURS w/ ASTRONOMICAL CLOCK & SET TO TURN OFF 1 HR. AFTER CLOSING |
| 6 | NO | SET TO ON DURING NIGHT HOURS w/ ASTRONOMICAL CLOCK |
| 7 | NO | SET TO ON DURING NIGHT HOURS w/ ASTRONOMICAL CLOCK |
| 8 | NO | SET TO ON DURING NIGHT HOURS w/ ASTRONOMICAL CLOCK |

NOTE: VERIFY LIGHTING OPERATION SCHEDULE WITH OWNER.
LIGHTING CONTROLS PROVIDED BY OWNER, INSTALLED BY ELECTRICAL CONTRACTOR.

## LIGHTING CONTROL PANEL DETAIL

**LIGHTING SCHEDULE**

| MARK | MANUFACTURER | MODEL NO. | TYPE | VOLTS | AMPS | WATTS | LUMENS | CCT (°K) | CRI | LAMPS | MOUNTING | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | HE WILLIAMS | 80R-4-L85-8-40-VBY-DIM-UNV | 4' STRIP | 277 | 0.22 | 65.5 | 8,563 | 4000 | 80 | LED | CHAIN | WITH R1240 REFLECTOR AND 2 WIRE HANGERS - 3' CHAINS PACKED WITH UNIT |
| BEM | HE WILLIAMS | 80R-4-L85-8-40-VBY/EM-DIM-UNV | 4' STRIP | 277 | 0.22 | 65.5 | 8,563 | 4000 | 80 | LED | CHAIN | WITH R1240 REFLECTOR AND 2 WIRE HANGERS - 3' CHAINS PACKED WITH UNIT |
| C | METALUX | 22FPSL2SCT3 | 2X2 FLAT PANEL | 277 | 0.05 | 16 | 1,900 | 4000 | 80 | LED | GRID | FIELD SELECTABLE LUMENS |
| D | METALUX | 24FPSL2SCT3 | 2x4 FLAT PANEL | 277 | 0.19 | 60 | 6,400 | 4000 | 85 | LED | GRID | FIELD SELECTABLE LUMENS |
| E | SURE-LITES | APCH7R | EM. LT/EXIT COMBO | 120/277 | 0.17 | - | - | - | - | LED | WALL/CLG | INDICATES APWR2 REMOTE HEAD OVER EXT. DOORS |
| E1 | SURE-LITES | LPXW71RWHSD | EM LIGHT | 120/277 | - | - | - | - | - | LED | WALL | WET LOCATION LISTED |
| F | LUMARK | XTOR1B-Y | XTOR1B-Y | 120 | 0.10 | 12 | 1,327 | 3000 | | LED | WALL | |
| G | LUMARK | WPMLED25S | WALL PACK | 277 | 0.31 | 100 | 13,400 | 4000 | 70 | LED | WALL | FIELD SELECTABLE LUMENS |
| H | GLLS | NF11C1012WERED24DV | LED LINEAR | 277 | - | 1 W/ FT | 18.3 LM/FT | - | - | LED | SURFACE | WITH NA11C1012WSE0EN01MP, CH11RAL01MSD, PSHLG120H24B ACCESSORIES |
| J | SURE-LITES | SELDW60BKSD | EM LIGHT | 120/277 | 0.05 | 5 | - | - | - | LED | WALL | WET LOCATION RATED |

NOTES:
1. ALL LIGHT FIXTURES AND ASSOCIATED EQUIPMENT SHALL BE SUPPLIED BY OWNER, INSTALLED BY CONTRACTOR
2. LIGHT FIXTURES ARE SUPPLIED BY OWNER AS PART OF A NATIONAL ACCOUNT WITH LIGHTING ASSOCIATES, INC. PLEASE CONTACT JUSTIN HATFIELD AT LIGHTING ASSOCIATES INC WITH QUESTIONS: 573-289-0880 jhatfield@laiweb.net
3. THE ELECTRICAL CONTRACTOR IS TO COORDINATE COUNTS OF FIXTURES WITH LIGHTING ASSOCIATES, INC.
4. THE ELECTRICAL CONTRACTOR IS TO COORDINATE FIXTURE DELIVERY WITH GENERAL CONTRACTOR.

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|---|---|
| PERMIT SET | 07-25-2025 |
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STATE OF MISSOURI
SHANE L. FLOYD
NUMBER PE-2010017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E. JULY 25TH, 2025
PE-2010017814
MO Certificate of Authority #000239

Timberlake ENGINEERING
A Custom Engineering Company

912 Old 63 South Columbia, MO 65201
ph: 573.875.4365

| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**LIGHTING PLAN**

SHEET NUMBER

**EL100**

## ELECTRICAL PANEL SCHEDULE — PANEL NO. MDP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| VOLTS: | 480 | MAIN CAPACITY: | 1200A MLO | | | "A" AMPS = | 663 |
| PHASE: | 3 | MOUNTING: | SURFACE | | | "B" AMPS = | 646 |
| WIRE: | SEE RISER | BUSS MATERIAL: | COPPER | | | "C" AMPS = | 653 |
| AIR: | SEE RISER | MODEL: | I-LINE | | | | |
| LOCATION / DESC. | | BREAKER | AMPS | PH. | AMPS | BREAKER | LOCATION / DESC. |
| SPACE | | | | A | 69 | 100-3 | TRANSFORMER 'TR1' |
| \ | | | | B | 54 | \ | \ |
| \ | | | | C | 71 | \ | \ |
| SPACE | | | | A | 76 | 225-3 | PANEL 'HP1' |
| \ | | | | B | 75 | \ | \ |
| \ | | | | C | 64 | \ | \ |
| PANEL MCC | | 800-3 | 517.9 | A | | 225-3 | SPARE |
| \ | | \ | 517.9 | B | | \ | \ |
| \ | | \ | 517.9 | C | | \ | \ |

NOTES:
1. ALL ELECTRICAL GEAR INSIDE THE BUILDING TO BE SUPPLIED BY OWNER, INSTALLED BY ELECTRICAL CONTRACTOR.
2. ELECTRICAL CONTRACTOR TO COORDINATE DELIVERY OF ELECTRICAL GEAR WITH GENERAL CONTRACTOR
3. ELECTRICAL GEAR IS SUPPLIED BY OWNER AS PART OF A NATIONAL ACCOUNT WITH GRAYBAR. PLEASE CONTACT JAMES WALLS AT GRAYBAR WITH QUESTIONS: 573-819-3289 james.walls@graybar.com

## ELECTRICAL PANEL SCHEDULE — PANEL NO. HP1

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| VOLTS: | 480 | MAIN CAPACITY: | 225 MLO | | | | "A" AMPS = | 76 |
| PHASE: | 3 | MOUNTING: | SURFACE | | | | "B" AMPS = | 75 |
| WIRE: | SEE RISER | BUSS MATERIAL: | COPPER | | | | "C" AMPS = | 64 |
| AIR: | SEE RISER | SQUARE D MODEL: | NF | | | | | |
| CKT. | LOCATION/DESC. | BREAKER | AMPS | PH. | AMPS | BREAKER | LOCATION/DESC. | CKT. |
| 1 | SPARE | 20-1 | | A | 5 | 20-1 | SITE LIGHTING | 2 |
| 3 | SPARE | 20-1 | | B | | 20-1 | SPARE | 4 |
| 5 | AIR COMPRESSOR | 25-3 | 14 | C | 3 | 20-1 | OFFICE/MECH LIGHTING | 6 |
| 7 | \ | \ | 14 | A | 10 | 20-1 | TOWER LIGHTING | 8 |
| 9 | \ | \ | 14 | B | 14 | 20-1 | TUNNEL LIGHTS | 10 |
| 11 | SPARE | 20-1 | | C | 16 | 20-3 | REJECT PUMP | 12 |
| 13 | SPARE | 20-1 | | A | 16 | \ | \ | 14 |
| 15 | SPARE | 20-3 | | B | 16 | \ | \ | 16 |
| 17 | \ | \ | | C | | | | 18 |
| 19 | \ | \ | | A | | | | 20 |
| 21 | RO FILTRATION | 20-3 | 3 | B | | | | 22 |
| 23 | \ | \ | 3 | C | | 15-3 | SPARE | 24 |
| 25 | \ | \ | 3 | A | | \ | \ | 26 |
| 27 | RO UNIT FILTER | 20-3 | 3 | B | | \ | \ | 28 |
| 29 | \ | \ | 3 | C | | 20-1 | SPARE | 30 |
| 31 | \ | \ | 3 | A | 3 | 20-3 | BOOSTER PUMP | 32 |
| 33 | CUSTOMER AIR COMPRESSOR | 25-3 | 14 | B | 3 | \ | \ | 34 |
| 35 | \ | \ | 14 | C | 3 | \ | \ | 36 |
| 37 | \ | \ | 14 | A | 8 | 20-3 | RECLAIM PUMP | 38 |
| 39 | SPACE | | | B | 8 | \ | \ | 40 |
| 41 | SPACE | | | C | 8 | \ | \ | 42 |

NOTES:
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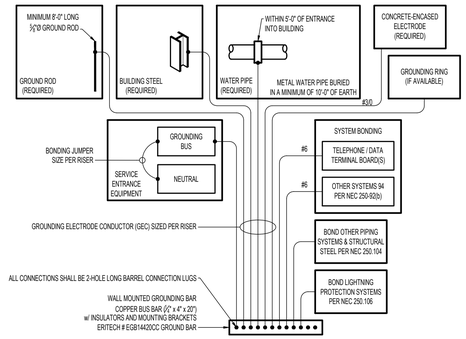
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| VOLTS | 208 | MAIN CAPACITY: | 200 MCB | | | | "A" AMPS = | 160.1 |
| PHASE | 3 | MOUNTING: | SURFACE | | | | "B" AMPS = | 123.5 |
| WIRE | SEE RISER | BUSS MATERIAL: | COPPER | | | | "C" AMPS = | 165 |
| AIR | SEE RISER | SQUARE D MODEL: | NQ | | | | | |
| CKT. | LOCATION/DESC. | BREAKER | AMPS | PH. | AMPS | BREAKER | LOCATION/DESC. | CKT. |
| 1 | SPARE | 20-2 | | A | 9 | 20-1 | F-1 | 2 |
| 3 | \ | \ | | B | 4 | 20-1 | WALL PACKS | 4 |
| 5 | SPARE | 20-2 | | C | 30 | 30-2 | CU-1 | 6 |
| 7 | SPARE | 20-1 | | A | 30 | \ | \ | 8 |
| 9 | SPARE | 20-1 | | B | 13 | 20-1 | WH-1 | 10 |
| 11 | RP-1 | 20-1 | 0.5 | C | 3.3 | 20-1 | UH-1, UH-2 | 12 |
| 13 | PROG. PUSH BUTTON RECEPT. | 20-1 | 3 | A | 3.6 | 20-1 | RH-(1-4) | 14 |
| 15 | SPARE | 20-1 | | B | 2 | 20-1 | BUILDING FAÇADE LIGHTS | 16 |
| 17 | SPARE | 20-1 | | C | 1.5 | 20-1 | MECH RECEPT. | 18 |
| 19 | SPARE | 20-1 | | A | 4.5 | 20-1 | LOBBY RECEPTS | 20 |
| 21 | IRRIGATION CONTROLS | 20-1 | 3 | B | 9 | 20-1 | SERVER RECEPTS | 22 |
| 23 | MECH RECEPT | 20-1 | 1.5 | C | 6 | 20-1 | RR GFCI RECEPTS | 24 |
| 25 | AIR DRYER | 20-1 | 6 | A | 7.5 | 20-1 | MECH RM. RECEPTS | 26 |
| 27 | AIR DRYER | 20-1 | 6 | B | 3 | 20-1 | RECLAIM SOLENOID | 28 |
| 29 | SPARE | 20-1 | | C | 1.5 | 20-1 | TELECOMMUNICATIONS | 30 |
| 31 | SPARE | 20-1 | | A | 3 | 20-1 | SERVER | 32 |
| 33 | UNIMAC EXTRACTOR | 20-3 | 4 | B | 1.5 | 20-1 | SAFE AND CAMERA SYSTEM RECEPT | 34 |
| 35 | \ | \ | 4 | C | 1.5 | 20-1 | PULSE ACTIVATOR RECEPT | 36 |
| 37 | \ | \ | 4 | A | 5 | 20-1 | XPT1 | 38 |
| 39 | WATER SOFTNER SYSTEM | 20-1 | 1 | B | 5 | 20-1 | XPT1 GATE | 40 |
| 41 | VACUUM ARCH LIGHTS | 20-1 | 10 | C | 9.2 | 20-1 | ZIP DOOR | 42 |
| 43 | SPARE | 20-1 | | A | 8 | 20-1 | MONUMENT SIGN | 44 |
| 45 | SPARE | 20-1 | | B | 12 | 20-1 | SIGNAGE | 46 |
| 47 | SPARE | 20-1 | | C | 12 | 20-1 | SIGNAGE | 48 |
| 49 | SPARE | 20-1 | | A | 3 | 20-1 | BOOSTER SOLENOID | 50 |
| 51 | SPARE | 20-1 | | B | 6 | 20-1 | WASH BAY & EXTERIOR WP GFCI'S | 52 |
| 53 | SPARE | 20-1 | | C | 3 | 20-1 | ROOFTOP RECEPT | 54 |
| 55 | TANKLESS WATER HEATERS | 20-1 | 6 | A | 4.5 | 20-1 | CASHIER BOOTH RECEPTS | 56 |
| 57 | RO SYSTEM | 20-1 | 6 | B | 2 | 20-1 | LCP-1 | 58 |
| 59 | TCS PANEL 1 | 20-1 | 3 | C | | 20-1 | SPARE | 60 |
| 61 | HORN & SIGNS | 20-1 | 10 | A | 5 | 20-1 | CASHIER BOOTH GATE | 62 |
| 63 | FOAM, 3X, PS2 & WAX LIGHTS | 20-1 | 10 | B | 12 | 20-1 | PED RECEPT | 64 |
| 65 | DRY, RO, HP LIGHTS | 20-1 | 10 | C | 6 | 20-1 | TICKET BOOTH SIGN & CANOPY LED'S | 66 |
| 67 | INSTRUCTION SIGN | 20-1 | 10 | A | | 20-1 | SPARE | 68 |
| 69 | CERAMIC LIGHTS | 20-1 | 10 | B | 3 | 20-1 | L-1, L-2, CD1 | 70 |
| 71 | BLOWER LIGHTS | 20-1 | 10 | C | 2 | 30-1 | EF-2,3 | 72 |
| 73 | IRRIGATION BOOSTER PUMP | 20-1 | 8 | A | 3 | 20-1 | RR EXHAUST FAN | 74 |
| 75 | SPARE | 20-1 | | B | 11 | 20-1 | EF-4 | 76 |
| 77 | ABOVE WINDOW RECEPTS | 20-1 | 3 | C | 31 | 50-2 | CASHIER BOOTH PANEL | 78 |
| 79 | SPARE | 20-1 | | A | 27 | \ | \ | 80 |
| 81 | | | | B | | 20-1 | SPARE | 82 |
| 83 | | | | C | 16 | 20-1 | MECH RM. RECEPTS | 84 |

NOTES:
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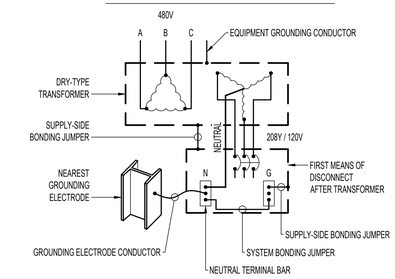
## MOTOR CONTROLLER (PROVIDED BY CAR WASH EQUIPMENT SUPPLIER, INSTALLED BY CONTRACTOR) — PANEL NO. MCC

(BREAKER SIZES FOR BIDDING ONLY. CONFIRM WITH CAR WASH EQUIPMENT SUPPLIER)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| VOLTS | 480 | MAIN CAPACITY: | 800 MLO | | | | "A" AMPS = | 517.9 |
| PHASE | 3 | MOUNTING: | SURFACE | | | | "B" AMPS = | 517.9 |
| WIRE | SEE RISER | BUSS MATERIAL: | COPPER | | | | "C" AMPS = | 517.9 |
| AIR | SEE RISER | MOTOR CONTROL CENTER | | | | | | |
| CKT. | LOCATION/DESC. | BREAKER | AMPS | PH | AMPS | BREAKER | LOCATION/DESC. | CKT. |
| 1 | CONVEYOR (MAIN) | 25-3 | 14 | A | 16.5 | 40-3 | BLOWER MOTOR #1 | 2 |
| | \ | \ | 14 | B | 16.5 | \ | \ | |
| | \ | \ | 14 | C | 16.5 | \ | \ | |
| 3 | CONVEYOR (SPARE) | 25-3 | 14 | A | 16.5 | 40-3 | BLOWER MOTOR #2 | 4 |
| | \ | \ | 14 | B | 16.5 | \ | \ | |
| | \ | \ | 14 | C | 16.5 | \ | \ | |
| 5 | TIRE SHINE | 15-3 | 4.1 | A | 16.5 | 40-3 | BLOWER MOTOR #3 | 6 |
| | \ | \ | 4.1 | B | 16.5 | \ | \ | |
| | \ | \ | 4.1 | C | 16.5 | \ | \ | |
| 7 | HALO (HP1) | 20-3 | 11 | A | 16.5 | 40-3 | BLOWER MOTOR #4 | 8 |
| | \ | \ | 11 | B | 16.5 | \ | \ | |
| | \ | \ | 11 | C | 16.5 | \ | \ | |
| 9 | WHEEL BLASTER (OMNI) | 40-3 | 21 | A | 16.5 | 40-3 | BLOWER MOTOR #5 | 10 |
| | \ | \ | 21 | B | 16.5 | \ | \ | |
| | \ | \ | 21 | C | 16.5 | \ | \ | |
| 11 | VAN HIGH | 20-3 | 11 | A | 16.5 | 40-3 | BLOWER MOTOR #6 | 12 |
| | \ | \ | 11 | B | 16.5 | \ | \ | |
| | \ | \ | 11 | C | 16.5 | \ | \ | |
| 13 | TIRE BRUSH (NINJA) | 20-3 | 11 | A | 16.5 | 40-3 | BLOWER MOTOR #7 | 14 |
| | \ | \ | 11 | B | 16.5 | \ | \ | |
| | \ | \ | 11 | C | 16.5 | \ | \ | |
| 15 | WRAP 1 | 20-3 | 11 | A | 16.5 | 40-3 | BLOWER MOTOR #8 | 16 |
| | \ | \ | 11 | B | 16.5 | \ | \ | |
| | \ | \ | 11 | C | 16.5 | \ | \ | |
| 17 | WRAP 2 | 20-3 | 11 | A | 16.5 | 40-3 | BLOWER MOTOR #9 | 18 |
| | \ | \ | 11 | B | 16.5 | \ | \ | |
| | \ | \ | 11 | C | 16.5 | \ | \ | |
| 19 | SPARE | 40-3 | | A | 16.5 | 40-3 | BLOWER MOTOR #10 | 20 |
| | \ | \ | | B | 16.5 | \ | \ | |
| | \ | \ | | C | 16.5 | \ | \ | |
| 21 | SPARE | 20-3 | | A | 16.5 | 40-3 | BLOWER MOTOR #11 | 22 |
| | \ | \ | | B | 16.5 | \ | \ | |
| | \ | \ | | C | 16.5 | \ | \ | |
| 23 | PREP GUN 1 | 20-3 | 11 | A | 16.5 | 40-3 | BLOWER MOTOR #12 | 24 |
| | \ | \ | 11 | B | 16.5 | \ | \ | |
| | \ | \ | 11 | C | 16.5 | \ | \ | |
| 25 | PREP GUN 2 | 20-3 | 11 | A | 21 | 40-3 | BLOWER MOTOR #13 | 26 |
| | \ | \ | 11 | B | 21 | \ | \ | |
| | \ | \ | 11 | C | 21 | \ | \ | |
| 27 | PREP GUN 3 | 20-3 | 11 | A | 21 | 40-3 | BLOWER MOTOR #14 | 28 |
| | \ | \ | 11 | B | 21 | \ | \ | |
| | \ | \ | 11 | C | 21 | \ | \ | |
| 29 | MITTER 1 | 15-3 | 3.4 | A | 65 | 100-3 | VACUUM #1 (50 HP) | 30 |
| | \ | \ | 3.4 | B | 65 | \ | \ | |
| | \ | \ | 3.4 | C | 65 | \ | \ | |
| 31 | MITTER 2 | 15-3 | 3.4 | A | 65 | 100-3 | VACUUM #2 (50 HP) | 32 |
| | \ | \ | 3.4 | B | 65 | \ | \ | |
| | \ | \ | 3.4 | C | 65 | \ | \ | |
| 33 | | | | A | | | | 34 |
| | | | | B | | | | |
| | | | | C | | | | |




## GROUNDING & BONDING

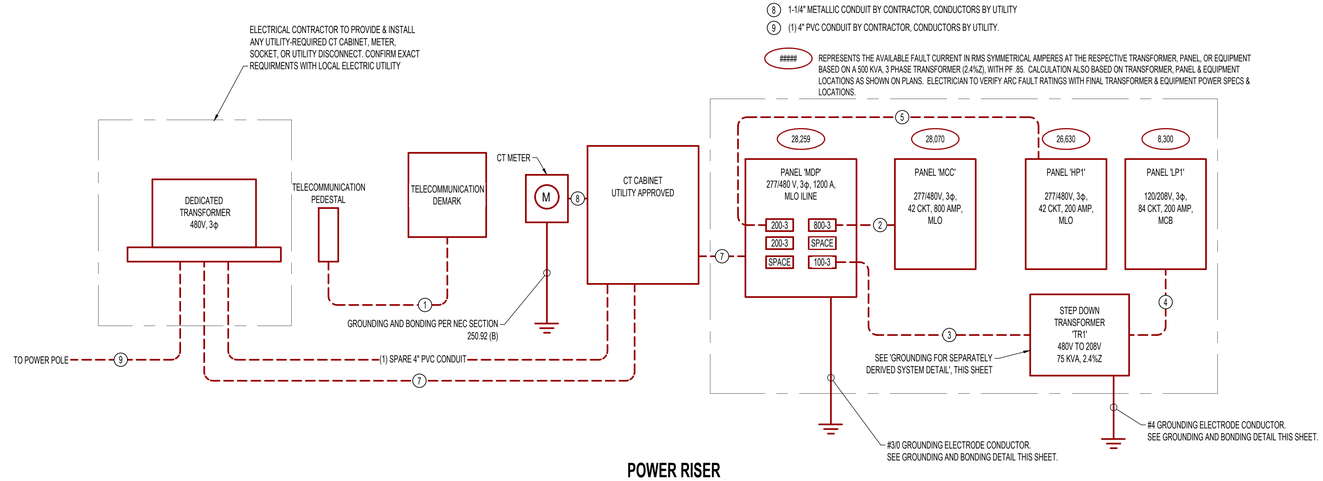



## GROUNDING FOR SEPARATELY DERIVED SYSTEM DETAIL

### KEYED NOTES:

1. 3" PVC CONDUIT WITH PULL STRING FOR TELECOMMUNICATIONS.
2. (2) 4" PVC CONDUIT WITH (4) # 500, (1) # 1/0 CU. EQ. GRD. IN EACH
3. 1½" PVC CONDUIT WITH (3) # 3, (1) # 8 CU. EQ. GRD.
4. 2½" PVC CONDUIT WITH (4) # 3/0, (1) # 4 CU. BONDING JUMPER
5. 2½" PVC CONDUIT WITH (4) # 3/0, (1) # 6 CU. EQ. GRD.
6. NOT USED.
7. (4) 4" PVC CONDUIT WITH (4) #350 CU IN EACH OR (4) 4" PVC CONDUIT WITH (4) #500 AL. IN EACH
8. 1-1/4" METALLIC CONDUIT BY CONTRACTOR, CONDUCTORS BY UTILITY.
9. (1) 4" PVC CONDUIT BY CONTRACTOR, CONDUCTORS BY UTILITY.

##### REPRESENTS THE AVAILABLE FAULT CURRENT IN RMS SYMMETRICAL AMPERES AT THE RESPECTIVE TRANSFORMER, PANEL OR EQUIPMENT BASED ON A 500 KVA, 3 PHASE TRANSFORMER (2.4%Z), WITH PF .85. CALCULATION ALSO BASED ON TRANSFORMER, PANEL & EQUIPMENT LOCATIONS AS SHOWN ON PLANS. ELECTRICIAN TO VERIFY ARC FAULT RATINGS WITH FINAL TRANSFORMER & EQUIPMENT POWER SPECS & LOCATIONS.




## POWER RISER

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| ISSUE TITLE | DATE |
|---|---|
| PERMIT SET | 07-25-2025 |
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| | |
| | |
| | |

IN AFFIXING THIS SEAL, THE ENGINEER TAKES RESPONSIBILITY FOR THE WORK SHOWN ON THIS DRAWING ONLY, AND HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR OTHER PROJECT DRAWINGS NOT DIRECTLY BEARING THIS SEAL.

STATE OF MISSOURI — SHANE L FLOYD — NUMBER PE-2019017814 — PROFESSIONAL ENGINEER

Shane Floyd, P.E. — JULY 25TH, 2025
PE-2019017814
MO Certificate of Authority #000239

Timberlake ENGINEERING
A Custom Engineering Company
912 Old 63 South Columbia, MO. 65201
ph: 573.875.4365

| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**POWER DETAILS & SCHEDULES**

SHEET NUMBER

**ED100**

# TUNNEL CONTROLLER FUNCTION LIST

| # | NAME | VOLTAGE | LOCATION | FROM /TO | WIRE SIZE | # OF WIRES | NOTES |
|---|---|---|---|---|---|---|---|
| 1 | HORN | 120 AC | HORN & SIGNS | LP1- 61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | 12 | 1 | 3 |
| 2 | INSTRUCTION SIGN | 120 AC | HORN & SIGNS | LP1-67 TO CONTACTOR (RUN IN 1 1/2" CONDUIT "B" UNDERGROUND) | 12 | 1 | |
| 3 | MVP CONF | 120 AC | HORN & SIGNS | LP1-61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 3 |
| 4 | ELITE CONF | 120 AC | HORN & SIGNS | LP1-61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 3 |
| 5 | VIP CONF | 120 AC | HORN & SIGNS | LP1-61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 3 |
| 6 | ROOKIE CONF | 120 AC | HORN & SIGNS | LP1-61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 3 |
| 7 | ROLLER UP | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 8 | FOAMINATOR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 9 | FOAM LIGHT | 120 AC | LED LIGHTS 1 | LP1-63 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | 12 | 1 | 4 |
| 10 | PRESOAK 1 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 11 | CTA 1 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 12 | WRAP 1 HYDRO | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 2 | 1 |
| 13 | WRAP 1 PS AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 14 | WRAP 1 DS AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 15 | TRIPLE FOAM RED | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 16 | TRIPLE FOAM BLUE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 17 | SCENT | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 18 | 3X LIGHT | 120 AC | LED LIGHTS 1 | LP1-63 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 4 |
| 19 | WHEEL BRUSH HYDRO | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 2 | 1 |
| 20 | WHEEL BRUSH DS AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 21 | WHEEL BRUSH PS AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 22 | MITTER 1 LUBE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 23 | MITTER 1 | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 24 | WRAP 2 HYDRO | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 2 | 1 |
| 25 | WRAP 2 DS AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 26 | WRAP 2 PS AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 27 | WRAP FOAM | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 28 | PRESOAK 2 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 29 | PRESOAK 2 LIGHT | 120 AC | LED LIGHTS 1 | LP1-63 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 4 |
| 30 | SIDE WASHERS HYDRO | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 2 | 1 |
| 31 | SIDE WASHERS LUBE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 32 | HOT WAX | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 33 | HOT WAX LIGHT | 120 AC | LED LIGHTS 1 | LP1-63 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 4 |
| 34 | CTA2 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 35 | CTA FLUSH | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 36 | MITTER 2 | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 37 | MITTER 2 LUBE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 38 | UNDERBODY | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 39 | BACK RINSE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 40 | HP LIGHT | 120 AC | LED LIGHTS 2 | LP1-65 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | 12 | 1 | 5 |
| 41 | HP RINSE | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 42 | WHEEL SPINNER | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 43 | WHEEL ROTATE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 44 | SET RINSE 1 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 45 | CERAMIC TOP | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 46 | CERAMIC SIDES | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 47 | DRYING AGENT TOP | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 48 | DRYING AGENT SIDES | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 49 | SET RINSE 2 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 50 | CERAMIC LIGHTS | 120 AC | LED LIGHTS 3 | LP1-69 TO CONTACTOR (RUN IN 1 1/2" CONDUIT "B" UNDERGROUND) | 12 | 1 | |
| 51 | CERAMIC LIGHTS SIDES | 120 AC | LED LIGHTS 3 | LP1-69 TO CONTACTOR (RUN IN 1 1/2" CONDUIT "B" UNDERGROUND) | - | - | |
| 52 | DRYING AGENT LIGHT | 120 AC | LED LIGHTS 2 | LP1-65 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 5 |
| 53 | RO LIGHT | 120 AC | LED LIGHTS 2 | LP1-65 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 5 |
| 54 | RO | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 55 | TIRE SHINE HYDRO | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 2 | 1 |
| 56 | TIRE SHINE AIR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 57 | FIRST BLOWERS | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 58 | SECOND BLOWERS | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 59 | THIRD BLOWERS | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 60 | LAST BLOWERS | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 16 | 1 | |
| 61 | DOUBLE V GATOR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 62 | GATOR 2 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 63 | ROUND FLIP 1 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 64 | ROUND GATOR 2 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 65 | ROUND FLIP 2 | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 66 | DUCKBILL GATOR | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| 67 | BLOWER LIGHTS 1 | 120 AC | LED LIGHTS 4 | LP1-71 TO CONTACTOR (RUN IN 1 1/2" CONDUIT "B" UNDERGROUND) | 12 | 1 | |
| 68 | BLOWER LIGHTS 2 | 120 AC | LED LIGHTS 4 | LP1-71 TO CONTACTOR (RUN IN 1 1/2" CONDUIT "B" UNDERGROUND) | - | - | |
| 69 | WAIT | 120 AC | HORN & SIGNS | LP1- 61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 3 |
| 70 | GO | 120 AC | HORN & SIGNS | LP1- 61 TO TCS (RUN IN 1 1/2" CONDUIT "A" UNDERGROUND) | - | - | 3 |
| 71 | CHAIN RINSE | 24 AC | SOLENOIDS | EQUIPMENT ROOM J-BOX TO TCS (RUN IN ADJACENT 1" CONDUIT UNDERGROUND) | 16 | 1 | |
| | CONVEYOR POWER | 24 AC | MCC MOTORS | FROM CONVEYOR CONTROL PANEL TO MCC | 12 | 1 | 2 |
| | CONVEYOR CONTROL | 24 AC | MCC MOTORS | FROM CONVEYOR CONTROL PANEL TO MCC | 12 | 1 | 2 |
| | SOLENOID POWER | 24 AC | SOLENOID POWER | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 12 | 2 | |
| | MCC MOTOR POWER | 24 DC | MCC MOTORS | MCC TO TCS (RUN IN 2" PVC CONDUIT "C" UNDERGROUND) | 12 | 2 | |

NOTES:

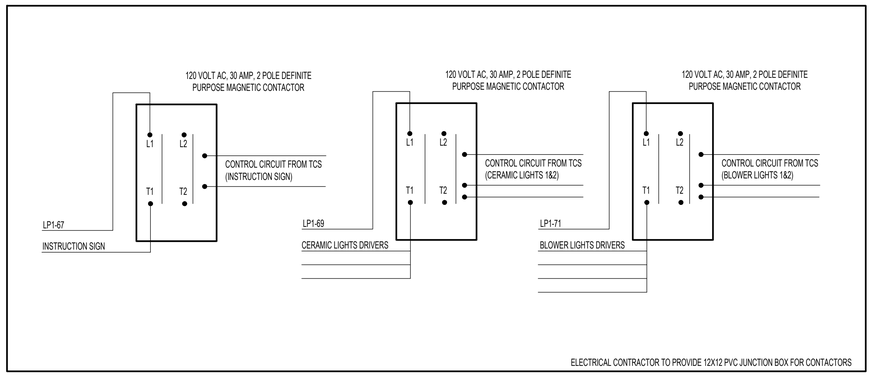
1.) FLOAT NEEDED. ELECTRICAL CONTRACTOR TO LABEL THE FLOAT OR LINE SIDE AS "A" AND THE LOAD SIDE AS "B". EX: WHEEL BRUSH HYDRO WOULD BE LABELED AS "19A" AND "19B".
2.) CONVEYOR HAS A FLOAT BUT IT ONLY TERMINATES FROM FIELD TO MCC. IT DOES NOT GO TO TCS. CONVEYOR MAY BE AC OR DC DEPENDING ON EQUIPMENT, VERIFY WITH OWNER.
3.) HORN, WAIT/GO, MVP, ELITE, VIP, AND ROOKIE ARE ALL RUN OFF LP1-61. THEY DO NOT NEED SEPARATE CONDUCTORS FROM LP1 TO TCS. RUN ADDITIONAL #16 CONTROL WIRES FROM TCS TO DRIVERS.
4.) FOAM, 3X, PS2, AND WAX TUNNEL ARCH LIGHTS ALL RUN OFF LP1-63. THEY DO NOT NEED SEPARATE CONDUCTORS FROM LP1 TO TCS. RUN ADDITIONAL #16 CONTROL WIRES FROM TCS TO DRIVERS.
5.) HP, DRYING AGENT, AND RO LIGHTS ALL RUN OFF LP1-65. THEY DO NOT NEED SEPARATE CONDUCTORS FROM LP1 TO TCS. RUN ADDITIONAL #16 CONTROL WIRES FROM TCS TO DRIVERS.

# TUNNEL CONTROLLER INPUTS

| NAME | VOLTAGE | FROM / TO | WIRE SIZE | # OF WIRES | NOTES |
|---|---|---|---|---|---|
| PHOTO EYE TRANSMITTER | 24 AC | GRAND ENTRY ARCH TO TCS | 16 | 2 | 1 |
| PHOTO EYE RECEIVER | 24 AC | GRAND ENTRY ARCH TO TCS | 16 | 2 | 1 |
| WHEEL PAD | 24 AC | GRAND ENTRY ARCH TO TCS | 16 | 2 | 1 |
| ROLLER UP FOOTPAD | 24 AC | GRAND ENTRY ARCH TO TCS | 16 | 2 | 1 |
| CHAIN TENSION | 24 AC | EQ. ROOM J-BOX TO TCS | | | |
| PULSE SWITCH | 24 VAC | EQ. ROOM J-BOX TO TCS | 16 | 2 | 1 |
| ANTI-COLLISION | 24 VAC | EQ. ROOM J-BOX TO TCS | 16 | 2 | 1 |
| SONAR | 12 VDC | GRAND ENTRY ARCH TO TCS | 16 | 1 | 1,2 |
| E-STOPS | 24 AC | TUNNEL E-STOPS TO TCS | 16 | 2 | 1,3 |

NOTES:

1.) VERIFY WITH OWNER
2.) 4 CONDUCTOR SHIELDED, PROVIDED BY OWNER
3.) DO NOT DAISY CHAIN




## TUNNEL ARCH / SIGN LIGHTING CONTACTOR DETAIL

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STATE OF MISSOURI
SHANE L. FLOYD
NUMBER PE-2019017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E. JULY 25TH, 2025
PE-2019017814
MO Certificate of Authority #000239

Timberlake ENGINEERING
A Custom Engineering Company
912 Old 63 South Columbia, MO 65201
ph: 573.875.4365

| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

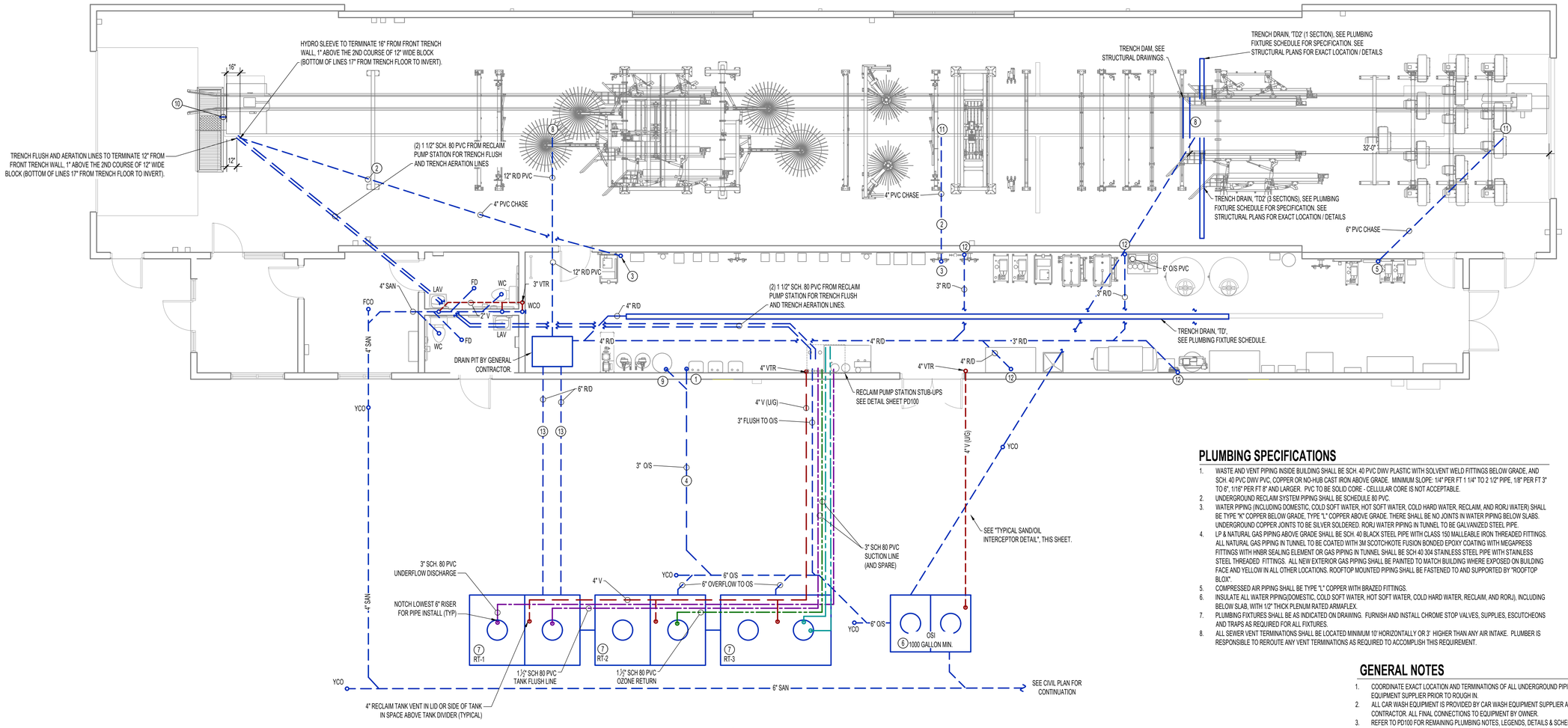
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**TUNNEL CONTROLLER SCHEDULES**

SHEET NUMBER

**ED200**




## SANITARY SEWER AND VENT PLAN

SCALE : 3/16" = 1'-0"

SEE CIVIL PLAN FOR CONTINUATION

NOTE: FINAL CONNECTION OF BUILDING SANITARY TO SANITARY LATERAL TO BE MADE BY PLUMBING CONTRACTOR. FINAL CONNECTION OF WATER SERVICE BY PLUMBING CONTRACTOR.

## PLUMBING SYMBOL LEGEND

- RECLAIM DRAIN (R/D)
- OIL/ SAND (O/S)
- SANITARY SEWER (SAN)
- VENT
- COLD WATER
- HOT WATER
- HOT WATER RECIRCULATION
- WATER METER
- VALVE
- PUMP
- GAS
- GAS METER
- AIR
- PIPE LINE TURNED UP / TURNED DOWN

**PLUMBING FIXTURE CONNECTION SCHEDULE**

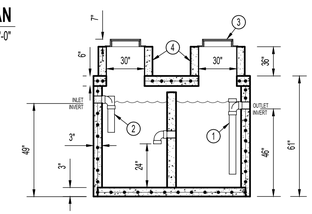
| FIXTURE | WATER | | WASTE | VENT | WATER HAMMER ARRESTOR REQUIRED |
|---|---|---|---|---|---|
| | COLD | HOT | | | |
| LAVATORY | 1/2" | 1/2" | 1 1/2" | 1 1/4" | YES |
| WATER CLOSET - TANK | 1/2" | | 4" | 2" | YES |
| MOP SINK | 1/2" | 1/2" | 3" | 1 1/2" | NO |
| HAND SINK | 1/2" | 1/2" | 2" | 1 1/4" | NO |
| FLOOR DRAIN | | | 3" | 2" | NO |

NOTE:
WASTE PIPING BELOW SLAB TO BE A MINIMUM OF 3".
PROVIDE SHUT-OFF VALVES IN CW & HW LINES AT EACH FIXTURE

**PLUMBING FIXTURE SCHEDULE**

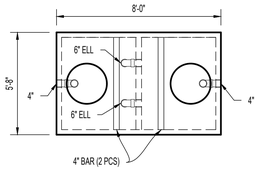
| MARK | DESCRIPTION | MANUFACTURER* | MODEL NO* | REMARKS |
|---|---|---|---|---|
| BFP1 | BACK FLOW PREVENTER | WILKINS | 975XL2 | SIZE AS INDICATED ON DRAWINGS |
| BFP2 | BACK FLOW PREVENTER | WILKINS | 350 | SIZE AS INDICATED ON DRAWINGS |
| EXP1 | EXPANSION TANK | WATTS | PLT-5 | WITH DOUBLE-CHECK BACKFLOW, ATMOSPHERIC VENT (ASSE 1072 COMPLIANT) |
| FBV | FLOW BALANCING VALVE | CALEFFI | #127 | AUTOMATIC BALANCING VALVE WITH INLET CHECK VALVE. SET TO 0.5 GPM. DETERMINE IF OUTLET TEMPERATURE GAUGE IS REQUIRED. |
| FD | FLOOR DRAIN WITH TRAP GUARD | ZURN | ZN415-5B | WITH PROSET TG33-ZURN TRAP GUARD |
| FCO | FLOOR CLEAN OUT | ZURN | ZN1400 | |
| FPHB | FROST PROOF HOSE BIBB | WOODFORD | 67P | |
| HB | HOSE BIBB | WOODFORD | 24P | |
| LAV | LAVATORY - WALL HUNG (MANUAL FAUCET) | AMERICAN STD. | 0355.012 | WITH ZURN Z81104-XL-3M FAUCET (WITH 0.5 GPM SPRAY OUTLET), MV, AND TRUEBRO "LAVGUARD" TRAP, STOP, AND SUPPLY COVER |
| MV | MIXING VALVE | WATTS | LFUSG-B | 3/8" POINT OF USE THERMOSTATIC |
| OSI | OIL/SAND INTERCEPTOR | - | - | CUSTOM, PRE-CAST TANK. REFER TO OSI INTERCEPTOR DETAIL, SHEET PS100 FOR DIMENSIONS AND ADDITIONAL DETAILS. PROVIDE WITH TRAFFIC RATED CAST IRON COVERS, HI WATER ANCHOR KIT |
| RT-(1,2,3) | RECLAIM TANKS | - | - | CUSTOM 2000 GALLON PRECAST TANKS, SEE DETAIL, SHEET PD100, TRAFFIC RATED CAST IRON COVERS, HI WATER ANCHOR KIT. |
| RP1 | RECIRC PUMP | GRUNDFOS | ALPHA HWR 15-55 SF/T | WITH TIMECLOCK. SET TO OPERATE DURING OCCUPIED HOURS. 120V |
| TD | TRENCH DRAIN | ZURN | Z886-HD-HPDE | 65'-7.5" LONG WITH CAST IRON GRATE |
| TD2 | TRENCH DRAIN | NDS | 864 | 5" PRO SERIES DEEP PROFILE HDPE CHANNEL DRAINKIT, 40" SECTIONS (WITH CLASS B TRAFFIC RATED GRATES) |
| WC | WATER CLOSET - FLOOR-MTD TANK TYPE - ADA | AMERICAN STANDARD | 215aa.104 | WHITE, WITH CHURCH 295SSCT SEAT , 1.28 GALLONS PER FLUSH |
| WCO | WALL CLEAN OUT | | | SAN TEE WITH THREADED PLUG AND CHROME ESCUTCHEON CLEANOUT COVER IN VENT LINE |
| WH-1 | WATER HEATER (POINT OF USE - GAS) | NAVIEN | NPE-240A2 | DIRECT VENT, 120V |
| YCO | YARD CLEAN OUT | ZURN | Z1474 | |

* OR EQUAL




## KEY NOTES

1. 6" INLET & OUTLET PIPE & FITTINGS
2. SANITARY TEE OR BELOW PER LOCAL CODE
3. NEENAH R-1642
4. CONCRETE RISER, FIBERGLASS RISERS ARE NOT ACCEPTABLE.




TOP VIEW
(COVERS & RISERS REMOVED)

◆ LIQUID CAPACITY = 1,000 GALLONS

## TYPICAL 1,000 GALLON OIL / SAND INTERCEPTOR DETAIL

## PLUMBING SPECIFICATIONS

1. WASTE AND VENT PIPING INSIDE BUILDING SHALL BE SCH. 40 PVC DWV PLASTIC WITH SOLVENT WELD FITTINGS BELOW GRADE, AND SCH. 40 PVC DWV PVC, COPPER OR NO-HUB CAST IRON ABOVE GRADE. MINIMUM SLOPE: 1/4" PER FT 1 1/4" TO 2 1/2" PIPE, 1/8" PER FT 3" TO 6", 1/16" PER FT 8" AND LARGER. PVC TO BE SOLID CORE - CELLULAR CORE IS NOT ACCEPTABLE.
2. UNDERGROUND RECLAIM SYSTEM PIPING SHALL BE SCHEDULE 80 PVC.
3. WATER PIPING (INCLUDING DOMESTIC, COLD SOFT WATER, HOT SOFT WATER, COLD HARD WATER, RECLAIM, AND RORJ WATER) SHALL BE TYPE "K" COPPER BELOW GRADE, TYPE "L" COPPER ABOVE GRADE. THERE SHALL BE NO JOINTS IN WATER PIPING BELOW SLABS. UNDERGROUND COPPER JOINTS TO BE SILVER SOLDERED. RORJ WATER PIPING IN TUNNEL TO BE GALVANIZED STEEL PIPE.
4. LP & NATURAL GAS PIPING ABOVE GRADE SHALL BE SCH. 40 BLACK STEEL PIPE WITH CLASS 150 MALLEABLE IRON THREADED FITTINGS. ALL NATURAL GAS PIPING IN TUNNEL TO BE COATED WITH 3M SCOTCHKOTE FUSION BONDED EPOXY COATING WITH MEGAPRESS FITTINGS WITH HNBR SEALING ELEMENT OR GAS PIPING IN TUNNEL SHALL BE SCH 40 304 STAINLESS STEEL PIPE WITH STAINLESS STEEL THREADED FITTINGS. ALL NEW EXTERIOR GAS PIPING SHALL BE PAINTED TO MATCH BUILDING WHERE EXPOSED ON BUILDING FACE AND YELLOW IN ALL OTHER LOCATIONS. ROOFTOP MOUNTED PIPING SHALL BE FASTENED TO AND SUPPORTED BY "ROOFTOP BLOX".
5. COMPRESSED AIR PIPING SHALL BE TYPE "L" COPPER WITH BRAZED FITTINGS.
6. INSULATE ALL WATER PIPING(DOMESTIC, COLD SOFT WATER, HOT SOFT WATER, COLD HARD WATER, RECLAIM, AND RORJ), INCLUDING BELOW SLAB, WITH 1/2" THICK PLENUM RATED ARMAFLEX.
7. PLUMBING FIXTURES SHALL BE AS INDICATED ON DRAWING. FURNISH AND INSTALL CHROME STOP VALVES, SUPPLIES, ESCUTCHEONS AND TRAPS AS REQUIRED FOR ALL FIXTURES.
8. ALL SEWER VENT TERMINATIONS SHALL BE LOCATED MINIMUM 10' HORIZONTALLY OR 3' HIGHER THAN ANY AIR INTAKE. PLUMBER IS RESPONSIBLE TO REROUTE ANY VENT TERMINATIONS AS REQUIRED TO ACCOMPLISH THIS REQUIREMENT.

## GENERAL NOTES

1. COORDINATE EXACT LOCATION AND TERMINATIONS OF ALL UNDERGROUND PIPING WITH CAR WASH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN.
2. ALL CAR WASH EQUIPMENT IS PROVIDED BY CAR WASH EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR. ALL FINAL CONNECTIONS TO EQUIPMENT BY OWNER.
3. REFER TO PD100 FOR REMAINING PLUMBING NOTES, LEGENDS, DETAILS & SCHEDULES
4. U/G = UNDERGROUND
5. OS = OIL/SAND
6. REFER TO SHEET EQ100 FOR CONNECTION RESPONSIBILITIES OF PLUMBING CONTRACTOR TO OWNER PROVIDED EQUIPMENT.
7. CAMERA ALL SEWER LINES INCLUDING TRASH PIT TO TANKS, OVERFLOW FROM TANKS TO OSI, TUNNEL TO OSI, OSI TO SEWER, RESTROOMS TO SEWER, AND SEWER CONNECTION TO MAIN PRIOR TO CONCRETE POUR AND AGAIN PRIOR TO TURNOVER TO OWNER.

## KEY NOTES

1. 1½" SANITARY STUBBED UP ABOVE SLAB FOR TANKLESS WATER HEATER CONDENSATE DRAIN INSTALL DRAIN PER MANUFACTURER'S REQUIREMENTS. PROVIDE WITH CONDENSATE NEUTRALIZING KIT.
2. 4" PVC CHASEWAY SLOPED TOWARD TRENCH FOR DRAINAGE. CONFIRM EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
3. STUB UP 4" PVC.
4. SANITARY LINE FROM WATER SOFTENER TO CONNECT DIRECTLY TO MAIN SANITARY, MUST NOT CONNECT TO TRASH PIT.
5. STUB UP 6" PVC.
6. SEE 'RT SUCTION LINE DETAIL' ON SHEET PD100.
7. SEE DETAIL ON SHEET PD100.
8. TERMINATE INTO TRENCH. COORDINATE EXACT TERMINATION LOCATION WITH OWNER PRIOR TO ROUGH-IN.
9. 3" SANITARY FUNNEL DRAIN STUBBED UP ABOVE SLAB FOR WATER SOFTENER FLUSH.
10. 3" PVC DRAIN FROM CORRELATOR PIT. SLOPE TOWARD TRENCH.
11. ALL CHASE / PIT / TRENCH WASH DOWN TERMINATIONS IN TRENCH TO BE SET 2" ABOVE TOP ROW OF 12" BLOCK. SEE STRUCTURAL DRAWINGS / TRENCH SECTION FOR DETAILS.
12. 3" FUNNEL DRAIN STUBBED UP ABOVE SLAB FOR EXTRACTOR WASHERS, RO SYSTEM BACKFLUSH, COMPRESSOR CONDENSATE, AND MANIFOLD DRAIN.
13. (2) 6" SANITARY LINES MUST BE STRAIGHT RUNS FROM TRASH PIT TO RT-1.

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STATE OF MISSOURI
SHANE L. FLOYD
NUMBER PE-2019017814
PROFESSIONAL ENGINEER

Shane Floyd, P.E.
PE-2019017814
MO Certificate of Authority #000239

JULY 25TH, 2025

Timberlake ENGINEERING
A Custom Engineering Company
912 Old 63 South Columbia, MO 65201
ph: 573.875.4365

| PROJECT No. | DESIGNED BY |
|---|---|
| 25042 | NCC |
| DRAWN BY | CHECKED BY |
| NCC | SLF |

PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**SANITARY SEWER AND VENT PLAN**

SHEET NUMBER

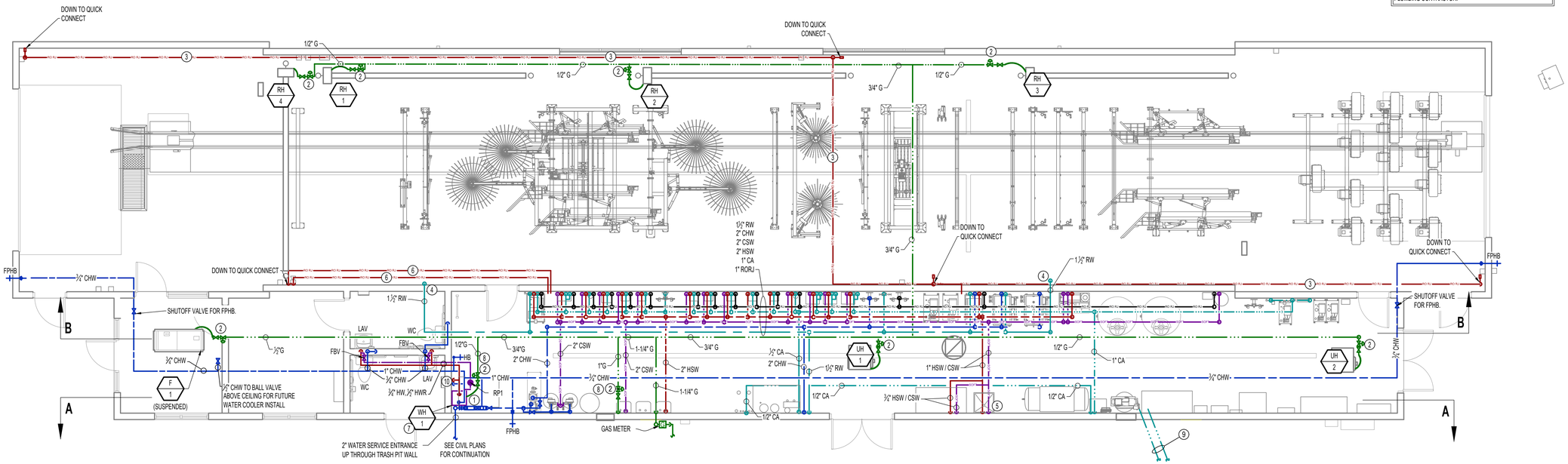
**PS100**

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NOTE: FINAL CONNECTION OF BUILDING SANITARY TO SANITARY LATERAL TO BE MADE BY PLUMBING CONTRACTOR. FINAL CONNECTION OF WATER SERVICE BY PLUMBING CONTRACTOR.

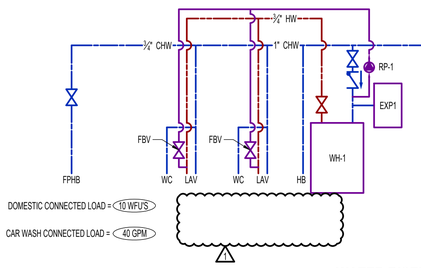



## WATER AND GAS PIPING PLAN

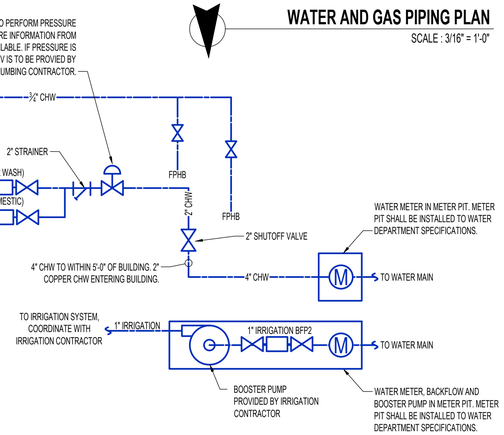
SCALE : 3/16" = 1'-0"

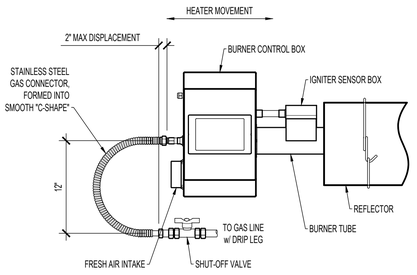
## GENERAL NOTES:

1. ALL CAR WASH EQUIPMENT IS PROVIDED BY CAR WASH EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR.
2. ALL FINAL PLUMBING CONNECTIONS FROM SHUT OFF VALVE TO CAR WASH EQUIPMENT SHALL BE BY OWNER.
3. SEE PLUMBING ELEVATIONS, SHEET PW101, FOR PLUMBING EQUIPMENT DROP SIZES & DETAILS.




## WATER RISER DETAIL



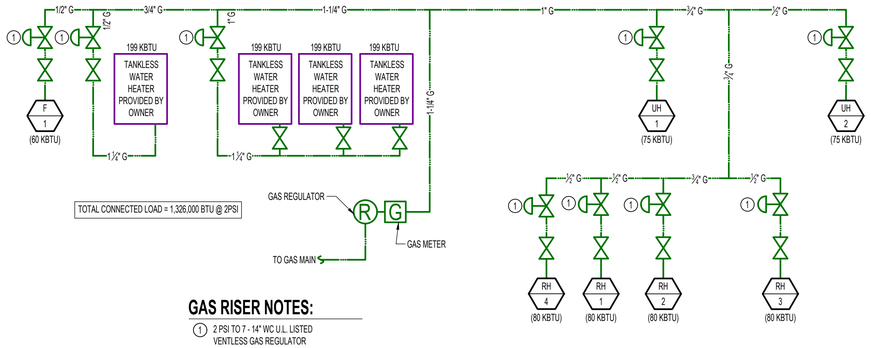

## TUBE HEATER GAS LINE INSTALL DETAIL

## KEY NOTES

1. (2) BFP's STACKED. (1) 2" FOR CAR WASH (1) 1" FOR DOMESTIC.
2. 2 PSI TO 7-14" W.C. UL LISTED VENTLESS REGULATOR
3. 3/4" RORJ PIPING IN TUNNEL FROM PREP 3 TO QUICK CONNECT PORTS TO BE UN-INSULATED, GALVANIZED, HIGH PRESSURE, 1,800 PSI RATED PIPING. PIPE TO BE ROUTED HIGH ON WALL ABOVE LADDER TRY AND BE MOUNTED WITH ALL THREAD OR PIPE CLEVIS HANGERS, DO NOT USE UNISTRUT.
4. 1 1/2" RW THRU TUNNEL WALL (40' FROM ENTRANCE), DN TO BALL VALVE FOR TUNNEL WASHOUT.
5. 3/4" CSW / HSW DN TO BALL VALVE FOR UTILITY SINK (PROVIDED BY OWNER).
6. 1/2" RORJ PIPING IN TUNNEL FROM PREP 1 & 2 TO TUNNEL WALL ADJACENT TO PREP ARCH. PIPE TO BE MOUNTED WITH ALL THREAD OR PIPE CLEVIS HANGERS, DO NOT USE UNISTRUT. PIPING SHALL BE GALVANIZED, HIGH PRESSURE, 1,800 PSI RATED.
7. SEE 'TYPICAL WATER HEATER RECIRC SCHEMATIC ', SHEET PW100.
8. REGULATOR TO BE INSTALLED NO LESS THAN 10'-0" FROM TANKLESS WATER HEATER.
9. (2) 2" SLEEVE OUT TO VACUUMS FOR CUSTOMER AIR. SEE SHEET MEP2 FOR CONTINUATION.
10. 3/4" CW/HW DOWN TO MIXING VALVE, "MV", FOR OWNER-PROVIDED FIXTURE (MOUNTED ON WALL ABOVE TRASH PIT).

## LEGEND

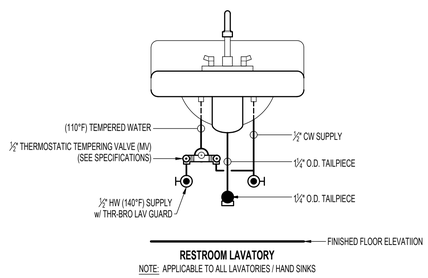
| | |
|---|---|
| CSW = COLD SOFT WATER | SOFT |
| HSW = HOT SOFT WATER | |
| CHW = COLD HARD WATER | |
| CA = COMPRESSED AIR | |
| G = GAS | |
| RORJ = RO / REJECT WATER | RO RJ |
| RW = RECLAIM WATER | |




## GAS RISER NOTES:

1. 2 PSI TO 7 - 14" WC U.L. LISTED VENTLESS GAS REGULATOR

## GAS RISER DETAIL

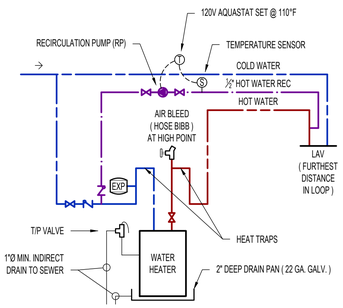



**RESTROOM LAVATORY**

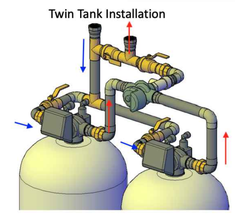
NOTE: APPLICABLE TO ALL LAVATORIES / HAND SINKS

## LOCAL MIXING VALVE DETAIL

NOTE: ALL HOT WATER & COLD WATER SHALL BE INSULATED PER SPECIFICATIONS




## TYP. HOT WATER RECIRCULATION SCHEMATIC




## WATER SOFTENER PIPING INSTALLATION DETAIL

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STATE OF MISSOURI
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MO Certificate of Authority #000239

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PROJECT

**CLUB CAR WASH**

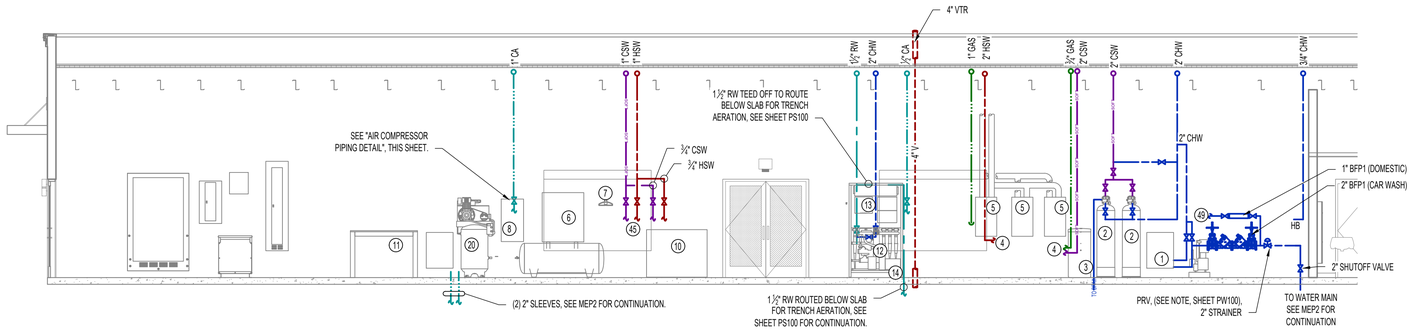
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**WATER AND GAS PIPING PLAN**

SHEET NUMBER

**PW100**




## EQUIPMENT ROOM EXTERIOR WALL ELEVATION A-A

SCALE: 3/16" = 1'

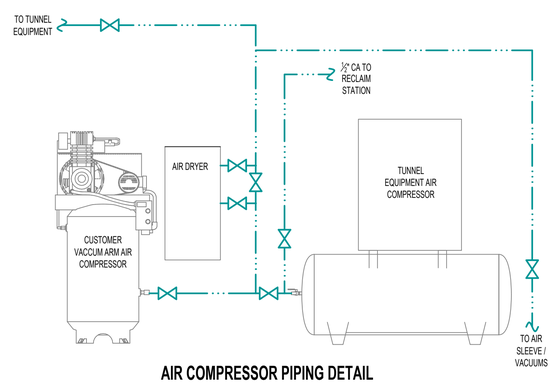
## EQUIPMENT KEY

1. BOOSTER PUMP
2. SOFTENER SYSTEM TANK
3. BRINE TANK
4. SEE 'TANKLESS WATER HEATER PIPING DETAIL', THIS SHEET.
5. TANKLESS WATER HEATERS
6. AIR COMPRESSOR
7. HOSE HOOK
8. AIR DRYER
9. NOT USED
10. EXTRACTOR WASHER
11. WORK BENCH
12. RECLAIM PUMP STATION
13. PUMP CONTROLLER
14. RECLAIM PUMP STATION STUB-UPS SEE DETAIL SHEET PD100
15. CONVEYOR
16. TIRE SHINE
17. GATOR MANIFOLD
18. RO TANK
19. REJECT TANK
20. CUSTOMER AIR COMPRESSOR
21. RORJ RE-PRESSURIZATION
22. REJECT PUMP
23. RO FILTRATION
24. HALO 1 (HP1)
25. WHEEL BLASTER 1
26. PREP 3
27. RORJ MANIFOLD
28. NINJA / VAN HIGH
29. COLD WATER MANIFOLD
30. RECLAIM MANIFOLD
31. DRY 1
32. DRY 2
33. WAX
34. CTA2
35. PS2
36. SCENT
37. 3X BLUE
38. 3X RED
39. WRAP FOAM
40. COMPRESSED AIR MANIFOLD
41. CTA1
42. PS1
43. FOAMINATOR
44. BUG GOO
45. PREP 1 & 2 (STACKED)
46. TO UTILITY SINK (BY OWNER)
47. CERAMIC
48. TIRE SHINE MANIFOLD
49. TO DOMESTIC CHW

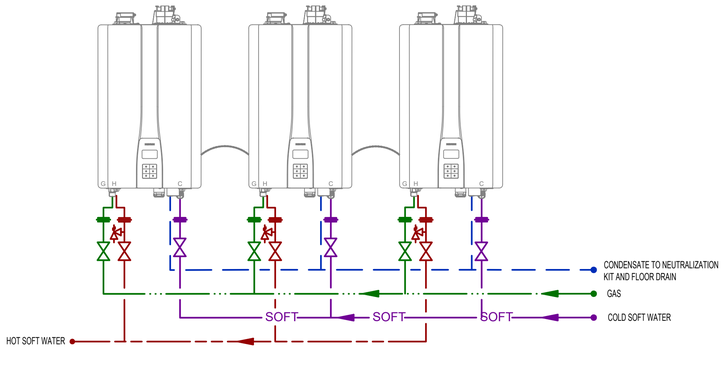
## LEGEND

- CSW = COLD SOFT WATER — SOFT
- HSW = HOT SOFT WATER
- CHW = COLD HARD WATER
- CA = COMPRESSED AIR
- G = GAS
- RORJ = RO / REJECT WATER — RO RJ
- RW = RECLAIM WATER

NOTE:
BALL VALVES TO TERMINATE 7'-6" AFF.



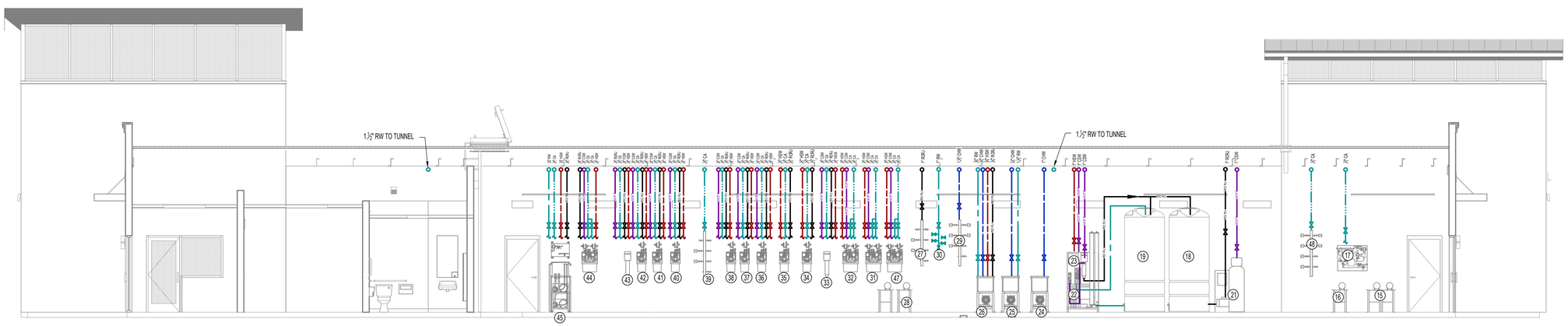

## AIR COMPRESSOR PIPING DETAIL




## TANKLESS WATER HEATER PIPING DETAIL

## GENERAL NOTES:

1. ALL CAR WASH EQUIPMENT IS PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR.
2. REFER TO SHEET EQ100 FOR CONNECTION RESPONSIBILITIES OF PLUMBING CONTRACTOR TO OWNER PROVIDED EQUIPMENT.
3. AT EQUIPMENT ROOM WALLS ALL BALL VALVES SHALL BE TERMINATED AT 7'-6" AFF.




## EQUIPMENT ROOM INTERIOR WALL ELEVATION B-B

SCALE: 3/16" = 1'

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PROJECT

**CLUB CAR WASH**

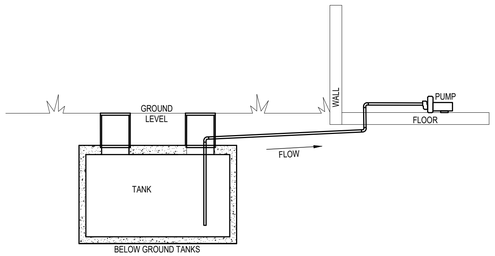
1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**PLUMBING ELEVATIONS**

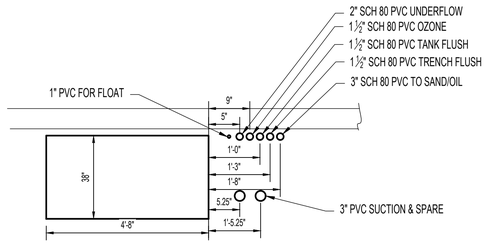
SHEET NUMBER

**PW101**

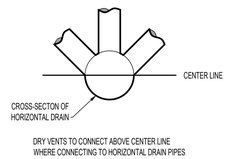



ALL suction lines require a continuous upward slope to the Equipment Room.

## RECLAIM TANK SUCTION LINE DETAIL

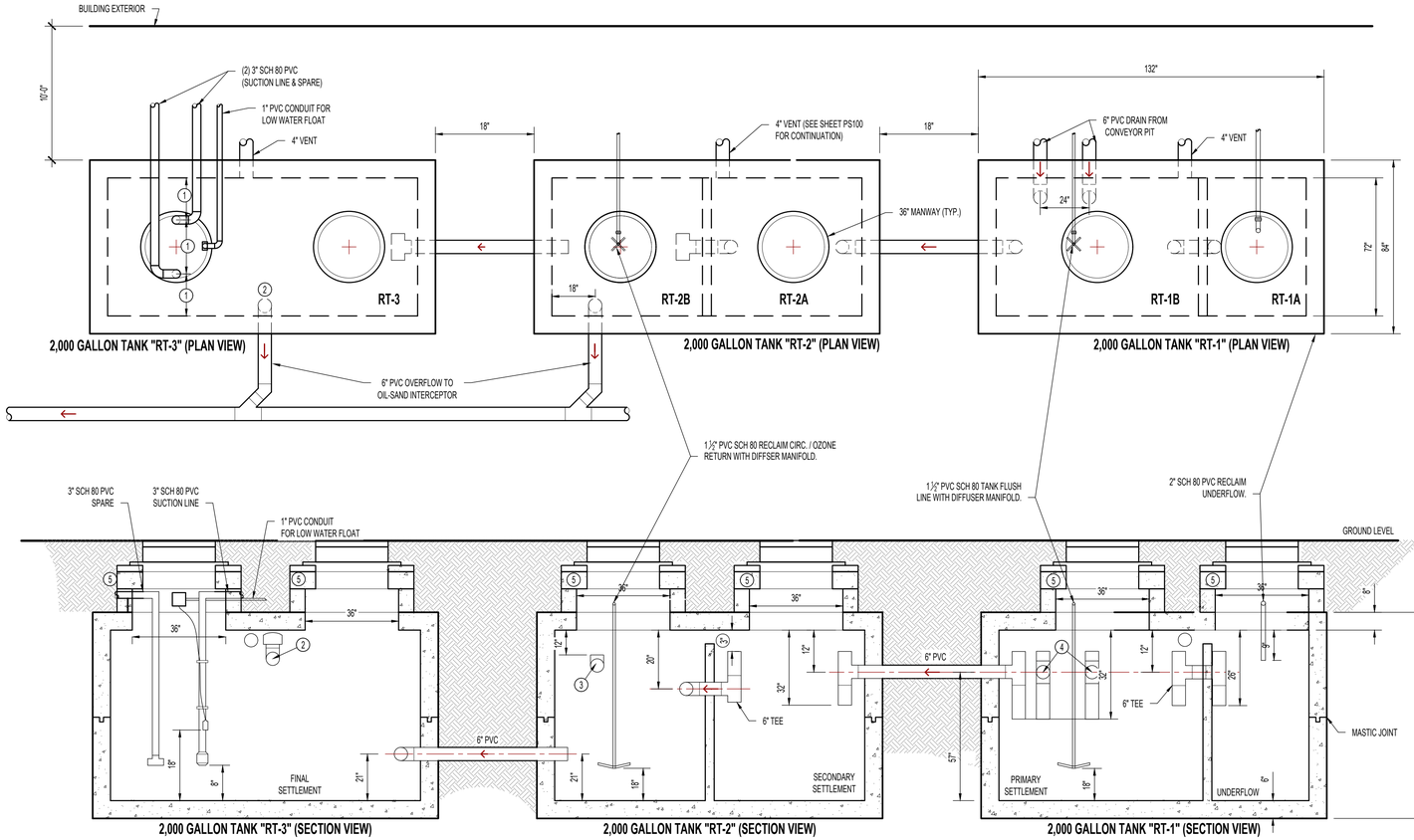



**STANDARD RECLAIM SYSTEM STUB-UP DETAIL**




DRY VENTS TO CONNECT ABOVE CENTER LINE. WHERE CONNECTING TO HORIZONTAL DRAIN PIPES

## DRY VENT DETAIL



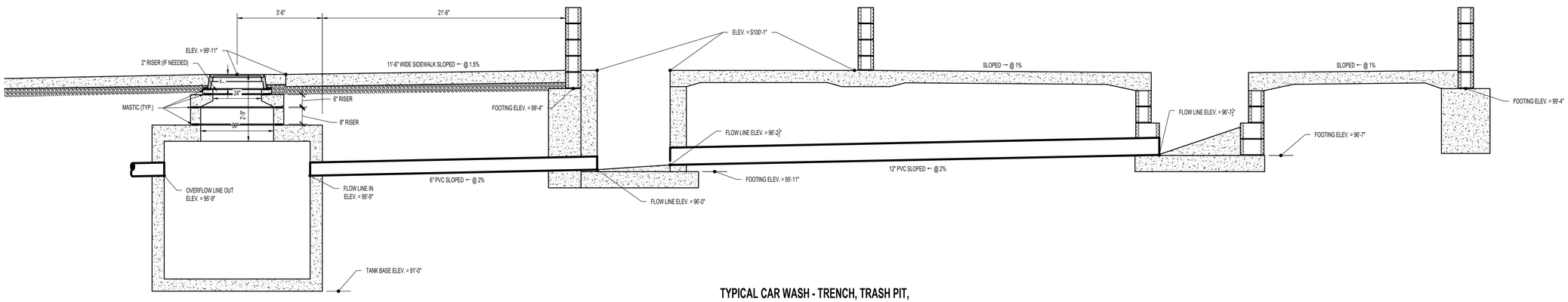

## KEY NOTES

1. MAINTAIN 12" MIN. GAP FROM WALLS & BETWEEN SUCTION LINES
2. SPARE 6" SEWER OVERFLOW. CAP INSIDE TANK FOR FUTURE USE.
3. 6" PVC SEWER OVERFLOW TO SAND OIL INTERCEPTOR.
4. 6" PVC DRAIN FROM CONVEYOR PIT.
5. CONCRETE RISER. FIBERGLASS RISERS AR NOT ACCEPTABLE.

NOTES:

1. PRESSURE TEST ALL SUCTION LINES UPON INSTALLATION @ 10-15 psi MAX.
2. KEEP PRESSURE ON SUCTION LINES FOR THE ENTIRE DURATION OF CONSTRUCTION
3. PRESSURE SHOULD NOT DROP MORE THAN 2 psi.
4. WATCH FOR PROBLEMS WHEN EXCAVATING DRIVEWAYS
5. PLACEMENT OF SUCTION LINES IS CRITICAL
6. DO NOT PUT SCREENS ON SUCTION LINES
7. ALL UNDERGROUND TANKS AND PIPING BY CONTRACTOR
8. PIPE LOCATIONS SHOULD BE USED FOR ANY TANK
9. ALL INTERNAL TANK PLUMBING TO BE 6" SCH. 40 PVC UNLESS NOTED OTHERWISE
10. ALL TANK BOTTOMS SHOULD BE LEVEL
11. THIS DRAWING IS TO SHOW TANK HOLDING CAPACITY AND PIPING RELATIONSHIPS ONLY AND IS NOT INTENDED TO ADDRESS TANK STRUCTURAL ENGINEERING.
12. TANK RISERS TO BE CONCRETE, FIBERGLASS RISERS ARE NOT ACCEPTABLE.
13. BACKFILL AROUND TANKS AND PIPING WITH ROCK, DIRT IS NOT ACCEPTABLE.

## TYPICAL CAR WASH-RECLAIM SYSTEM STANDARD RECLAIM 3-TANK




## TYPICAL CAR WASH - TRENCH, TRASH PIT, & RECLAIM TANK ELEVATION DETAIL

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PROJECT

**CLUB CAR WASH**

1310 SW MARKET ST.
LEES SUMMIT, MO

SHEET TITLE

**PLUMBING DETAILS & SCHEDULES**

SHEET NUMBER

**PD100**