



The City of  
**OKLAHOMA CITY**

## APPLICATION FOR CERTIFICATE OF APPROVAL

<input type="checkbox"/> BC	<input checked="" type="checkbox"/> DBD, DTD-1, DTD-2	<input type="checkbox"/> SRODD	<input type="checkbox"/> SYC, SYT	<input type="checkbox"/> UD
District: <u>DTD-1</u>				
Fee: <u>\$200</u> Administrative Review or Extension				
\$750 Commission/Committee Review				
Case Number: <u>DICA-24-00055</u>				

☒ New Project

☐ Revision to Case # \_\_\_\_\_

☐ Extension to Case # \_\_\_\_\_

Project Address 1328 N. Classen Blvd

Property Owner Name Chris Dunning

Address 7324 N. Classen Blvd

City, State, Zip Oklahoma City, OK 73116

☐ Violation Notice Issued

☐ City Project (If yes, please select type)

☐ CIP ☐ Federal Exempt ☐ Maps

☐ COTPA ☐ General Fund ☐ Special Purpose

☐ Federal ☐ GO Bond ☐ TIF

Organization AMG Classen LLC

Phone 405.816.5100

Email cdunning@ventus.investments

I prefer my documents to be: ☐ Mailed or ☒ Emailed.

**Property Owner:** I authorize the applicant to speak for me in matters regarding this application. Any agreement made by the applicant regarding this proposal will be binding upon me. I authorize the City of Oklahoma City Planning Staff to enter the property for the purpose of observing and taking photographs of the project area for presentation and for inspections to insure consistency between approved proposal and completed project. Owner agrees that work will be performed exactly as approved or they will apply for revisions prior to work commencing.

Property Owner's Name Chris Dunning Signature Chris Dunning Date 9-5-24

Applicant Name Williams, Box, Forshee & Bullard on behalf of the Applicant Organization \_\_\_\_\_

Address 522 Colcord Drive Phone 405-232-0080

City, State, Zip Oklahoma City, OK 73102 Email Kturner@wbfbllaw.com

I prefer my documents to be: ☐ Mailed or ☒ Emailed.

Applicant's Name Applicant Signature Kaitlyn Turner Date 9-17-24

**BUILDING CONSTRUCTION** Square feet of entire structure 1285

☒ New Construction ☐ Renovation ☐ Addition ☐ Demolition

### OTHER WORK

☐ Parking Lot Square feet of new parking lot or expansion to parking lot \_\_\_\_\_

☐ Sign Square feet each sign [ \_\_\_\_\_ ] [ \_\_\_\_\_ ] [ \_\_\_\_\_ ] Total Signage [ \_\_\_\_\_ ] Type: \_\_\_\_\_

☐ Streetscape Length [ \_\_\_\_\_ ] Width [ \_\_\_\_\_ ] Note: Revocable Permits Required

☐ Fence Height [ \_\_\_\_\_ ] Length [ \_\_\_\_\_ ] Material \_\_\_\_\_

☐ Work not specified above \_\_\_\_\_

Received by Laura Griego

Date received \_\_\_\_\_

Fees effective 07/16/2020

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SEP 17 2024  
PLANNING DEPARTMENT

K:\TOW\_LDEV\starbucksoklahoma city, ok - n classen blvd & nw 12th st\3 Design\CAD\plansheets\CO-COVER SHEET.dwg November 05, 2024 - 1:24pm

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

# SITE DEVELOPMENT PLANS FOR STARBUCKS- N CLASSEN BLVD & NW 12TH ST

S28, T12N, R3W  
OKLAHOMA CITY, OKLAHOMA COUNTY, OK

## PROJECT TEAM:

CIVIL ENGINEER & LANDSCAPE ARCHITECT  
KIMLEY-HORN AND ASSOCIATES, INC.

**Kimley»Horn**

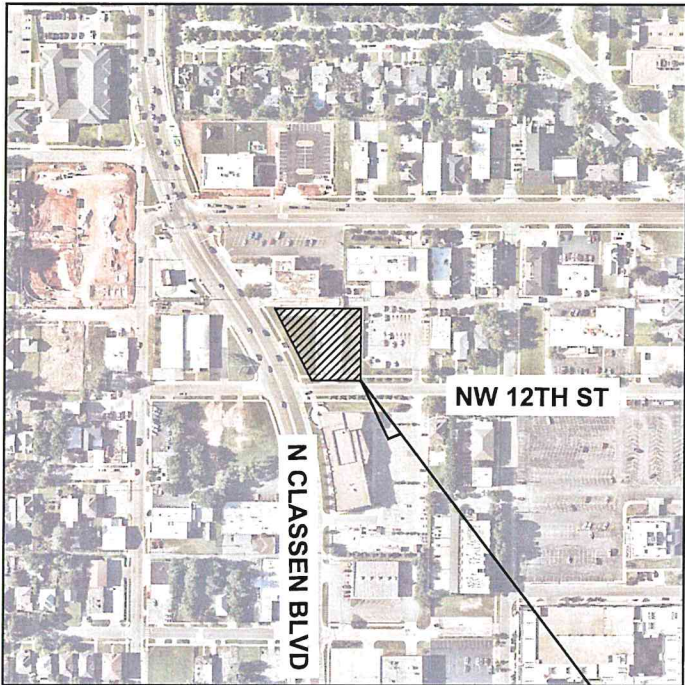
PREPARED BY: AUSTIN C. BURTON, P.E. &  
ANDREA POWELL, P.L.A  
4727 GALLARDIA PARKWAY, SUITE 250  
OKLAHOMA CITY, OK 73142  
TELEPHONE (405) 252-5960

OWNER / DEVELOPER  
STARBUCKS



55 MONUMENT CIRCLE  
SUITE 1300C  
INDIANAPOLIS, IN 46202

SURVEYOR  
GOLDEN LAND SURVEYING  
4131 NW 122ND ST, SUITE 100,  
OKLAHOMA CITY, OKLAHOMA 73120  
TELEPHONE: (405) 849-6010  
CONTACT: TROY DEE



VICINITY  
N.T.S.

SITE

## NOTES:

1. CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.
2. IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 22x34 SHEET.
3. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICES COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
4. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

Sheet List Table	
Sheet Number	Sheet Title
C000	COVER SHEET
C100	GENERAL NOTES
C101	ALTA TOPOGRAPHIC SURVEY
C200	SITE DEMOLITION PLAN
C300	EROSION AND SEDIMENT CONTROL PLAN - PHASE 1
C301	EROSION AND SEDIMENT CONTROL PLAN - PHASE 2
C302	EROSION AND SEDIMENT CONTROL DETAILS
C400	SITE PLAN
C401	SITE DETAILS
C402	SITE DETAILS
C403	SITE DETAILS
C500	GRADING AND DRAINAGE PLAN
C600	UTILITY PLAN
C601	FIRE HYDRANT COVERAGE PLAN
C602	UTILITY DETAILS
L100	LANDSCAPE PLAN
L101	LANDSCAPE DETAILS
L102	LANDSCAPE STANDARD NOTES

## BENCHMARKS

SITE BENCHMARKS:  
(LOCATIONS SHOWN ON SURVEY)

SBM #1 S MAG TC  
ELEVATION=1226.207

SBM #2 S MAG TC  
ELEVATION=1228.061

SBM #3 S MAG IN AS  
ELEVATION=1223.875

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NOV - 5 2024  
PLANNING DEPARTMENT



Know what's below.  
Call before you dig.

KHA PROJECT 161249000		DATE 07/26/2024	SCALE AS SHOWN	DESIGNED BY BSK	DRAWN BY BSK	CHECKED BY MTL
STARBUCKS- N CLASSEN BLVD & NW 12TH ST		COVER SHEET		OK		
PREPARED FOR STARBUCKS		SHEET NUMBER C000		OKLAHOMA CITY		
Kimley»Horn		2024 KIMLEY-HORN AND ASSOCIATES, INC. 4727 GALLARDIA PARKWAY, SUITE 250, OKLAHOMA CITY, OK 73142 PHONE: 405-241-5423 FAX: 405-241-5424 WWW.KIMLEY-HORN.COM		REVISIONS		
				DATE		
				BY		



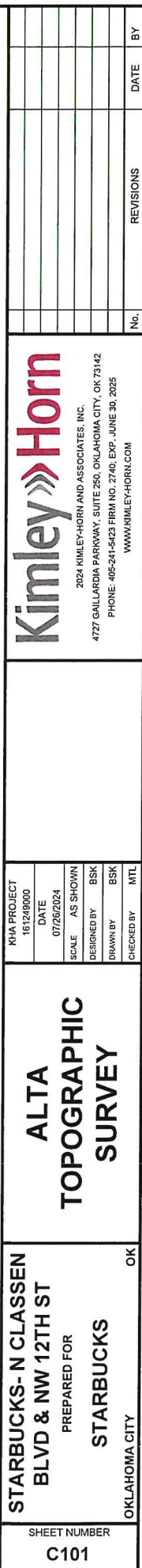
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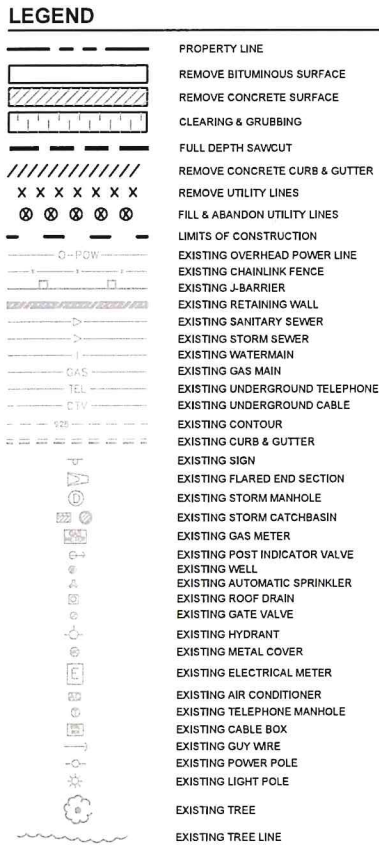
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PLANNING DEPARTMENT









1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC. SUCH THAT THE REMOVED MATERIALS ARE TO BE CONSTRUCTED, FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE PROJECT DOCUMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING OF THE DEBRIS IN A LAWFUL MANNER AND IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEMOLITION AND DISPOSAL FROM THE APPROPRIATE LOCAL AND STATE AGENCIES. CONTRACTOR SHALL PROVIDE THE PERMITS AND THE RECEIPTS OF DISPOSAL OF MATERIALS TO THE UTILITY COMPANY FOR THEIR SERVICES. INCLUDING THE TYPE OF DEBRIS AND LOCATION WHERE IT WAS DISPOSED.
3. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ADJACENT PROPERTIES AT ALL TIME. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER AND COORDINATION WITH THE ADJACENT PROPERTIES AND/OR THE CITY.
4. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
5. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES TO PROVIDE LOCATIONS OF EXISTING UTILITIES WITHIN PROPOSED WORK AREA.
6. EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE BASED ON AVAILABLE RECORD LOCATION DATA AND/OR FIELD UTILITY MARKINGS AND ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION. ADVANCE TIME SHALL BE ALLOWED FOR THE CONTRACTOR TO INVESTIGATE EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED UNDERGROUND FEATURES. GIVE NOTICE TO AFFECTED UTILITY COMPANIES REGARDING REMOVAL OF SERVICE LINES AND CAP ANY ABANDONED LINES BEFORE PRECEDING WITH THE PROPOSED WORK.
7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADVANCE TIME SHALL BE ALLOWED FOR THE CONTRACTOR TO INVESTIGATE EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED UNDERGROUND FEATURES. GIVE NOTICE TO AFFECTED UTILITY COMPANIES REGARDING REMOVAL OF SERVICE LINES AND CAP ANY ABANDONED LINES BEFORE PRECEDING WITH THE PROPOSED WORK.
8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. MAINTENANCE OF TRAFFIC CONTROL SHALL BE COORDINATED IN ACCORDANCE WITH THE CITY, COUNTY, AND STATE DOT AS NECESSARY.
9. CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION, AND SHALL NOTIFY ADJACENT PROPERTY OWNERS IF ACCESS WILL BE INTERRUPTED OR ALTERED AT ANY TIME DURING CONSTRUCTION.
10. PRIOR TO THE START OF DEMOLITION, INSTALL EROSION CONTROL BMP'S IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLANS / SWPPP.
11. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT OR CURB, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
12. THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE CITY WATER AND FIRE DEPARTMENTS. ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE AND SURROUNDING PROPERTY THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE CITY. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
13. IN THE EVENT A WELL IS FOUND, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND OWNER IMMEDIATELY. ALL WELLS SHALL BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH STATE REQUIREMENTS.
14. IN THE EVENT THAT UNKNOWN CONTAINERS OR TANKS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR OWNERS REPRESENTATIVE IMMEDIATELY. ALL CONTAINERS SHALL BE DISPOSED OR AT A PERMITTED LANDFILL PER THE PROJECT DOCUMENTS.
15. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY EXISTING DRAINFILE IS ENCOUNTERED ON SITE. ACTIVE DRAINFILE SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.
16. IF CONTAMINATED MATERIAL IS ENCOUNTERED ON THE PROJECT SITE, THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE OWNER AND ENGINEER IMMEDIATELY.
17. ENSURE MINIMUM 14-FEET CLEARANCE UNDER EXISTING OVERHEAD LINES IS MET AT PROPOSED DRIVE (COORDINATE WITH OWNER & UTILITY)



STARBUCKS- N CLASSEN  
BLVD & NW 12TH ST  
PREPARED FOR  
STARBUCKS  
OKLAHOMA CITY OK

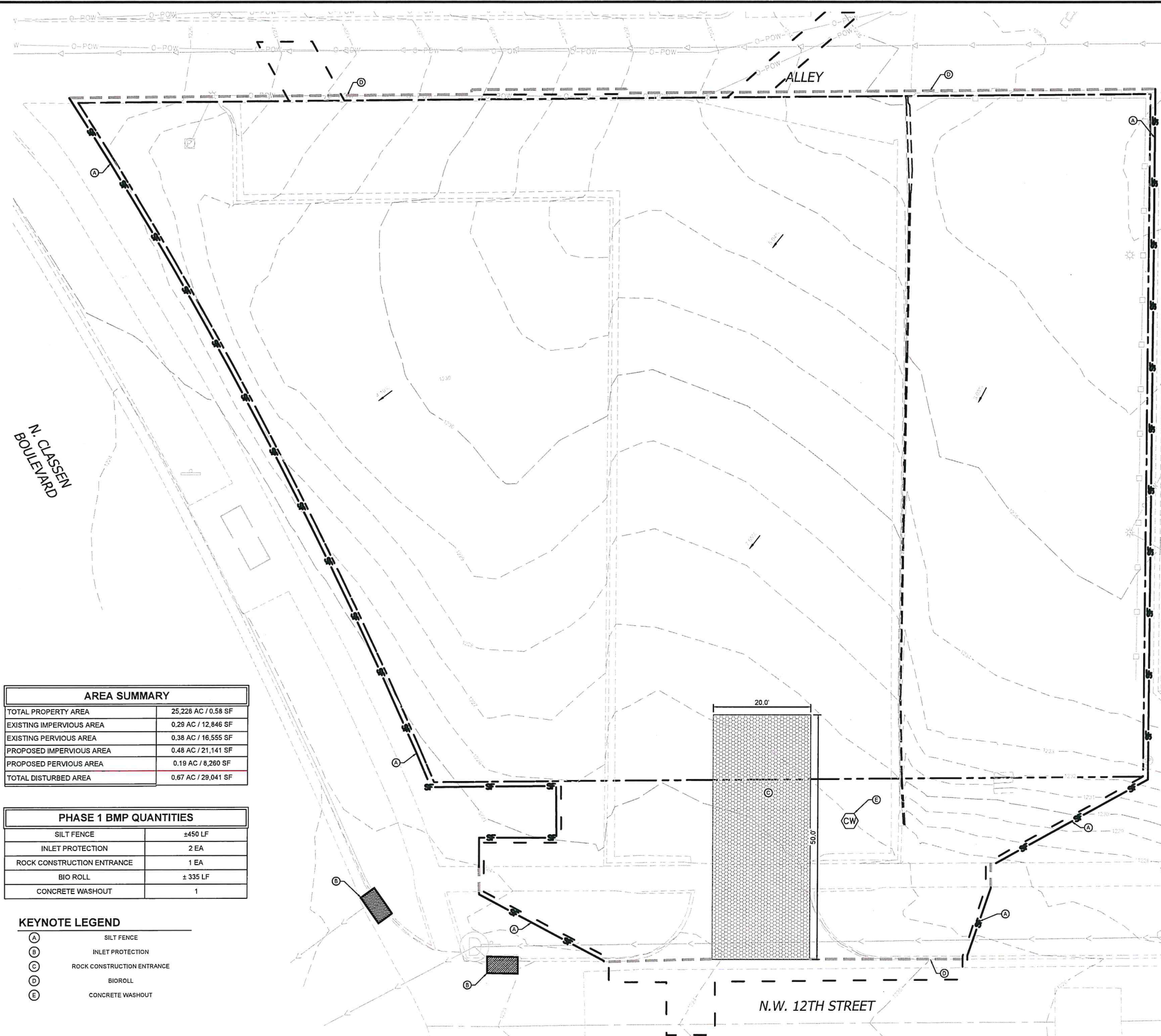
KHA PROJECT	DATE	AS SHOWN	BSK	BSK	MTL
161249000	07/26/2024				

# SITE DEMOLITION PLAN

**Kimley»»Horn**  
2024 KIMLEY-HORN AND ASSOCIATES, INC.  
4727 GALLARDA PARKWAY, SUITE 250, OKLAHOMA CITY, OK 73142  
PHONE: 405-241-5423 FRM NO. 2740, EXP. JUNE 30, 2025  
[WWW.KIMLEY-HORN.COM](http://WWW.KIMLEY-HORN.COM)

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AREA SUMMARY	
TOTAL PROPERTY AREA	25,228 AC / 0.58 SF
EXISTING IMPERVIOUS AREA	0.29 AC / 12,846 SF
EXISTING PVIOUS AREA	0.38 AC / 16,555 SF
PROPOSED IMPERVIOUS AREA	0.48 AC / 21,141 SF
PROPOSED PVIOUS AREA	0.19 AC / 8,260 SF
TOTAL DISTURBED AREA	0.67 AC / 29,041 SF

PHASE 1 BMP QUANTITIES	
SILT FENCE	±450 LF
INLET PROTECTION	2 EA
ROCK CONSTRUCTION ENTRANCE	1 EA
BIO ROLL	± 335 LF
CONCRETE WASHOUT	1

KEYNOTE LEGEND	
A	SILT FENCE
B	INLET PROTECTION
C	ROCK CONSTRUCTION ENTRANCE
D	BIO ROLL
E	CONCRETE WASHOUT

#### LEGEND

	ROCK ENTRANCE
	CONCRETE WASHOUT
	INLET PROTECTION
	SILT FENCE
	LIMITS OF DISTURBANCE
	BIO ROLL

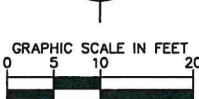
#### EROSION CONTROL PLAN NOTES

- THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH LAND DISTURBING ACTIVITIES SHALL OBTAIN A COPY OF THE SWPPP AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT, AND BECOME FAMILIAR WITH THEIR CONTENTS.
- BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE AND LOCAL REQUIREMENTS, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY, ENGINEER OR OWNER.
- SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO A PUBLIC ROADWAY FROM THE CONSTRUCTION SITE MUST BE REMOVED AS SOON AS PRACTICABLE. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ANY FINES IMPOSED FOR DISCHARGING SEDIMENT ONTO A PUBLIC RIGHT OF WAY SHALL BE PAID BY THE CONTRACTOR.
- TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.
- THE CONTRACTOR SHALL MINIMIZE LAND DISTURBANCE AND CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- CONTRACTOR SHALL DENOTE ON THE 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.
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- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- 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.
- STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED OUTSIDE OF DRAINAGE WAYS SUCH THAT STORM WATER RUNOFF WILL NOT BE ADVERSELY AFFECTED. PROVIDE STABILIZATION MEASURES SUCH AS PERIMETER EROSION CONTROL BMP'S, SEEDING, OR OTHER COVERING AS NECESSARY TO PREVENT EROSION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL BMP DISTURBED DURING CONSTRUCTION OPERATIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OF STORM WATER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING, CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUELS, LUBRICANT OILS, PESTICIDES, AND SOLID WASTE MATERIALS.
- EROSION CONTROL BMP'S SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT, AND INITIATED AS SOON AS PRACTICABLE.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION, AND SHALL MAINTAIN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS FOR THE DURATION OF CONSTRUCTION.
- THE CONTRACTOR SHALL FIELD ADJUST AND/OR PROVIDE ADDITIONAL EROSION CONTROL BMP'S AS NEEDED TO PREVENT EROSION AND OFF-SITE SEDIMENT DISCHARGE FROM THE CONSTRUCTION SITE. LOG AND RECORD ANY ADJUSTMENTS AND DEVIATIONS FROM THE APPROVED EROSION CONTROL PLANS WITHIN THE SWPPP DOCUMENTS STORED IN THE JOB SITE TRAILER.

#### PHASE 1 SEQUENCE OF CONSTRUCTION

- INSTALL PERIMETER EROSION CONTROL (I.E. SILT FENCE) AND INLET PROTECTION AT EXISTING STORMWATER INLETS.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
- CLEAR AND GRUB THE SITE.
- BEGIN MASS SITE GRADING AND ROUGH GRADE SITE SUFFICIENTLY TO ESTABLISH PROPOSED DRAINAGE PATTERNS.
- START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
- TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE OR AS REQUIRED BY THE NPDES AND/OR CITY GRADING PERMIT(S).

NOTE: THE SEQUENCE OF CONSTRUCTION IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY.



ISSUED FOR PERMIT - NOT FOR CONSTRUCTION

STARBUCKS- N CLASSEN BLVD & NW 12TH ST

PREPARED FOR STARBUCKS OKLAHOMA CITY

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

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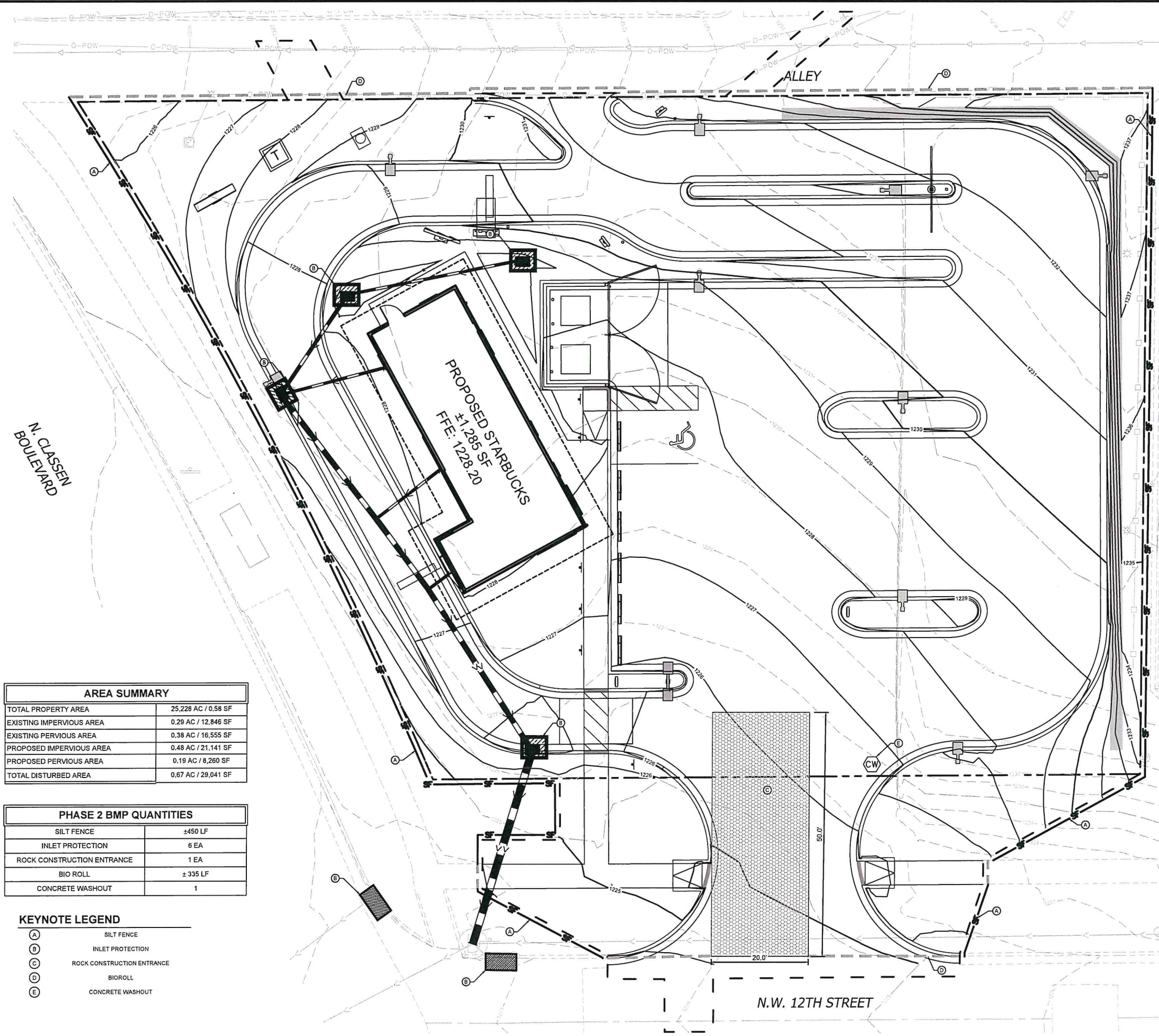
SHEET NUMBER C300

DATE BY

REVISIONS

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4727 GALLARDA PARKWAY, SUITE 280, OKLAHOMA CITY, OK 73142  
PHONE: 405-241-5422 FAX: 405-241-5423  
WWW.KIMLEY-HORN.COM





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E	CONCRETE WASHOUT

#### LEGEND

	ROCK ENTRANCE
	CONCRETE WASHOUT
	INLET PROTECTION
	SILT FENCE
	LIMITS OF DISTURBANCE
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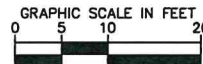
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11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED OUTSIDE OF DRAINAGE WAYS SUCH THAT STORM WATER RUNOFF WILL NOT BE ADVERSELY AFFECTED. PROVIDE STABILIZATION MEASURES SUCH AS PERIMETER EROSION CONTROL BMPs, SEEDING, OR OTHER COVERING AS NECESSARY TO PREVENT EROSION.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL BMP DISTURBED DURING CONSTRUCTION OPERATIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OF STORM WATER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING, CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUELS, LUBRICANT OILS, PESTICIDES, AND SOLID WASTE MATERIALS.
14. EROSION CONTROL BMPs SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT, AND INITIATED AS SOON AS PRACTICABLE.
15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION, AND SHALL MAINTAIN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS FOR THE DURATION OF CONSTRUCTION.
16. THE CONTRACTOR SHALL FIELD ADJUST AND/OR PROVIDE ADDITIONAL EROSION CONTROL BMPs AS NEEDED TO PREVENT EROSION AND OFF-SITE SEDIMENT DISCHARGE FROM THE CONSTRUCTION SITE. LOG AND RECORD ANY ADJUSTMENTS AND DEVIATIONS FROM THE APPROVED EROSION CONTROL PLANS WITHIN THE SWPPP DOCUMENTS STORED IN THE JOB SITE TRAILER.

#### PHASE 2 SEQUENCE OF CONSTRUCTION

1. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
2. CONSTRUCT UNDERGROUND SITE UTILITIES AND STORM SEWER, INCLUDING UNDERGROUND STORMWATER MANAGEMENT SYSTEM.
3. INSTALL APPROPRIATE INLET PROTECTION AT ANY NEW STORM SEWER STRUCTURES AS EACH STRUCTURE IS CONSTRUCTED.
4. COMPLETE SITE GRADING AND PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
5. PLACE PAVEMENT BASE MATERIAL AND INSTALL SUBDRAINAGE SYSTEM.
6. CONSTRUCT PAVEMENTS, CURB & GUTTER, AND SIDEWALKS.
7. AS APPROPRIATE, REPLACE & MAINTAIN INLET PROTECTION DEVICES WITHIN PAVED AREAS AS WORK PROGRESSES.
8. COMPLETE FINAL GRADING AND INSTALL OF PERMANENT STABILIZATION (SEEDING, SODDING, ETC.) WITHIN LANDSCAPED AREAS.
9. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION AS DEFINED BY THE APPLICABLE EROSION CONTROL PERMITS, REMOVE ALL REMAINING TEMPORARY EROSION & SEDIMENT CONTROL BMPs AND RE-STABILIZE ANY AREAS DISTURBED BY THE REMOVAL.

NOTE: THE SEQUENCE OF CONSTRUCTION IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY.



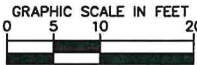
Know what's below.  
Call before you dig.

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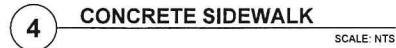






ISSUED FOR PERMIT - NOT FOR CONSTRUCTION	STARBUCKS-N CLASSEN BLVD & NW 12TH ST		OK	Oklahoma City	SHEET NUMBER C400	KHA PROJECT 161249000		DATE 07/26/2024	SCALE AS SHOWN	DESIGNED BY BSK	DRAWN BY BSK	CHECKED BY MTL	KIMLEY-HORN		© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 1727 GALLARDIA PARKWAY, SUITE 250, OKLAHOMA CITY, OK 73142 PHONE: 405-241-5423 FIRM NO. 2740, EXP. JUNE 30, 2025 WWW.KIMLEY-HORN.COM		No.	REVISIONS	DATE	BY
	SITE PLAN					NOV - 5 2024							PLANNING DEPT							





1. A MAX CROSS SLOPE OF 2% AND RUNNING SLOPE OF 5% SHALL BE PROVIDED AND SHALL SLOPE TOWARDS THE DIRECTION OF POSITIVE DRAINAGE IN THE AREA.
2. CONCRETE WALKS SHALL BE GROOVED OR SAWCUT TRANSVERSELY TO A DEPTH OF  $\frac{1}{4}$ " AT INTERVALS MATCHING SIDEWALK WIDTH UP TO 7'. IF SIDEWALK WIDTH IS GREATER THAN 7', CONTRACTION JOINTS SHALL BE SAWCUT LONGITUDINALLY AND TRANSVERSELY AT DISTANCES EQUAL TO 1/2 OF SIDEWALK WIDTH. NO PANEL SIZE TO EXCEED 7'X7'.
3. CONTRACTION JOINTS MAXIMUM DISTANCE = 7'. SAWCUT OR GROOVE  $\frac{1}{4}$ " DEEP AND FILL WITH SEALANT. SAWCUT JOINTS WITHIN 24 HOURS.
4. EXPANSION JOINTS MAXIMUM DISTANCE = 100'. USE 1/2" PREMOLOD EXPANSION MATERIAL. TRANSVERSE SIDEWALK EXPANSION JOINT SHALL BE DOWELED PER NOTE 8.
5. USE 1/2" PREMOLOD EXPANSION JOINT AT CURB.
6. 1/2" EXPANSION JOINTS SHALL BE INSTALLED TO SURROUND OR TO SEPARATE ALL STRUCTURES OR FEATURES WHICH PROJECT THROUGH OR AGAINST SIDEWALK FLAT. 36" OF CLEAR TRAVEL SPACE MUST BE MAINTAINED AT ALL TIMES ALONG LENGTH OF SIDEWALK.
7. ALL JOINTS TO BE SEALED. PREMOLOD EXPANSION MATERIAL TO BE REMOVED TO A DEPTH OF 1/2" PRIOR TO APPLYING SEALANT.
8. AT DOORWAYS, EXPANSION JOINTS SHALL BE DOWELED ACCORDING TO STRUCTURAL PLANS. WHERE SIDEWALK ABUTS ADA CURB RAMPS AND GUTTERS, EXPANSION JOINTS WITH 6" THICKENED EDGE SHALL BE DOWELED WITH  $\frac{1}{2}$ " X 12" SMOOTH DOWELS AT 18" O.C. WITH BOND BREAKER AND EXPANSION CAP APPLIED TO ONE END, WHERE SIDEWALK ABUTS CURB, BUILDING, OR OTHER STRUCTURES, DOWELED EXPANSION JOINTS ARE NOT REQUIRED.
9. CDOT TYPE 'A' AGGREGATE.
10. WHERE CONSTRUCTION OF SIDEWALK BEGINS AND ENDS EACH DAY, INSTALL A DOWELED EXPANSION JOINT WITH THICKENED EDGE IN ACCORDANCE WITH NOTE 8.
11. PORTLAND CEMENT CONCRETE MATERIAL FOR SIDEWALKS SHALL BE IDENTICAL TO CONCRETE PAVEMENT.

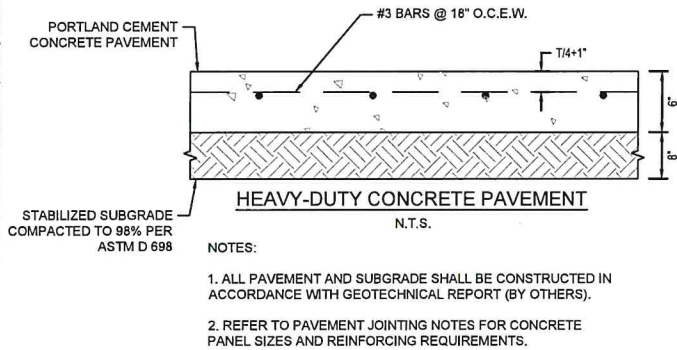
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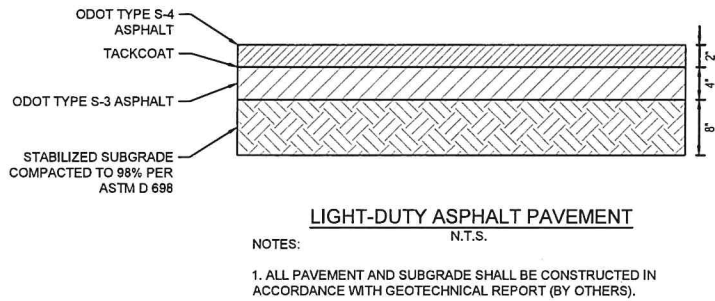
**Kimley»»Horn**  
2024 KIMLEY-HORN AND ASSOCIATES, INC.  
4727 GALLARDIA PARKWAY, SUITE 250, OKLAHOMA CITY, OK 73142  
PHONE: 405-211-5423 FIRM NO. 27-40, EXP. JUNE 30, 2025  
[WWW.KIMLEY-HORN.COM](http://WWW.KIMLEY-HORN.COM)



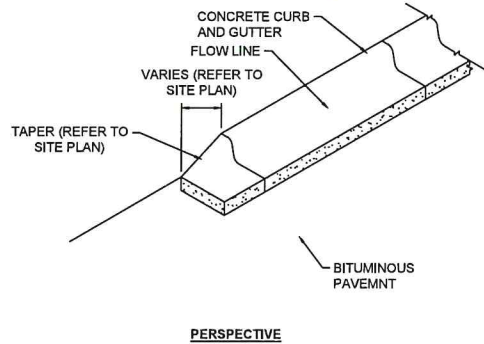
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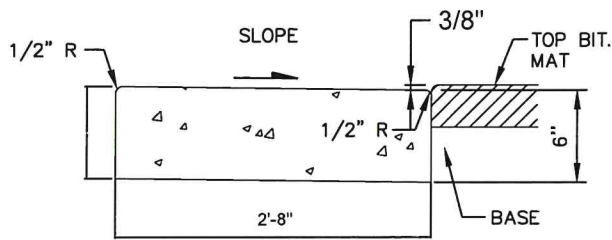
1 HEAVY-DUTY CONCRETE PAVEMENT  
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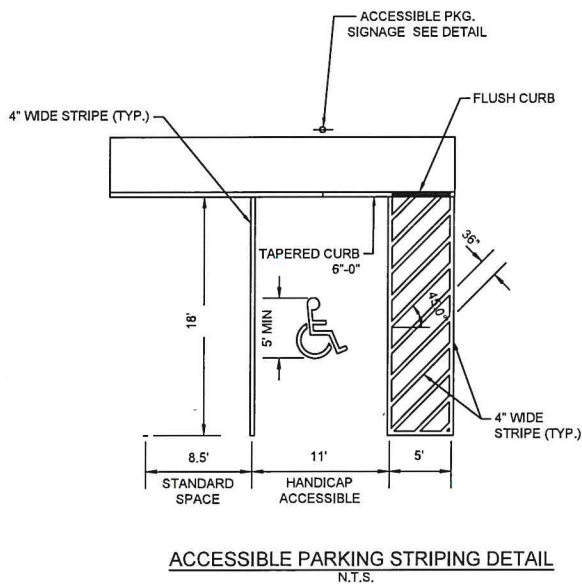
2 ASPHALT PAVEMENT  
SCALE: NTS



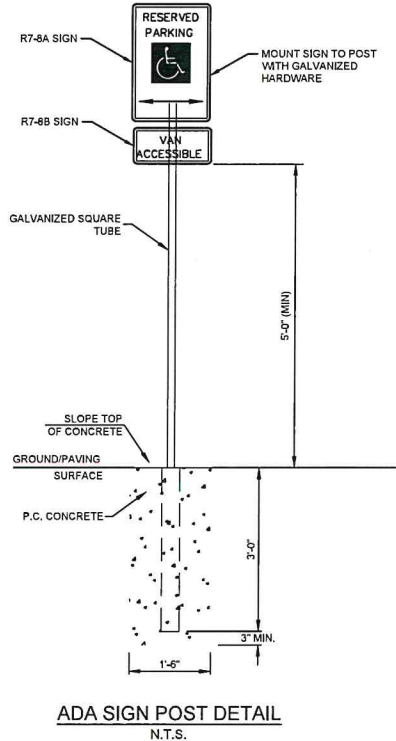
3 CURB TAPER  
NO SCALE



4 FLUSH CURB  
SCALE: NTS

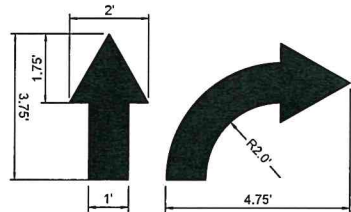


5 ADA PARKING STALL LAYOUT  
SCALE: NTS



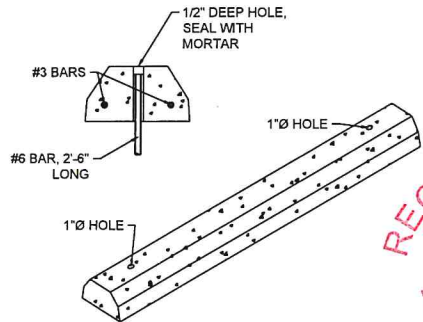
- NOTES:
- SIGN AND POST SHALL CONFORM TO 2010 ADA STANDARDS. SIGNS SHALL BE SHEET ALUMINUM AND CONFORM TO MUTCD AND ODOT 2019 STANDARD SPECIFICATIONS.
  - GALVANIZED SQUARE TUBE
  - 2.1. POST TUBES - 2"x2"x3/16" 14ga
  - 2.2. POST TUBE SHALL MEET ASTM A1011 GRADE 50.
  - 2.3. POST TUBE GALVANIZED AS PER ASTM A653 GRADE 90.

6 ACCESSIBLE PARKING SIGN  
SCALE: NTS



NOTE: ALL TRAFFIC FLOW ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE

7 TRAFFIC ARROW  
NO SCALE

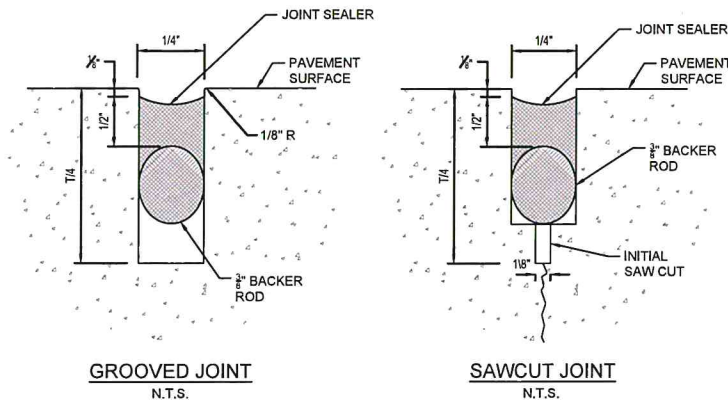


8 PRECAST WHEEL STOP  
NO SCALE

KHA PROJECT 151249000		DATE 07/26/2024	SCALE AS SHOWN	DESIGNED BY BSK	DRAWN BY BSK	CHECKED BY MTL
<b>SITE DETAILS</b>						
STARBUCKS - N CLASSEN BLVD & NW 12TH ST PREPARED FOR STARBUCKS OKLAHOMA CITY						
SHEET NUMBER C402						
No.						REVISIONS
DATE						BY

**Kimley»Horn**  
2024 KIMLEY-HORN AND ASSOCIATES, INC.  
4727 GALLARDIA PARKWAY, SUITE 250, OKLAHOMA CITY, OK 73142  
PHONE: 405-241-5423 FAX: 405-241-5424  
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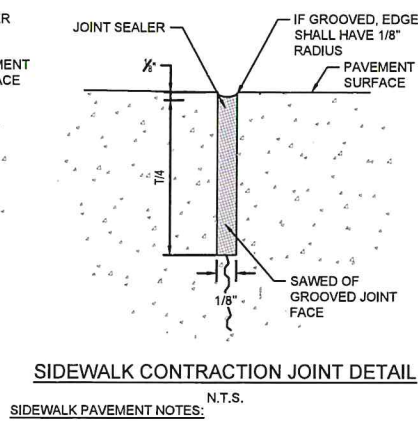
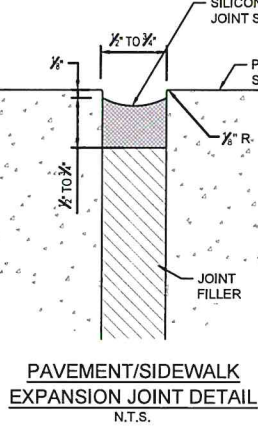
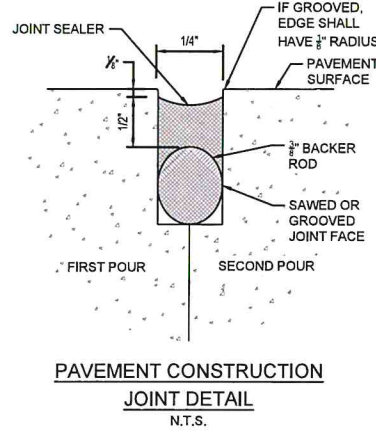




**PAVEMENT CONTRACTION JOINT DETAIL**  
N.T.S.

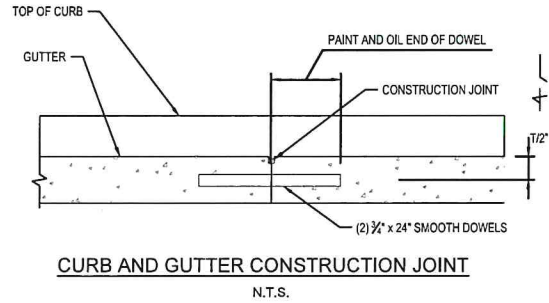
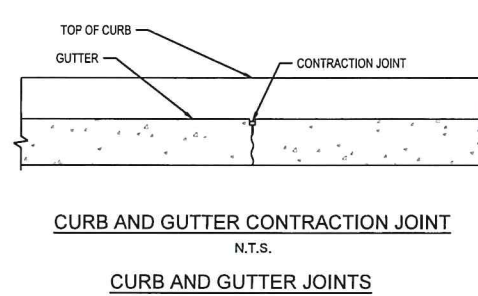
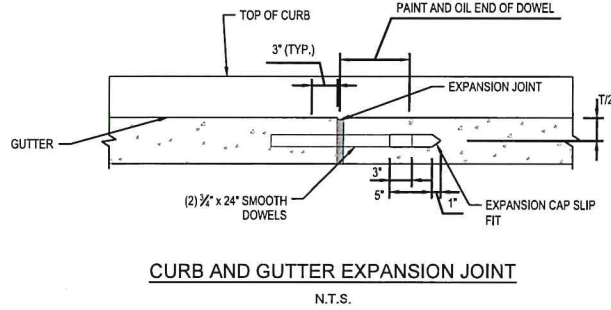
**PAVEMENT JOINTING NOTES:**

- JOINT SPACING FOR CONCRETE PAVEMENT SHALL BE PROVIDED SUCH THAT NO PANEL EXCEEDS THE 1.25L:1.00W RATIO. MAXIMUM PANEL SIZE FOR 5-INCH CONCRETE SHALL BE 10 FEET X 12.5 FEET AND FOR 6-INCH/7-INCH CONCRETE SHALL BE 12 FEET X 15 FEET. JOINTS SHOULD BE CUT AS SOON AS CONCRETE WILL SUPPORT MACHINERY (WITHIN 6 TO 12 HOURS OF CONCRETE PLACEMENT).
- ODD-SHAPED CONCRETE PANELS SHALL BE REINFORCED. AN ODD-SHAPED PANEL IS CONSIDERED TO BE ONE WHICH THE LONGER DIMENSION EXCEEDS THE SHORTER DIMENSION BY MORE THAN 25% OR A PANEL WHICH CONTAINS A PENETRATION LARGER THAN 18" X 18".
- JOINTS MUST INTERSECT PAVEMENT-FREE EDGE AT A 90-DEGREE ANGLE TO THE PAVEMENT EDGE AND MUST EXTEND STRAIGHT FOR A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE UNLESS OTHERWISE NOTED.
- EXPANSION JOINTS SHOULD BE INSTALLED TO SURROUND OR TO SEPARATE ALL STRUCTURES OR FEATURES WHICH PROJECT THROUGH OR AGAINST CONCRETE PAVEMENT.
- JOINT SEALANT SHALL BE COLD-APPLIED, SINGLE COMPONENT, SELF-LEVELING, SILICONE THAT IS IN ACCORDANCE WITH ASTM D-5893 (TYPE SL).



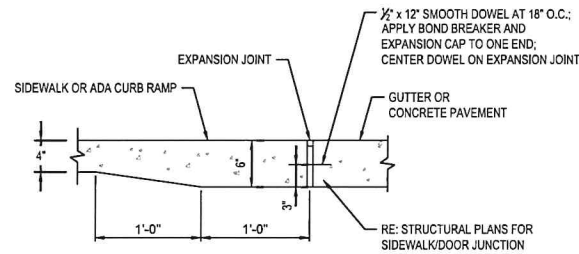
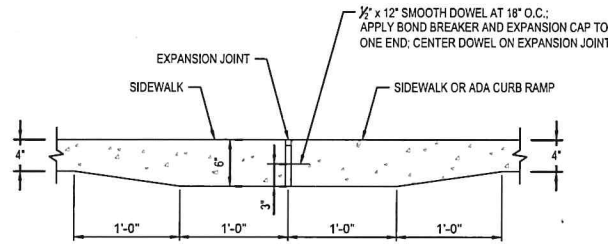
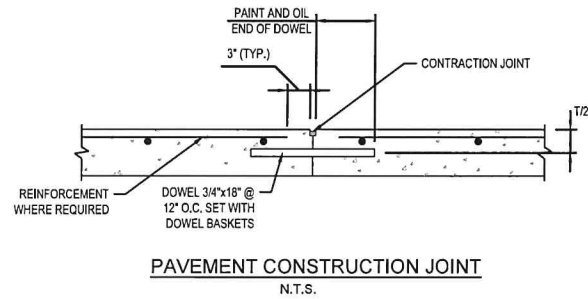
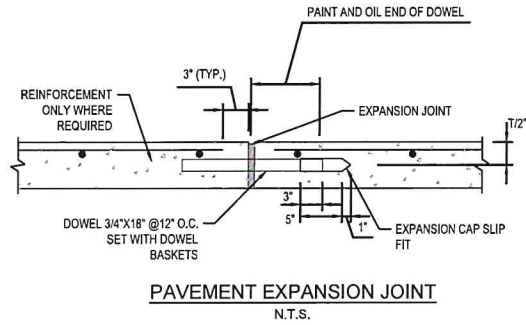
**SIDEWALK PAVEMENT NOTES:**

- REFERENCE SIDEWALK DETAIL FOR SIDEWALK JOINTING NOTES.
- JOINT SEALANT SHALL BE COLD-APPLIED, SINGLE COMPONENT, SELF-LEVELING, SILICONE THAT IS IN ACCORDANCE WITH ASTM D-5893 (TYPE SL).



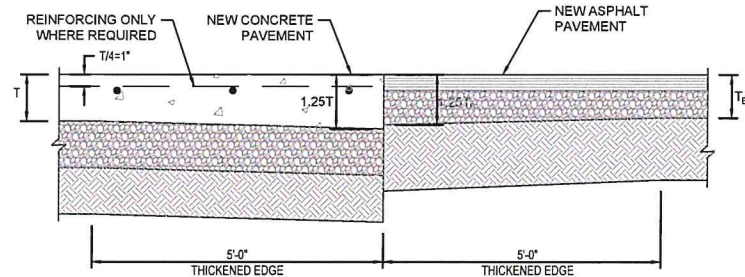
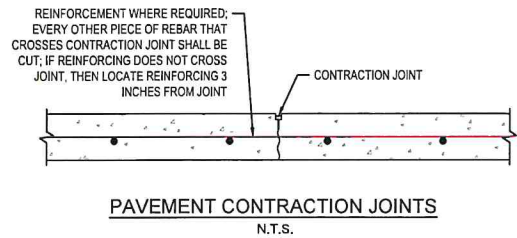
**CURB AND GUTTER JOINT NOTES:**

- CONTRACTION JOINTS SHALL BE PROVIDED AT INTERVALS NOT LESS THAN 5 FEET AND NOT GREATER THAN 15 FEET. FOR INTEGRAL CURB AND GUTTER, CONTRACTION JOINTS SHALL MATCH PAVEMENT JOINTS.
- EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT LESS THAN 30 FEET AND NOT GREATER THAN 120 FEET. FOR INTEGRAL CURB AND GUTTER, EXPANSION JOINTS SHALL MATCH PAVEMENT JOINTS.



**NOTES:**

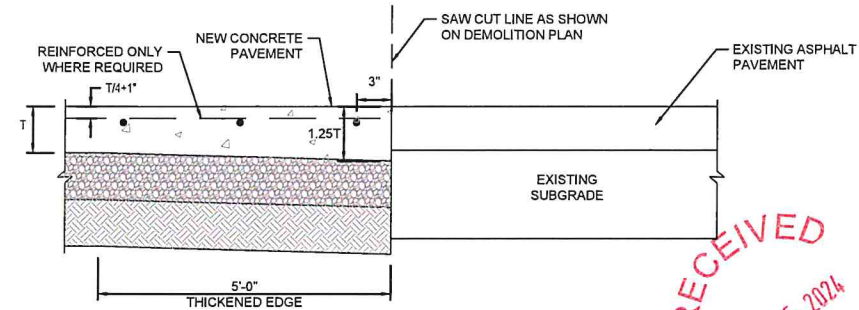
- REFERENCE SIDEWALK DETAIL FOR SIDEWALK JOINTING NOTES.



**JUNCTURE OF NEW ASPHALT AND NEW CONCRETE PAVEMENT**  
N.T.S.

**NOTES:**

- REFER TO CONCRETE AND ASPHALT PAVEMENT DETAILS FOR SPECIFICS ON PAVEMENT SECTIONS



**JUNCTURE OF NEW CONCRETE PAVEMENT AND EXISTING ASPHALT PAVEMENT**  
N.T.S.

**NOTES:**

- REFER TO CONCRETE PAVEMENT DETAILS FOR SPECIFICS ON PAVEMENT SECTIONS

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WWW.KIMLEY-HORN.COM

KHA PROJECT	151249000
DATE	07/26/2024
SCALE	AS SHOWN
DESIGNED BY	BSK
DRAWN BY	BSK
CHECKED BY	MTL

**SITE DETAILS**

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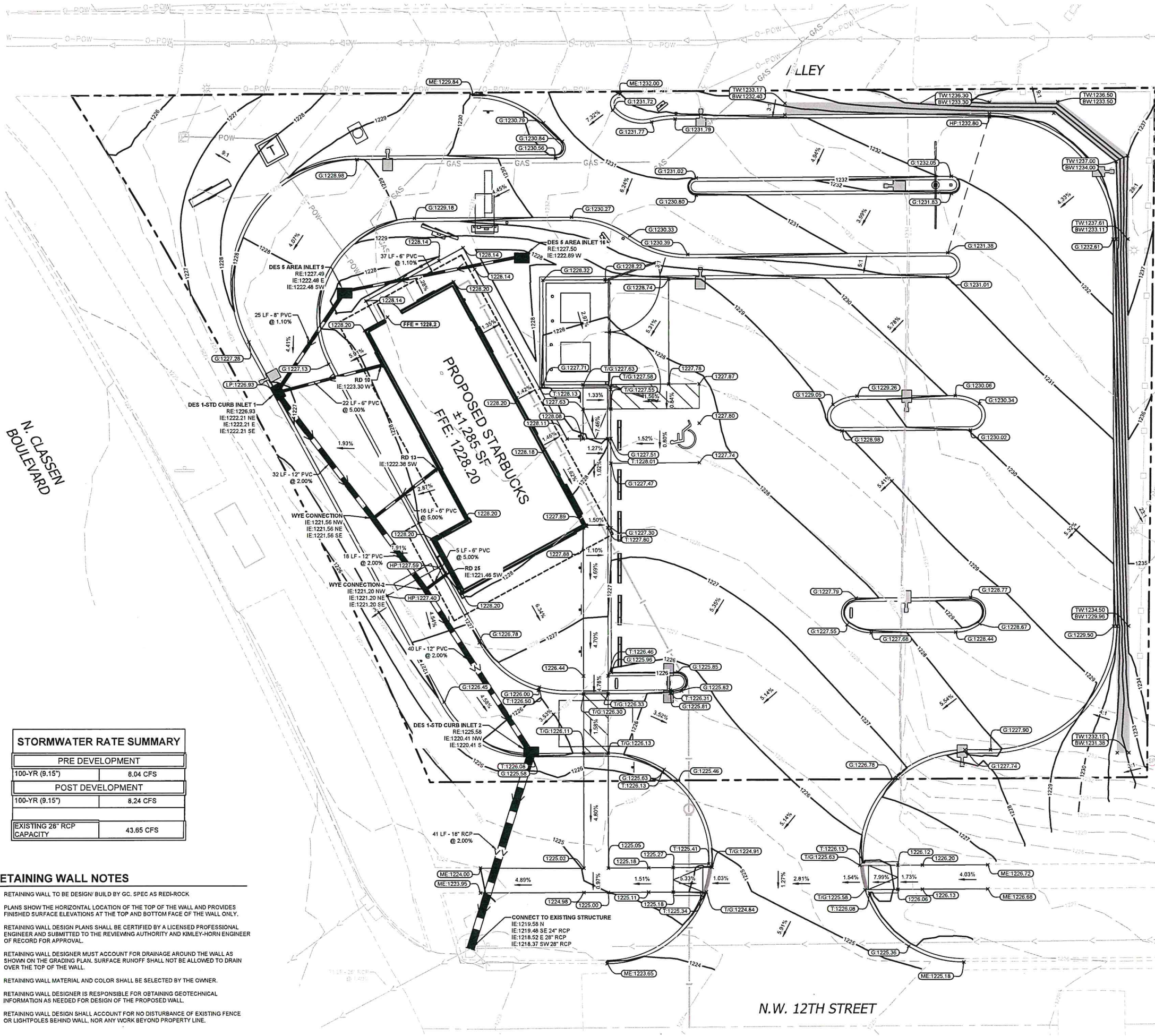
**STARBUCKS - N CLASSEN BLVD & NW 12TH ST**

PREPARED FOR  
**STARBUCKS**

OKLAHOMA CITY



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STORMWATER RATE SUMMARY	
PRE DEVELOPMENT	
100-YR (9.15')	8.04 CFS
POST DEVELOPMENT	
100-YR (9.15')	8.24 CFS
EXISTING 26" RCP CAPACITY	43.65 CFS

RETAINING WALL NOTES

- RETAINING WALL TO BE DESIGN/ BUILD BY GC. SPEC AS RED-ROCK
- PLANS SHOW THE HORIZONTAL LOCATION OF THE TOP OF THE WALL AND PROVIDES FINISHED SURFACE ELEVATIONS AT THE TOP AND BOTTOM FACE OF THE WALL ONLY.
- RETAINING WALL DESIGN PLANS SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE REVIEWING AUTHORITY AND KIMLEY-HORN ENGINEER OF RECORD FOR APPROVAL.
- RETAINING WALL DESIGNER MUST ACCOUNT FOR DRAINAGE AROUND THE WALL AS SHOWN ON THE GRADING PLAN. SURFACE RUNOFF SHALL NOT BE ALLOWED TO DRAIN OVER THE TOP OF THE WALL.
- RETAINING WALL MATERIAL AND COLOR SHALL BE SELECTED BY THE OWNER.
- RETAINING WALL DESIGNER IS RESPONSIBLE FOR OBTAINING GEOTECHNICAL INFORMATION AS NEEDED FOR DESIGN OF THE PROPOSED WALL.
- RETAINING WALL DESIGN SHALL ACCOUNT FOR NO DISTURBANCE OF EXISTING FENCE OR LIGHTPOLES BEHIND WALL, NOR ANY WORK BEYOND PROPERTY LINE.

LEGEND

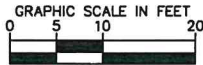
- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED RIDGE LINE
- PROPOSED SWALE
- PROPOSED STORM MANHOLE (SOLID CASTING)
- PROPOSED STORM MANHOLE (ROUND INLET CASTING)
- PROPOSED STORM MANHOLE/ CATCH BASIN (CURB INLET CASTING)
- PROPOSED STORM SEWER CLENDUT
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- PROPOSED STORM SEWER
- PROPOSED SPOT ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED LOW POINT ELEVATION
- PROPOSED GUTTER ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED FLUSH PAVEMENT ELEVATION
- MATCH EXISTING ELEVATION
- PROPOSED EMERGENCY OVERFLOW ELEVATION
- PROPOSED TOP/BOTTOM OF WALL ELEVATION
- PROPOSED DRAINAGE DIRECTION

GRADING PLAN NOTES

- PERFORM GRADING WORK IN ACCORDANCE WITH APPLICABLE CITY SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.
- CONTACT STATE 811 CALL-BEFORE-YOU-DIG LOCATING SERVICE AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION FOR UNDERGROUND UTILITY LOCATIONS.
- STORM SEWER PIPE SHALL BE AS FOLLOWS:  
RCP PER ASTM C-76  
HDPE: 12" PER AASHTO M-252  
HDPE: 12" OR GREATER PER ASTM F-2306  
PVC SCH. 40 PER ASTM D-1765  
STORM SEWER FITTINGS SHALL BE AS FOLLOWS:  
RCP PER ASTM C-76, JOINTS PER ASTM C-361, C-990, AND C-443  
HDPE PER ASTM D-3212  
PVC PER ASTM D-3034, JOINTS PER ASTM D-3212
- CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS.
- SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF EXISTING PAVEMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
- CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
- GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATION AND LEAVE STREET READY FOR SUBBASE.
- ALL EXCESS MATERIAL, BITUMINOUS SURFACING, CONCRETE ITEMS, ANY ABANDONED UTILITY ITEMS, AND OTHER UNSTABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE CONSTRUCTION SITE.
- REFER TO THE UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN SERVICE LAYOUT AND ELEVATIONS AND CASTING/ STRUCTURE NOTATION.
- CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF PAVEMENTS AND CURB AND GUTTER WITH SMOOTH UNIFORM SLOPES TO PROVIDE POSITIVE DRAINAGE.
- INSTALL A MINIMUM OF 4" CLASS 5 AGGREGATE BASE UNDER CURB AND GUTTER AND CONCRETE SIDEWALKS.
- UPON COMPLETION OF EXCAVATION AND FILLING, CONTRACTOR SHALL RESTORE ALL STREETS AND DISTURBED AREAS ON SITE. ALL DISTURBED AREAS SHALL BE RE-VEGETATED WITH A MINIMUM OF 4" OF TOPSOIL.
- ALL SPOT ELEVATIONS/CONTOURS ARE TO GUTTER / FLOW LINE UNLESS OTHERWISE NOTED.
- GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. IN NO CASE SHALL ACCESSIBLE RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2%. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5%. IN NO CASE SHALL ACCESSIBLE PARKING STALLS OR AISLES EXCEED 2% (1.5% TARGET) IN ALL DIRECTIONS. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS AND GATES SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION PRIOR TO PAVING. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A COMPLIANCE ISSUES.
- MAINTAIN A MINIMUM OF 0.5% GUTTER SLOPE TOWARDS LOW POINTS.
- ALL STORM SEWER CONNECTIONS SHALL BE GASKETED AND WATER TIGHT INCLUDING MANHOLE CONNECTIONS.
- ALL STORM SEWER PIPE SHALL BE AIR TESTED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
- MAINTAIN A MINIMUM OF 1.25% SLOPE IN BITUMINOUS PAVEMENT AREAS, 0.5% SLOPE IN CONCRETE PAVEMENT AREAS.
- CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "INFALL CURB" WHERE PAVEMENT DRAINS TOWARD GUTTER AND "OUTFALL" CURB WHERE PAVEMENT DRAINS AWAY FROM GUTTER.



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KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
151249000	07/26/2024	AS SHOWN	BSK	BSK	MTL

GRADING AND DRAINAGE PLAN

STARBUCKS- N CLASSEN BLVD & NW 12TH ST  
PREPARED FOR  
STARBUCKS  
OKLAHOMA CITY

SHEET NUMBER  
C500

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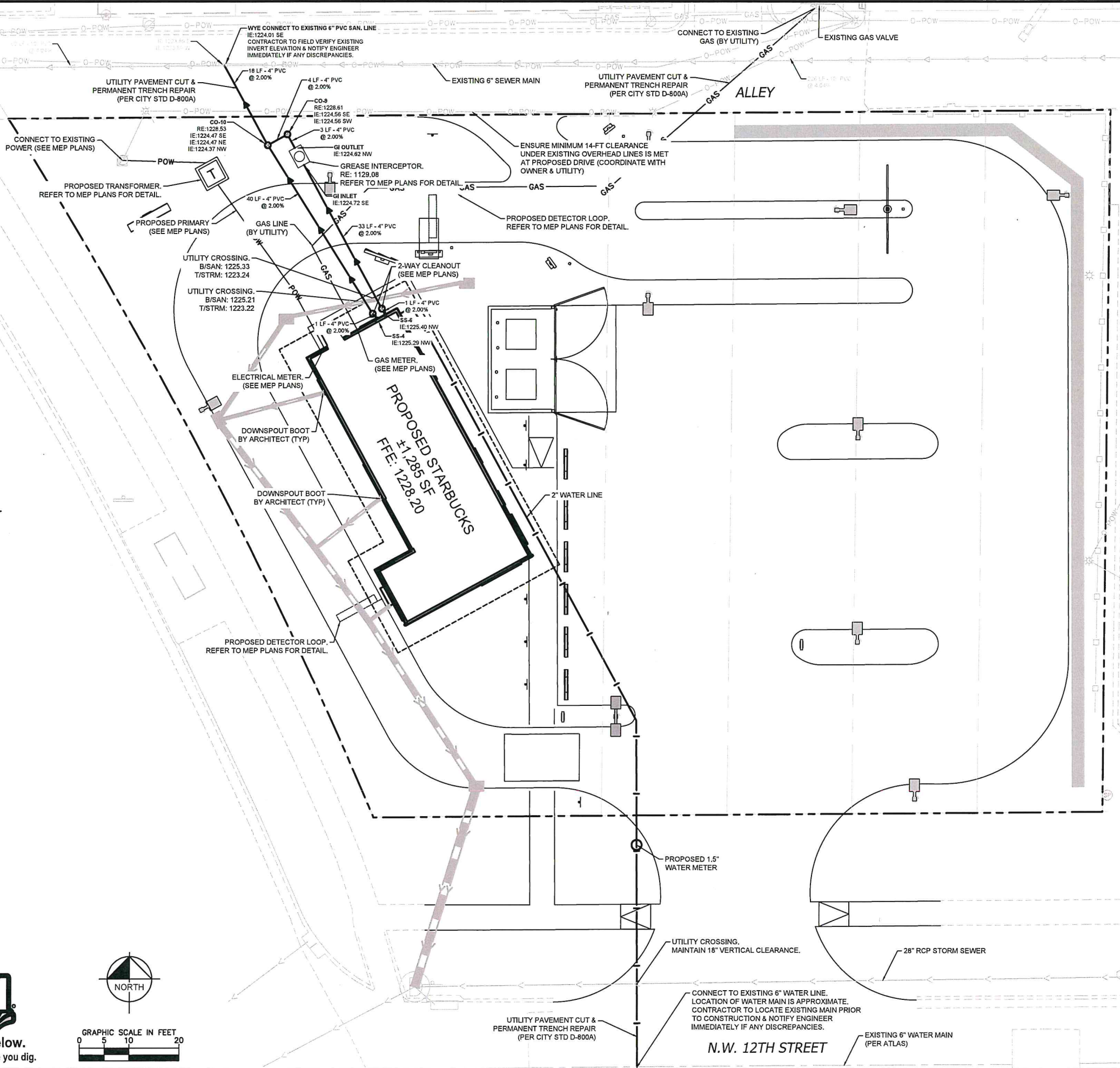


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GRAPHIC SCALE IN FEET  
0 5 10 20

N. CLASSEN  
BOULEVARD



#### LEGEND

EXISTING	PROPOSED	
		GATE VALVE
		HYDRANT
		REDUCER
		TEE
		SANITARY SEWER MANHOLE
		SANITARY CLEANOUT
		WATERMAIN
		SANITARY SEWER
		STORM SEWER
		UNDERGROUND ELECTRIC
		TELEPHONE
		GAS MAIN

#### UTILITY PLAN NOTES

1. INSTALL UTILITIES IN ACCORDANCE WITH APPLICABLE CITY SPECIFICATIONS, STATE PLUMBING CODE, AND BUILDING PERMIT REQUIREMENTS.
2. CONTACT STATE 811 CALL-BEFORE-YOU-DIG LOCATING SERVICE AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION FOR UNDERGROUND UTILITY LOCATIONS.
3. CONTRACTOR IS RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
4. SANITARY SEWER PIPE SHALL BE:  
PVC: ASTM D-2729, D-3034  
PVC SCH 40: ASTM D-1785, F-714, F-894  
SANITARY SEWER FITTINGS SHALL BE:  
PVC: ASTM D-2729, D-3034  
PVC SCH 40: ASTM D-2665, F-2794, F-1866
5. WATER SERVICE PIPE SHALL BE:  
PVC: ASTM D-1785, D-2241, AWWA C-900  
DUCTILE IRON: AWWA C115  
WATER MAIN FITTINGS SHALL BE:  
PVC: ASTM D-2464, D-2466, D-2467, F-1970, AWWA C-907  
DUCTILE IRON: AWWA C-153, C-110, ASME 316.4
6. WHEN CONNECTING TO AN EXISTING UTILITY LINE, FIELD VERIFY THE LOCATION, DEPTH, AND SIZE OF THE EXISTING PIPE(S) PRIOR TO INSTALLATION OF THE NEW LINES. NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS IMPACTING THE PROPOSED DESIGN OF THE PROJECT.
7. PLACE AND COMPACT ALL FILL MATERIAL PRIOR TO INSTALLATION OF PROPOSED UNDERGROUND UTILITIES. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
8. MAINTAIN A MINIMUM OF 4' COVER ON ALL WATER LINES.
9. FOR WATER LINES AND STUB-OUTS UTILIZE MECHANICAL JOINTS WITH RESTRAINTS SUCH AS THRUST BLOCKING, WITH STAINLESS STEEL OR COBALT BLUE BOLTS, OR AS INDICATED IN THE CITY SPECIFICATIONS AND PROJECT DOCUMENTS.
10. MAINTAIN 24-INCH MINIMUM VERTICAL SEPARATION WHERE SEWER PIPE CROSSES WATER LINES (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE OR STRUCTURE). PROVIDE 10-FOOT HORIZONTAL SEPARATION BETWEEN SEWER PIPE AND WATER LINES.
11. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (OR ANY OBSTRUCTION EXISTING AND PROPOSED), THE SANITARY PIPE MATERIAL SHALL BE PVC SCHEDULE 40 OR PVC C900 AND HAVE MECHANICAL JOINTS AT LEAST 10 FEET ON EITHER SIDE OF THE CENTER LINE OF THE CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE FASTENERS AS REQUIRED TO PROVIDE A MINIMUM OF 24-INCH VERTICAL SEPARATION MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
12. ALL PVC & HDPE SEWER AND WATER PIPE SHALL HAVE A TRACER WIRE INSTALLED IN THE TRENCH AND TERMINATED PER THE DETAILS.
13. UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO PLACING BACKFILL.
14. IN PAVEMENT AREAS, RAISE MANHOLE CASTINGS TO BE FLUSH WITH PROPOSED FINISHED SURFACE GRADE. IN GREEN AREAS, RAISE MANHOLE CASTINGS TO BE 6" ABOVE FINISHED GROUND ELEVATION & INSTALL A WATERTIGHT LID.
15. REFER TO PLUMBING PLANS FOR LOCATION, SIZE AND ELEVATION OF UTILITY SERVICE CONNECTIONS AND ROOF DRAINS TO THE INTERIOR BUILDING SYSTEMS. BACKFLOW DEVICES (DDCV AND PRZ ASSEMBLIES) & METERS ARE LOCATED INSIDE THE BUILDING.
16. 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 COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
17. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES. COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
18. REFER TO THE SITE ELECTRICAL PLANS FOR SPECIFICATIONS OF THE PROPOSED SITE LIGHTING AND ELECTRICAL EQUIPMENT.
19. EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS. REFER TO THE UTILITY PLANS FOR LAYOUT AND ELEVATIONS FOR PROPOSED SANITARY SEWER, WATER MAIN, AND OTHER BUILDING UTILITY SERVICE CONNECTIONS. REFER TO THE GRADING PLAN FOR DETAILED SURFACE ELEVATIONS.
20. EXCESS MATERIAL, ABANDONED UTILITY ITEMS, AND OTHER UNUSABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE CONSTRUCTION SITE.
21. COORDINATE WITH THE PLUMBING PLANS FOR THE LOCATION, SIZE AND ELEVATION OF THE PROPOSED UNDERGROUND ROOF DRAIN CONNECTIONS.
22. ALL STORM SEWER PIPE JOINTS SHALL BE WATER-TIGHT CONNECTIONS.
23. ALL STORM SEWER PIPE CONNECTIONS TO MANHOLES SHALL BE GASKETED AND WATER TIGHT, BOOTED COUPLERS AT THE STRUCTURE OR A WATER STOP WITH NON-SHRINK GROUT MAY BE USED IN ACCORDANCE WITH LOCAL CODES.
24. CONTRACTOR SHALL AIR TEST ALL STORM SEWER PIPE IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

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KHA PROJECT 151295000				DATE 07/26/2024	SCALE AS SHOWN	DESIGNED BY BSK	DRAWN BY BSK	CHECKED BY MTL
ISSUED FOR PERMIT - NOT FOR CONSTRUCTION								
STARBUCKS - N CLASSEN BLVD & NW 12TH ST								
PREPARED FOR STARBUCKS								
OKLAHOMA CITY								
SHEET NUMBER C600								

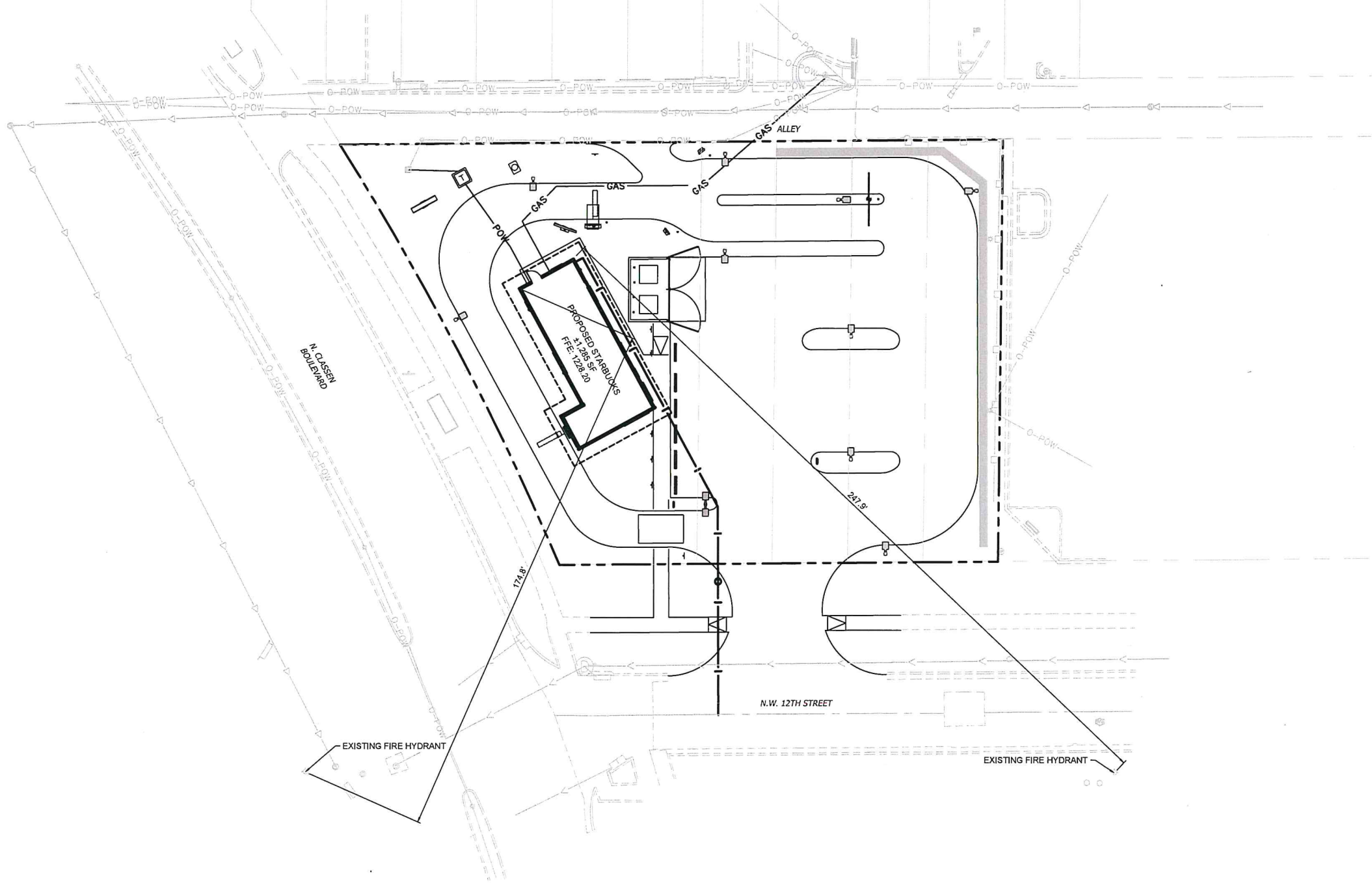
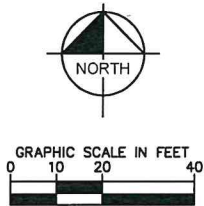
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LEGEND		
EXISTING	PROPOSED	
		GATE VALVE
		HYDRANT
		REDUCER
		TEE
		SANITARY SEWER MANHOLE
		SANITARY CLEANOUT
		WATERMAIN
		SANITARY SEWER
		STORM SEWER
		UNDERGROUND ELECTRIC
		TELEPHONE
		GAS MAIN

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OKLAHOMA CITY

## FIRE HYDRANT COVERAGE PLAN

KHA PROJECT	161246000
DATE	07/26/2024
SCALE	AS SHOWN
DESIGNED BY	BSK
DRAWN BY	BSK
CHECKED BY	MTL

**Kimley»Horn**

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C601

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### PLANT SCHEDULE

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	CALL	TOTAL POINT VALUE	UNIT POINT VALUE
<b>OVERSTORY TREES</b>								
	CHO	2	CHENAPIN OAK	QUERCUS MUEHLENBERGERI	5 & 8	2.5' CAL.	12	24
	RPM	2	REDPOINTED MAPLE	ACER RUBRUM FRANK JR.	5 & 8	2.5' CAL.	12	24
<b>SMALL TREES</b>								
SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SPACING	TOTAL POINT VALUE	UNIT POINT VALUE
	ANH	10	ANNABELLE HYDRANGEA	HYDRANGEA ARBORESCENS ANNABELLE	#5 CONT.	4' O.C.	3	30
	TJB	9	THORNLESS JAPANESE BARBERRY	BERBERIS THUNBERGII THORNLESS	#5 CONT.	4' O.C.	3	27
	VIB	8	SPRING RED COMPACT VIBURNUM	VIBURNUM TILLODIUM 'SPRING RED COMPACT'	#5 CONT.	4' O.C.	3	24
<b>EVERGREEN SHRUBS</b>								
	ABE	3	GLOSSY ABELIA	ABELIA X GRANDIFLORA	#5 CONT.	4' O.C.	3	9
	BPJ	31	BLUE POINT JUNPER	JUNIPERUS CHINENSIS 'BLUE POINT'	#5 CONT.	4' O.C.	3	93
	SGJ	8	SEA GREEN JUNPER	JUNIPERUS CHINENSIS 'SEA GREEN'	#5 CONT.	5' O.C.	3	24
<b>LOW VOLTAGE GRASSES</b>								
	BBG	66	BLOODE AMBITON BLUE GRAMA	BOUTELOUA GRACILIS 'BLOODE AMBITON'	#1 CONT.	16" O.C.	0.5	33
	PLG	43	PURPLE LOVEGRASS	EKGROSTIS SPECTABILIS	#1 CONT.	16" O.C.	0.5	21
<b>PERENNIALS</b>								
SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT.	SPACING	TOTAL POINT VALUE	UNIT POINT VALUE
	BMW	125	BUTTERFLY MILKWEED	ASCLEPIAS TUBEROSA	#1 CONT.	18" O.C.	0.5	62
	NGL	221	NEW GOLD LANTANA	LANTANA X 'NEW GOLD'	#1 CONT.	14" O.C.	0.5	89
					SOD	112 S.F.	.25	28
							<b>GRAND TOTAL</b>	<b>478</b>

NOTE:  
QUANTITIES ON PLAN SUPERSEDE LIST QUANTITIES IN THE EVENT OF A DISCREPANCY.

ABBREVIATIONS:  
B&B = BALLED AND BURLAPPED CAL. = CALIPER HT. = HEIGHT MIN. = MINIMUM O.C. = ON CENTER  
SP. = SPECIES QTY. = QUANTITY

### LANDSCAPE LEGEND

- EDGER (TYP.)
- APPROXIMATE LIMITS OF SODDING / SOD ALL DISTURBED AREAS (TYP.)

### LANDSCAPE KEYNOTES

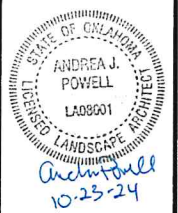
- (A) EDGER (TYP.)
- (B) ROCK MULCH (TYP.)
- (C) SOD (TYP.)

### LANDSCAPE SUMMARY

#### LANDSCAPE REQUIREMENTS

- 58-11250 C.3 SITE POINTS**
    - REQUIRED: 126 POINTS / ONE POINT PER S.F. OF DEVELOPED AREA BY 200
    - PROVIDED: 406 POINTS
  - 58-11250 C.3 PARKING POINTS**
    - REQUIRED: 26 POINTS / 13 PARKING SPACES
    - PROVIDED: 28 POINTS / 14 PROPOSED PARKING SPACES
  - 58-11250 C.6**
    - REQUIRED: 102 POINTS / MINIMUM 25% POINTS FOR EVERGREENS
    - PROVIDED: 102 POINTS
  - 58-11250 C.6**
    - REQUIRED: 102 POINTS / MAXIMUM 25% POINTS FOR TURF GRASS (EXCLUDING R.O.W.)
    - PROVIDED: 28 POINTS
  - 58-11250 C.7**
    - REQUIRED: 61 POINTS / MAXIMUM 15% POINTS FOR PERENNIALS
    - PROVIDED: 61 POINTS
- DEVELOPED AREA: 25,228 S.F. / 0.579 AC  
PROPOSED PARKING SPACES: 14 PARKING SPACES

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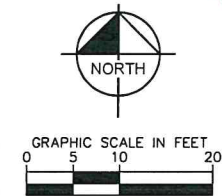


KHA PROJECT	161246000
DATE	11/05/2024
SCALE	AS SHOWN
DESIGNED BY	ATK
DRAWN BY	ATK
CHECKED BY	AJP

### LANDSCAPE PLAN

ISSUED FOR PERMIT - NOT FOR CONSTRUCTION  
**STARBUCKS - N CLASSEN**  
**BLVD & NW 12TH ST**  
PREPARED FOR  
**STARBUCKS**  
OKLAHOMA CITY

SHEET NUMBER  
**L100**



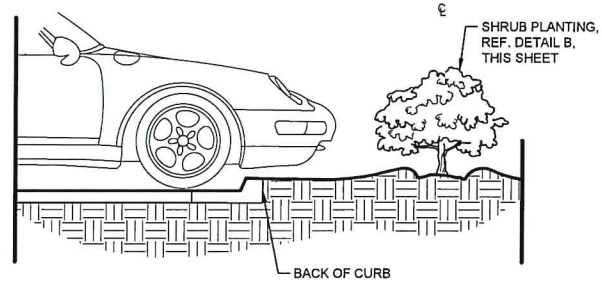
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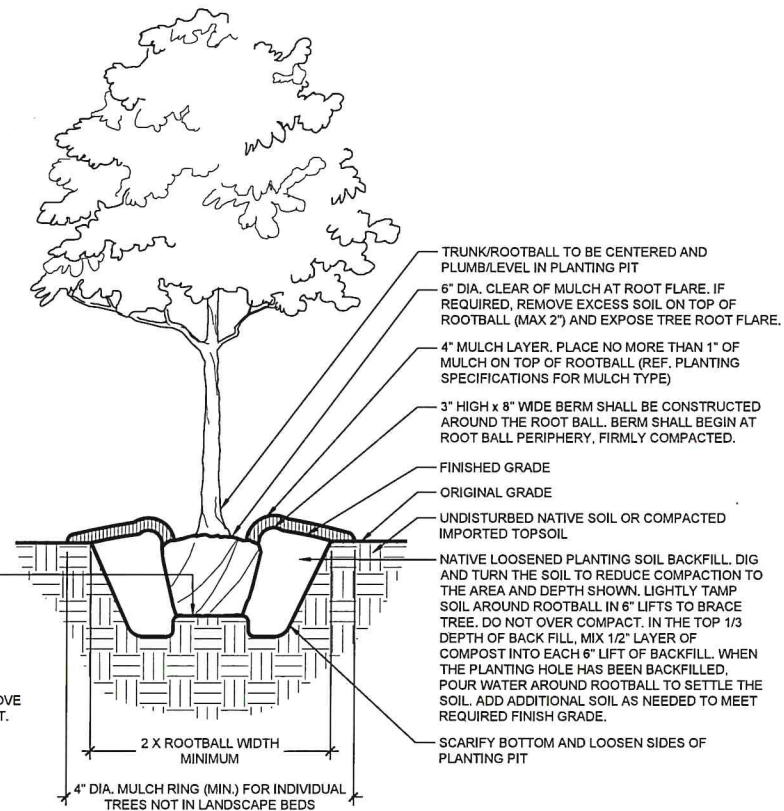
METAL EDGING AT LANDSCAPE BED



SHRUB PLANTING AT CURB



## TYPICAL GROUNDCOVER PLANTING




**SECTION**  
TYPICAL TREE PLANTING (UP TO 3" CALIPER)

N.T.S.

PLANTING NOTES:

1. ALL PLANT MATERIAL SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES AND SHALL MEET ALL STANDARDS AS STATED IN THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. NO SUBSTITUTIONS IN PLANT MATERIALS SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION FROM OWNER OR LANDSCAPE ARCHITECT. IN THE EVENT OF DISCREPANCIES BETWEEN THE DRAWING AND THE PLANT LIST, THE DRAWING SHALL PREVAIL.
3. LOCATE ALL UTILITIES PRIOR TO ANY DIGGING OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES INCURRED BY HIS WORK.
4. STAKING AND GUYING ALTERNATIVES: METHODS INDICATED IN DRAWING DETAILS ARE PREFERRED. CONTRACTOR MAY SUGGEST ALTERNATE METHODS, ASSUMING FULL RESPONSIBILITY FOR THEIR IMPLEMENTATION. CONTRACTOR SHALL REPLACE, PLANT, OR UPRIGHT ANY TREES BLOWN OVER OR DAMAGED DUE TO INADEQUATE STAKING AT NO ADDITIONAL COST TO THE OWNER.
5. PLANTS MASSED IN BEDS SHALL BE ARRANGED USING TRIANGULAR SPACING.
6. PROVIDE A STEEL EDGE BETWEEN ALL PLANTING BEDS AND LAWN AREAS. REFERENCE SITE PLAN.
7. ALL PLANTING BEDS TO BE TOP DRESSED WITH A MINIMUM OF 3" SHREDDED HARDWOOD MULCH, REFERENCE LANDSCAPE PLAN.
8. LAY BERMUDA SOD FOR PROPOSED LAWN AREAS TO ALL EDGES OF PAVEMENT AND/ OR LIMITS OF DISTURBANCE OUTSIDE R.O.W. OR PROPOSED LANDSCAPE EASEMENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING UNTIL FINAL ACCEPTANCE. ALL REQUIRED LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THE WORK SHALL INCLUDE, BUT NOT TO BE LIMITED TO, MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING, AND OTHER SUCH ACTIVITIES COMMON TO THE MAINTENANCE OF LANDSCAPING. ALL PLANT MATERIALS SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIAL THAT DIES SHALL BE REPLACED WITH THE PLANT MATERIAL OF SIMILAR SIZE AND VARIETY.
10. CONTRACTOR SHALL WARRANTY PLANT MATERIAL TO REMAIN ALIVE AND HEALTHY FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE. WARRANTY SHALL NOT INCLUDE DAMAGE FOR LOSS OF PLANT MATERIAL DUE TO ACTS OF VANDALISM OR NEGLIGENCE ON THE PART OF THE OWNER.
11. ALL DISTURBED AREAS WITHIN LIMITS OF CONSTRUCTION NOT CALLED TO BE SODDED, SHALL BE REESTABLISHED WITH BERMUDA SOD OR SEED. REFER TO PLANS.
12. ALL LANDSCAPE BED AREAS TO BE PREPARED USING "RICH MIX" BY MINICK MATERIALS OR MURPHY (OR APPROVED EQUAL). INSTALL TO FINISH, PER PLANTING DETAILS (2" DEPTH MIN.) FINISHED GRADES OF PLANTING BEDS TO BE 2" BELOW FINISHED GRADE OF ADJACENT PAVING OR AS SHOWN ON GRADING PLAN.
13. ALL SOD AREAS TO RECEIVE 4" DEPTH (MIN) TOPSOIL PRIOR TO INSTALLATION. TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE, pH RANGE OF 7.0-7.5, AND FREE OF TRASH, DEBRIS, STONES, WEEDS, AND TWIGGS/BRANCHES.

SHEET NUMBER L101	STARBUCKS- N CLASSEN BLVD & NW 12TH ST  PREPARED FOR  STARBUCKS  OKLAHOMA CITY	OK	LANDSCAPE DETAILS	KHA PROJECT 161248000								<b>Kimley»»»Horn</b>  2024 KIMLEY-HORN AND ASSOCIATES, INC. 4127 GALLARDIA PARKWAY, SUITE 250, OKLAHOMA CITY, OK 73142 PHONE: 405-241-5423 FAX NO. 2746 EXP. JUNE 30, 2025  WWW.KIMLEY-HORN.COM				No.	REVISIONS	DATE	BY
				DATE 8/9/2024	SCALE AS SHOWN	DESIGNED BY ATK	DRAWN BY ATK	CHECKED BY AJP											

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**STARBUCKS- N CLASSEN**  
**BLVD & NW 12TH ST**

PREPARED FOR  
**STARBUCKS**

OKLAHOMA CITY

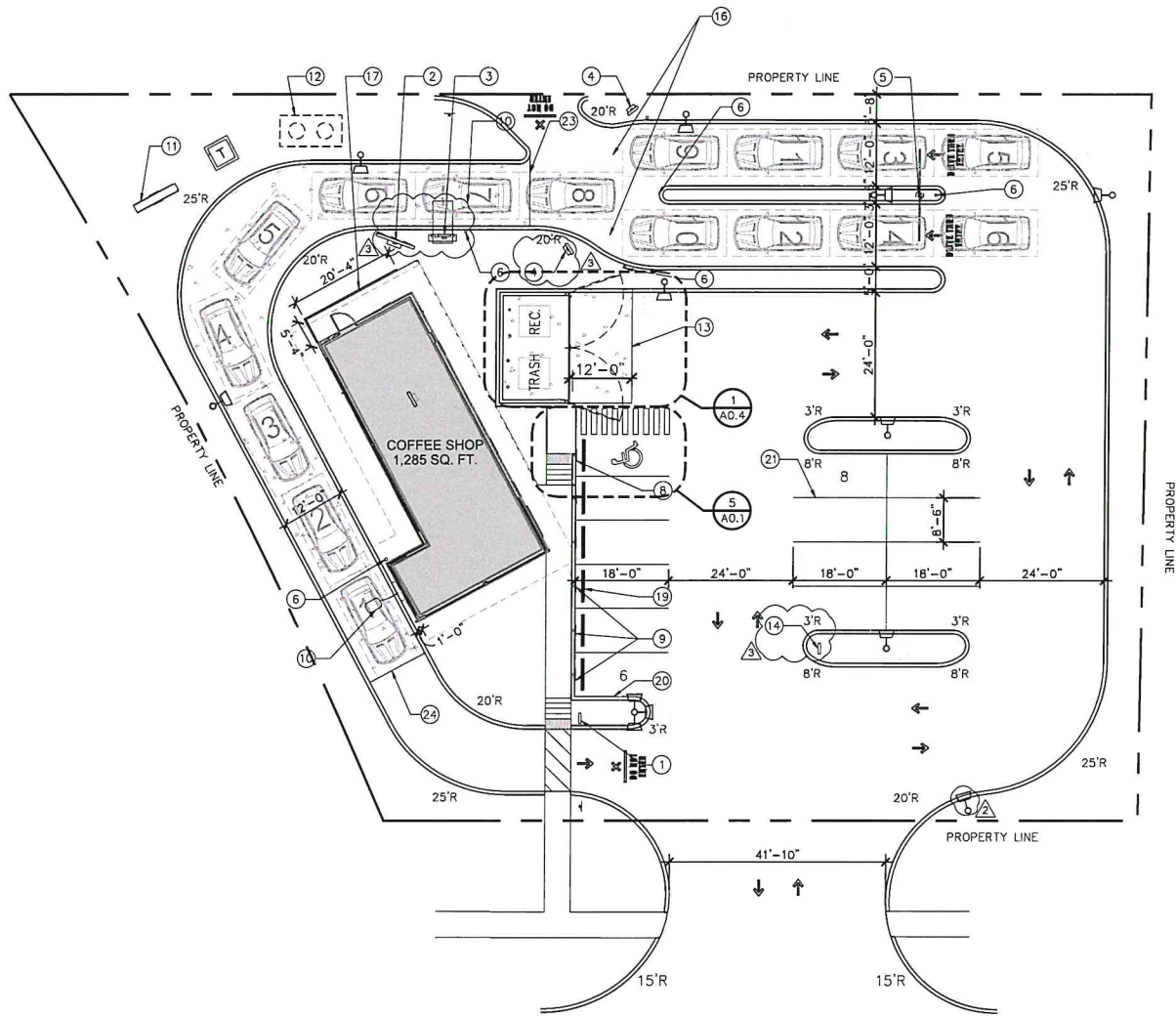
LANDSCAPE  
DETAILS

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2024 KIMLEY-HORN AND ASSOCIATES, INC.  
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PHONE: 405-241-5423 FIRM NO. 2740, EXP. JUNE 30, 2025  
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1 SITE PLAN  
SCALE: 1/16" = 1'-0"

**MENU BOARD CONDUIT NOTES**

**SITE SIGNAGE:**  
ONE (1) 1" CONDUIT FOR EACH DIRECTIONAL SIGN TO ELECTRICAL PANELS IN BOH. (MAXIMUM THREE (3) DIRECTIONAL SIGNS SERVED BY A SINGLE CIRCUIT)

**PRE-ORDER MENU:**  
ONE (1) 1" CONDUIT FROM PRE-ORDER MENU BOARD TO ELECTRICAL PANELS IN BOH.

**DIGITAL ORDER SCREEN:**  
ONE (1) 1" CONDUIT FROM DIGITAL ORDER SCREEN TO ELECTRICAL PANELS IN BOH.  
TWO (2) 1" CONDUITS FROM DATA FROM DIGITAL ORDER SCREEN TO THE INTERIOR OF THE DRIVE THRU "BUMP-OUT"

**DRIVE THRU WINDOW:**  
FURNISH AND INSTALL 1" CONDUIT CENTERED BENEATH DRIVE THRU WINDOW FROM INTERIOR BUMP OUT TO EXTERIOR TO ALLOW LOOP DETECTOR CONNECTION.

GC TO VERIFY FINAL LOCATIONS OF DIRECTIONAL SIGNAGE WITH TENANTS DRAWINGS

ALL CONDUIT TO HAVE LABELED PULL STRINGS.

**SITE NOTES:**

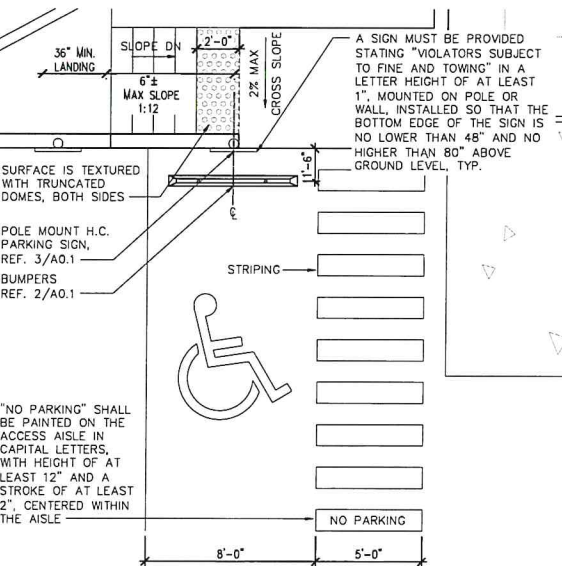
- G.C. SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL ENGINEERING REPORT FOR PREPARATION OF SITE AND PARKING SUBGRADE.
- REFER TO STRUCTURAL NOTES FOR BUILDING SLAB SITE PREPARATION
- G.C. SHALL HIRE A STATE LICENSED IRRIGATION CONTRACTOR FOR THE INSTALLATION OF IRRIGATION SYSTEM.
- G.C. SHALL INSURE THAT THE WALK AT EXTERIOR DOORS IS A MAXIMUM OF 1:50 AT ACCESSIBLE APPROACHES AND 1:50 CROSS SLOPE.
- G.C. SHALL INSURE THAT ALL ACCESSIBLE ROUTES ARE A MAXIMUM OF 1:20 SLOPE
- SLOPE AT ACCESSIBLE PARKING AND ACCESS AISLES SHALL NOT EXCEED 1:50 SLOPE AND CROSS SLOPE
- PROVIDE JUNCTION BOX AT DUMPSTER ENCLOSURE FOR IRRIGATION CONTRACTOR TO HARDWIRE SPRINKLER CONTROLLER.
- THE SPRINKLER SYSTEM SHALL HAVE A FREEZE AND RAIN DETECTOR.
- NO EXTERIOR CONDUITS ARE TO BE RUN UNDER THE BUILDING.

PARKING TABULATION	
REQUIRED PARKING = 1 PER 250 SF	
1,285 / 250 = 6 SPACES	
TOTAL REQUIRED PARKING	6
TOTAL PROVIDED PARKING	14
H/C ACCESSIBLE REQUIRED	1
H/C ACCESSIBLE PROVIDED	1

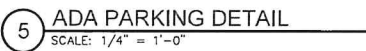
#### KEYED NOTES

- INTERNALLY ILLUMINATED EXIT, THANK YOU TRAFFIC SIGN. LANDLORDS G.C. SHALL PROVIDE FOOTING, ANCHOR BOLTS, ELECTRICAL CONDUIT W/ LABELED PULL STRINGS EACH END. REFER TO ELECTRICAL DRAWINGS. REF. 1/A0.2, TYP.
- MENU BOARD AND SPEAKER MOUNT BY STARBUCKS. LANDLORD G.C. SHALL INSTALL FOOTING, ANCHOR BOLTS, UNDERGROUND ELECTRICAL CONDUIT FOR POWER AND DATA WITH LABELED PULL STRINGS EACH END AND CONCRETE FOOTINGS PER SPECIFICATIONS. TENANT G.C. TO COORDINATE REQUIREMENTS AND FINAL LOCATION WITH TENANT REF. 3/A0.2.
- ORDER CONFIRMATION POST BY STARBUCKS. LANDLORD G.C. SHALL INSTALL FOOTING, ANCHOR BOLTS, UNDERGROUND ELECTRICAL CONDUIT FOR POWER AND DATA WITH LABELED PULL STRINGS EACH END AND CONCRETE FOOTINGS PER SPECIFICATIONS. TENANT G.C. TO COORDINATE REQUIREMENTS AND FINAL LOCATION WITH TENANT. REF. 2/A0.2.
- INTERNALLY ILLUMINATED PRE-MENU BOARD SIGN BY STARBUCKS. LANDLORD G.C. SHALL PROVIDE FOOTING, ANCHOR BOLTS, ELECTRICAL CONDUIT WITH LABELED PULL STRINGS EACH END AND CONCRETE FOOTINGS PER SPECIFICATIONS. TENANT G.C. TO COORDINATE REQUIREMENTS AND FINAL LOCATION WITH TENANT. REF. 2/A0.3.
- HEIGHT CLEARANCE BAR, LANDLORD G.C. SHALL PROVIDE CONCRETE FOOTING AND ANCHOR BOLTS. REF. 1/A0.3.
- NON-ILLUMINATED SQUARE BOLLARD, TYP. REF. 6/A0.1.
- ROOF CANTILEVER ABOVE.
- POLE MOUNT H.C. PARKING SIGN, REF. 3/A0.1.
- POLE MOUNT MOP PARKING SIGN, REF. 7/A0.1. LL TO PROVIDE POLE AND FOOTING, SIGN BY TENANT.
- DRIVE THRU DETECTOR LOOP.
- PROPOSED Pylon SIGN.
- GREASE TRAP, SCHER 6875.
- CONCRETE SURFACE.
- INTERNALLY ILLUMINATED DIRECTIONAL TRAFFIC SIGN. LANDLORDS G.C. SHALL PROVIDE FOOTING, ANCHOR BOLTS, ELECTRICAL CONDUIT W/ LABELED PULL STRINGS EACH END. REFER TO ELECTRICAL DRAWINGS. REF. 1/A0.2, TYP.
- NOT USED
- MERGE GRAPHIC ON PAVEMENT.
- EQUIPMENT SCREEN, REF. 3/A0.3.
- NOT USED
- BUMPERS, REF. 2/A0.1.
- NEW CURBS, TYP.
- NEW STRIPING, TYP.
- NOT USED
- CONCRETE TO STOP 12' BEFORE ORDER POINT.
- CONCRETE TO STOP 12' AFTER DRIVE THRU WINDOW.

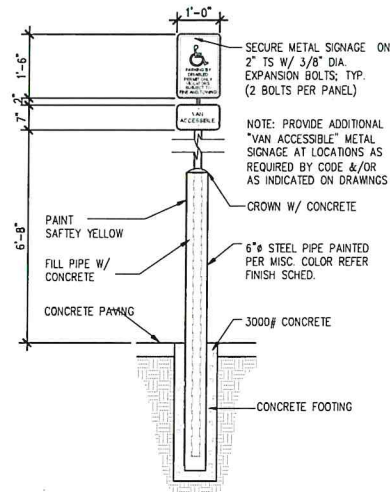
2 PRECAST PARKING BUMPER  
SCALE: 1 1/2" = 1'-0"



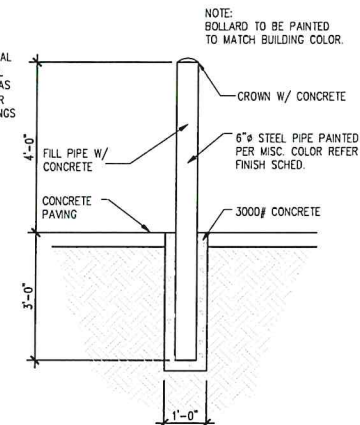
5 ADA PARKING DETAIL  
SCALE: 1/4" = 1'-0"



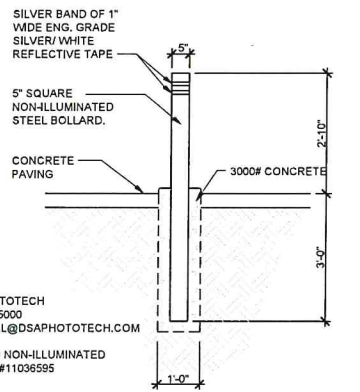
3 H.C. SIGN DETAIL  
SCALE: 1/2" = 1'-0"



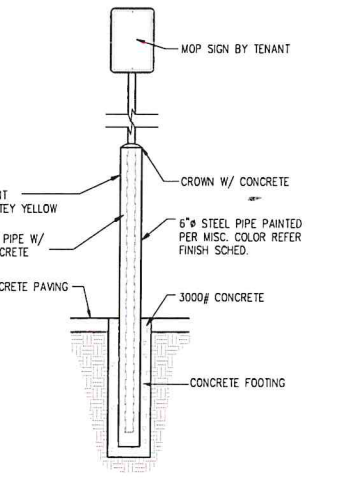
4 BOLLARD DETAIL  
SCALE: 1/2" = 1'-0"



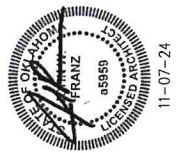
6 SQUARE BOLLARD DETAIL  
SCALE: 1/2" = 1'-0"



7 MOP SIGN DETAIL  
SCALE: 1/2" = 1'-0"



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**SHELL BUILDING**  
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OKLAHOMA CITY, OK 73106

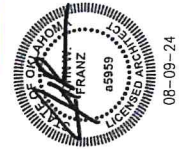
Revisions:

2	REVISION 7/15/24-24 / BY CC
1	DRAWER / CITY COMMENTS
3	REVISION 1/11-07-24 / BY CC
4	TENANT / CITY COMMENTS

File Name: 24097-A0.1  
Project No: 24097  
Date: 08/09/24  
Drawn By: CC  
Checked By: TI

SHEET  
**A0.1**  
SITE PLAN AND DETAILS





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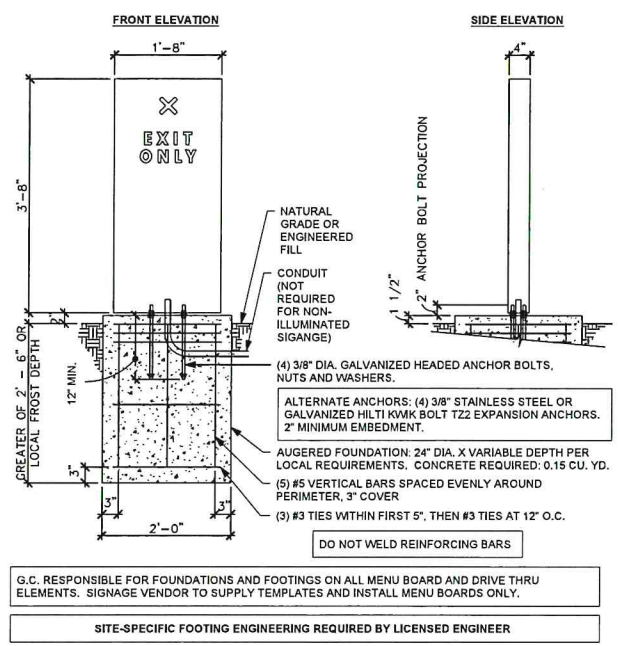
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Project No: 24037  
Date: 08/09/24  
Drawn By: MUNK  
Checked By: TI

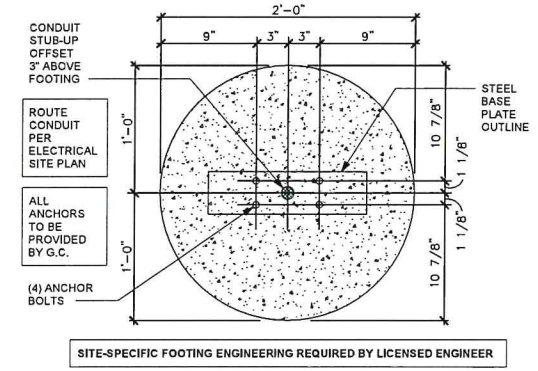
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SITE DETAILS

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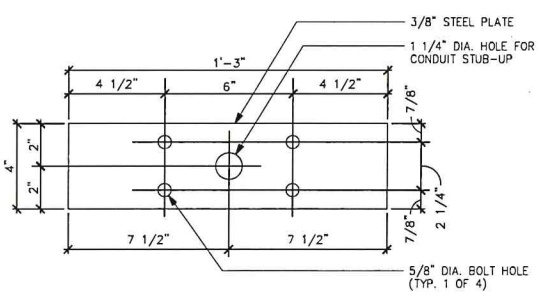
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**1A DTE EXIT SIGNAGE GROUND FOOTING**  
SCALE: 3/4" = 1'-0"

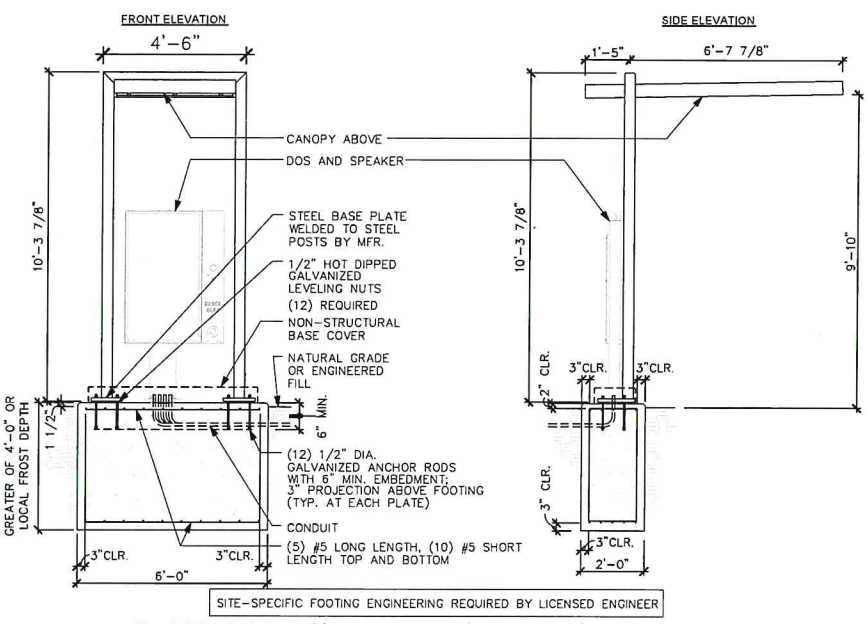


**1B DTE EXIT SIGNAGE BOLT PATTERN (TOP VIEW)**  
SCALE: 1 1/2" = 1'-0"

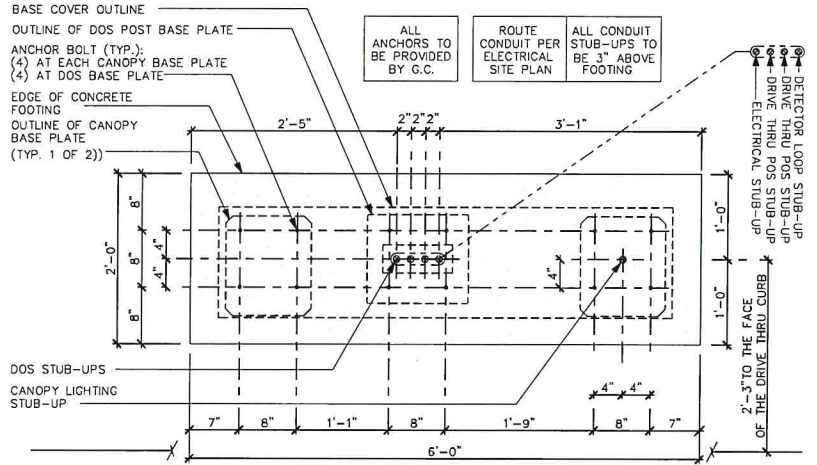


**1C DTE EXIT SIGNAGE BASE PLATE**  
SCALE: 3" = 1'-0"

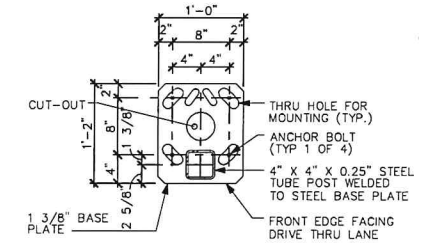
**1 DIRECTION SIGNAGE FOOTING**  
SCALE: N.T.S.



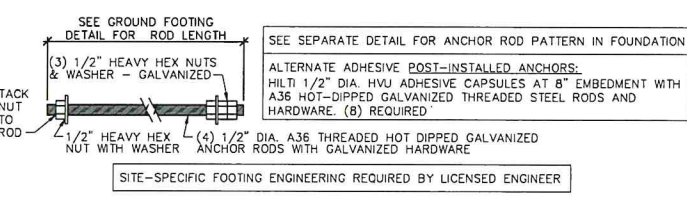
**2A DTE DOS CANOPY GROUND FOOTING**  
SCALE: 3/8" = 1'-0"



**2B DTE DOS CANOPY BOLT PATTERN (TOP VIEW)**  
SCALE: 1" = 1'-0"

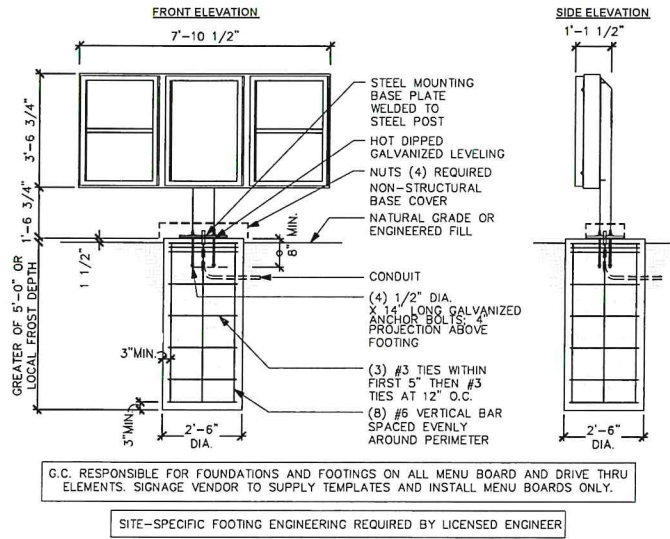


**2C DTE DOS CANOPY BASE PLATE**  
SCALE: 1" = 1'-0"

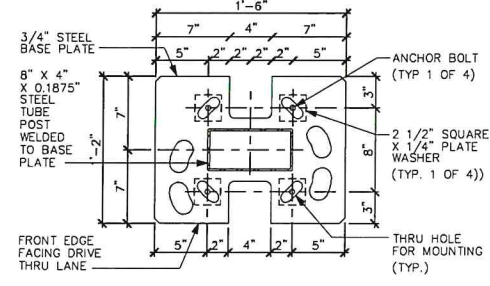


**2D DTE DOS CANOPY ANCHOR ROD**  
SCALE: 3" = 1'-0"

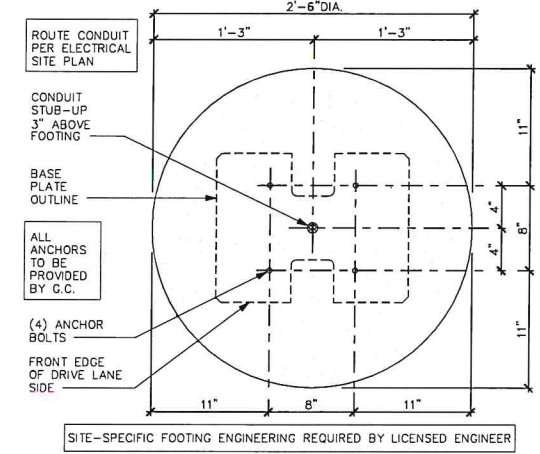
**2 ORDER CONFIRMATION POST**  
SCALE: N.T.S.



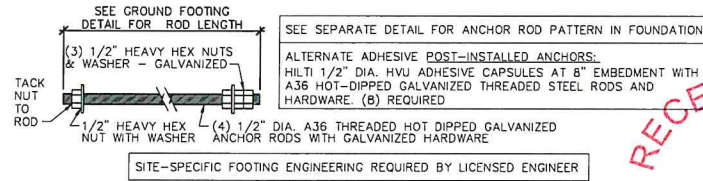
**3A DTE 5-PANEL MENU BOARD GROUND FOOTING**  
SCALE: 3/8" = 1'-0"



**3B DTE 5-PANEL MENU BOARD BASE PLATE**  
SCALE: 1 1/2" = 1'-0"



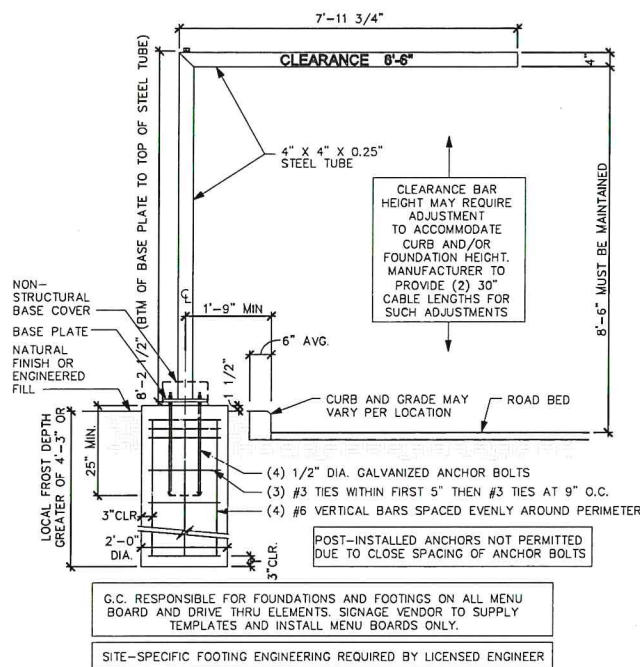
**3C DTE 5-PANEL MENU BOARD BOLT PATTERN (TOP VIEW)**  
SCALE: 1 1/2" = 1'-0"



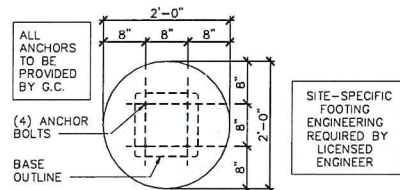
**3D DTE 5-PANEL MENU BOARD ANCHOR ROD**  
SCALE: 3" = 1'-0"

**3 MENU BOARD FOOTING**  
SCALE: N.T.S.

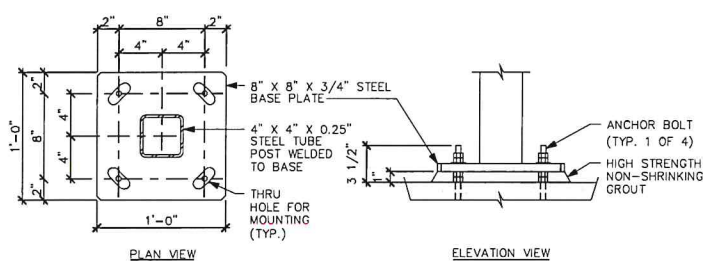




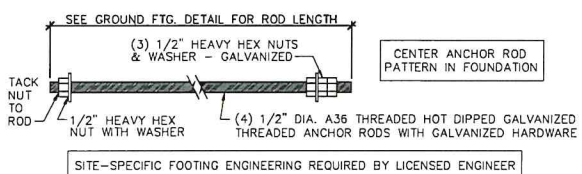
1A DTE CLEARANCE BAR GROUND FOOTING  
SCALE: 1/2" = 1'-0"



1B DTE CLEARANCE BAR BOLT PATTERN (TOP VIEW)  
SCALE: 3/4" = 1'-0"

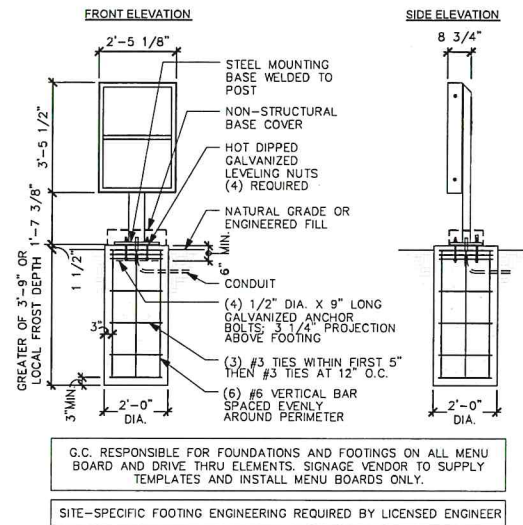


1C DTE CLEARANCE BAR BASE PLATE  
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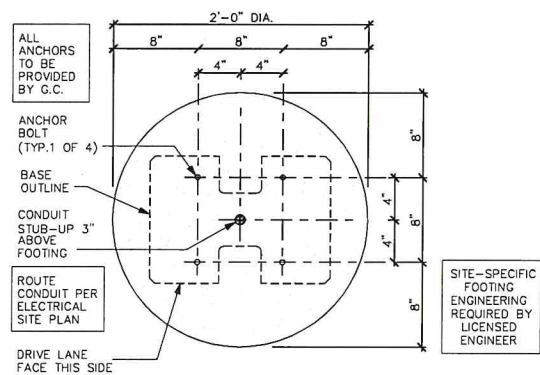


1D DTE CLEARANCE BAR ANCHOR ROD  
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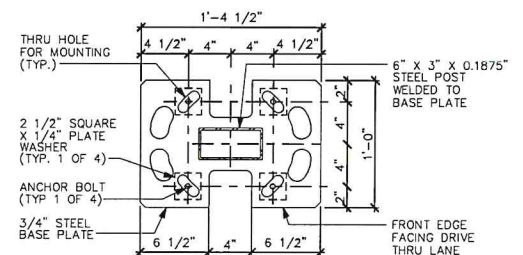
1 CLEARANCE BAR FOOTING  
SCALE: N.T.S.



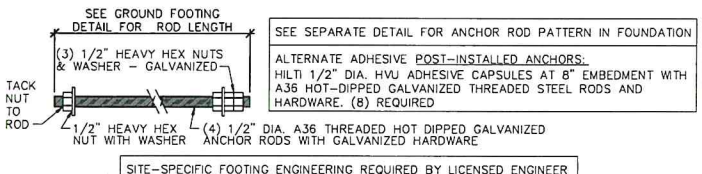
2A DTE PRE-MENU GROUND FOOTING  
SCALE: 3/8" = 1'-0"



2B DTE PRE-MENU BOLT PATTERN (TOP VIEW)  
SCALE: 1 1/2" = 1'-0"

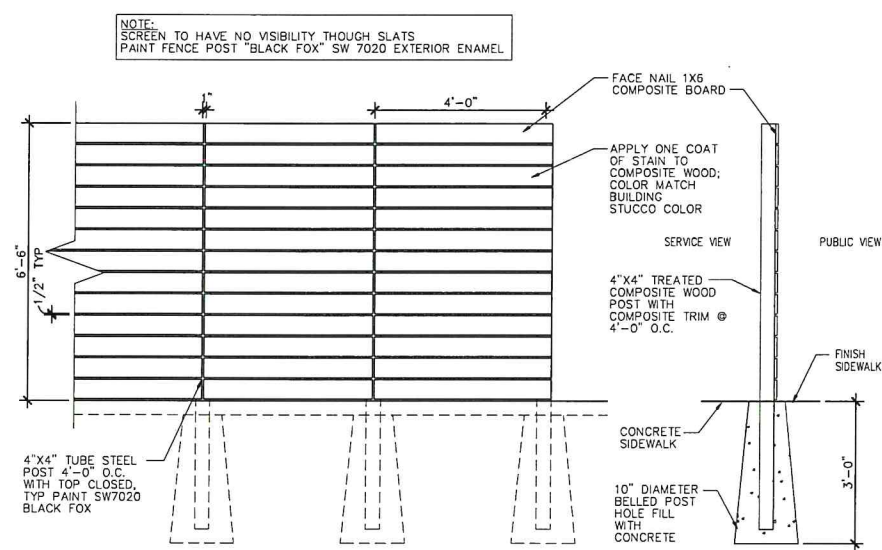


2C DTE PRE-MENU BASE PLATE  
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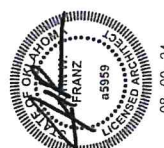


2D DTE PRE-MENU ANCHOR ROD  
SCALE: 3" = 1'-0"

2 PRE-MENU BOARD FOOTING  
SCALE: N.T.S.



3 EQUIPMENT SCREEN ELEV.  
SCALE: 1/2" = 1'-0"



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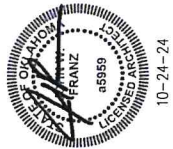
**SHELL BUILDING**  
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OKLAHOMA CITY, OK 73106

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File Name: 24097 A0.3  
Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
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SHEET  
**A0.3**  
SITE DETAILS





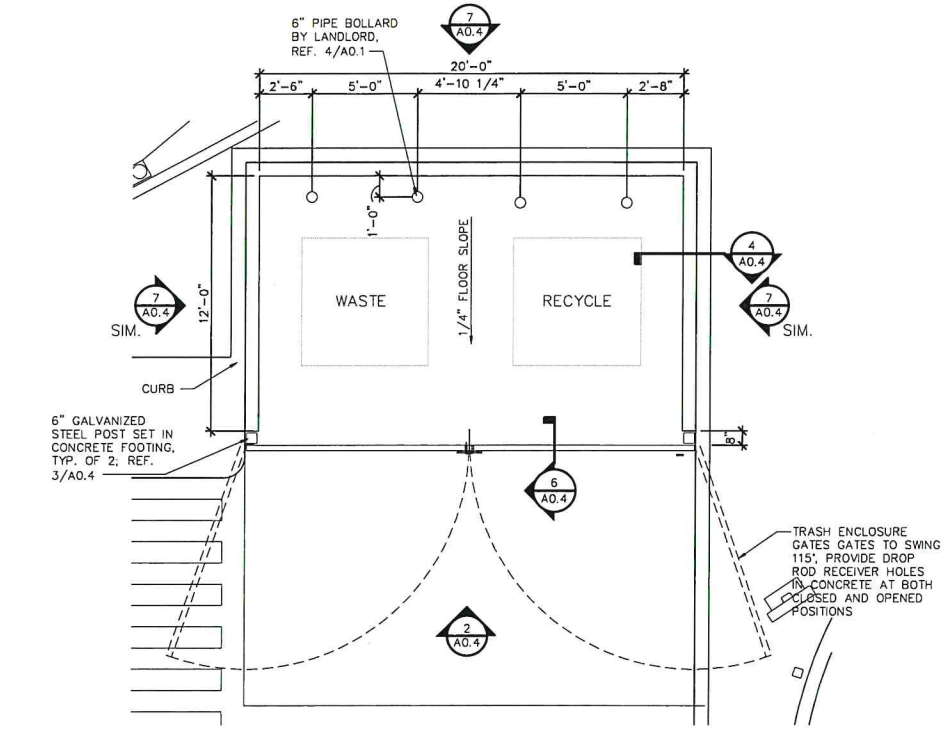
**SHELL BUILDING**  
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Revisions:  
1. REVISION 9/10/24-24 / BY CC  
OWNER / CITY COMMENTS

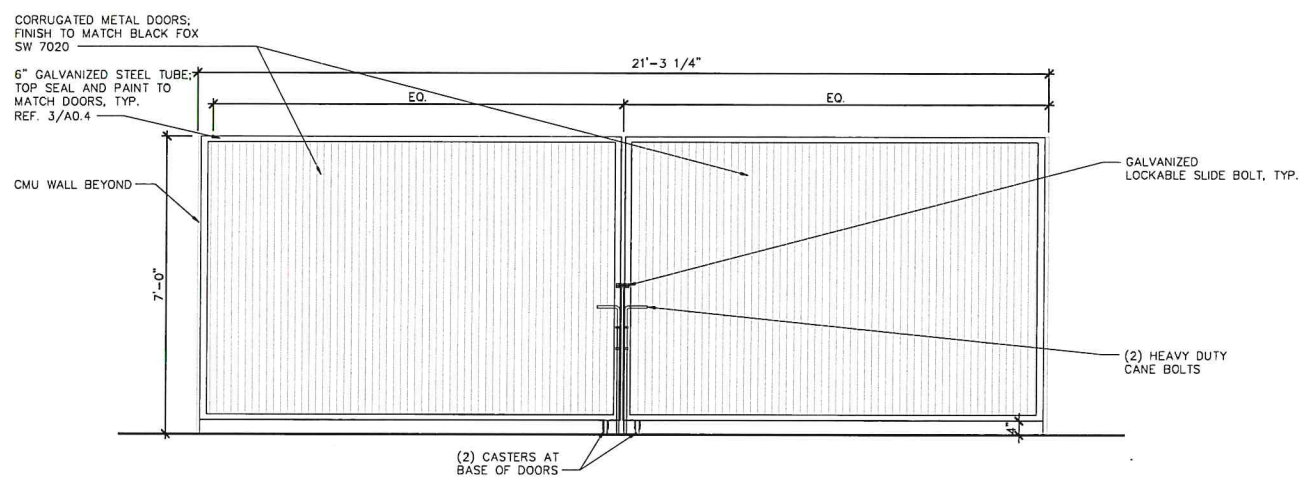
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SITE DETAILS

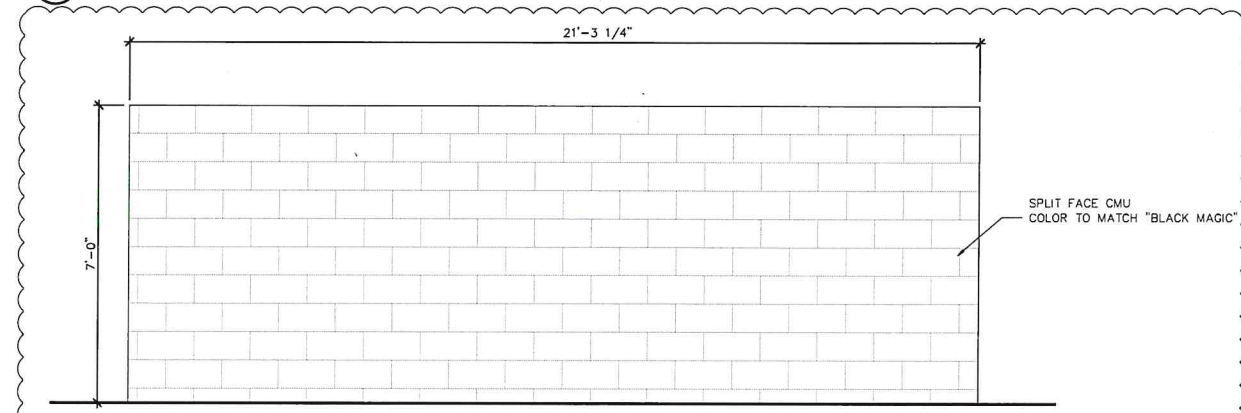


1 TRASH ENCLOSURE PLAN  
SCALE: 1/4" = 1'-0"

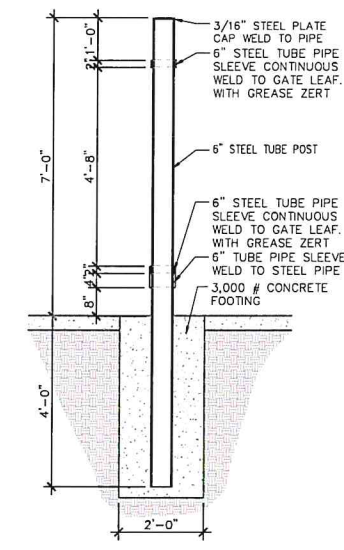
TRASH ENCLOSURE DOOR		
QTY.	DESCRIPTION	NUMBER - FINISH
4	BARREL HINGE	BLK
2	RICHARD WILCOX: CANE BOLT	0524.00021 - BLK
2	LAWRENCE BROS PULL	CD1210S - BLK
1	LAWRENCE BROS HASP	CD1915S - B
1	PADLOCK	C955-2 FIC - 606
1	CYLINDER CORE	(hardware number to be determined)



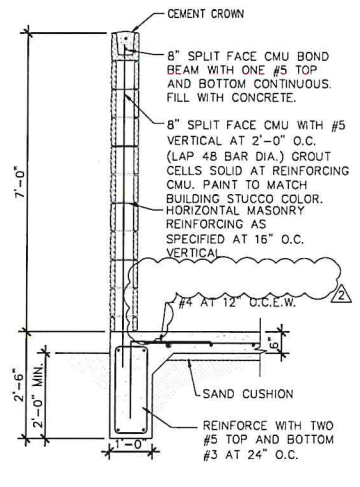
2 TRASH ENCLOSURE ELEV.  
SCALE: 1/2" = 1'-0"



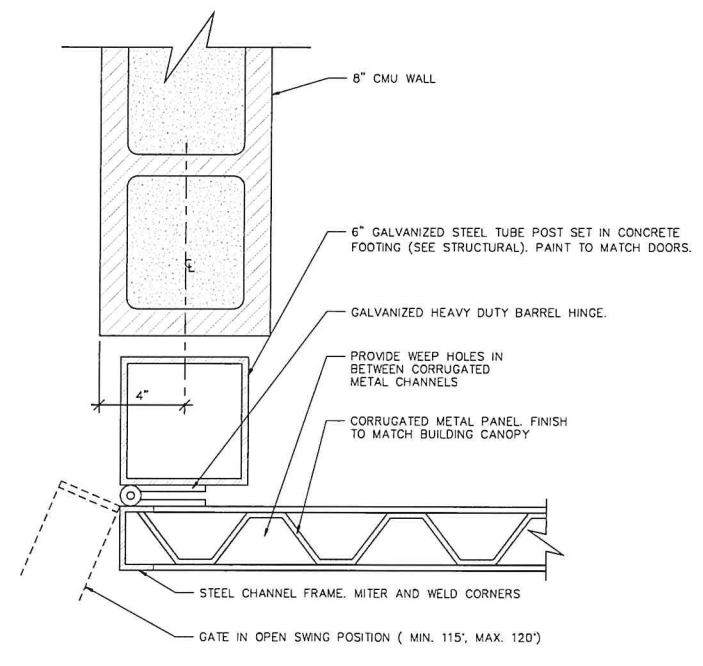
3 TRASH ENCLOSURE ELEV.  
SCALE: 1/2" = 1'-0"



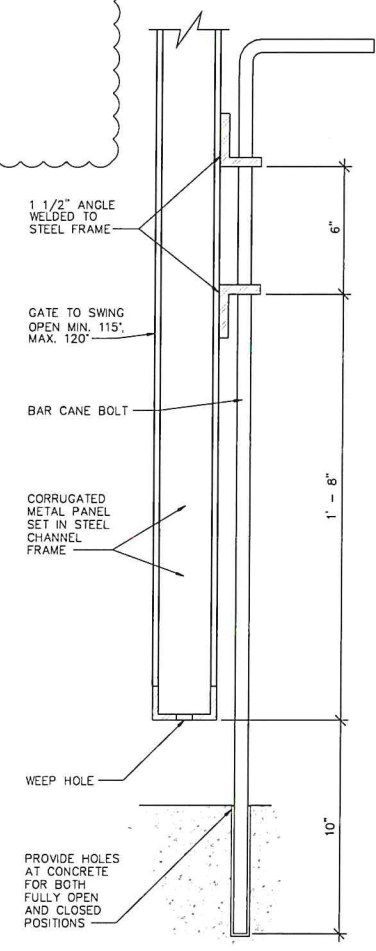
4 GATE POST  
SCALE: 1/2" = 1'-0"



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



6 GATE HINGE DETAIL  
SCALE: 3" = 1'-0"



7 SECTION AT CANE BOLT  
SCALE: 3" = 1'-0"





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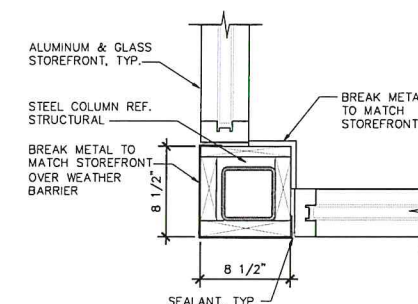
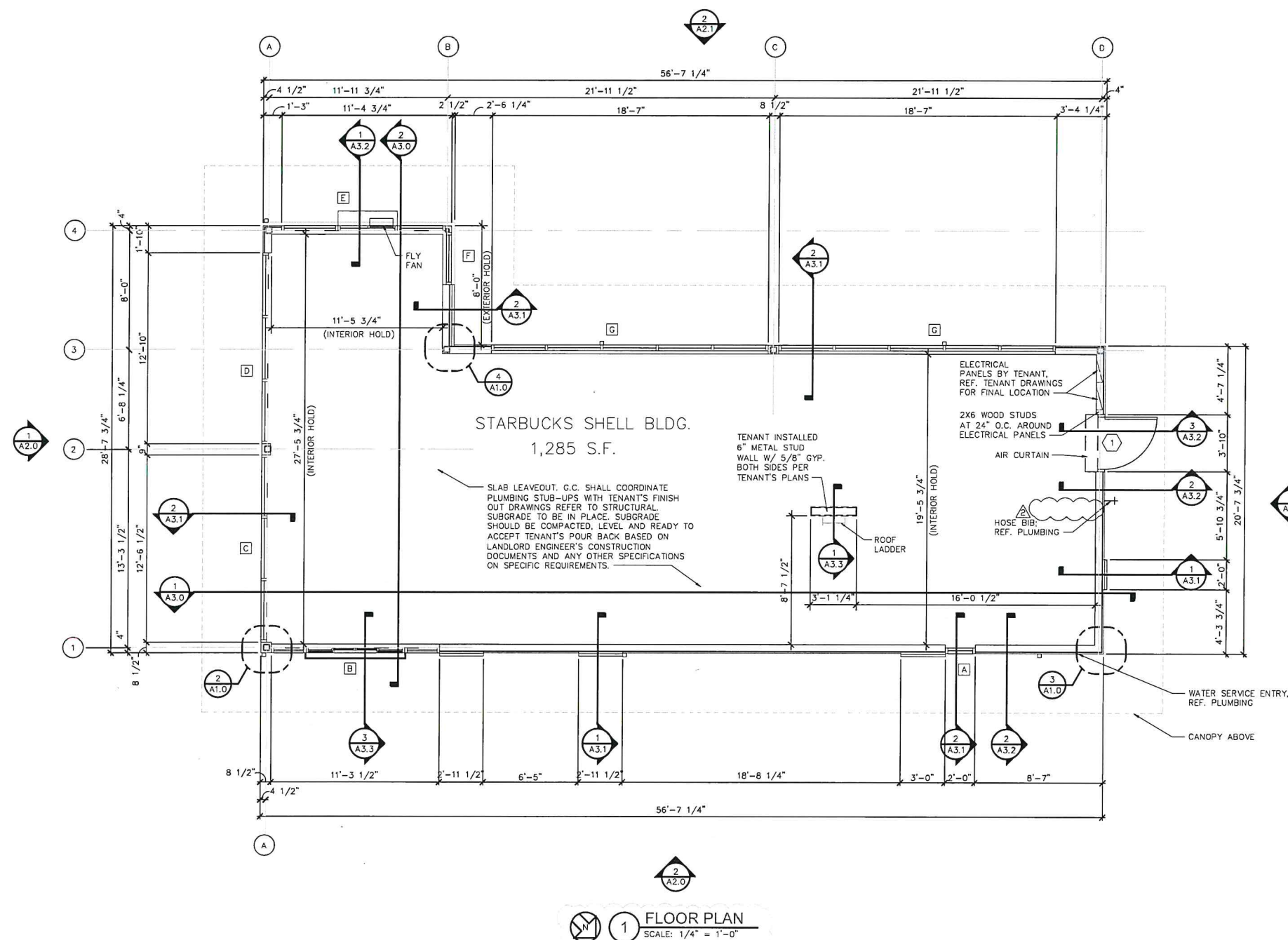
Revisions:  
1. REVISION 1/10/24 BY CC  
2. REVISION 2/10/24 BY CC  
3. REVISION 2/10/24 BY CC  
4. OWNER / CITY COMMENTS

File Name: 24097-A1.0  
Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

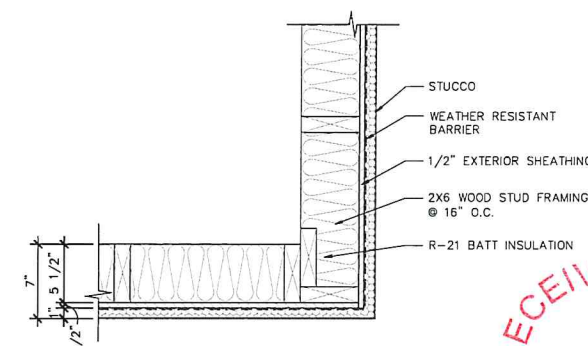
SHEET

**A1.0**  
FLOOR PLAN  
AND DETAILS

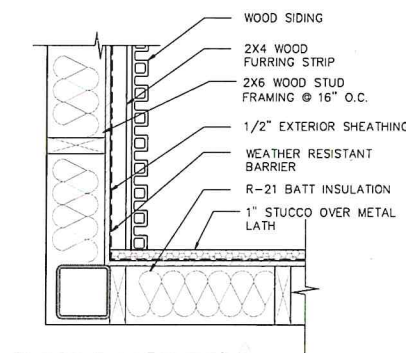
COPYRIGHT © 2024



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

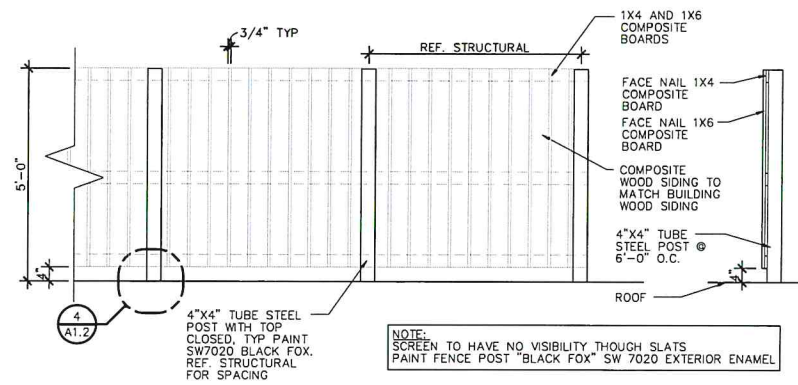


3 WALL DETAIL  
SCALE: 1 1/2" = 1'-0"

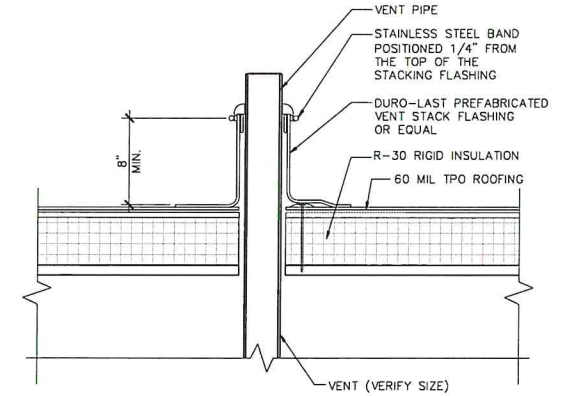


4 WALL DETAIL  
SCALE: 1 1/2" = 1'-0"

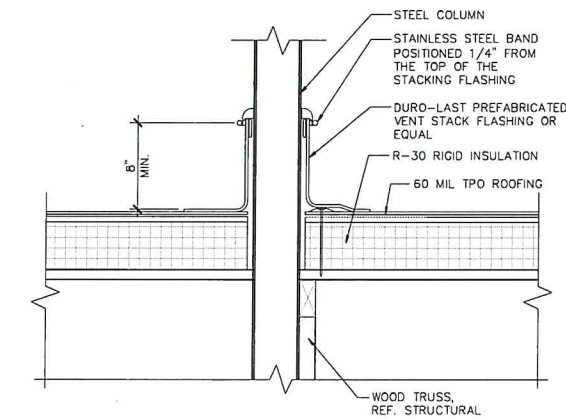




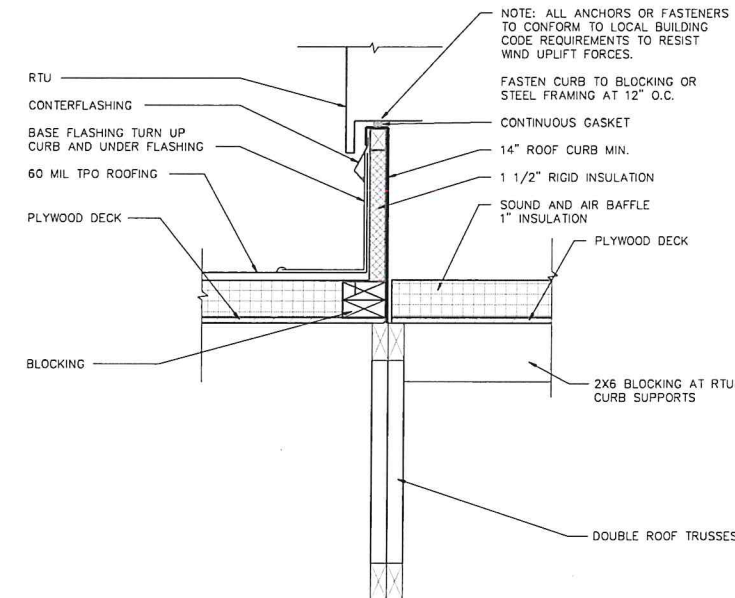
2 RTU SCREEN DETAILS  
SCALE: 1/2" = 1'-0"



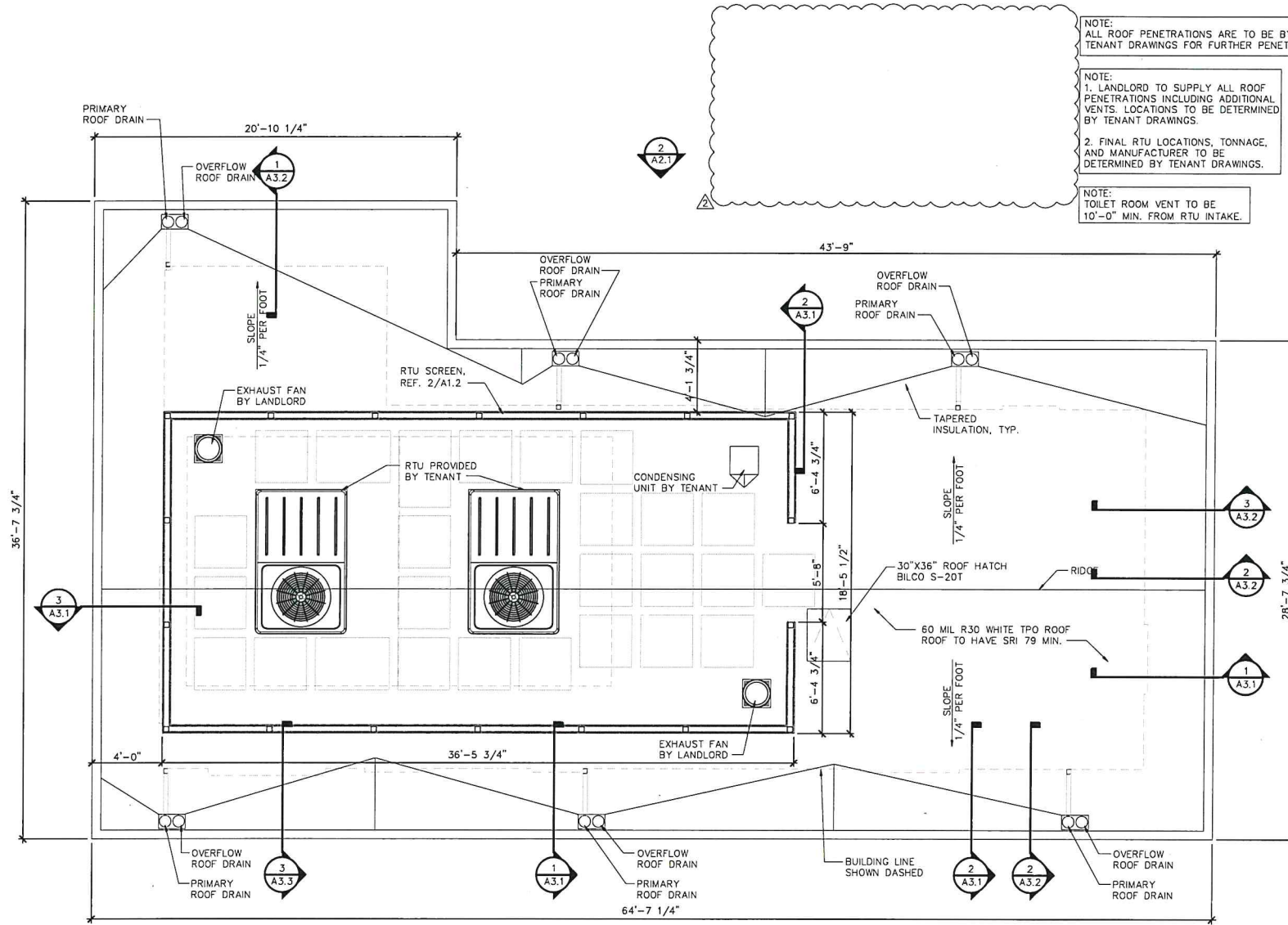
3 ROOF DETAIL  
SCALE: 1 1/2" = 1'-0"



4 ROOF DETAIL  
SCALE: 1 1/2" = 1'-0"



5 ROOF CURB DETAIL  
SCALE: 1 1/2" = 1'-0"



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



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Revisions:  
1. REVISION 1/10/24-24 / BY CS  
2. OWNER COMMENTS / CITY COMMENTS  
3. REVISION 2/10/24-24 / BY CC  
4. OWNER / CITY COMMENTS

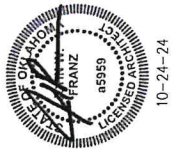
File Name: 24097-A1.2  
Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

SHEET  
A1.2  
ROOF PLAN AND DETAILS









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Revisions:  
1/10-04-24 / BY GC  
2/10-04-24 / BY GC  
3/10-04-24 / BY GC  
4/10-04-24 / BY GC

File Name: 24097 A2.0  
Project No: 24097  
Date: 08/09/24  
Drawn By: DMT  
Checked By: TT

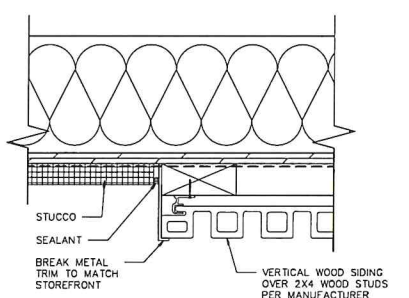
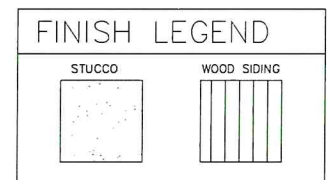
SHEET  
**A2.0**  
EXTERIOR  
ELEVATIONS

EXTERIOR FINISH SCHEDULE

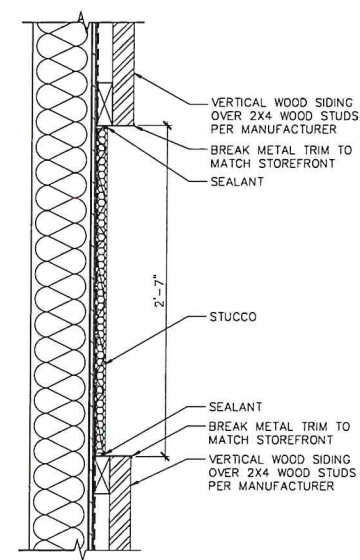
ITEM	COLOR	MANUFACTURER	REMARKS
(F-1) COMPOSITE WOOD SIDING	CANADA OAK	NORTWOOD	FLUTED PANEL
(F-2) SOLID SURFACE	BLACK WITH FLECKS CP0005	CORIAN	-
(P-1) PAINT FINISH	SW 6991 "BLACK MAGIC"	SHERWIN WILLIAMS	-
(M-1) PREFINISHED METAL COPING	SW 7020 "BLACK FOX"	SHERWIN WILLIAMS	-
(M-2) ACM PANELS	DARK BRONZE	BEST SOURCE	-
STUCCO	-	-	SMOOTH FINISH
STOREFRONT FRAMES	DARK BRONZE ANODIZED FRAME AND DOORS	KAWNEER	REFER TO WINDOW AND DOOR SCHEDULE
SPANDREL GLASS	BACKPAINTED BLACK MAGIC	-	-
HARDWARE	SATIN CLEAR FINISH	FACTORY FINISHED	REFER TO HARDWARE LEGEND
HOLLOW METAL DOOR AND FRAME	SW 7030 "ANEW GRAY"	SHERWIN WILLIAMS	-
METAL GATES AT TRASH ENCLOSURE	DARK BRONZE	SHERWIN WILLIAMS	-
DOWN SPOUTS	DARK BRONZE	AEP SPAN	FACTORY APPLIED DURATECH FINISH
MISCELLANEOUS METALS	DARK BRONZE	SHERWIN WILLIAMS	-
LIGHT FIXTURE A	DARK BRONZE	KICHLER	LED (REFER TO ELECT.)

\*\*\* COLORS AND MANUFACTURERS INDICATED ARE PREFERRED. G.C. SHALL SUBMIT SAMPLES OF PROPOSED ALTERNATES FOR ARCHITECT'S APPROVAL IN ACCORDANCE WITH DIRECTIONS IN SPECIFICATIONS

NOTE:  
REFER TO SHEET A4.0 FOR WINDOW SCHEDULE



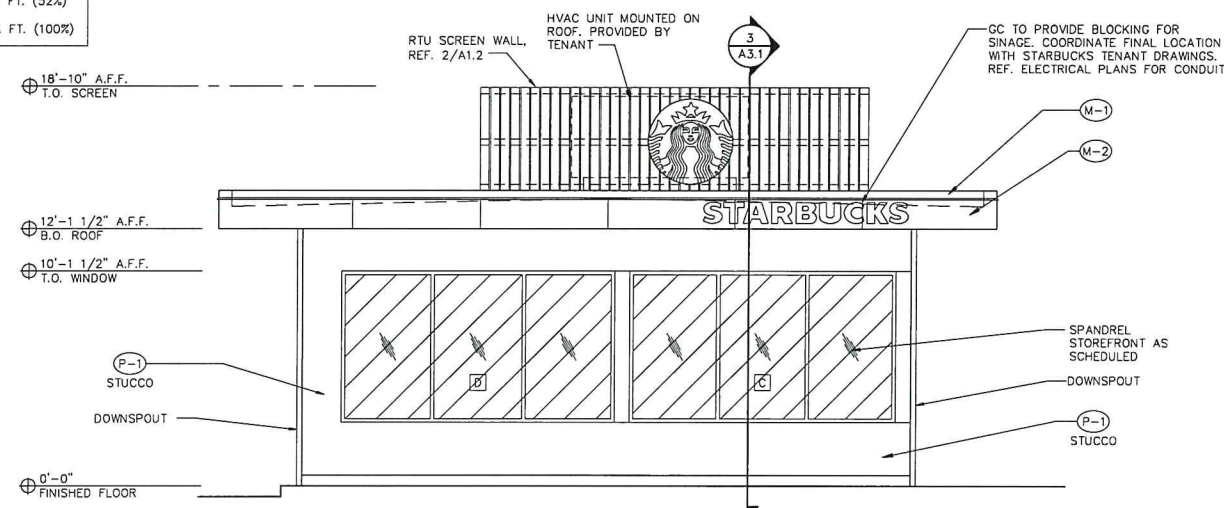
3 TRANSITION DETAIL  
SCALE: 3"=1'-0"



4 SECTION DETAIL  
SCALE: 1 1/2"=1'-0"

MATERIAL CALCULATIONS:

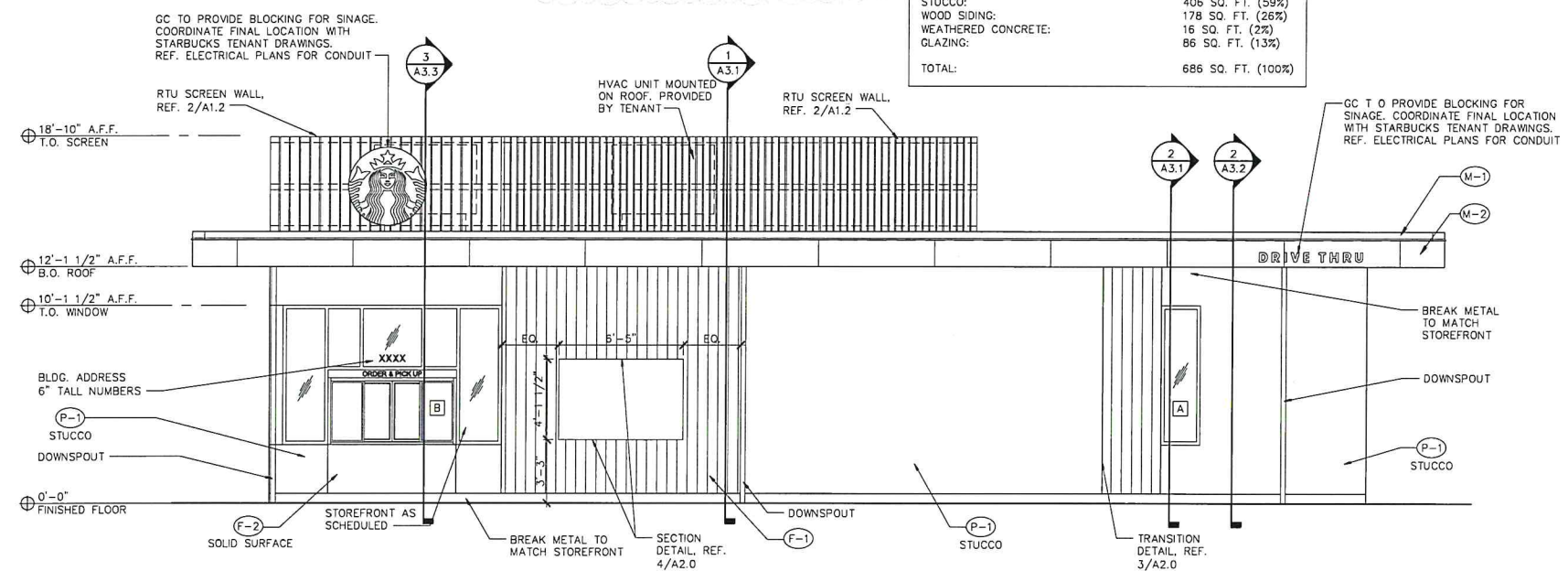
STUCCO:	168 SQ. FT. (48%)
GLAZING:	180 SQ. FT. (52%)
TOTAL:	348 SQ. FT. (100%)



1 SOUTH (SIDE) ELEVATION  
SCALE: 1/4"=1'-0"

MATERIAL CALCULATIONS:

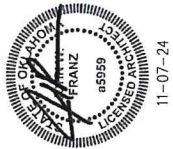
STUCCO:	406 SQ. FT. (59%)
WOOD SIDING:	178 SQ. FT. (26%)
WEATHERED CONCRETE:	16 SQ. FT. (2%)
GLAZING:	86 SQ. FT. (13%)
TOTAL:	686 SQ. FT. (100%)



2 EAST (FRONT) ELEVATION  
SCALE: 1/4"=1'-0"

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REVISION 1/ 10-04-24 / BY CC  
OWNER COMMENTS / CITY COMMENTS  
REVISION 2/ 10-24-24 / BY CC  
OWNER / CITY COMMENTS  
REVISION 3/ 11-07-24 / BY CC  
TENANT / CITY COMMENTS

File Name: 24097 A2.1  
Project No: 24097  
Date: 08/09/24  
Drawn By: DMT  
Checked By: TI

SHEET  
**A2.1**  
EXTERIOR ELEVATIONS

## EXTERIOR FINISH SCHEDULE

ITEM	COLOR	MANUFACTURER	REMARKS
F-1 COMPOSITE WOOD SIDING	CANADA OAK	NORTWOOD	FLUTED PANEL
F-2 SOLID SURFACE	BLACK WITH FLECKS CP0005	CORIAN	-
P-1 PAINT FINISH	SW 6991 "BLACK MAGIC"	SHERWIN WILLIAMS	-
M-1 PREFINISHED METAL COPING	SW 7020 "BLACK FOX"	SHERWIN WILLIAMS	-
M-2 ACM PANELS	DARK BRONZE	BEST SOURCE	-
STUCCO	-	-	SMOOTH FINISH
STOREFRONT FRAMES	DARK BRONZE ANODIZED FRAME AND DOORS	KAWNEER	REFER TO WINDOW AND DOOR SCHEDULE
SPANDREL GLASS	BACKPAINTED BLACK MAGIC	-	-
HARDWARE	SATIN CLEAR FINISH	FACTORY FINISHED	REFER TO HARDWARE LEGEND
HOLLOW METAL DOOR AND FRAME	SW 7030 "ANEW GRAY"	SHERWIN WILLIAMS	-
METAL GATES AT TRASH ENCLOSURE	DARK BRONZE	SHERWIN WILLIAMS	-
DOWN SPOUTS	DARK BRONZE	AEP SPAN	FACTORY APPLIED DURATECH FINISH
MISCELLANEOUS METALS	DARK BRONZE	SHERWIN WILLIAMS	-
LIGHT FIXTURE A	DARK BRONZE	KICHLER	LED (REFER TO ELECT.)

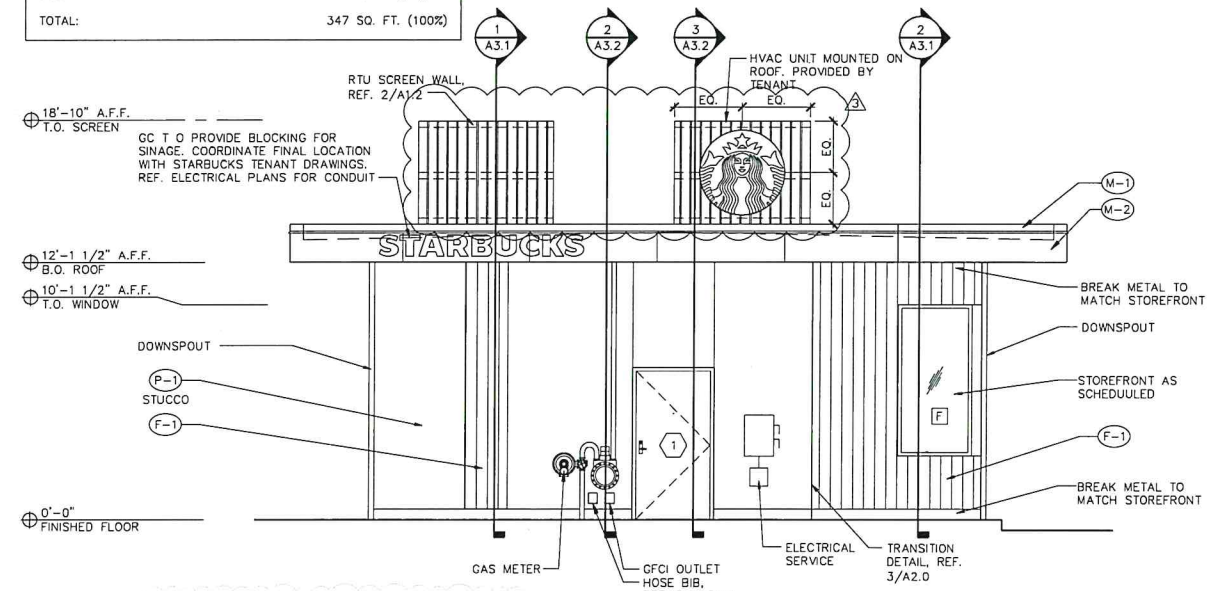
\*\* COLORS AND MANUFACTURERS INDICATED ARE PREFERRED. G.C. SHALL SUBMIT SAMPLES OF PROPOSED ALTERNATES FOR ARCHITECT'S APPROVAL IN ACCORDANCE WITH DIRECTIONS IN SPECIFICATIONS

NOTE:  
REFER TO SHEET A4.0 FOR WINDOW SCHEDULE

FINISH LEGEND	
STUCCO	WOOD SIDING

MATERIAL CALCULATIONS:

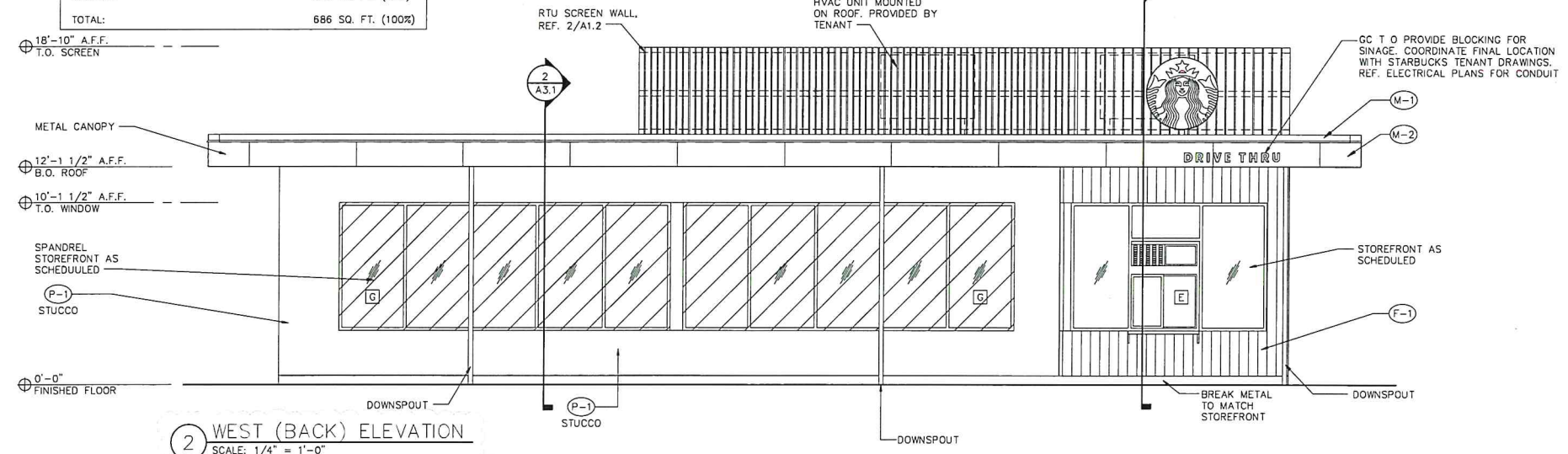
STUCCO:	207 SQ. FT. (60%)
WOOD SIDING:	90 SQ. FT. (26%)
GLAZING:	22 SQ. FT. (6%)
DOOR:	28 SQ. FT. (8%)
TOTAL:	347 SQ. FT. (100%)



**1 NORTH (SIDE) ELEVATION**  
SCALE: 1/4" = 1'-0"

MATERIAL CALCULATIONS:

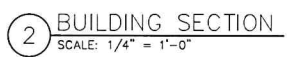
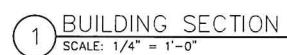
STUCCO:	268 SQ. FT. (39%)
WOOD SIDING:	74 SQ. FT. (11%)
GLAZING:	344 SQ. FT. (50%)
TOTAL:	686 SQ. FT. (100%)



**2 WEST (BACK) ELEVATION**  
SCALE: 1/4" = 1'-0"

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Revisions:

REVISION	1 / 10-04-24 / BY CC	OWNER COMMENTS / CITY COMMENTS
2	REVISION 2 / 10-24-24 / BY CC	OWNER / CITY COMMENTS

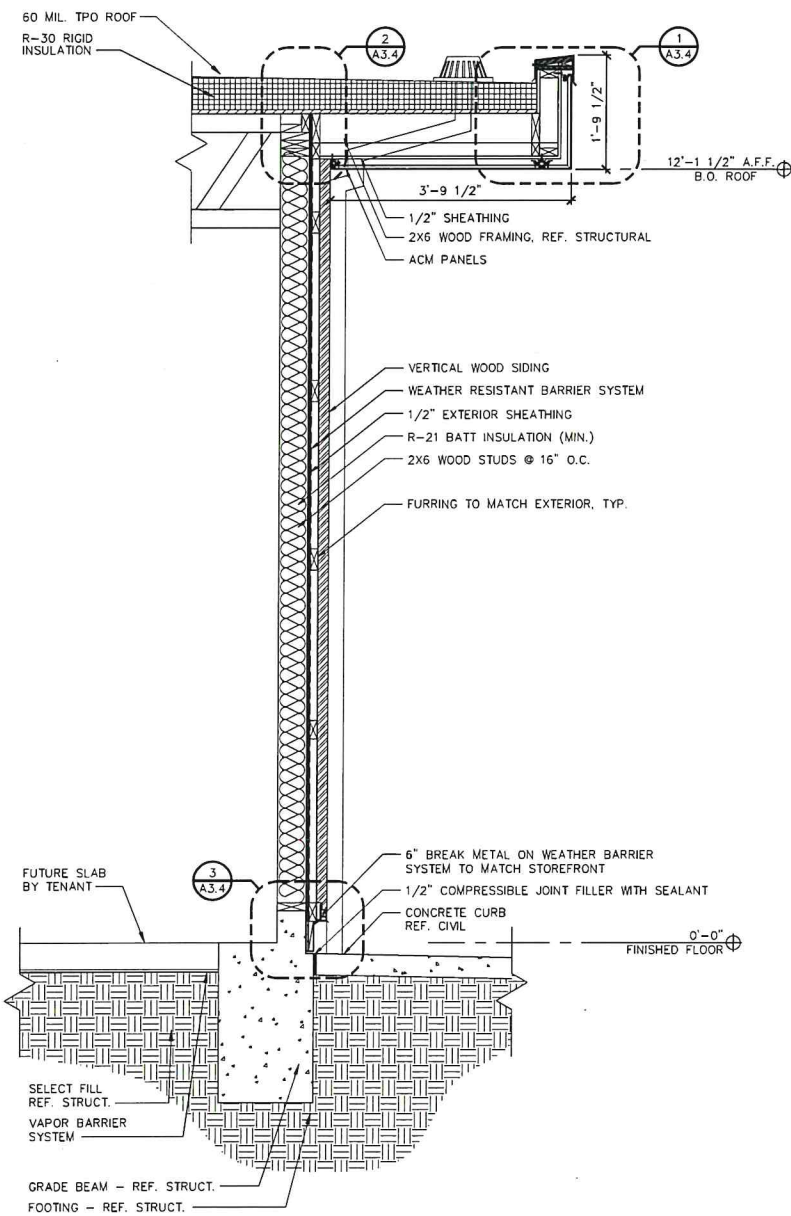
File Name: 24097-A3.0  
Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

SHEET

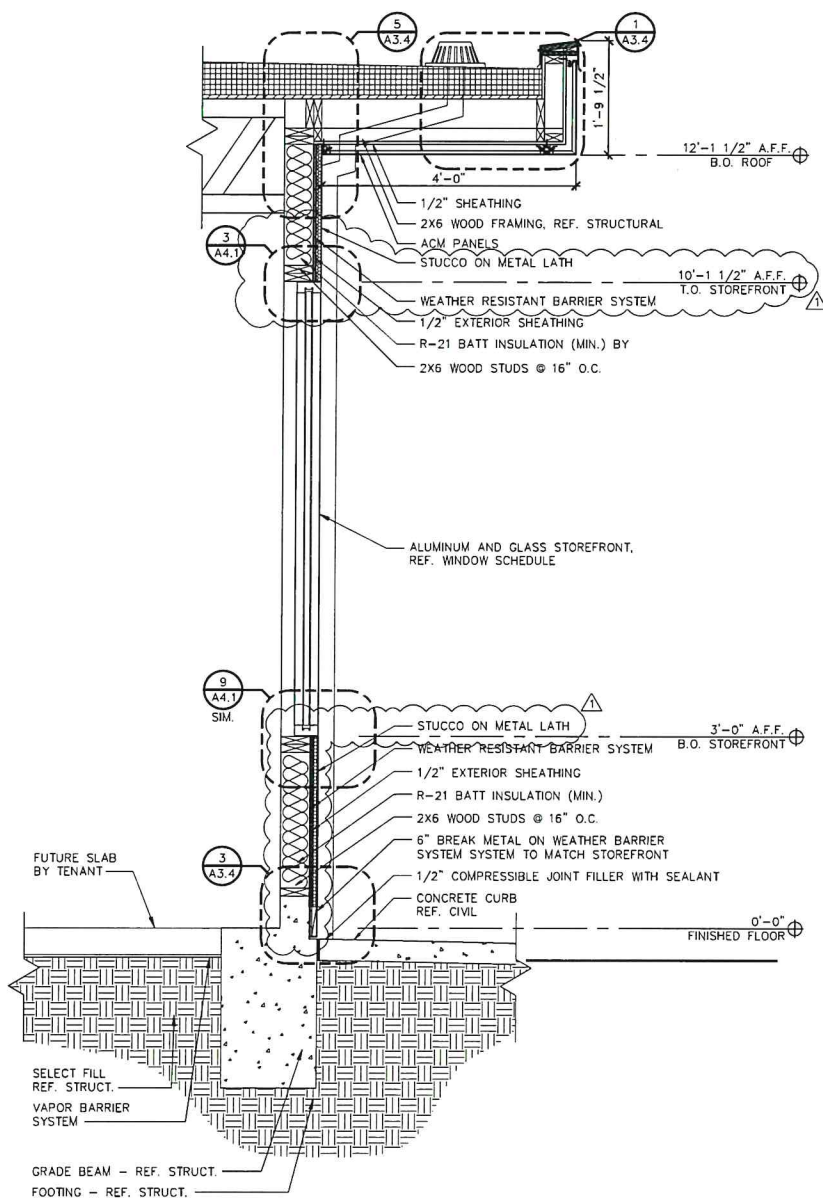
**A3.0**

BUILDING SECTIONS





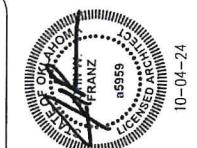
1 WALL SECTION  
SCALE: 3/4" = 1'-0"



2 WALL SECTION  
SCALE: 3/4" = 1'-0"

3 NOT USED  
SCALE: 3/4" = 1'-0"

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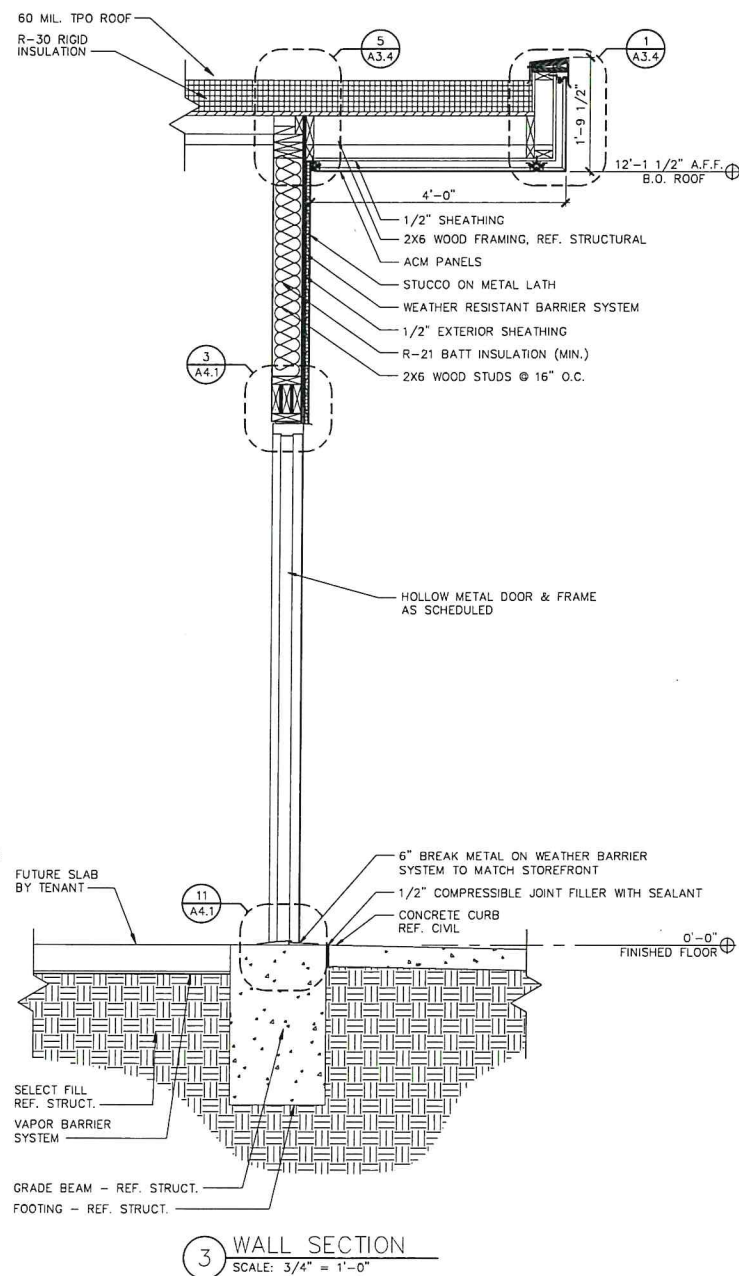
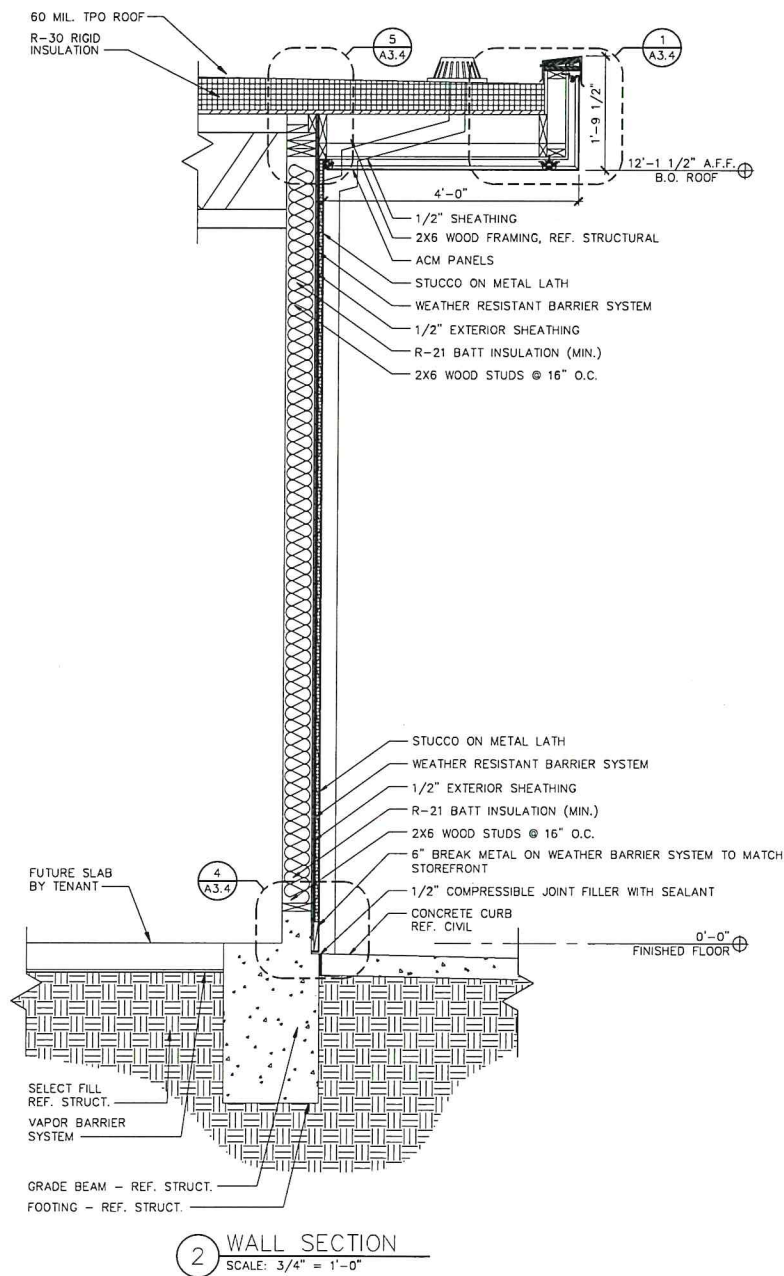
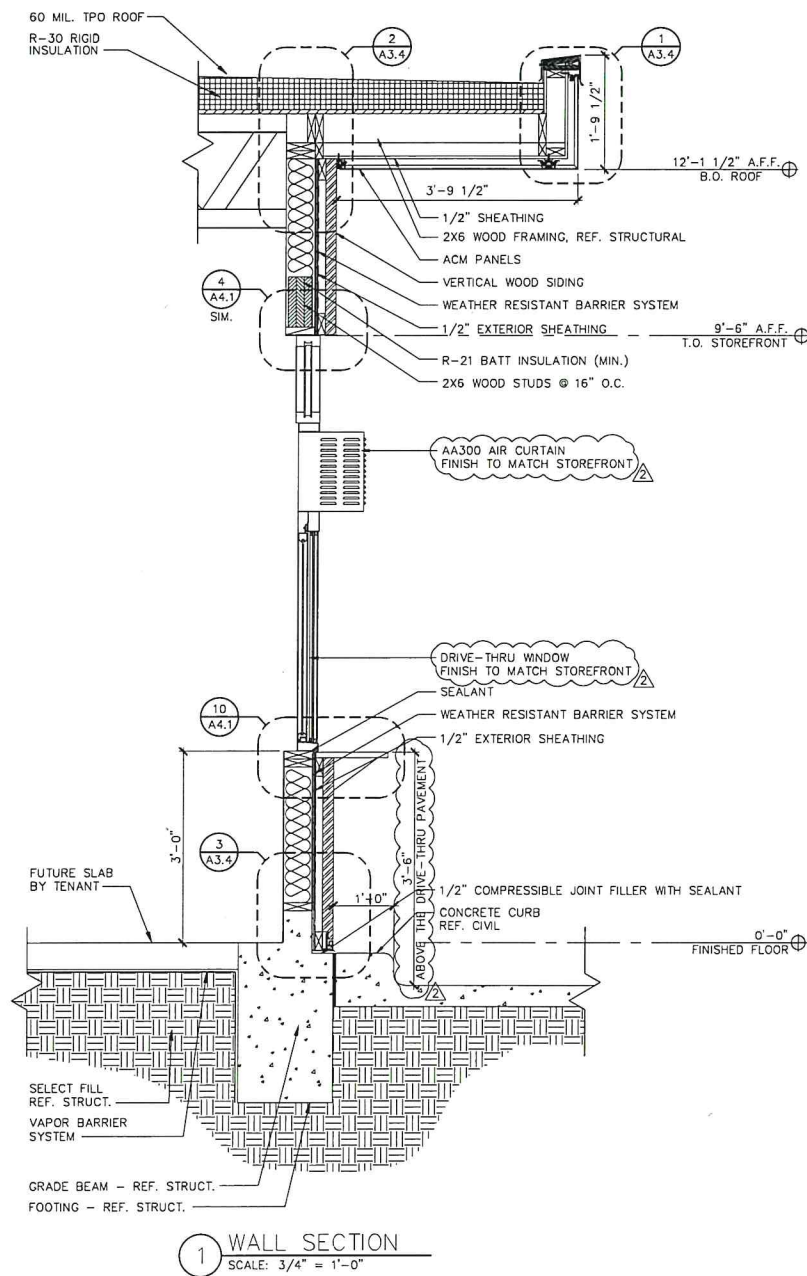
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Revisions:  
1. CHANGES 1/10/24 - 24 / BY CS  
2. OWNER COMMENTS / CITY COMMENTS

File Name: 24097-A3.1  
Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

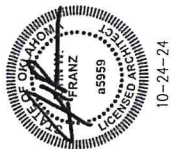
SHEET  
**A3.1**  
WALL SECTIONS





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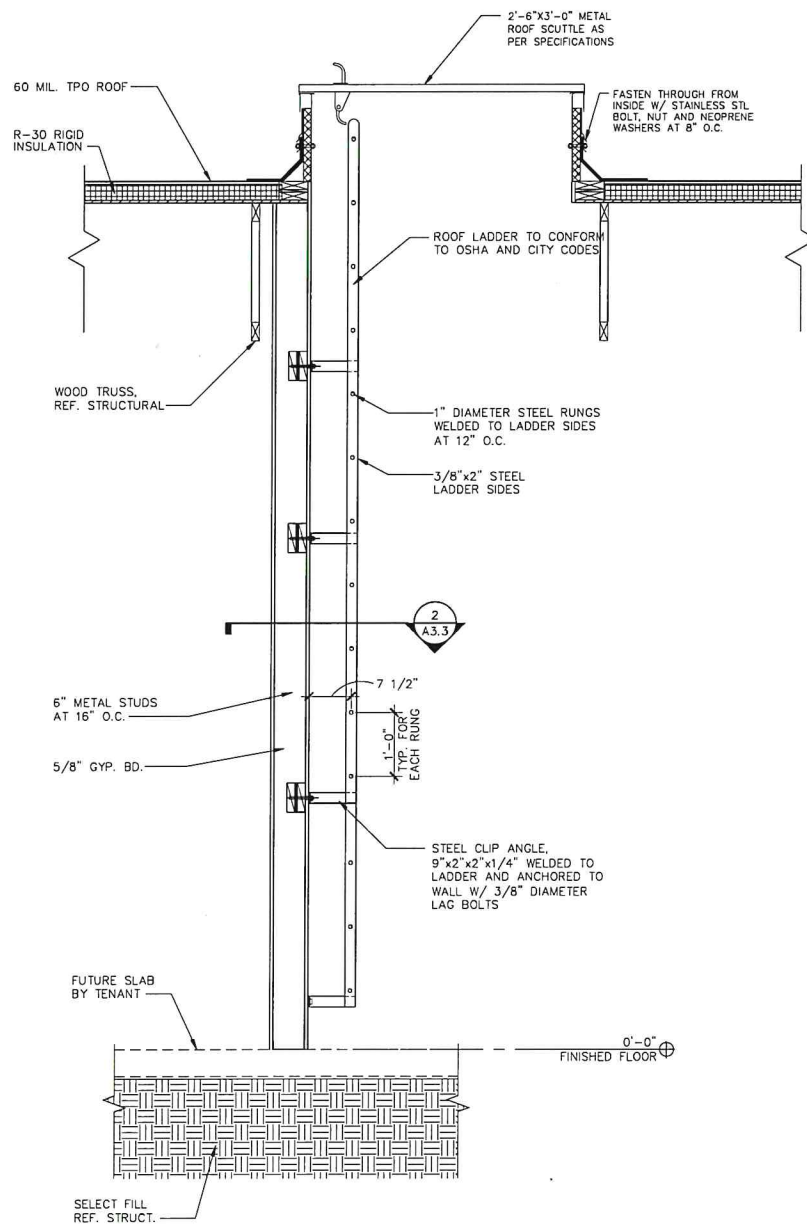
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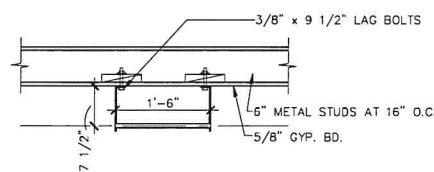
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Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

SHEET  
**A3.2**  
WALL SECTIONS

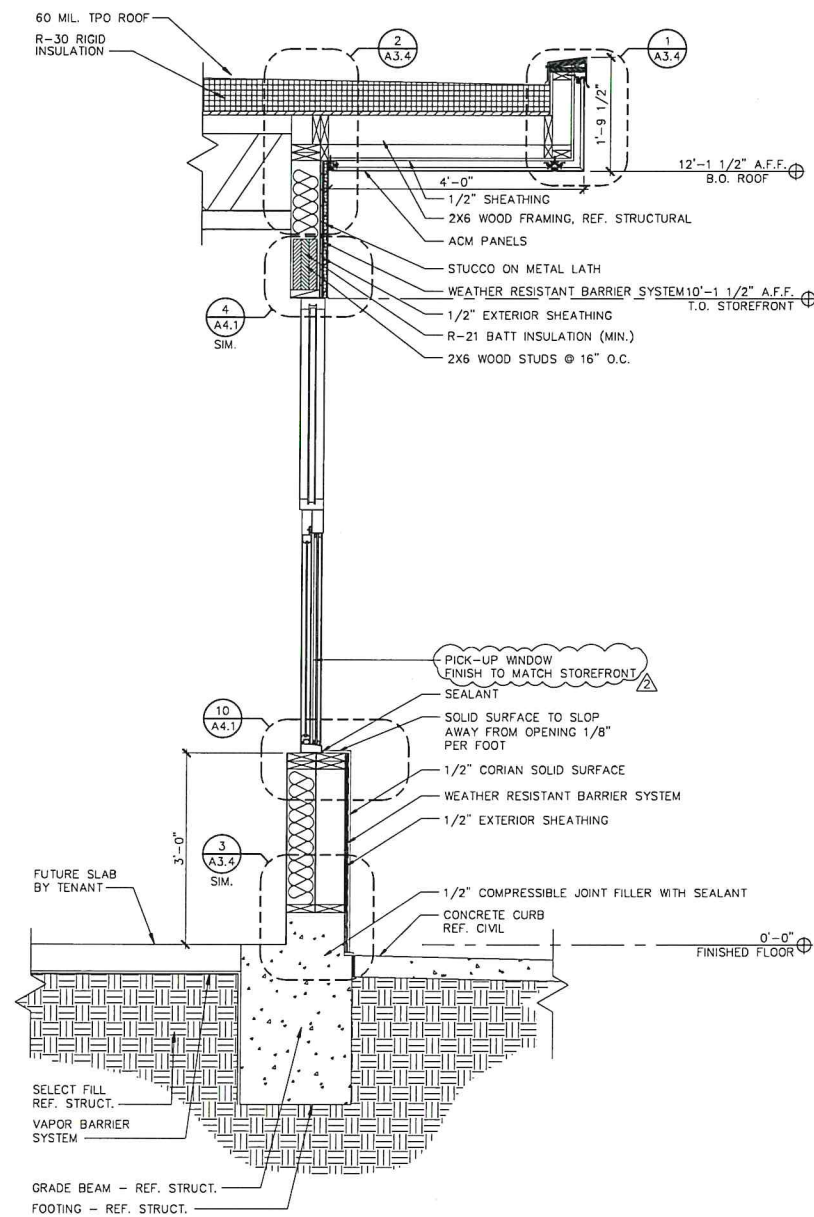




1 WALL SECTION  
SCALE: 3/4" = 1'-0"



2 LADDER PLAN  
SCALE: 3/4" = 1'-0"



3 WALL SECTION  
SCALE: 3/4" = 1'-0"

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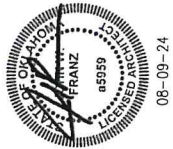
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Revisions:  
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File Name: 24097-A3.3  
Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

SHEET  
**A3.3**  
WALL SECTIONS





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Revisions:

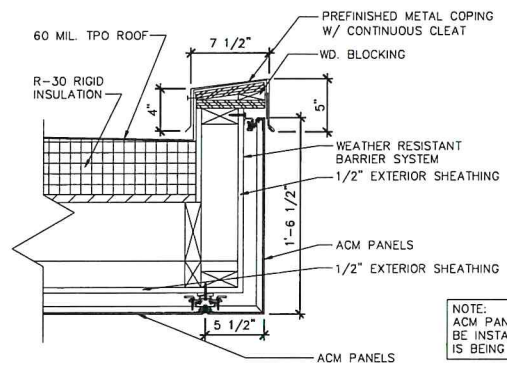
File Name: 24097 A3.4  
Project No: 24097  
Date: 08/09/24  
Drawn By: JAT  
Checked By: TI

SHEET  
**A3.4**  
SECTION DETAILS

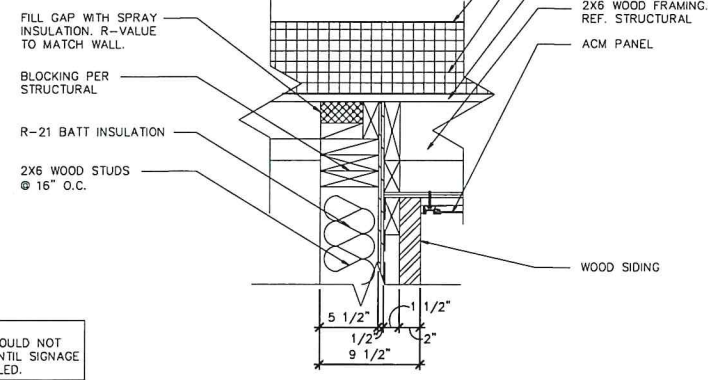
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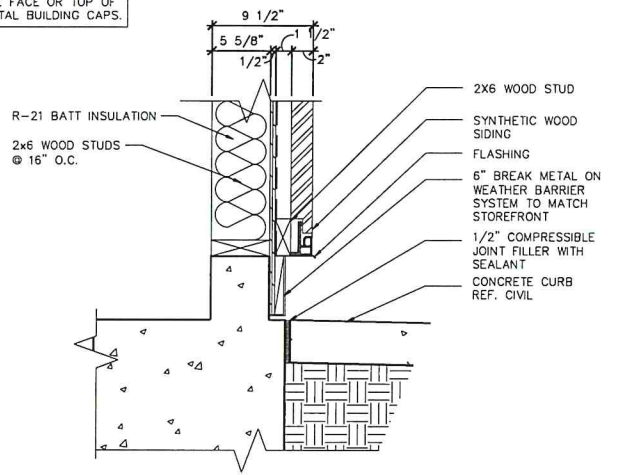
NOTE:  
NO FASTENERS OF ANY  
KIND TO BE USED ON THE  
OUTSIDE FACE OR TOP OF  
ALL METAL BUILDING CAPS.



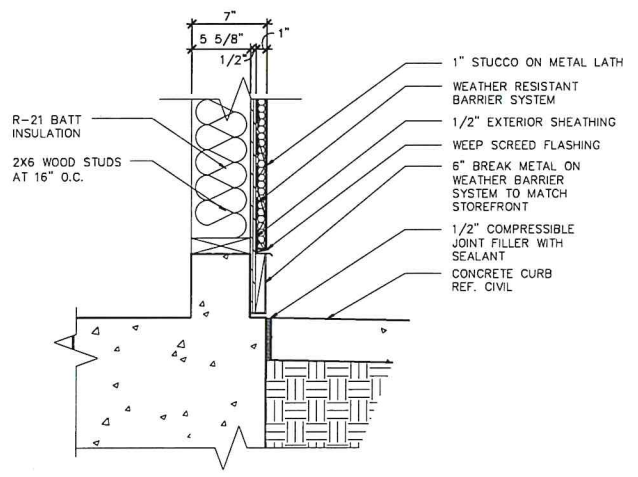
**1 COPING DETAIL**  
SCALE: 1 1/2" = 1'-0"



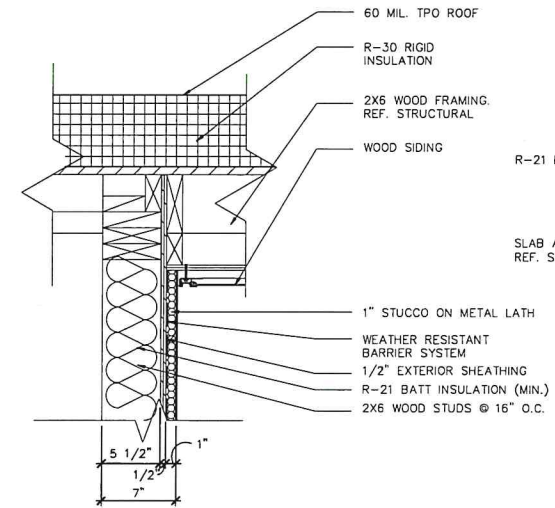
**2 DETAIL**  
SCALE: 1 1/2" = 1'-0"



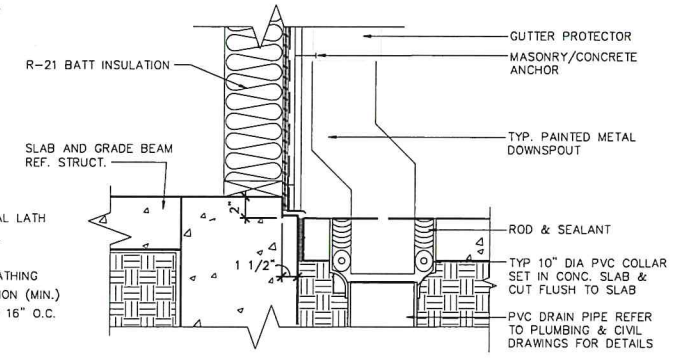
**3 DETAIL**  
SCALE: 1 1/2" = 1'-0"



**4 DETAIL**  
SCALE: 1 1/2" = 1'-0"



**5 DETAIL**  
SCALE: 1 1/2" = 1'-0"



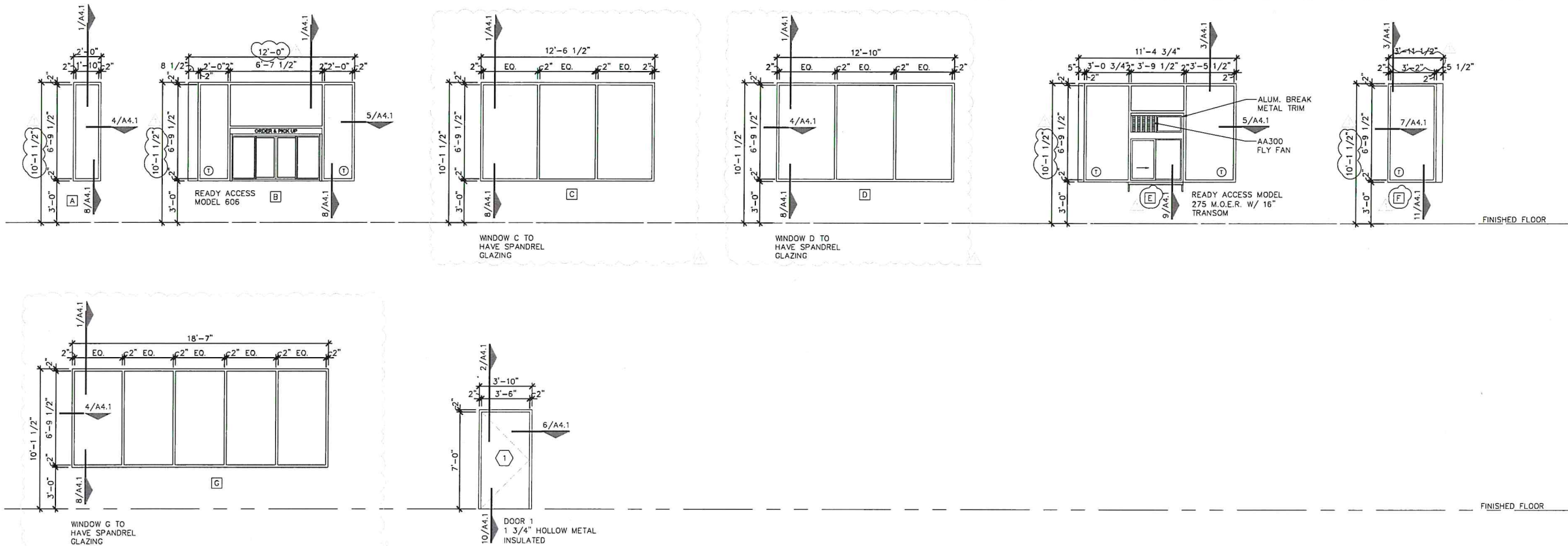
**6 DOWNSPOUT DETAIL**  
SCALE: 1 1/2" = 1'-0"



DOOR SCHEDULE					
DOOR			FRAME		REMARKS
MARK	SIZE (NOM.)	MAT'L	TYPE	FIRE RATING	
1	3'-6" x 7'-0"	HM	HM		H-2

DOOR HARDWARE LEGEND					
G.C. SHALL INSURE THAT ALL HARDWARE CONFORMS APPLICABLE ACCESSIBILITY STANDARDS					
H-2 [BACK EXIT DOOR] NOTE: NO EXTERIOR EXPOSED HARDWARE IS ALLOWED					
NO.	ITEM	DESCRIPTION	MANUFACTURER	FINISH	FURN. BY
1	HANGING DEVICES	CFM 83 HD (83 = SPECIFIED DOOR HEIGHT)	PEMKO	630	GC
1	SECURING DEVICES	7100 36 PB826F 630	ARROW	630	GC
1	SECURING DEVICES	C953 7-PIN RIM CYLINDER HOUSING	FALCON LOCK	625	GC
1	CLOSING DEVICES	8916 DOOR CLOSER 8916 AF89P	DORMA	689	GC
1	PROTECTIVE TRIM UNITS	K1050 B4E KICKPLATE 10" X 40"	ROCKWOOD	630	GC
1	ACCESSORIES	137NA WEATHER STRIP 20" 42" X 84"	NATIONAL GUARD	A	GC
1	ACCESSORIES	DOOR SWEEP 18062CNB36	PEMKO	A	GC
1	THRESHOLD	325 HALF SADDLE 42"	NGP	MILL FINISH ALUMINUM	GC
1	MISCELLANEOUS ITEMS	DS / 1000 DOOR SCOPE	SECURITY PRODUCTS	SILVER	GC
1	MISCELLANEOUS ITEMS	MCHBV TWO NOTE MECHANICAL DOOR CHIME	NEWHOUSE	AS SELECTED	GC

NOTE:  
ALL GLAZING TO HAVE A  
U-FACTOR 0.27, SHGC 0.25  
  
ALL GLAZING TO BE CLEAR,  
NON-TINTED, NON-REFLECTIVE,  
DOUBLE GLAZED.



## WINDOW AND DOOR TYPES

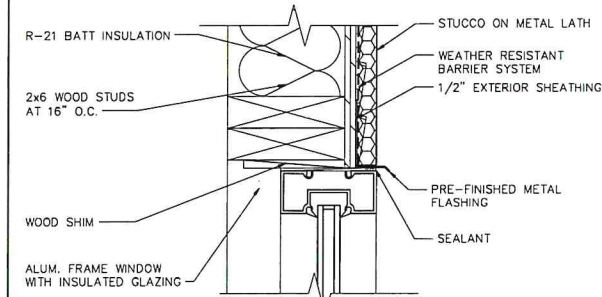
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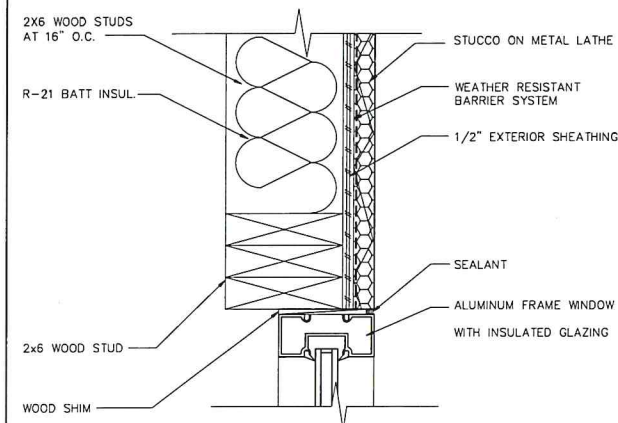
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Revisions:  
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481. REVISION 1/50-04-24 / BY CC  
482. REVISION 2/50-04-24 /

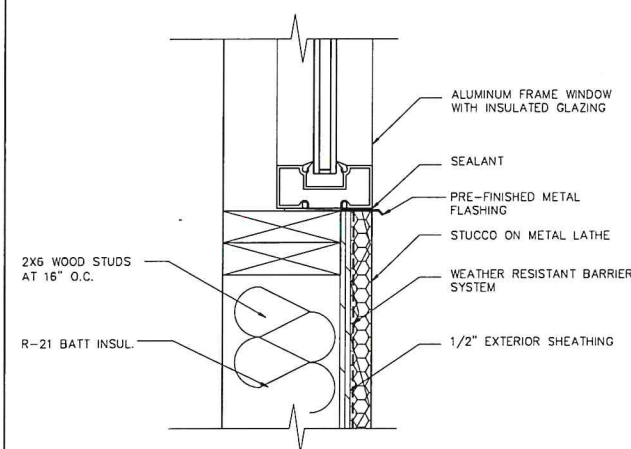




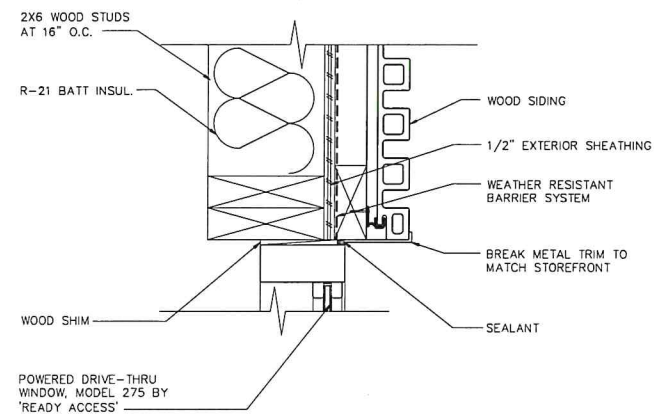
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SCALE: 3" = 1'-0"



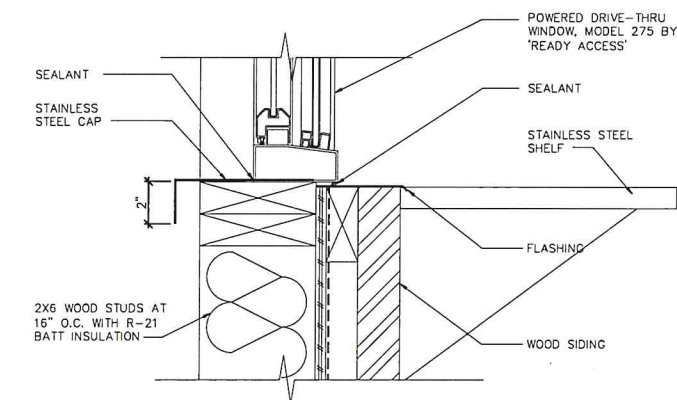
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SCALE: 3" = 1'-0"



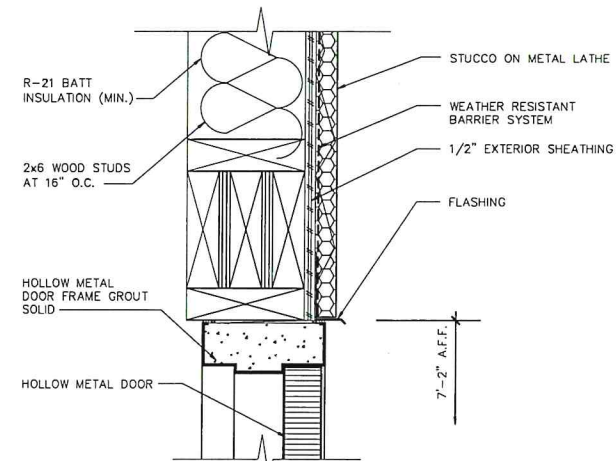
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SCALE: 3" = 1'-0"



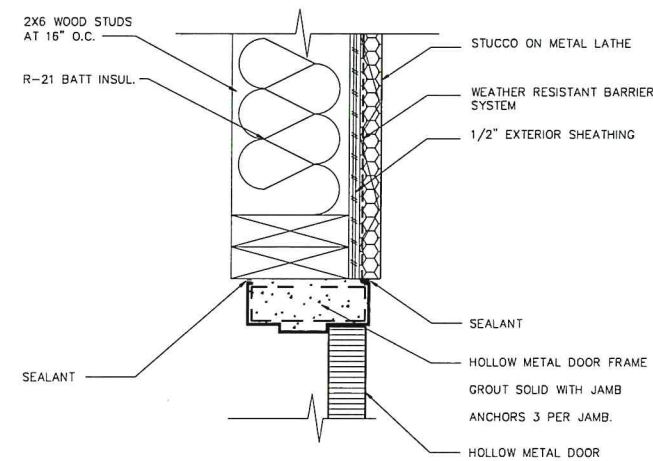
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SCALE: 3" = 1'-0"



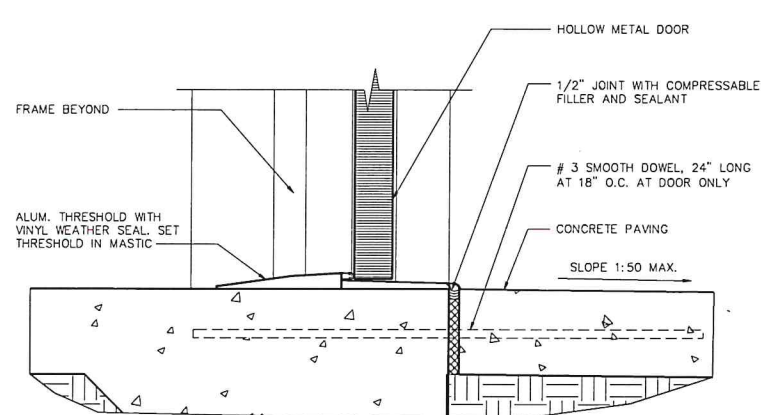
9 DRIVE-THRU SILL  
SCALE: 3" = 1'-0"



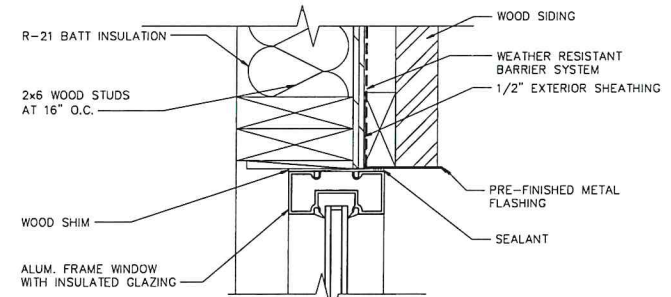
2 H.M. DOOR HEADER  
SCALE: 3" = 1'-0"



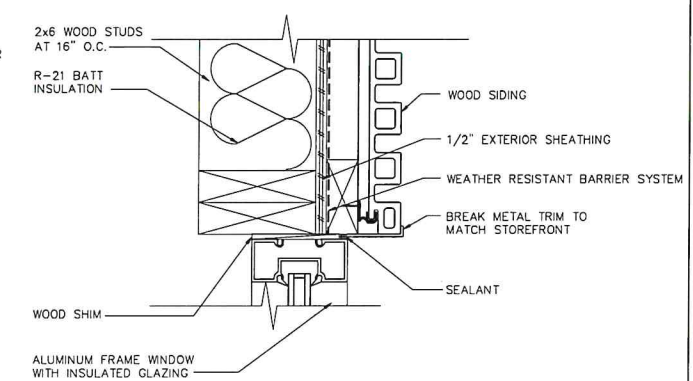
6 H.M. DOOR JAMB  
SCALE: 3" = 1'-0"



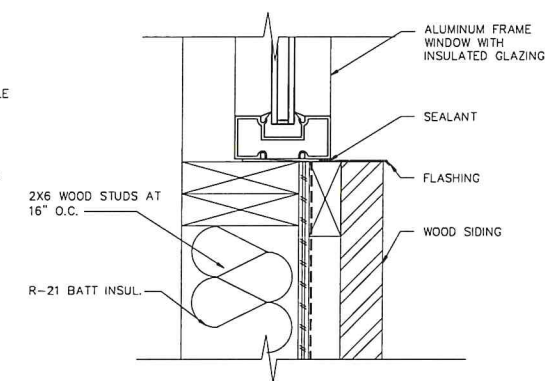
10 H.M. DOOR THRESHOLD  
SCALE: 3" = 1'-0"



3 HEADER  
SCALE: 3" = 1'-0"



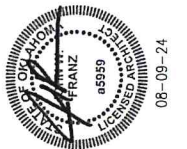
7 JAMB  
SCALE: 3" = 1'-0"



11 SILL  
SCALE: 3" = 1'-0"

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Revisions:

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Project No: 24097  
Date: 08/09/24  
Drawn By: MNK  
Checked By: TI

SHEET  
**A4.1**  
DOOR & WINDOW  
SECTIONS  
AND DETAILS



# 2009 ICC A117.1 Accessible and Usable Buildings and Facilities

## CHAPTER 3: BUILDING BLOCKS

301 General  
301.1 Scope. The provisions of Chapter 3 shall apply where required by Chapter 4 through 11.  
301.2 Overlap. Unless otherwise specified, clear floor spaces, clearances at fixtures, maneuvering clearances at doors, and turning spaces shall be permitted to overlap.  
302 Floor or Ground Surfaces  
302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 302.

302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/unlaid pile texture. Pile height shall be 1/2 inch (13 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 303.

302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch (13 mm) diameter except as allowed in 407.4.3, 408.4.3, 410.4, 408.4.3 and 805.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

303 Changes in Level  
303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.

303.2 Vertical. Changes in level of 1/4 inch (6.4 mm) high maximum shall be permitted to be vertical.

303.3 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.  
303.4 Ramps. Changes in level greater than 1/2 inch (13 mm) high shall be ramped, and shall comply with 405 or 406.

### SECTION 304 TURNING SPACE

304.1 General. A turning space shall comply with Section 304.

304.2 Floor Surface. Floor surfaces of a turning space shall comply with Section 302. Changes in level shall not be permitted within the turning space.  
Exception: Slopes not steeper than 1:48 shall be permitted.

304.3 Size. Turning spaces shall comply with Section 304.3.1 or 304.3.2.

304.3.1.1 New Buildings and Facilities. In new buildings and facilities, the turning space shall be a circular space with a 67-inch (1700 mm) minimum diameter.

304.3.1.1.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306. The turning space shall be a circular space with a 60-inch (1525 mm) minimum diameter.

304.3.1.2.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306.

### 304.3.2 T-Shaped Space

The turning space shall be a T-shaped with a 60-inch (1525 mm) min square, with arms and base 36 inches (915 mm) in width. Each arm of the T shall be clear of obstructions 12 inches (305 mm) min in each direction, and the base shall be clear of obstructions 24 inches (610 mm) min. Turning spaces shall be permitted to include knee and toe clearance complying with section 306 only at the end of either the base or one arm.

304.3.2.1.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306 of either the base or one arm. For Option 1, the base or arm is the portion beyond the chamfer.

304.4 Door Swing. Unless otherwise specified, doors shall be permitted to swing into turning spaces.

### 305 CLEAR FLOOR OR GROUND SPACE

305.1 General. Clear floor or ground space shall comply with 305.

305.2 Floor Surfaces. Floor surfaces of a clear space shall comply with 302. Changes in level are not permitted.  
Exception: Slopes not steeper than 1:48 shall be permitted.

### 305.3 SIZE

305.3.1 The clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.

305.4 Knee and Toe Clearance. Unless otherwise specified, clear floor space shall be permitted to include knee and toe clearance complying with Section 306.

305.5 Position. Unless otherwise specified, clear floor spaces shall be positioned for either forward or parallel approach to an element.

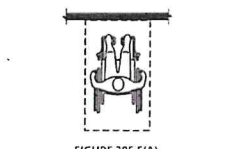


FIGURE 305.5(A)

POSITION OF CLEAR FLOOR SPACE - FORWARD

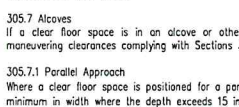


FIGURE 305.5(B)

POSITION OF CLEAR FLOOR SPACE - PARALLEL

### 305.6 Approach

One full, unobstructed side of a clear floor space shall adjoin or overlap an accessible route or adjoin another clear floor space.

### 305.7 Alcoves

If a clear floor space is in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances complying with Sections 305.7.1 and 305.7.2 shall be provided, as applicable.

### 305.7.1 Parallel Approach

Where a clear floor space is positioned for a parallel approach, the alcove shall be 60 inches (1525 mm) minimum in width where the depth exceeds 15 inches (380 mm).

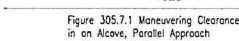


Figure 305.7.1 Maneuvering Clearance in an Alcove, Parallel Approach

### 305.7.2 Forward Approach

Where a clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).

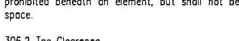


Figure 305.7.2 Maneuvering Clearance in an Alcove, Forward Approach

### SECTION 306 KNEE AND TOE CLEARANCE

### 306.1 General

Where space beneath an element is included as part of the clear floor space at an element, clearance at an element, or a turning space, the space shall comply with Section 306. Additional space shall not be prohibited beneath an element, but shall not be considered as part of the clear floor space or turning space.

### 306.2 Toe Clearance

306.2.1 General. Space beneath an element between the floor and 9 inches (230 mm) above the floor shall be considered toe clearance and shall comply with Section 306.2.

### 306.2.2 Maximum Depth

Toe clearance shall be permitted to extend 25 inches (635 mm) maximum under an element.

### 306.2.3 Minimum Depth

Where toe clearance is required at an element as part of a clear floor space complying with Section 305, the toe clearance shall extend 17 inches (430 mm) minimum beneath the element.

### 306.2.4 Additional Clearance

Space extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the finish floor or ground shall not be considered toe clearance.

### 306.2.5 Width. Toe clearance shall be 30 inches (760 mm) wide minimum.



Figure 306.2 Toe Clearance

### 306.3 Knee Clearance

306.3.1 General. Space under an element between 8 inches (203 mm) and 27 inches (685 mm) above the finish floor or ground shall be considered knee clearance and shall comply with 306.3.

306.3.2 Maximum Depth. Knee clearance shall extend 25 inches (635 mm) maximum under an element at 9 inches (230 mm) above the finish floor or ground.

306.3.3 Minimum Required Depth. Where knee clearance is required under an element as part of a clear floor space, the knee clearance shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (203 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground.

306.3.4 Clearance Reduction. Between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

306.3.5 Width. Knee clearance shall be 30 inches (760 mm) wide minimum.

### 307 Protruding Objects

307.1 General. Protruding objects shall comply with 307.

307.2 Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path. EXCEPTION: Handrails shall be permitted to protrude 4 1/2 inches (115 mm) maximum.

307.3 Post-Mounted Objects. Objects on posts or pylons shall be permitted to overhang 4 inches (100 mm) maximum where more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the floor. Objects on multiple posts or pylons where the clear distance between the posts or pylons is greater than 12 inches (305 mm) shall have the lowest edge of such object either 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the floor.  
Exception: The sloping portions of handrails serving stairs and ramps shall not be required to comply with 307.3.

307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2030 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground.

Exception: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor.

307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes.

### 308 REACH RANGES

308.1 General. Reach ranges shall comply with 308.

### 308.2 Forward Reach

308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space complying with Section 305 and knee and toe clearance complying with Section 306 shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. The high forward reach shall be 44 inches (1120 mm) maximum above the floor where the reach depth over the obstruction is greater than 20 inches (510 mm) and not more than 25 inches (635 mm) maximum.



Figure 308.2.1 Unobstructed Forward Reach

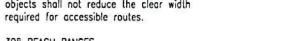


Figure 308.2.2 Obstructed High Forward Reach

### 308.3 Side Reach

308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor.

### EXCEPTIONS:

1. Existing elements that are not altered shall be permitted at 54 inches (1370 mm) maximum above the floor.

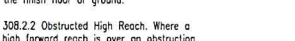


Figure 308.3.1 Unobstructed Side Reach

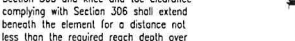


Figure 308.3.2 Obstructed High Side Reach

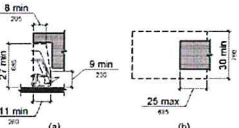


Figure 306.3 Knee Clearance

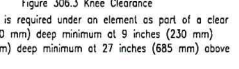


Figure 307.2 LIMITS OF PROTRUDING OBJECTS

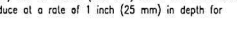


Figure 307.3(A) POST MOUNTED PROTRUDING OBJECTS



Figure 307.3(B) POST MOUNTED PROTRUDING OBJECTS



Figure 307.4 REDUCED VERTICAL CLEARANCE



Figure 308.2.1 Unobstructed Forward Reach

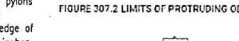


Figure 308.2.2 Obstructed High Forward Reach



Figure 308.3.1 Unobstructed Side Reach



Figure 308.3.2 Obstructed High Side Reach

308.3.2 Obstructed High Reach. Where a clear floor space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

### SECTION 309 OPERABLE PARTS

309.1 General. Operable parts shall comply with Section 309.

309.2 Clear Floor Space. A clear floor space complying with Section 305 shall be provided.

309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in Section 308.

309.4 Operation. Operable parts shall be operable with one hand and shall not require light grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5.0 pounds (22.2 N) maximum. Exception: Gas pump nozzles shall not be required to provide operable parts that have an activating force of 5.0 pounds (22.2 N) maximum.

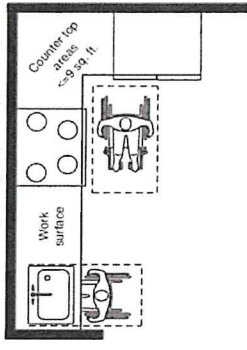


FIGURE 309.1

OPERABLE PARTS - EXCEPTION 3

## CHAPTER 4: ACCESSIBLE ROUTES

### SECTION 401 GENERAL

401.1 Scope. Accessible routes required by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 4.

### SECTION 402 ACCESSIBLE ROUTES

402.1 General. Accessible routes shall comply with Section 402.

### 402.2 Components

Accessible routes shall consist of one or more of the following components: walking surfaces with a running slope not steeper than 1:20, doors and doorways, gates, ramps, curb ramps excluding the flared sides, blended transitions, elevators and platform lifts. All components of an accessible route shall comply with the applicable portions of this standard.

402.3 Revolving Doors, Revolving Gates and Turnstiles. Revolving doors, revolving gates and turnstiles shall not be part of an accessible route.

### SECTION 403 WALKING SURFACES

403.1 General. Walking surfaces that are a part of an accessible route shall comply with Section 403.

### 403.2 Floor Surface

Floor surfaces shall comply with Section 302.

### 403.3 Slope

The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of a walking surface shall not be steeper than 1:48.

### 403.4 Changes in Level

Changes in level shall comply with Section 303.

### 403.5 Clear Width

The clear width of an accessible route shall comply with Section 403.5.1, 403.5.2, 403.5.3 or 403.5.4 as applicable.

### 403.5.1 General

The clear width of an interior accessible route shall be 36 inches (915 mm) minimum.

### Exceptions:

1. The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced-width segments are separated by segments that are 52 inches (1320 mm) minimum in length and 36 inches (915 mm) minimum in width.

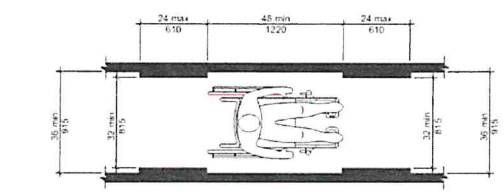


FIG. 403.5

CLEAR WIDTH OF AN ACCESSIBLE ROUTE

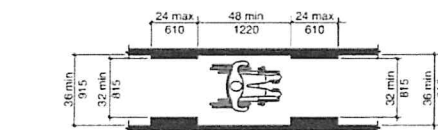


FIGURE 403.5.1(C)

CLEAR WIDTH OF AN ACCESSIBLE ROUTE

24 max 610 48 min 1220 24 max 610 36 min 915 32 min 815 36 min 915

### 403.5.2 Clear Width at 180-Degree Turn

Where an accessible route makes a 180 degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn, and 42 inches (1065 mm) minimum leaving the turn. Exception: This section shall not apply where the clear width during the turn is 60 inches (1525 mm) minimum.

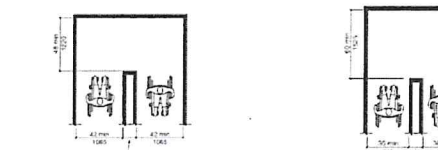


Figure 403.5.2.1(A)

CLEAR WIDTH AT 180 DEGREE TURN NEW BUILDINGS - OPTION 1

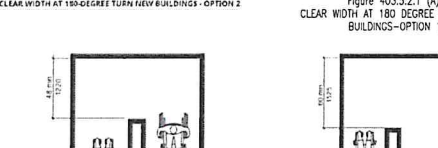


Figure 403.5.2.1(B)

CLEAR WIDTH AT 180 DEGREE TURN EXISTING BUILDINGS



Figure 403.5.2.2(A)

CLEAR WIDTH AT 180 DEGREE TURN EXISTING BUILDINGS



Figure 403.5.2.2(B)

CLEAR WIDTH AT 180 DEGREE TURN EXISTING BUILDINGS



Figure 403.5.2.2(C)

CLEAR WIDTH AT 180 DEGREE TURN EXISTING BUILDINGS



Figure 403.5.2.2(D)

CLEAR WIDTH AT 180 DEGREE TURN EXISTING BUILDINGS

24 max 610 48 min 1220 24 max 610 36 min 915 32 min 815 36 min 915



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Project No: 24097  
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Checked By: TI

SHEET  
ANSI-1  
ACCESSIBILITY  
STANDARDS

2009 ICC A117.1



## 2009 ICC A117.1 Accessible and Usable Buildings and Facilities

### 403.5.2 PASSING SPACE

An accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either a 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped turning space complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

### 403.6 Handrails

Where handrails are required at the side of a corridor they shall comply with Sections 505.4 through 505.

### SECTION 404 DOORS, DOORWAYS AND GATES

#### 404.1 General

Doors, doorways and gates that are part of an accessible route shall comply with Section 404. Exception: Doors, doorways and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.2.6, 404.2.7, and 404.2.8.

404.2 Manual Doors, Doorways and Manual Gates  
Manual doors, doorways and manual gates intended for user passage shall comply with Section 404.2.

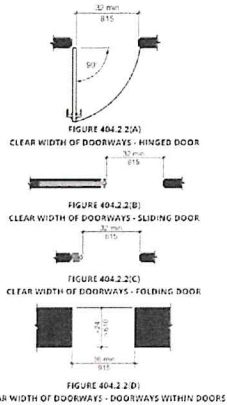
#### 404.2.1 Double-Leaf Doors and Gates

At least one of the active leaves of doorways with two leaves shall comply with Sections 404.2.2 and 404.2.3.

#### 404.2.2 Clear Width

Doorways shall have a clear opening width of 32 inches (815 mm) minimum. Clear opening width of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) in depth at doors and doorways without doors shall provide a clear opening width of 36 inches (915 mm) minimum. There shall be no projections into the clear opening width lower than 34 inches (865 mm) above the floor. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the floor shall not exceed 4 inches (100 mm).  
Exceptions:

1. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.
2. In alterations, a projection of 5/8 inch (16 mm) maximum into the required clear opening width shall be permitted for the latch side stop.



### 404.2.3 Maneuvering Clearances

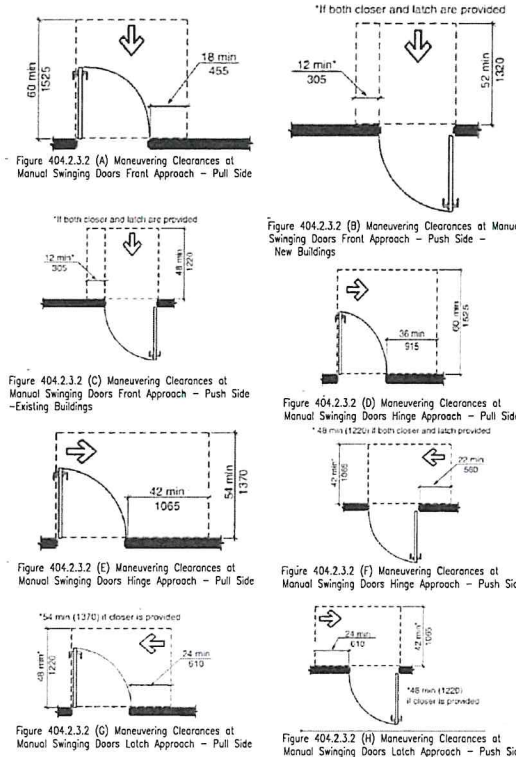
Minimum maneuvering clearances at doors and gates shall comply with Section 404.2.3. Maneuvering clearances shall include the full clear opening width of the doorway and required door maneuvering clearances shall not include knee and toe clearance.

#### 404.2.3.1 Floor Surface

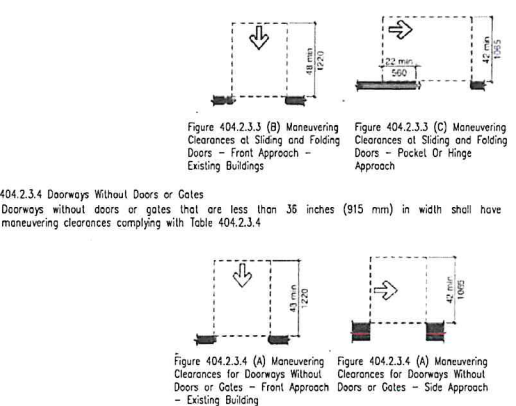
The floor surface within the maneuvering clearances shall have a slope not steeper than 1:48 and shall comply with Section 302.

#### 404.2.3.2 Swinging Doors and Gates

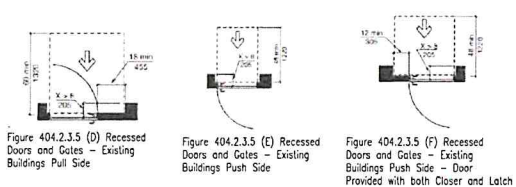
Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.3.2.



404.2.3.3 Sliding and Folding Doors  
Sliding doors and folding doors shall have maneuvering clearances complying with Table 404.2.3.3.



404.2.3.4 Doorways Without Doors or Gates  
Doorways without doors or gates that are less than 36 inches (915 mm) in width shall have maneuvering clearances complying with Table 404.2.3.4.

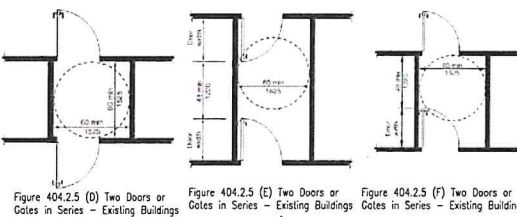


### 404.2.4 Thresholds

If provided, thresholds at doorways shall be 1/2 inch (13 mm) maximum in height. Raised thresholds and changes in level at doorways shall comply with Sections 302 and 303.  
Exception: An existing or altered threshold shall be permitted to be 3/4 inch (19 mm) maximum in height provided that the threshold has a beveled edge on each side with a maximum slope of 1:2 for the height exceeding 1/4 inch (6.4 mm).

#### 404.2.5 Two Doors or Gates in Series

Distance between two hinged or pivoted doors or gates in series shall be 48 inches (1220 mm) minimum plus the width of any door or gate swinging into the space. The space between the doors and gates shall provide a turning space.



404.2.6 Door and Gate Hardware  
Handles, pulls, latches, locks and other operable parts on doors and gates shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching or twisting of the wrist to operate.



404.2.6.1 Hardware Height  
Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

404.2.7 Closing Speed  
Door and gate closing speed shall comply with 404.2.7.

#### 404.2.7.1 Door and Gate Closers

Door and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door or gate to an open position of 12 degrees shall be 5 seconds minimum.

#### 404.2.7.2 Spring Hinges

Door and gate spring hinges shall be adjusted so that from an open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

#### 404.2.8 Door and Gate Opening Force

Fire doors and doors or gates required to be equipped with panic hardware, break away features or other factors requiring higher opening force for safety reasons shall have the minimum opening force allowable in scoping provisions adopted by the appropriate administrative authority. For other doors or gates, the force for pushing or pulling open doors or gates shall be as follows:

1. Interior hinged door: 5.0 pounds (22.2 N) maximum.
2. Sliding or folding door: 5.0 pounds (22.2 N) maximum.
- Exception: The force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position shall not apply to panic hardware, delayed egress devices or fire-rated hardware.

#### 404.2.9 Door and Gate Surface

Door and gate surfaces within 10 inches (255 mm) of the floor, measured vertically, shall be smooth surfaces on the push side extending the full width of the door. Parts creating horizontal or vertical joints in such surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.

1. Sliding doors shall not be required to comply with this section.
2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at no less than 60 degrees from the horizontal shall not be required to comply with the 10-inch (255 mm) bottom rail height requirement.
3. Doors and gates that do not extend to within 10 inches (255 mm) of the floor shall not be required to comply with this section.

#### 404.2.10 Vision Lites

Doors, gates and sidelites adjacent to doors or gates containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one panel on either the door, gate or an adjacent sidelite 43 inches (1090 mm) maximum above the floor.  
Exception: Vision lites with the lowest part more than 66 inches (1675 mm) above the floor shall not be required to comply with this section.

#### 404.3 Automatic and Power-Assisted Doors and Gates

Automatic doors and gates shall comply with Section 404.3. Full powered automatic doors and gates shall comply with ANSI/BHMA A156.10 listed in Section 105.2.4. Power-assist doors and gates and low-energy automatic doors and gates shall comply with ANSI/BHMA A156.19 listed in Section 105.2.6.

#### 404.3.1 Clear Width

Doorways shall have a clear opening width of 32 inches (815 mm) in power-on and power-off mode. The minimum clear opening width for automatic door systems shall be based on the clear opening width provided with all levels in the open position.

#### 404.3.2 Maneuvering Clearances

Maneuvering clearances at power-assisted doors and gates shall comply with Section 404.2.3. Maneuvering clearances complying with Section 404.2.3 shall be provided on the egress side of low-energy automatic and full power automatic doors and gates that serve as part of an accessible means of egress.

1. Low-energy automatic and full power automatic doors and gates that have standby power or battery back-up shall not be required to comply with this section.
2. Low-energy automatic and full power automatic doors and gates that remain open in the power-off condition shall not be required to comply with this section.
3. Full power automatic sliding doors and gates that include a break-away feature shall not be required to comply with this section.

### 404.3.3 Thresholds

Thresholds and changes in level at doorways shall comply with Section 404.2.4.

#### 404.3.4 Two Doors or Gates in Series

Doors or gates in series shall comply with Section 404.2.5.  
Exception: Where both doors or gates in a series are low-energy automatic or full power automatic doors or gates, the two doors or gates in a series shall not be required to provide a turning space between the doors or gates.

#### 404.3.5 Controls

Manually operated controls shall comply with Section 309. The clear floor space adjacent to the controls shall be located beyond the arc of the door or gate swings.

### SECTION 405 RAMPS

#### 405.1 General

Ramps along accessible routes shall comply with Section 405.  
Exception: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with this section.

#### 405.2 Slope

Ramp runs shall have a running slope greater than 1:20 and not steeper than 1:12.  
Exception: In existing buildings or facilities, ramps shall be permitted to have slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

#### 405.3 Cross Slope

Cross slope of ramp runs shall not be steeper than 1:48.

#### 405.4 Floor Surfaces

Floor surfaces of ramp runs shall comply with Section 302.

#### 405.5 Clear Width

The clear width of a ramp run shall be 36 inches (915 mm) minimum. Handrails and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run.

#### 405.6 Rise

The rise for any ramp run shall be 30 inches (760 mm) maximum.

#### 405.7 Landings

Ramps shall have landings at the bottom and top of each ramp run. Landings shall comply with Section 405.7.

#### 405.7.1 Slope

Landings shall have a slope not steeper than 1:48 and shall comply with Section 302.

#### 405.7.2 Width

Clear width of landings shall be at least as wide as the widest ramp run leading to the landing.

#### 405.7.3 Length

Landings shall have a clear length of 60 inches (1525 mm) minimum.

#### 405.7.4 Change in Direction

Ramps that change direction between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

#### 405.7.5 Doorways

Where a door or gate is adjacent to a ramp landing, maneuvering clearances required by Sections 404.2.3 and 404.3.4 shall be permitted to overlap the landing area. Where a door or gate that is subject to locking is located adjacent to a ramp landing, the landing shall be sized to provide a turning space complying with Section 304.3.

#### 405.8 Handrails

Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with Section 505.

#### 405.9 Edge Protection

Edge protection complying with Section 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

1. Edge protection shall not be required on ramps not required to have handrails and that have flared sides complying with Section 406.1.
2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in Section 405.7.
4. Edge protection shall not be required on the sides of ramped aisles where the ramps provide access to the adjacent seats and aisle access ways.

#### 405.9.1 Extended Floor Surface

The floor surface of ramp runs and ramp landings shall extend 12 inches (305 mm) minimum beyond the inside face of a railing complying with Section 505.

#### 405.9.2 Curb or Barrier

A curb complying with Section 405.9.2.1 or a barrier complying with Section 405.9.2.2 shall be provided.

#### 405.9.2.1 Curb

A curb shall be a minimum of 4 inches (100 mm) in height.

#### 405.9.2.2 Barrier

Barriers shall be constructed so that the barrier prevents the passage of a 4-inch (100 mm) diameter sphere where any portion of the sphere is within 4 inches (100 mm) of the floor.

#### 405.10 Wet Conditions

Landings subject to wet conditions shall be designed to prevent the accumulation of water.

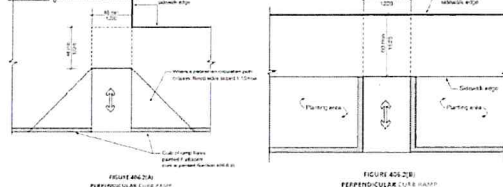
### SECTION 406 CURB RAMPS AND BLENDED TRANSITIONS

#### 406.1 General

Curb ramps and blended transitions on accessible routes shall comply with Section 406.

#### 406.2 Perpendicular Curb Ramps

Perpendicular curb ramps shall comply with Sections 406.2 and 406.5.



#### 406.2.1 Landings

A landing 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided at the top of a curb ramp. The landing shall be permitted to overlap pedestrian routes and clear spaces. Where the landing is constrained at the back-of-sidewalk, the landing shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum. The 60-inch (1525 mm) dimension shall be provided in the direction of the curb ramp run. The slope of landings shall be 1:48 maximum in all directions.

#### 406.2.2 Running Slope

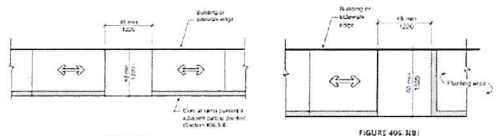
The running slope of a curb ramp shall cut through or shall be built up to the curb at right angles or shall meet the gutter grade break at right angles where the curb is curved. The running slope of a curb ramp shall be 1:20 minimum and 1:12 maximum. The curb ramp run length shall not be required to exceed 15 feet (4570 mm).

#### 406.2.3 Flared Sides

Where a pedestrian circulation path crosses a curb ramp, flared sides shall be provided and shall be sloped 10 percent maximum.

#### 406.3 Parallel Curb Ramps

Parallel curb ramps shall comply with Sections 406.3 and 406.5.



#### 406.3.1 Landing

A landing 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided at the bottom of a curb ramp. The landing shall be permitted to overlap pedestrian routes and clear spaces. Where the landing is constrained on two or more sides, the landing shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum. The 60 inches (1525 mm) dimension shall be provided in the direction of the pedestrian street crossing. The slope of landings shall be 1:48 maximum in all directions.

#### 406.3.2 Running Slope

The running slope of a curb ramp shall be in line with the direction of sidewalk travel. The running slope of a curb ramp shall be 1:20 minimum and 1:12 maximum. The curb ramp run length shall not be required to exceed 15 feet (4570 mm).

#### 406.4 Blended Transitions

Blended transitions shall comply with Sections 406.4 and 406.5.

#### 406.4.1 Running Slope

The running slope of blended transitions shall be 1:20 maximum.

#### 406.5 Common Requirements

Curb ramps and blended transitions shall comply with Section 406.5.

#### 406.5.1 Width

The clear width of curb ramp runs (excluding any flared sides) and blended transitions shall be 48 inches (1220 mm) minimum.

#### 406.5.3 Cross Slope

The cross slope of curb ramps and blended transitions shall be 1:48 maximum. At pedestrian street crossings without yield or stop control and at mid-block pedestrian street crossings, the cross slope shall be permitted to equal the street or highway grade.

#### 406.5.4 Counter Slope

The counter slope of the gutter or street at the foot of curb ramp runs, blended transitions and landings shall be 1:20 maximum.

#### 406.5.5 Clear Space

Beyond the bottom grade break, a clear space 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided within the width of the pedestrian street crossing and wholly outside the parallel vehicle travel lane.

#### 406.5.6 Marking

If curbs adjacent to the ramp flares are painted, the painted surface shall extend along the flared portion of the curb.

#### 406.5.7 Location

Curb ramps and the flared sides of curb ramps shall be located so they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.

#### 406.5.8 Obstructions

Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

#### 406.5.9 Handrails

Handrails shall not be required on curb ramps.

#### 406.6 Detectable Warnings

Where detectable warning surfaces are provided, they shall comply with Section 705.

#### 406.6.1 General

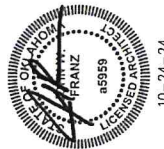
Where detectable warning surfaces are provided, they shall comply with Section 705.

#### 406.6.2 Locations

Detectable warning surfaces shall be provided at the following locations on pedestrian access routes and at transit stops:

1. Curb ramps and blended transitions at pedestrian street crossings.
2. Pedestrian refuge islands.
3. Pedestrian at-grade rail crossings not located within a street or highway.
4. Boarding platforms at transit stops for buses and rail vehicles where the edges of the boarding platform are not protected by screens or guards and.
5. Boarding and alighting areas at sidewalk or street-level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or guards.

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Checked By: TI

2009 ICC A117.1

SHEET  
**ANSI-2**  
ACCESSIBILITY  
STANDARDS



## 2009 ICC A117.1 Accessible and Usable Buildings and Facilities

### CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS

#### SECTION 505 HANDRAILS

**505.1 General**  
Handrails required by Section 405.8 for ramps, Section 504.6 for stairs, Section 1009.3.3 for pool sloped entries and Section 1009.6.2 for pool stairs shall comply with Section 505.

**505.2 Location**  
Handrails shall be provided on both sides of stairs and ramps.

**505.3 Continuity**  
Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs. Other handrails shall comply with Sections 505.10 and 307.  
Exception: Handrails shall not be required to be continuous in aisles serving seating where handrails are discontinuous to provide access to seating and to permit crossovers within the aisles.

**505.4 Height**  
Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above stair nosings, ramp surfaces and walking surfaces. Handrails shall be at a consistent height above stair nosings, ramp surfaces and walking surfaces.

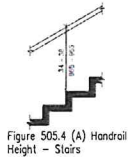


Figure 505.4 (A) Handrail Height - Stairs

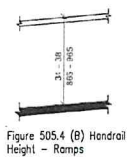


Figure 505.4 (B) Handrail Height - Ramps

#### 505.5 Clearance

Clearance between handrail gripping surface and adjacent surfaces shall be 1 1/2 inches (38 mm) minimum.

#### 505.6 Gripping Surface

Gripping surfaces shall be continuous, without interruption by newel posts, other construction elements, or obstructions.

Exception: Handrail brackets or balusters attached to the bottom surface of the handrail shall not be considered obstructions, provided the brackets or balusters comply with the following criteria:

- 1.1 Not more than 20 percent of the handrail length is obstructed.
  - 1.2 Horizontal projections beyond the sides of the handrail occur 1 1/2 inches (38 mm) minimum below the bottom of the handrail, and provided that for each 1/2 inch (13 mm) of additional handrail perimeter dimension above 4 inches (100 mm), the vertical clearance dimension of 1 1/2 inch (38 mm) shall be permitted to be reduced by 1/8 inch (3.2 mm), and
  - 1.3 Edges shall be rounded.
2. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

#### 505.7 Cross Section

Handrails shall have a cross section complying with Section 505.7.1 or 505.7.2.

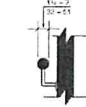


Figure 504.7 (A) Handrail Cross Section - Circular

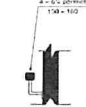


Figure 504.7 (B) Handrail Cross Section - Non-Circular



Figure 504.7 (C) Handrail Cross Section - Non-Circular

#### 505.7.1 Circular Cross Section

Handrails with a circular cross section shall have an outside diameter of 1 1/4 inches (32 mm) minimum and 2 inches (51 mm) maximum.

#### 505.7.2 Noncircular Cross Sections

Handrails with a noncircular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6 1/4 inches (160 mm) maximum, and a cross-section dimension of 2 1/4 inches (57 mm) maximum.

#### 505.8 Surfaces

Handrails, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive elements. Edges shall be rounded.

#### 505.9 Fittings

Handrails shall not rotate within their fittings.

#### 505.10 Handrail Extensions

Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with Section 505.10.3.

1. Continuous handrails at the inside turn of stairs and ramps.
2. Handrail extensions shall not be required in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within the aisle.
3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

#### 505.10.1 Top and Bottom Extension at Ramps

Ramp handrails shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

#### 505.10.2 Top Extension at Stairs

At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the landing nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

#### 505.10.3 Bottom Extension at Stairs

At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

### CHAPTER 6: PLUMBING ELEMENTS & FACILITIES

#### SECTION 601 GENERAL

##### 601.1 Scope

Plumbing elements and facilities required to be accessible by scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 6.

#### SECTION 602 DRINKING FOUNTAINS AND BOTTLE FILLING STATIONS

##### 602.1 General

Drinking fountains for persons using wheelchairs shall comply with Sections 602.2 and 307. Drinking fountains for persons who are standing shall comply with Section 602.3 and 307.

##### 602.2 Drinking Fountains for Persons Using Wheelchairs

Drinking fountains for persons using wheelchairs shall comply with Sections 602.2.1 through 602.2.5.

##### 602.2.1 Clear Floor Space

A clear floor space positioned for a forward approach to the drinking fountain shall be provided. Knee and toe space complying with Section 306 shall be provided. The clear floor space shall be centered on the drinking fountain.

Exception: Drinking fountains primarily for children's use shall be permitted where a clear floor space provides a parallel approach and is centered on the drinking fountain.

##### 602.2.2 Operable Parts

Operable parts shall comply with Section 309.

##### 602.2.3 Spout Outlet Height

Spout outlets of drinking fountains shall be 36 inches (915 mm) maximum above the floor.  
Exception: At drinking fountains primarily for children's use, the spout outlet shall be 30 inches (760 mm) maximum above the floor.

##### 602.2.4 Spout Location

The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the drinking fountain, including bumpers.  
Exception: At drinking fountains primarily for children's use, the spout shall be located 3 1/2 inches (90 mm) maximum from the front edge of the drinking fountain, including bumpers.

##### 602.2.5 Water Flow

The spout shall provide a flow of water 4 inches (100 mm) minimum in height. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches (75 mm) and 5 inches (125 mm) from the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain.

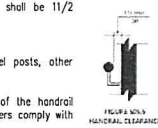


Figure 504.7 (A) Handrail Cross Section - Circular

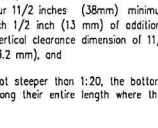


Figure 504.7 (B) Handrail Cross Section - Non-Circular

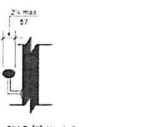


Figure 504.7 (C) Handrail Cross Section - Non-Circular

#### 505.7.1 Circular Cross Section

Handrails with a circular cross section shall have an outside diameter of 1 1/4 inches (32 mm) minimum and 2 inches (51 mm) maximum.

#### 505.7.2 Noncircular Cross Sections

Handrails with a noncircular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6 1/4 inches (160 mm) maximum, and a cross-section dimension of 2 1/4 inches (57 mm) maximum.

#### 505.8 Surfaces

Handrails, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive elements. Edges shall be rounded.

#### 505.9 Fittings

Handrails shall not rotate within their fittings.

#### 505.10 Handrail Extensions

Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with Section 505.10.3.

1. Continuous handrails at the inside turn of stairs and ramps.
2. Handrail extensions shall not be required in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within the aisle.
3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

#### 505.10.1 Top and Bottom Extension at Ramps

Ramp handrails shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

#### 505.10.2 Top Extension at Stairs

At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the landing nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

#### 505.10.3 Bottom Extension at Stairs

At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

### CHAPTER 6: PLUMBING ELEMENTS & FACILITIES

#### SECTION 601 GENERAL

##### 601.1 Scope

Plumbing elements and facilities required to be accessible by scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 6.

#### SECTION 602 DRINKING FOUNTAINS AND BOTTLE FILLING STATIONS

##### 602.1 General

Drinking fountains for persons using wheelchairs shall comply with Sections 602.2 and 307. Drinking fountains for persons who are standing shall comply with Section 602.3 and 307.

##### 602.2 Drinking Fountains for Persons Using Wheelchairs

Drinking fountains for persons using wheelchairs shall comply with Sections 602.2.1 through 602.2.5.

##### 602.2.1 Clear Floor Space

A clear floor space positioned for a forward approach to the drinking fountain shall be provided. Knee and toe space complying with Section 306 shall be provided. The clear floor space shall be centered on the drinking fountain.

Exception: Drinking fountains primarily for children's use shall be permitted where a clear floor space provides a parallel approach and is centered on the drinking fountain.

##### 602.2.2 Operable Parts

Operable parts shall comply with Section 309.

##### 602.2.3 Spout Outlet Height

Spout outlets of drinking fountains shall be 36 inches (915 mm) maximum above the floor.  
Exception: At drinking fountains primarily for children's use, the spout outlet shall be 30 inches (760 mm) maximum above the floor.

##### 602.2.4 Spout Location

The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the drinking fountain, including bumpers.  
Exception: At drinking fountains primarily for children's use, the spout shall be located 3 1/2 inches (90 mm) maximum from the front edge of the drinking fountain, including bumpers.

##### 602.2.5 Water Flow

The spout shall provide a flow of water 4 inches (100 mm) minimum in height. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches (75 mm) and 5 inches (125 mm) from the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain.

#### 602.3 Drinking Fountains for Persons Who Are Standing

Drinking fountains for persons who are standing shall comply with Sections 602.3.1 through 602.3.4.

##### 602.3.1 Operable Parts

Operable parts shall comply with Sections 309.3 and 309.4.

##### 602.3.2 Spout Outlet Height

Spout outlets of drinking fountains shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the floor.

Exception: Drinking fountains primarily for children's use shall be permitted where the spout outlet is 30 inches (760 mm) minimum and 43 inches (1090 mm) maximum above the floor.

##### 602.3.3 Spout Location

The spout shall be located 5 inches (125 mm) maximum from the front edge of the drinking fountain, including bumpers.

##### 602.3.4 Water Flow

The spout shall provide a flow of water 4 inches (100 mm) minimum in height. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches (75 mm) and 5 inches (125 mm) from the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain.

##### 602.4 Bottle Filling Stations

Bottle filling stations shall comply with Sections 602.4.1 and 602.4.2.  
Exception: Where bottle filling stations are part of the drinking fountain for persons who are standing, the bottle filling station is not required to comply with this section provided a bottle filling station is located at the drinking fountain for persons using wheelchairs.

##### 602.4.1 Clear Floor Space

A clear floor space positioned for a forward or side approach shall be provided.

##### 602.4.2 Controls

Controls for bottle filling stations shall be hand operated or automatic. Hand operated controls shall comply with Section 309.

#### SECTION 603 TOILET AND BATHING ROOMS

##### 603.1 General

Toilet and bathing rooms shall comply with Section 603.

##### 603.2 Clearances

##### 603.2.1 Turning Space

A turning space shall be provided within the room. The required turning space shall not be provided within a toilet compartment.

##### 603.2.2 Door Swing

Doors shall not swing into the clear floor space or clearance for any fixture.  
Exceptions:

1. To a toilet or bathing room for a single occupant, accessed only through a private office and not for common use or public use shall be permitted to swing into the clear floor space, provided the swing of the door can be reversed to comply with Section 603.2.2.
2. Where the room is for individual use and a clear floor space complying with Section 305.3 is provided within the room beyond the arc of the door swing, the door shall not be required to comply with Section 603.2.2.

##### 603.3 Mirrors

Where mirrors are located above lavatories, a mirror shall be located over the lavatory complying with Section 606 and shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor. Where mirrors are located above counters that do not contain lavatories, the mirror shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.  
Exception: Other than within Accessible dwelling or sleeping units, mirrors shall not be required over the lavatories or counters if a mirror is located within the same toilet or bathing room and mounted with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the floor.

##### 603.4 Coat Hooks and Shelves

Coat hooks shall be located within one of the reach ranges specified in Section 308. Shelves shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

##### 603.5 Diaper Changing Tables

Diaper changing tables shall comply with Sections 309 and 902.

##### 603.6 Operable Parts

Operable parts on towel dispensers and hand dryers serving lavatories complying with Section 606 shall comply with Table 603.6.

#### SECTION 604 WATER CLOSETS AND TOILET COMPARTMENTS

##### 604.1 General

Water closets and toilet compartments shall comply with Section 604. Compartments containing more than one plumbing fixture shall comply with Section 603. Wheelchair accessible compartments shall comply with Section 604.9. Ambulatory accessible compartments shall comply with Section 604.10.  
Exception: Water closets and toilet compartments primarily for children's use shall be permitted to comply with Section 604.11 as applicable.

##### 604.2 Location

The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition. Water closets located in ambulatory accessible toilet compartments specified in Section 604.10 shall have the centerline of the water closet 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition.

##### 604.3 Clearance

**604.3.1 Clearance Width**  
Clearance around a water closet shall be 60 inches (1525 mm) minimum in width, measured perpendicular from the sidewall.

##### 604.3.2 Clearance Depth

Clearance around the water closet shall be 56 inches (1420 mm) minimum in depth, measured perpendicular from the rear wall.

##### 604.3.3 Clearance Overlap

The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, paper dispensers, sanitary napkin receptacles, coat hooks, shelves, accessible routes, clear floor space at other fixtures and the turning space. No other fixtures or obstructions shall be within the required water closet clearance.

##### 604.4 Height

The height of water closet seats shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the floor, measured to the top of the seat. Seats shall not be sprung to return to a tilted position.  
Exceptions:

1. A water closet which is adjustable in height by the user is permitted provided that at least one adjustment setting provides a seat within the range specified in this section.
2. A water closet in a toilet room for a single occupant, accessed only through a private office and not for common use or public use, shall not be required to comply with this section.

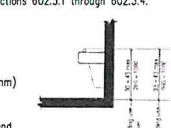


Figure 602.3.2 Standing Use Drinking Fountain Spout Height and Location

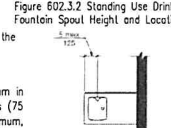


Figure 602.3.3 Standing Use Drinking Fountain Spout Location

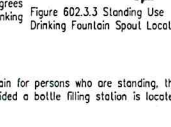


Figure 602.3.4 Water Flow

#### 602.3.2 Standing Use Drinking Fountain Spout Height and Location

Spout outlets of drinking fountains shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the floor.

#### 602.3.3 Standing Use Drinking Fountain Spout Location

The spout shall be located 5 inches (125 mm) maximum from the front edge of the drinking fountain, including bumpers.

#### 602.3.4 Water Flow

The spout shall provide a flow of water 4 inches (100 mm) minimum in height. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches (75 mm) and 5 inches (125 mm) from the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain.

#### 602.4 Bottle Filling Stations

Bottle filling stations shall comply with Sections 602.4.1 and 602.4.2.  
Exception: Where bottle filling stations are part of the drinking fountain for persons who are standing, the bottle filling station is not required to comply with this section provided a bottle filling station is located at the drinking fountain for persons using wheelchairs.

#### 602.4.1 Clear Floor Space

A clear floor space positioned for a forward or side approach shall be provided.

#### 602.4.2 Controls

Controls for bottle filling stations shall be hand operated or automatic. Hand operated controls shall comply with Section 309.

#### 603.2 Clearances

#### 603.2.1 Turning Space

A turning space shall be provided within the room. The required turning space shall not be provided within a toilet compartment.

#### 603.2.2 Door Swing

Doors shall not swing into the clear floor space or clearance for any fixture.  
Exceptions:

1. To a toilet or bathing room for a single occupant, accessed only through a private office and not for common use or public use shall be permitted to swing into the clear floor space, provided the swing of the door can be reversed to comply with Section 603.2.2.
2. Where the room is for individual use and a clear floor space complying with Section 305.3 is provided within the room beyond the arc of the door swing, the door shall not be required to comply with Section 603.2.2.

#### 603.3 Mirrors

Where mirrors are located above lavatories, a mirror shall be located over the lavatory complying with Section 606 and shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor. Where mirrors are located above counters that do not contain lavatories, the mirror shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.  
Exception: Other than within Accessible dwelling or sleeping units, mirrors shall not be required over the lavatories or counters if a mirror is located within the same toilet or bathing room and mounted with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the floor.

#### 603.4 Coat Hooks and Shelves

Coat hooks shall be located within one of the reach ranges specified in Section 308. Shelves shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

#### 603.5 Diaper Changing Tables

Diaper changing tables shall comply with Sections 309 and 902.

#### 603.6 Operable Parts



## 2009 ICC A117.1 Accessible and Usable Buildings and Facilities

### SECTION 604.10 AMBULATORY ACCESSIBLE TOILET COMPARTMENTS

#### 604.10.1 GENERAL

Ambulatory accessible toilet compartments shall comply with Section 604.10.

#### 604.10.2 SIZE

The minimum area of an ambulatory accessible toilet compartment shall be 60 inches (1525mm) minimum un depth and a width of 36 inches (890mm) minimum.

#### 604.10.3 DOORS

Ambulatory accessible toilet compartment doors, including door hardware, shall comply with Section 404. The door shall be self-closing. A door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Compartment doors shall not swing into the required minimum area of the compartment.

#### EXCEPTIONS:

1. Outside of the ambulatory accessible toilet compartment, where the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065mm) minimum.

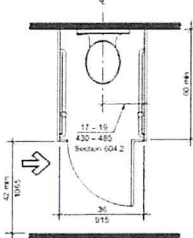


Figure 604.10.1 Ambulatory Compartment

#### 604.10.4 GRAB BARS

Grab bars shall comply with Section 609. Side wall grab bars complying with Section 604.5.1 shall be provided on both sides of the compartment.

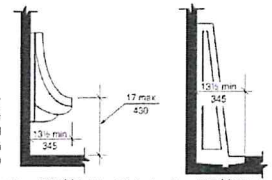
### SECTION 605 URINALS

#### 605.1 General

Urinals shall comply with Section 605.

#### 605.2 Height and Depth

Urinals shall be of the stall type or shall be of the wall hung type with the rim at 17 inches (430 mm) maximum above the floor. Urinals shall be 13 1/2 inches (345 mm) minimum in depth measured from the outer face of the urinal rim to the finished wall surface.



#### 605.3 Clear Floor Space

A clear floor space positioned for forward approach shall be provided.

#### 605.4 Flush Controls

Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with

### SECTION 606 LAVATORIES AND SINKS

#### 606.1 General

Lavatories and sinks shall comply with Section 606.

#### 606.2 Clear Floor Space

A clear floor space complying with Section 305.3, positioned for forward approach, shall be provided. Knee and toe clearance complying with Section 306 shall be provided. The dip of the overflow shall not be considered in determining knee and toe clearances.

#### EXCEPTIONS:

1. A clear floor space providing a parallel approach shall be permitted at a kitchen sink in a space where a cook top or conventional range is not provided.
2. The requirement for knee and toe clearance shall not apply to a lavatory in a toilet or bathing facility for a single occupant, accessed only through a private office and not for common use or public use.
3. A knee clearance of 24 inches (610 mm) minimum above the floor shall be permitted at lavatories and sinks used primarily by children ages 6 through 12 where the higher of the rim or counter surface is 31 inches (785 mm) maximum above the floor.
4. A clear floor space providing a parallel approach shall be permitted at lavatories and sinks used primarily by children ages 5 and younger.
5. The requirement for knee and toe clearance shall not apply to more than one bowl of a multi-bowl sink.
6. A clear floor space providing a parallel approach shall be permitted at wet bars.

#### 606.3 Height

The front of lavatories and sinks shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

Exception: A lavatory in a toilet or bathing facility for a single occupant, accessed only through a private office and not for common use or public use, shall not be required to comply with Section 606.3.

#### 606.4 Faucets

Faucets shall comply with Section 309. Hand-operated metering faucets shall remain open for 10 seconds minimum. Exception: Automatic faucets shall not be required to comply with Section 309 provided that the reach depth to activate the faucets and the reach depth to the water flow is 11 inches (280 mm) maximum.

#### 606.5 Lavatories With Enhanced Reach Range

Where enhanced reach range is required at lavatories, faucets and soap dispenser controls shall have a reach depth of 11 inches (280 mm) maximum. Water and soap outlets shall be provided with a reach depth of 11 inches (280 mm) maximum. The lavatory shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

#### EXCEPTIONS:

1. Enhanced reach range faucets shall not be required on lavatories provided with automatic faucets where the reach depth to activate the faucets and the reach depth to the water outlet is 11 inches (280 mm) maximum.
2. Enhanced reach range soap dispensers shall not be required on lavatories provided with automatic dispensers where the reach depth to activate the soap dispensers and the reach depth to the soap outlet is 11 inches (280 mm) maximum.

#### 606.6 Exposed Pipes and Surfaces

Water supply and drainpipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

### SECTION 609 GRAB BARS

#### 609.1 General

Grab bars in toilet or bathing facilities shall comply with Section 609.

#### 609.2 Cross Section

Grab bars shall have a cross section complying with Section 609.2.1 or 609.2.2.

#### 609.2.1 Circular Cross Section

Grab bars with a circular cross section shall have an outside diameter of 1 1/4 inch (32 mm) minimum and 2 inches (51 mm) maximum.

#### 609.2.2 Noncircular Cross Section

Grab bars with a noncircular cross section shall have a cross section dimension of 2 inches (51 mm) maximum, and a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum.

#### 609.3 Spacing

The space between the wall and the grab bar shall be 1 1/2 inches (38 mm). The space between the grab bar and projecting objects below and at the ends of the grab bar shall be 1 1/2 inches (38 mm) minimum. The space between the grab bar and projecting objects above the grab bar shall be 12 inches (305 mm) minimum.

FIGURE 609.2 SIZE OF GRAB BARS

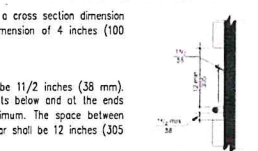


Figure 609.3 Spacing of Grab Bars

#### EXCEPTIONS:

1. The space between the grab bars and shower controls, shower fittings, and other grab bars above the grab bar shall be permitted to be 1 1/2 inches (38 mm) minimum.
2. Recessed dispensers projecting from the wall 1/4 inch (6.4 mm) maximum measured from the face of the dispenser and complying with Section 604.7 shall be permitted within the 12-inch (305 mm) space above and the 1 1/2-inch (38 mm) spaces below and at the ends of the grab bar.

#### 609.4 Position of Grab Bars

#### 609.4.1 General

Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the floor measured to the top of the gripping surface or shall be installed as required by Items 1 through 3.

1. The lower grab bar on the back wall of a bathtub shall comply with Section 607.4.1.1 or 607.4.2.1.
2. Vertical grab bars shall comply with Sections 604.5.1.2, 607.4.1.2.2, 607.4.2.2 and 608.3.1.2.
3. Grab bars at water closets primarily for children's use shall comply with Section 609.4.2.

#### 609.5 SURFACE HAZARDS

Grab bars and any wall or other surface adjacent to grab bars shall be free of sharp or abrasive elements. Edges shall be rounded.

#### 609.6 FITTINGS

Grab bars shall not rotate within their fittings.

#### 609.7 INSTALLATION AND CONFIGURATION

Grab bars shall be installed in any manner that provides a gripping surface at the locations specified in this standard and does not obstruct the clear floor space. Horizontal and vertical grab bars shall be permitted to be separate bars, a single piece bar, or a combination thereof.

#### 609.8 STRUCTURAL STRENGTH

Allowable stresses shall not be exceeded for materials used where a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the grab bar, fastener mounting device, or supporting structure.

## Chapter 7 Communication Elements and Features

### SECTION 701 GENERAL

#### 701.1 Scope

Communications elements and features required to be accessible by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 7.

### SECTION 702 ALARMS

#### 702.1 General

Audible and visible alarms and notification appliances that are part of a building fire alarm system shall be installed in accordance with NFPA-72 listed in Section 106.2.4, be powered by a commercial light and power source, be permanently connected to the wiring of the premises electric system and be permanently installed.

Exception: Audible and visible notification appliances provided within dwelling or sleeping units shall comply with Sections 1106.2 through 1106.4.4.

### SECTION 703 SIGNS

#### 703.1 General

Signs shall comply with Section 703. Signs shall contain both raised characters and braille. Where signs with both visual and raised characters are required, either one sign with both visual and raised characters, or two separate signs, one with visual, and one with raised characters, shall be provided.

#### 703.1.1 Designations

Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2, and 703.3.

Exception: Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section 703.3.

#### 703.1.2 Directional and Informational Signs

Signs that provide direction to or information about interior spaces and facilities of the site shall comply with Section 703.2.

#### 703.1.3 Pictograms

Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 and shall have text descriptors located directly below the pictogram field and complying with Sections 703.2 and 703.3.

Exception: Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

#### 703.2 Visual Characters

#### 703.2.1 General

Visual characters shall comply with the following:

1. Visual characters that also serve as raised characters shall comply with Section 703.3, or
  2. Visual characters on VMS signage shall comply with Section 703.7, or
  3. Visual characters not covered in items 1 and 2 shall comply with Section 703.2.
- Exception: The visual and raised requirements of item 1 shall be permitted to be provided by two separate signs that provide corresponding information provided one sign complies with Section 703.2 and the second sign complies with Section 703.3.

#### 703.2.2 Case

Characters shall be uppercase, lowercase, or a combination of both.

#### 703.2.3 Style

Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

#### 703.2.4 Character Height

The uppercase letter "T" shall be used to determine the allowable height of all characters of a font. The uppercase letter "T" of the font shall have a minimum height complying with Table 703.2.4. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.

Exception: In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the height of the uppercase "T" of fonts shall be permitted to be 1 inch (25 mm) for every 30 feet (9.15 m) of viewing distance, provided the character height is 8 inches (205 mm) minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.

#### 703.2.5 Character Width

The uppercase letter "O" shall be used to determine the allowable width of all characters of a font. The width of the uppercase letter "O" of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase "T" of the font.

#### 703.2.6 Stroke Width

The uppercase letter "T" shall be used to determine the allowable stroke width of all characters of a font. The stroke width shall be 10 percent minimum and 30 percent maximum of the height of the uppercase "T" of the font.

#### 703.2.7 Character Spacing

Spacing shall be measured between the two closest points of adjacent characters within a message, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of the character height.

#### 703.2.8 Line Spacing

Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

Exception: In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the spacing between the baselines of separate lines of characters within a message shall be permitted to be 120 percent minimum and 170 percent maximum of the character height.

#### 703.2.9 Height Above Floor

Visual characters shall be 40 inches (1015 mm) minimum above the floor of the viewing position, measured to the baseline of the character. Heights shall comply with Table 703.2.4, based on the size of the characters on the sign.

Exception: Visual characters indicating elevator car controls shall not be required to comply with Section 703.2.9.

#### 703.2.10 Finish and Contrast

Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.

### 703.3 Raised Characters

#### 703.3.1 General

Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4.

#### 703.3.2 Depth

Raised characters shall be raised 1/32 inch (0.8 mm) minimum above their background.

#### 703.3.3 Case

Characters shall be uppercase.

#### 703.3.4 Style

Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative or of other unusual forms.

#### 703.3.5 Character Height

The uppercase letter "T" shall be used to determine the allowable height of all characters of a font. The height of the uppercase letter "T" of the font, measured vertically from the baseline of the character, shall be 5/8 inch (16 mm) minimum, and 2 inches (51 mm) maximum.

Exception: Where separate raised and visual characters with the same information are provided, the height of the raised uppercase letter "T" shall be permitted to be 1/2 inch (13 mm) minimum.

#### 703.3.6 Character Width

The uppercase letter "O" shall be used to determine the allowable width of all characters of a font. The width of the uppercase letter "O" of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase "T" of the font.

#### 703.3.7 Stroke Width

Raised character stroke width shall comply with Section 703.3.7.

The uppercase letter "T" of the font shall be used to determine the allowable stroke width of all characters of a font.

#### 703.3.7.1 Maximum

The stroke width shall be 15 percent maximum of the height of the uppercase letter "T" measured at the top surface of the character, and 30 percent maximum of the height of the uppercase letter "T" measured at the base of the character.

#### 703.3.7.2 Minimum

When characters are both visual and raised, the stroke width shall be 10 percent minimum of the height of the uppercase letter "T".

#### 703.3.8 Character Spacing

Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Spacing between individual raised characters shall be 1/8 inch (3.2 mm) minimum measured at the top surface of the characters, 1/16 inch (1.6 mm) minimum measured at the base of the characters, and four times the raised character stroke width maximum. Characters shall be separated from raised borders and decorative elements 3/8 inch (9.5 mm) minimum.

#### 703.3.9 Line Spacing

Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

#### 703.3.10 Height Above Floor

Raised characters shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the lowest raised character and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exception: Raised characters for elevator car controls shall not be required to comply with Section 703.3.10.

#### 703.3.11 Location

Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side. Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45 degree open position.

Exception: Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.

#### 703.3.12 Finish and Contrast

Characters and their background shall have a nonglare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.

Exception: Where separate raised characters and visual characters with the same information are provided, raised characters shall not be required to have nonglare finish or to contrast with their background.

### 703.4 BRAILLE

#### 703.4.1 General

Braille shall be contracted (Grade 2) braille and shall comply with Section 703.4.

#### 703.4.2 Uppercase Letters

The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials or acronyms.

#### 703.4.3 Dimensions

Braille dots shall have a domed or rounded shape and shall comply with Table 703.4.3.

#### 703.4.4 Position

Braille shall be below the corresponding text. If text is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other raised characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

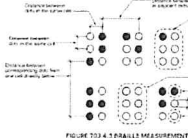


FIGURE 703.4.3.1 PARALLEL MEASUREMENT

#### 703.4.5 Mounting Height

Braille shall be 48 inches (1220 mm) minimum and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the braille cells.

Exception: Elevator car controls shall not be required to comply with this section.

### 703.5 Pictograms

#### 703.5.1 General

Pictograms shall comply with Section 703.5.

#### 703.5.2 Pictogram Field

Pictograms shall have a field 6 inches (150 mm) minimum in height.

Characters or braille shall not be located in the pictogram field.

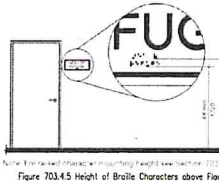


Figure 703.5.2 PICTOGRAM FIELD

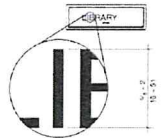


FIGURE 703.6.3.1 International Symbol of Accessibility

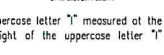


FIGURE 703.6.3.2 International TTY Symbol

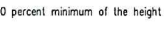


FIGURE 703.6.3.3 International Symbol of Access for Hearing

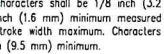


FIGURE 703.6.3.4 Volume-Controlled Telephone

### 703.5.3 Finish and Contrast

Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field.

#### 703.5.3.1 Nonglare Finish

The glare from coverings and the finish of pictograms and their fields shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

#### 703.5.3.2 Character Contrast

Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.

### 703.6 Symbols of Accessibility

#### 703.6.1 General

Symbols of accessibility shall comply with Section 703.6.

#### 703.6.2 Finish and Contrast

Symbols of accessibility and their backgrounds shall have a nonglare finish. Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background.

#### 703.6.2.1 Nonglare Finish

The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

#### 703.6.3.1 International Symbol of Accessibility

The International Symbol of Accessibility shall comply with Figure 703.6.3.1.

#### 703.6.3.2 International Symbol of TTY

The International Symbol of TTY shall comply with Figure 703.6.3.2.

#### 703.6.3.3 Assistive Listening Systems

Assistive listening systems shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.6.3.3.



GENERAL CONDITIONS

1. CODE 2018 INTERNATIONAL BUILDING CODE
2. BUILDING GRAVITY LOADS
- A. LIVE LOAD ROOF 20 PSF
- B. SNOW LOAD GROUND SNOW LOAD Pg 10 PSF
3. BUILDING LATERAL LOADS
- A. WIND LOADS
1. BASIC WIND SPEED (3-SECOND GUST) 109 MPH
2. WIND EXPOSURE CATEGORY C
3. RISK CATEGORY II
4. INTERNAL PRESSURE COEFFICIENT (GCP) ±0.18
- B. SEISMIC LOADS
1. RISK CATEGORY II
2. SEISMIC IMPORTANCE FACTOR (Ie) 1.0
3. MAPPED SPECTRAL RESPONSE COEFFICIENT (Se) 0.308
4. MAPPED SPECTRAL RESPONSE COEFFICIENT (S1) 0.081
5. SITE CLASS C
6. SPECTRAL RESPONSE COEFFICIENT (Sds) 0.267
7. SPECTRAL RESPONSE COEFFICIENT (Sd1) 0.081
8. SEISMIC DESIGN CATEGORY B
9. BASIC SEISMIC FORCE RESISTING SYSTEM LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
10. DESIGN BASE SHEAR (V) 0.041W
11. SEISMIC RESPONSE COEFFICIENT (Cs) 0.041
12. RESPONSE MODIFICATION COEFFICIENT (R) 6.5
13. ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE
4. STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2018 EDITION (IBC 2018).
5. CONSULT STRUCTURAL ENGINEER IF LOCATIONS OR DESIGN WEIGHTS OF ROOF TOP UNITS DIFFER FROM THOSE ON PLANS.
6. FIELD VERIFY ALL RELEVANT DIMENSIONS AND CONDITIONS AT EXISTING STRUCTURES PRIOR TO STARTING SHOP DRAWINGS AND THE CONSTRUCTION PROCESS IN THOSE AREAS. SUBMIT APPROPRIATE PLANS AND DETAILS REFLECTING THE FIELD VERIFIED EXISTING CONDITIONS FOR THE ARCHITECTS USE.
7. EXISTING CONDITIONS WHICH REQUIRE MODIFICATIONS TO THE DESIGN OF THE PROPOSED CONSTRUCTION SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE SADLER GROUP.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
9. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF OTHER TRADES (MECHANICAL, ELECTRICAL, & ETC.) PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION, FORMING, OR PLACEMENT OF MATERIALS. GENERAL CONTRACTOR SHALL REPORT DISCREPANCIES IMMEDIATELY TO ARCHITECT AND SHALL PROCEED WITH CONSTRUCTION ONLY AFTER DISCREPANCY HAS BEEN RESOLVED.
11. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN ALL AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE SHOWN IN THE DETAILS.
12. IF A CONFLICT EXIST BETWEEN PLANS AND SPECIFICATION, OR BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS THE CONTRACTOR SHALL REQUEST WRITTEN CONFORMANCE. IF IT IS NOT RESOLVED PRIOR TO SUBMITTING BIDS, THE CONTRACTOR SHALL PRICE THE MOST EXPENSIVE OPTION.
13. MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL WHICH ARE NOT AS SPECIFIED IN THE DOCUMENT SHALL BE ACCOMPANIED BY A CURRENT I.C.B.O. (INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS) REPORT. MATERIALS OR PRODUCTS THAT DO NOT HAVE I.C.B.O. REPORTS INDICATING THE SUBSTITUTED MATERIAL OR PRODUCT TO BE EQUAL TO THAT SPECIFIED, WILL NOT BE CONSIDERED.

CODES & DESIGN SPECIFICATIONS

1. 2018 INTERNATIONAL BUILDING CODE (IBC 2018).
2. STRUCTURAL STEEL: "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 2005.
3. STRUCTURAL WOOD: "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION," THE AMERICAN FOREST AND PAPER ASSOCIATION, 2005.
4. STRUCTURAL CONCRETE: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-08)," THE AMERICAN CONCRETE INSTITUTE, 2008.
5. WHERE THERE IS CONFLICT BETWEEN THE BUILDING CODE AND THE MATERIAL CODES, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.

SITE NOTES

1. THE FOUNDATION DESIGN IS BASED ON THE SOIL REPORT CONDUCTED IN THE VICINITY OF THE NEW CONSTRUCTION SITE ASSUMED SOIL VALUES ARE AS FOLLOWS:
- A. AN ALLOWABLE BEARING PRESSURE FOR CONTINUOUS FOOTING ARE AS FOLLOWS:
- a. 2,500 PSF FOR FOOTING BEARING ON STRUCTURAL FILL/ UNDISTURBED SOIL
- b. 5,000 PSF FOR FOOTING BEARING ON IGM/WEATHERED ROCK
2. ALL GRADE BEAMS SHALL BE FOUNDED A MINIMUM OF TWO (2) FEET BELOW FINAL EXTERIOR GRADE.
3. THE GRADE BEAM EXCAVATIONS SHALL BE MADE TO NEAT LINES AND SHALL BE FREE OF LOOSE OR WET MATERIALS. CONCRETE SHALL BE PLACED DIRECTLY AGAINST THE SOIL WITHOUT FORMING.
4. PLACEMENT OF FILL SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT.
5. BUILDING PAD SHALL BE AS FOLLOWS:
- A. THE BUILDING SITE AND AREAS TO BE PAVED SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROOTS, OLD CONSTRUCTION DEBRIS, OR OTHER ORGANIC MATERIAL.
- B. AFTER STRIPPING THE SITE, THE CONTRACTOR SHALL PLACE A MINIMUM OF THREE (3) FEET OF COMPACTED ENGINEERED FILL BELOW THE SUB.
- C. THE SUB GRADE SHALL BE FIRM AND ABLE TO SUPPORT THE CONSTRUCTION EQUIPMENT WITHOUT DISPLACEMENT AND BE COMPACTED AS RECOMMENDED HEREIN. SOFT OR YIELDING SUB GRADE SHALL BE CORRECTED AND MADE STABLE BEFORE CONSTRUCTION PROCEEDS. ANY OLD FILL FOUND ON THE SITE SHALL BE REMOVED TO PROVIDE ADEQUATE SUPPORT FOR FOUNDATIONS AND PAVEMENTS OR SHALL BE REMOVED. THE SUB GRADE SHALL BE PROOF ROLLED TO DETECT ANY SOFT SPOTS, WHICH IF EXIST, SHALL BE REWORKED, COMPACTED AND TESTED. PRIOR TO FILL PLACEMENT THE SUB GRADE SHALL BE SCARIFIED TO A DEPTH OF APPROXIMATELY SIX (6) INCHES AND COMPACTED TO NINETY-TWO (92) TO NINETY-EIGHT (98) PERCENT OF MAXIMUM DRY DENSITY WITH A MINIMUM MOISTURE CONTENT OF FOUR (4) POINTS ABOVE OPTIMUM.
- D. ALL FILL REQUIRED IN BUILDING AREAS SHALL BE SELECT FILL HAVING A MAXIMUM PLASTICITY INDEX OF EIGHTEEN (18) AND A MAXIMUM LIQUID LIMIT OF FORTY (40).
- E. SELECT FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING EIGHT (8) INCHES IN UNCOMPACTED THICKNESS, AND BE COMPACTED TO A MINIMUM DENSITY OF NINETY-EIGHT (98) PERCENT OF STANDARD PROCTOR (ASTM D 698), AT A MOISTURE CONTENT BETWEEN MINUS TWO (-2) TO PLUS THREE (+3) PERCENT POINTS ABOVE OPTIMUM.
- F. PLACE AN 10-MIL VAPOR BARRIER BENEATH ALL FLOOR SLABS THAT MEETS OR EXCEEDS ASTM E-1745 CLASS C STANDARD AND SHALL HAVE A MAXIMUM WATER VAPOR PERMEANCE OF 0.044 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. ALL SEAMS AND PENETRATIONS THROUGH THE BARRIER SHOULD BE SEALED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
- G. COMPACTION TESTS SHALL BE TAKEN AS FOLLOWS: TWO FIELD DENSITY TESTS PER LIFT. FOR AREAS WHERE HAND TAMPING IS REQUIRED, THE TESTING FREQUENCY SHOULD BE INCREASED TO APPROXIMATELY ONE TEST PER LIFT, PER 100 LINEAR FEET OF AREA. EACH LIFT SHALL BE COMPACTED, TESTED AND APPROVED BEFORE ANOTHER LIFT IS ADDED.
7. CONTRACTOR SHALL BRACE WALL OR GRADE BEAM WHILE PLACING BACKFILL OR FILL MATERIAL.

WELD NOTES

1. WELDED CONSTRUCTION SHALL CONFORM TO THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE", D1.1 AND "REINFORCING STEEL WELDING CODE", D1.4. ELECTRODES FOR FIELD AND SHOP WELDS SHALL BE E70XX.
2. FULL PENETRATION GROOVE WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING, TWENTY-FIVE PERCENT OF THE WELDS SHALL BE INSPECTED AT RANDOM UNLESS NOTED OTHERWISE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. WHEN WELDS ARE NOT CALLED OUT ON DRAWINGS, THEY ARE MINIMUM SIZE CONTINUOUS FILLET WELDS IN ACCORDANCE WITH AWS D1.1 FILLET WELDS NOT SPECIFIED AS TO LENGTH SHALL BE CONTINUOUS.
4. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL GROOVE WELDS SHALL BE FULL PENETRATION.
5. ONLY LOW HYDROGEN ELECTRODES SHALL BE USED ON REINFORCING STEEL AND ASTM A572 STEEL.
6. PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

CONCRETE NOTES

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.
3. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT SPECIFIED ON DRAWINGS, USE CLASS "B" SPLICES.

MINIMUM LAP FOR SPLICES IN CONCRETE					
BAR SIZE	TENSION SPLICES				COMPRESSION SPLICES
	TOP BARS		OTHER BARS		
	A	B	A	B	
#3	1'-10"	2'-4"	1'-5"	1'-10"	1'-0"
#4	2'-5"	3'-1"	1'-10"	2'-5"	1'-5"
#5	3'-0"	3'-11"	2'-4"	3'-0"	1'-7"
#6	3'-7"	4'-8"	2'-9"	3'-7"	1'-11"
COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS LAP WELDED WIRE FABRIC ONE SPACING OF CROSS WIRES PLUS 2".					

4. NON-SCHEDULED HORIZONTAL GRADE BEAM REINFORCEMENT SHALL BE CONTINUOUS AND PLACED AS FOLLOWS:
- TOP BARS - SHALL BE SPLICED, 30 BAR DIAMETERS, AT THE MID-POINT BETWEEN SUPPORTS. PROVIDE STANDARD ACI HOOKS AT ENDS OF BEAMS.
- BOTTOM BARS - SHALL BE SPLICED OVER EACH INTERIOR SUPPORT AND SHALL EXTEND 12" INTO ADJACENT SPAN.
5. STIRRUPS SHALL BE SPACED AS SPECIFIED, STARTING FROM THE FACE OF EACH SUPPORT, WHERE THE FIRST STIRRUP IS SPACED AT "S/2" FROM THE FACE OF THE SUPPORT, WHERE "S" IS THE FIRST SPECIFIED STIRRUP SPACING.
6. PROVIDE CORNER BAR REINFORCEMENT AT ALL CORNERS AND INTERSECTIONS OF GRADE BEAMS OR WALLS. REFER TO TYPICAL DETAIL ON SHEET S1 FOR PLACEMENT AND ADDITIONAL NOTES.
7. ALL REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL.
8. CONTRACTOR SHALL COORDINATE ALL PENETRATIONS, CONDUIT, CHAMFERS AND EMBEDDED ITEMS PRIOR TO CONCRETE PLACEMENT.

WOOD NOTES

1. DIMENSION LUMBER FOR ROOF JOISTS, RAFTERS OR EXTERIOR LOAD BEARING STUDS SHALL BE SOUTHERN PINE #2 OR BETTER, 19% K.D. DESIGN VALUES ARE AS FOLLOWS:
- 2X4's Fb = 1500/1725 PSI FOR SINGLE/REPETITIVE USE, AND Fv = 90 PSI.
- 2X6's Fb = 1250/1440 PSI FOR SINGLE/REPETITIVE USE, AND Fv = 90 PSI.
- 2X8's Fb = 1200/1380 PSI FOR SINGLE/REPETITIVE USE, AND Fv = 90 PSI.
- 2X10's Fb = 1050/1200 PSI FOR SINGLE/REPETITIVE USE, AND Fv = 90 PSI.
- 2X12's Fb = 975/1120 PSI FOR SINGLE/REPETITIVE USE, AND Fv = 90 PSI.
2. PLYWOOD ROOF DECK SHALL BE 19/32" THICK APA RATED SHEATHING, EXPOSURE 1 (PLYWOOD OR OSB). FOR UNBLOCKED DIAPHRAGMS NAIL DECK TO SUPPORTS WITH 10d COMMON NAILS AT 6" ON CENTER AT DIAPHRAGM BOUNDARIES AND SUPPORTING MEMBERS. FOR BLOCKED DIAPHRAGMS THE DECK SHALL BE NAILED WITH 10d COMMON NAILS AT 4" ON CENTER AT DIAPHRAGM BOUNDARIES, 6" ON CENTER AT OTHER PANEL EDGES AND AT 12" ON CENTER ALONG INTERMEDIATE FRAMING MEMBERS. FASTENERS SHALL BE LOCATED A MINIMUM OF 3/8" FROM PANEL EDGES.
3. EXTERIOR SHEATHING ON PLYWOOD SHEAR WALLS SHALL BE 15/32" THICK APA RATED SHEATHING, EXPOSURE 1 (PLYWOOD OR OSB). NAIL PANELS TO VERTICAL STUDS WITH 8d COMMON NAILS, REFER TO DETAILS FOR SPACING. FASTENERS SHALL BE LOCATED A MINIMUM OF 3/8" FROM PANEL EDGES.
4. WOOD CONNECTORS SHALL BE SIMPSON OR BETTER.
5. SILL ON CONCRETE SHALL BE FOUNDATION GRADE REDWOOD OR PRESSURE TREATED SOUTHERN PINE OR FIR, ANCHORED WITH 5/8 INCH DIAMETER X 10" ANCHOR BOLTS AT 48 INCHES O.C., UNLESS NOTED OTHERWISE ON SHEAR WALL SCHEDULE. MINIMUM OF 2 BOLTS PER PIECE WITH ONE BOLT WITHIN 9 INCHES OF EACH END.
6. PROVIDE STANDARD WASHERS FOR MACHINE BOLTS AND LAG SCREWS WITH HEADS OR NUTS BEARING ON WOOD, UNLESS NOTED OTHERWISE.
7. NAILING SCHEDULE - ALL MEMBERS THROUGHOUT THIS PROJECT SHALL BE CONNECTED TOGETHER WITH NAILS LISTED IN THIS SCHEDULE UNLESS A GREATER NUMBER OR SIZE IS INDICATED ON DRAWINGS. ALL NAILS SHALL BE A COMMON WIRE AND STANDARD LENGTH EXCEPT AS OTHERWISE NOTED.
- JOISTS OR RAFTERS TO ALL BEARING STUDS TO BEARING
- 2-8d TOENAILS EA. SIDE
- 4-8d TOENAILS EA. SIDE
- OR 2-16d END NAILS
- 2-8d TOENAILS EA. SIDE
- 2-8d NAILS EACH END
- 16d @ 12" O.C. MAX.
- 2-16d TO EA. BEARING
- 10d TOENAILS @ 6" O.C.
- BLOCKING BETWEEN JOISTS OVER TOP PLATE
- HERRINGBONE AND STUD BLOCKING
- MULTIPLE STUDS AND BUILT-UP BEAMS
- 2X CEILING STRIPPING (FURRING)
- BLOCKING BETWEEN RAFTERS OVER TOP PLATE
- DOUBLE TOP PLATES:
- LOWER PLATE TO TOP STUD
- 2-16d NAILS
- 16d @ 6" O.C. (MIN. 8' LAP)
- UPPER PLATE TO LOWER PLATE
- 8d COMMON @ 6" O.C. PLY EDGES
- 8d COMMON @ 12" O.C. FIELD
8. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AS RECOMMENDED BY THE AMERICAN FOREST AND PAPER ASSOCIATION.
9. STRUCTURAL BEAMS SHALL BE 2.0 MICROLAM LVL'S WITH Fb = 2,600 PSI.

STRUCTURAL STEEL

1. ALL STEEL PIPES SHALL BE ASTM A53 GRADE B (Fy=35 KSI) STEEL, ALL TUBES (HSS SECTIONS) SHALL BE ASTM A500 GRADE B (Fy=46 KSI) STEEL, AND ALL WIDE FLANGE SECTIONS SHALL BE ASTM A992 (Fy=50 KSI) STEEL.
2. ALL OTHER STRUCTURAL STEEL SHALL BE ASTM A36 STEEL.
3. STEEL JOISTS SHALL MEET ALL SPECIFICATIONS OF THE LATEST S.J.I. EDITION. Fy=50 KSI.
4. STEEL JOISTS AND BRIDGING SHALL BE DESIGNED BY MANUFACTURERS FOR NET UPLIFT FORCES DUE TO WIND OF 10 P.S.F.
5. CONNECTIONS SHALL BE DESIGNED AND FABRICATED ACCORDING TO THE FOLLOWING NOTES:
- A. ALL CONNECTIONS SHALL BE TYPE 2 CONSTRUCTION, FRAMED BEAM CONNECTIONS CONFORMING TO PART 4 TABLES II AND III, OF AISC MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN, NINTH EDITION.
- B. ALL TYPE 2 BEAM CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE TYPE UNLESS DETAILED OTHERWISE. CONNECTIONS MAY BE 100% BOLTED IN ACCORDANCE WITH TABLE II OR A COMBINATION OF WELDS AND BOLTS PER TABLE III.
- C. ALL BOLTED CONNECTIONS SHALL USE A325-N BOLTS (LAJUENE IS ACCEPTABLE) UNLESS NOTED OTHERWISE. MINIMUM NUMBER AND SIZE OF BOLTS PER CONNECTION SHALL BE TWO (2) 3/4 INCH DIAMETER BOLTS. ALL CONNECTIONS SHALL DEVELOP A MINIMUM SHEAR CAPACITY OF 6 KIPS.
- D. CONNECTIONS SHALL BE SELECTED TO CARRY THE END REACTIONS AS SHOWN OR SCHEDULED ON THE DRAWINGS. STEEL FABRICATOR TO SELECT ANGLE SIZES, WELD SIZES, AND NUMBER AND SIZE OF BOLTS IN CONFORMANCE WITH AISC STEEL MANUAL INCLUDING TABLE, SPECIFICALLY TABLES II AND/OR III.
- E. WHEN THE END REACTIONS ARE NOT SHOWN OR SCHEDULED ON THE DRAWINGS, FABRICATE CONNECTIONS WITH 1/4 INCH THICK DOUBLE ANGLES, USING 3/4" DIA. A325-N BOLTS. THE NUMBER OF HORIZONTAL ROWS OF BOLTS SHALL BE DETERMINED BY DIVIDING THE NOMINAL BEAM DEPTH BY 5.5 AND ROUNDING ANY FRACTION UP TO THE NEXT HIGHER NUMBER.
6. ALL WELDS SHALL BE MADE USING E70 ELECTRODES.
7. HEADED STUDS (H.S.) SHALL BE NELSON OR BETTER.

SPECIAL INSPECTIONS

STRUCTURAL TESTS AND INSPECTION

1. THIS SECTIONS APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE OUTLINED IN IBC 1704 AND SHALL BE VERIFIED WITH THOSE LISTED BELOW PRIOR TO THE START OF ANY WORK.
2. COPIES OF TEST RESULTS AND FINAL REPORTS SHALL BE SUPPLIED TO THE ENGINEER OF RECORD IN ADDITION TO OTHER NORMAL DISTRIBUTIONS WITHIN ONE WEEK OF THE VISIT OR INSPECTION. FINAL REPORTS SHALL STATE WHETHER WORK WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE NOTIFIED IMMEDIATELY OF ANY/ALL DISCREPANCIES. AFTER NOTIFICATION TO CONTRACTOR, IF THE DISCREPANCIES ARE NOT CORRECTED, THE BUILDING OFFICIAL AND ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY.
3. ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER AND APPROVED BY THE BUILDING OFFICIAL. JOB SITE VISITS BY THE STRUCTURAL ENGINEER OF RECORD DO NOT CONSTITUTE A SPECIAL INSPECTION.
4. THE CONTRACTOR SHALL TESTIFY AND INSPECTION AGENCY WITH A SCHEDULE TO FACILITATE THE PROPER COORDINATION OF WORK.
5. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:

	CONTINUOUS	PERIODIC	NONE	N/A
STEEL CONSTRUCTION SECTION 1705.2				
1. INSPECTION OF WELDING:				
A. REINFORCING STEEL:				
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. SHEAR REINFORCEMENT.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. OTHER REINFORCING STEEL.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONCRETE CONSTRUCTION SECTION 1705.3				
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRE-STRESSING TENDONS & PLACEMENT.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. INSPECTION OF REINFORCING STEEL WELDING.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. VERIFYING USE OF REQUIRED DESIGN MIX, AT THE TIME OF FRESH CONCRETE IS SAMPLED TOPROBACATE SPECIMENS FOR STRENGTH, SLUMP, AND AIR CONTENT TESTS.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. INSPECTION OF PRE-STRESSED CONCRETE:				
A. APPLICATION OF PRE-STRESSING FORCES.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. GROUTING OF BONDED PRE-STRESSING TENDONS IN SEISMIC FORCE RESISTING SYSTEM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. ERECTION OF PRECAST CONCRETE MEMBERS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. INSPECT FORM WORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CAST-IN-PLACE DEEP FOUNDATIONS SECTION 1705.8				
1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE), AND ADEQUATE END BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. CONTINUOUS INSPECTION INDICATES FULL TIME OBSERVATION/TESTING BY APPROVED SPECIAL INSPECTOR, PERIODIC INSPECTION INDICATES PART-TIME OR INTERMITTENT OBSERVATION/TESTING BY APPROVED SPECIAL INSPECTOR.				
7. ALL OFFSITE FABRICATION SHALL BE INSPECTED AS OUTLINED ABOVE UNLESS FABRICATOR IS APPROVED PER IBC 1704. APPROVED FABRICATORS MUST SUBMIT CERTIFICATE OF COMPLIANCE FOR ALL OFFSITE FABRICATION SUCH AS STRUCTURAL STEEL, CLUTAMS, PRECAST CONCRETE, ETC.				
8. FOR STRUCTURAL OBSERVATION REQUIRED BY THE ENGINEER OF RECORD OR THE BUILDING DEPARTMENT, THE OWNER SHALL EMPLOY AN ENGINEER APPROVED BY THE ENGINEER OF RECORD AN BUILDING OFFICIAL TO PERFORM STRUCTURAL OBSERVATIONS AS DEFINED IN IBC 2009.				

RECEIVED  
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PLANNING DEPARTMENT

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Revisions:  
A 10/08/2024 - REV. 2 - OWNER/CITY COMMENTS

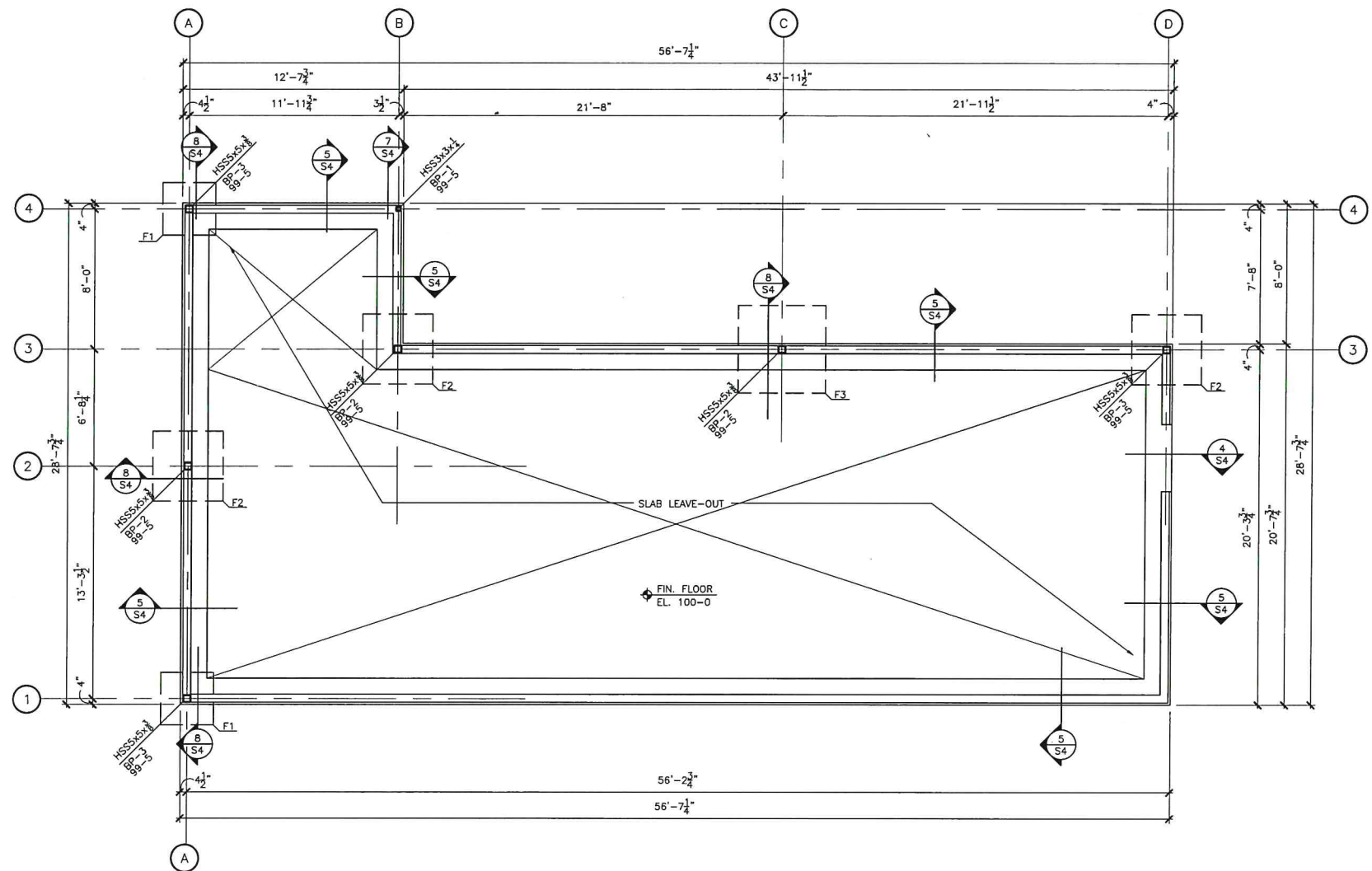
File Name: S-SHEETS  
Project No: 24-518  
Date: 10/08/2024  
Drawn By: GTS  
Checked By: TRS

SHEET

S1

GENERAL  
NOTES





**1 FOUNDATION PLAN**  
 NORTH  
 SCALE: 1/4"=1'-0"

**TYPICAL FOUNDATION PLAN NOTES**

1. REFER TO SHEET S1 FOR GENERAL NOTES AND TYPICAL DETAILS NOT NOTED ON PLAN.
2. FIN. FL. = DATUM EL. 100'- 0", ACTUAL EL. =
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
4. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.
5. FLOOR SLAB SHALL BE 5" THICK SLAB-ON-GRADE, REINFORCED WITH #3@18" O.C.E.W. CENTERED IN SLAB.
6. PROVIDE 2#4 X 3'-0" ADDITIONAL SLAB REINFORCING, CENTERED IN SLAB AT ALL INTERIOR CORNERS WHERE A CONSTRUCTION OR SAWN JOINT DOES NOT OCCUR.
7. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF ALL LEDGES, POCKETS OR DEPRESSIONS.
8. REFER TO ARCHITECTURAL DRAWINGS AND SPECS FOR FINISH AND JOINT PATTERNS ON CONCRETE WALKS AND SLABS.
9. COLUMNS ARE NOTED ON PLAN THUS:  
 HSS3x3x1/4 COLUMN SIZE  
 BP-1 BASE PLATE MARK  
 99-5 BASE PLATE ELEVATION
10. F1 ON PLAN DENOTES FOOTING. REFER TO FOOTING SCHEDULE ON SHEET S4.

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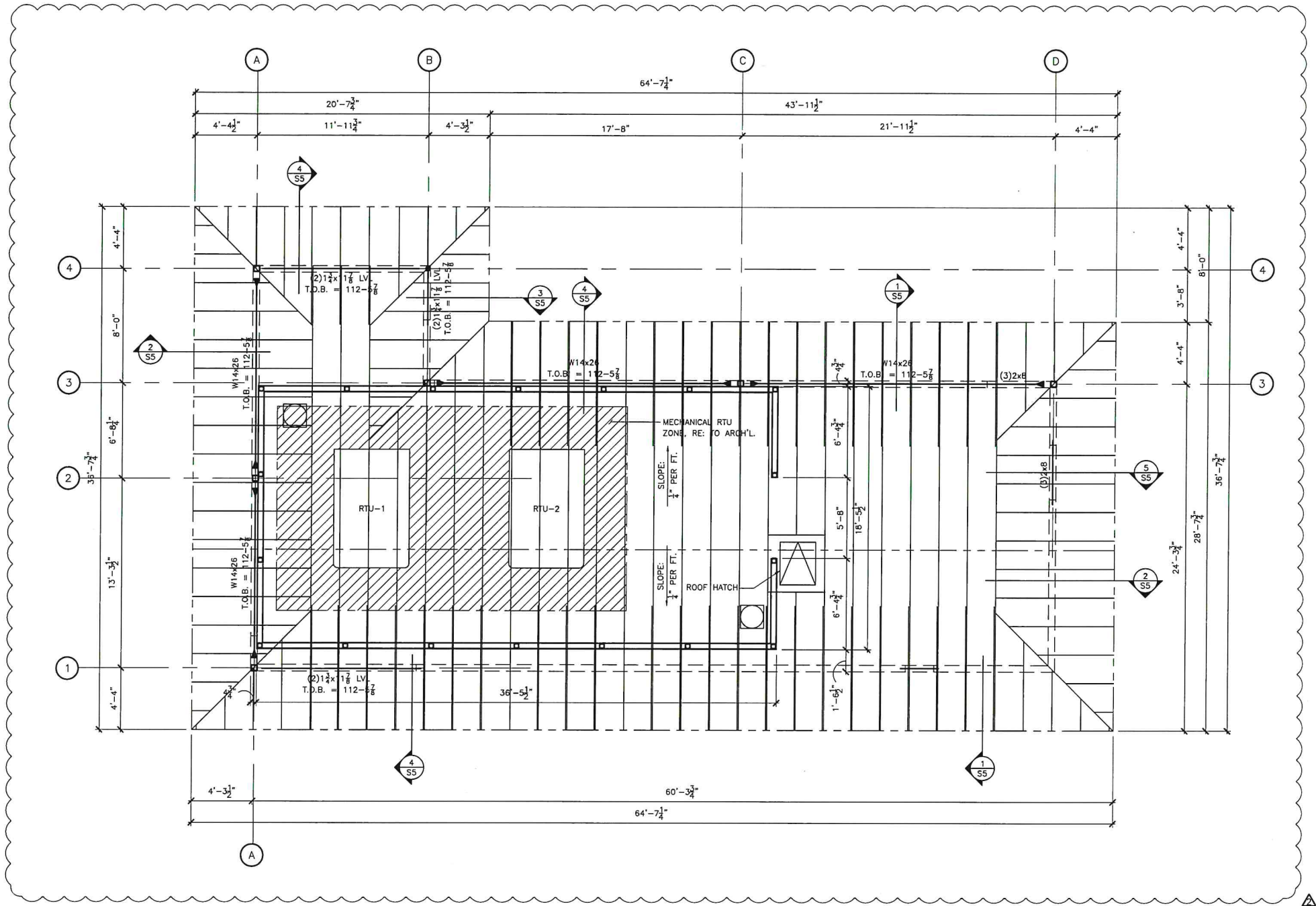
**SHELL BUILDING**  
 1328 N. CLASSEN BLVD.  
 OKLAHOMA CITY, OK 73106

Revisions  
 10/08/2024 - REV. 2 - OWNER/CITY COMMENTS

File Name: S\_SHEETS  
 Project No: 24-518  
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SHEET  
**S2**  
 FOUNDATION PLAN





**1 ROOF FRAMING PLAN**  
 SCALE: 1/4"=1'-0"  
 NORTH

**TYPICAL FRAMING PLAN NOTES**

- REFER TO SHEETS S1 AND S6 FOR TYPICAL DETAILS NOT NOTED ON PLAN.
- ROOF DECK SHALL BE A 19/32 INCH THICK APA RATED SHEATHING, EXPOSURE 1 (PLYWOOD OR OSB). NAIL TO FRAMING MEMBERS WITH 6d NAILS SPACED AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE FRAMING MEMBERS. (DIAPHRAGM VALUES BASED ON UN-BLOCKED PANEL EDGES). FASTENERS SHALL BE LOCATED A MINIMUM OF 3/8" FROM PANEL EDGES.
- ROOF JOISTS AND TRUSSES TO BE AN OPEN WEB PRE-ENGINEERED WOOD JOIST OR TRUSS, SPACED AT 24 INCHES ON CENTER UNLESS NOTED OTHERWISE.
- T.O.B. ON PLAN INDICATES TOP OF STRUCTURAL BEAM ELEVATION.
- ALL LINTELS AND BEAMS EXPOSED TO WEATHER SHALL BE GALVANIZED.
- ALL WALLS TO BE 2x6 STUDS AT 16" ON CENTER UNLESS NOTED OTHERWISE.
- DESIGN SPECIAL TRUSSES FOR THE CONCENTRATED MECHANICAL A/C EQUIPMENT WEIGHT OF 1,500 LBS IN ADDITION TO TYPICAL UNIFORM ROOF LOADS OF 25 PSF DEAD AND 20 PSF LIVE.
- VERIFY EQUIPMENT WEIGHT, LOCATION, AND DIMENSIONS WITH THE EQUIPMENT SUPPLIERS PRIOR TO FINAL DESIGN. REFER TO STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

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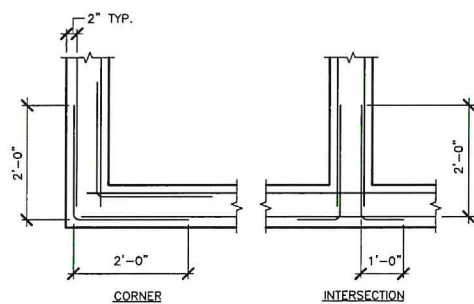
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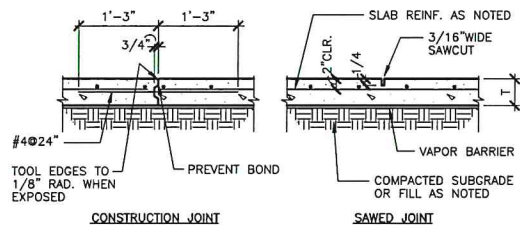
SHEET  
**S3**  
 FRAMING PLAN





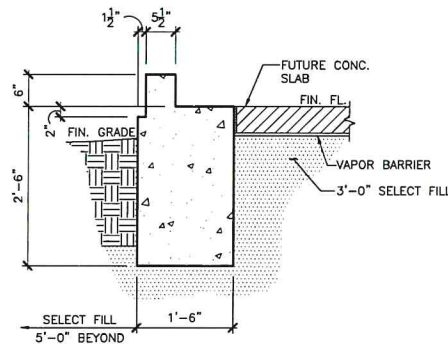
GRADE BM. CORNER REINFORCING  
NOTE: LAP TOP & BOT. GRADE BEAM REINF. WITH #5 CORNER BARS.

1 TYPICAL DETAIL  
SCALE: 3/4"=1'-0"

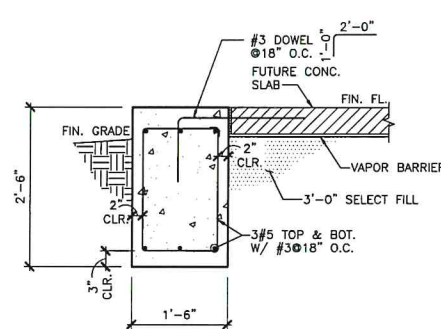


NOTES:  
1. PROVIDE JOINTS IN SLAB AT MAXIMUM SPACING OF 25 FEET O.C. EACH WAY.  
2. TYPICAL JOINT IS A SAWEED JOINT. CONTRACTOR TO LOCATE CONSTRUCTION JOINTS AT HIS DISCRETION.  
3. SAWEED JOINT SHALL BE CUT WITHIN 12 HOURS OF SLAB PLACEMENT.

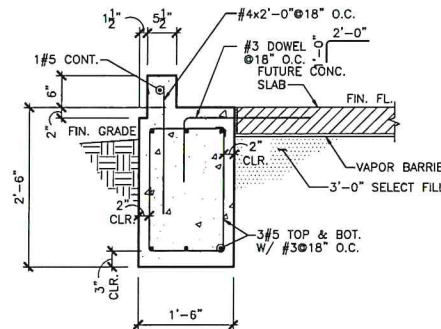
2 CONTROL JOINT DETAILS  
SCALE: 3/4"=1'-0"



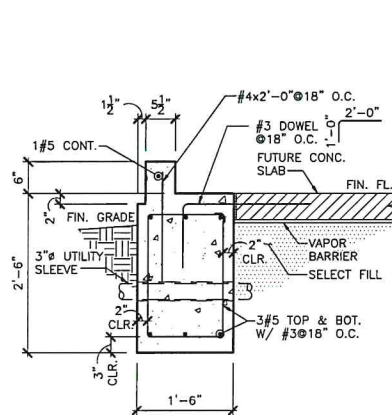
3 TYP. DETAIL  
SCALE: 3/4"=1'-0"



4 SECTION  
SCALE: 3/4"=1'-0"

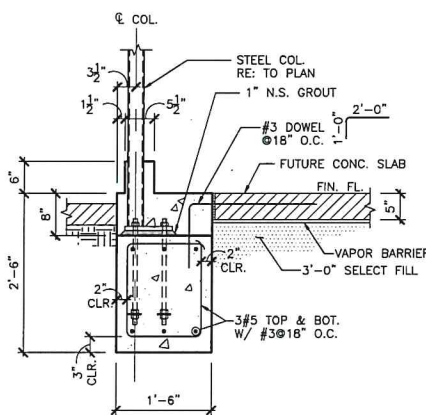


5 SECTION  
SCALE: 3/4"=1'-0"

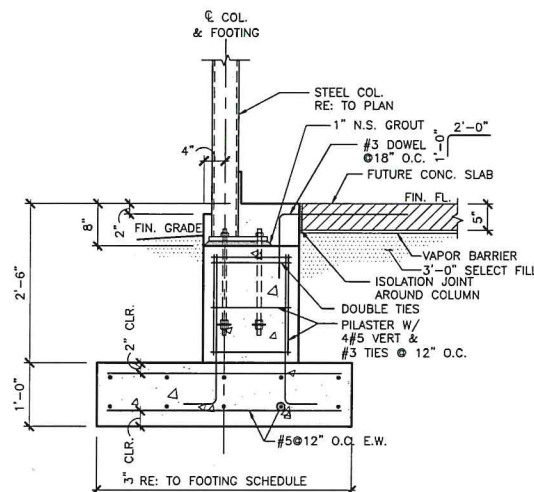


UTILITY SLEEVES  
RE: TENANT DRAWINGS  
FOR LOCATIONS

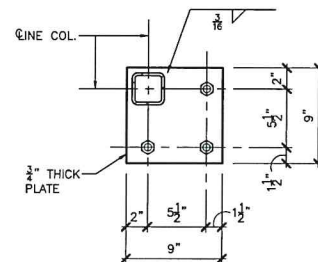
6 SECTION  
SCALE: 3/4"=1'-0"



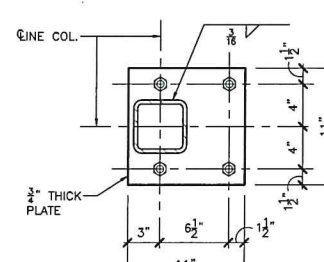
7 SECTION  
SCALE: 3/4"=1'-0"



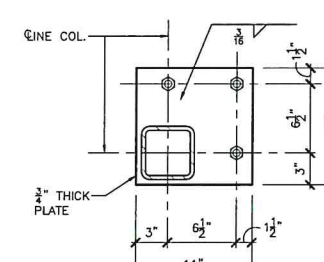
8 SECTION  
SCALE: 3/4"=1'-0"



9 B.P. DETAIL  
SCALE: 1-1/2"=1'-0"



10 B.P. DETAIL  
SCALE: 1-1/2"=1'-0"



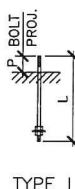
11 B.P. DETAIL  
SCALE: 1-1/2"=1'-0"

### FOOTING SCHEDULE

MARK	DIMENSIONS			DETAIL	REINFORCEMENT
	L	W	D		
F1	3'-0"	3'-0"	1'-0"	9/S4	#5@12" O.C.E.W. TOP & BOT.
F2	4'-0"	4'-0"	1'-0"	9/S4	#5@12" O.C.E.W. TOP & BOT.
F3	5'-0"	5'-0"	1'-0"	9/S4	#5@12" O.C.E.W. TOP & BOT.

### ANCHOR BOLT SCHEDULE

TYPE	MARK	DIA. (IN.)	DIMENSIONS (IN.)			MATERIAL
			L	H	P	
I	AB-1	3/4	18	--	3	F1554 GRADE 55
I	AB-2	5/8	18	--	3	F1554 GRADE 55



TYPE I

### BASE PLATE SCHEDULE

MARK	DIMENSIONS (IN.)			THICK (IN.)	ANCHOR BOLTS	DETAIL
	L	W	X			
BP-1	9	9		3/4	(3)AB-1	9/S4
BP-2	11	11		3/4	(4)AB-1	10/S4
BP-3	11	11		3/4	(3)AB-1	11/S4

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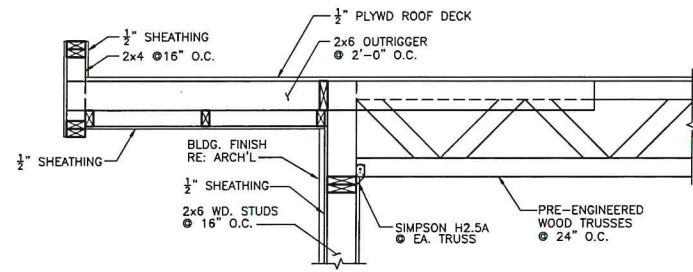
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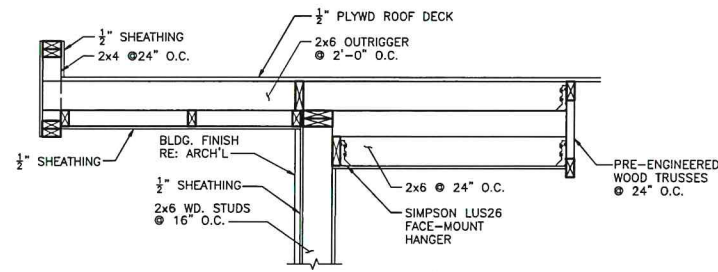
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SHEET  
S4  
FOUNDATION  
DETAILS

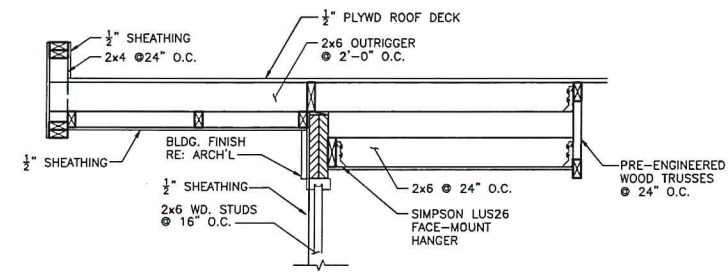




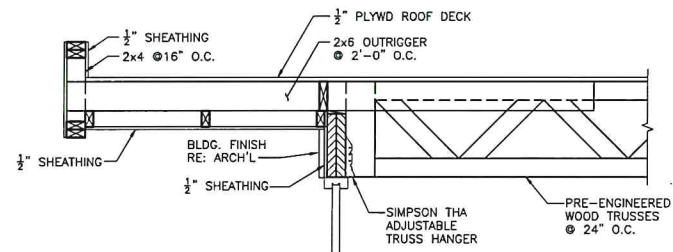
1 SECTION  
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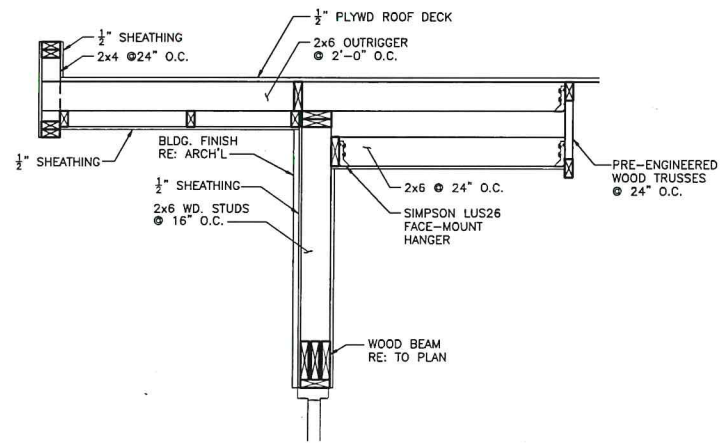
2 SECTION  
SCALE: 3/4"=1'-0"



3 SECTION  
SCALE: 3/4"=1'-0"



4 SECTION  
SCALE: 3/4"=1'-0"



5 SECTION  
SCALE: 3/4"=1'-0"

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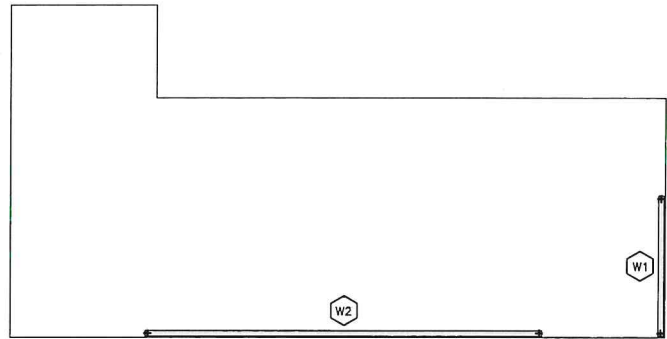
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SHEET  
**S5**  
FRAMING DETAILS

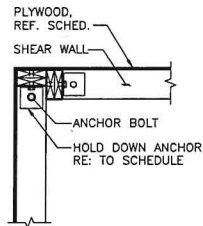




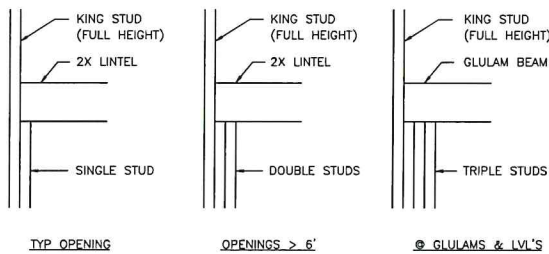
1 SHEAR WALL KEY PLAN  
SCALE: N.T.S.

SHEAR WALL SCHEDULE									
MARK	PANEL SHEATHING	FACES OF SHEATHING	EDGE NAILING	FIELD NAILING	END POST	HOLD DOWN EA. END	HOLD DOWN BOLTS	HOLD DOWN POST FASTENERS	TENSION LOADS
W1	15/32" OSB SHEATHING	ONE	8d @ 6"	8d @ 12"	(2)-2X6	HDU4-SDS2.5	3/8" F1554 GRADE 55 ANCHOR BOLTS	(10) 1/2"x2 1/2" SDS	3,153 LBS
W2	15/32" OSB SHEATHING	ONE	8d @ 6"	8d @ 12"	(2)-2X6	HDU2-SDS2.5	3/8" F1554 GRADE 55 ANCHOR BOLTS	(6) 1/2"x2 1/2" SDS	315 LBS

- NOTES:
- W1 - INDICATES SHEAR WALL - WALL 1
  - INDICATES WALL NUMBER - REFER TO KEY PLAN
  - FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED 2" O.C.
  - FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE BOTH OF THE FOLLOWING CONDITIONS ARE MET: (1) 10d (3"x0.148") NAILS HAVING PENETRATION INTO FRAMING OF MORE THAN 1 1/2" AND (2) NAILS ARE SPACED 3" O.C.

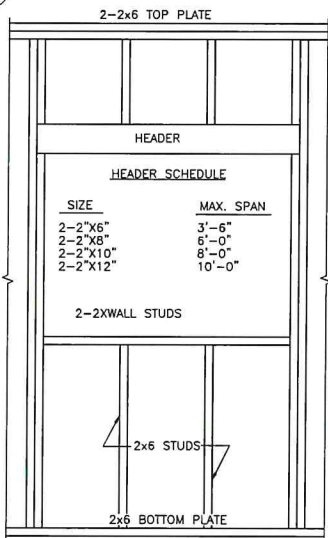


4 SHEAR WALL CORNER DETAIL  
SCALE: 3/4"=1'-0"

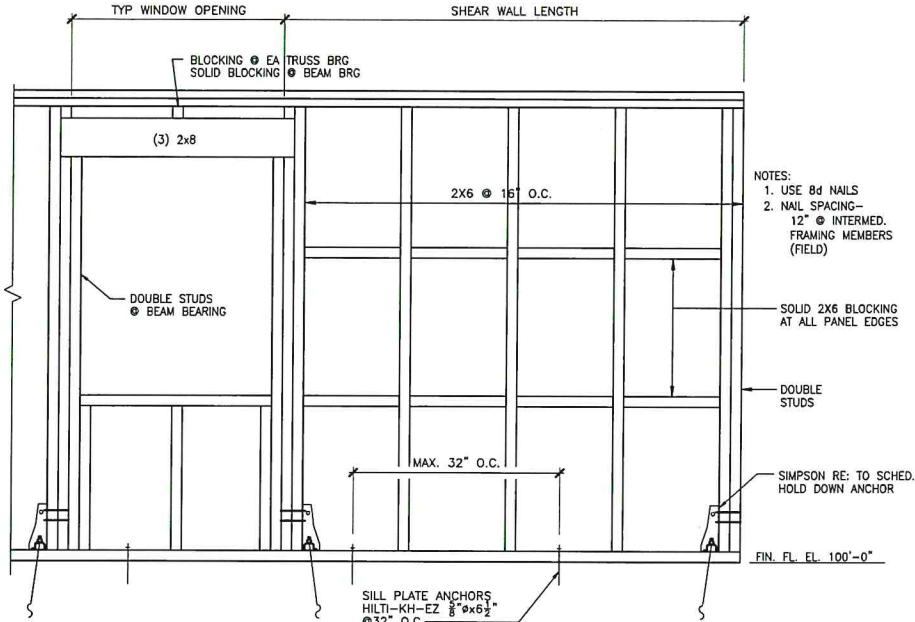


NOTE: REFER TO PLAN FOR LINTEL, OPENING, AND STUD SIZES

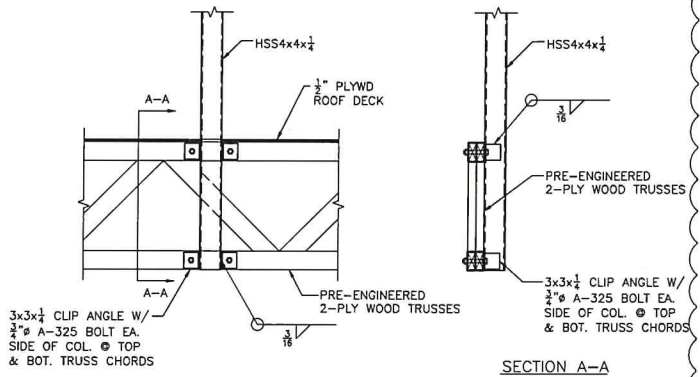
5 TYP. LINTEL SUPPORT  
SCALE 3/4"=1'-0"



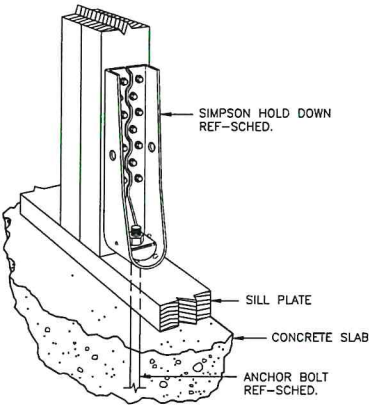
6 TYPICAL HEADER DETAIL  
SCALE 3/4"=1'-0"



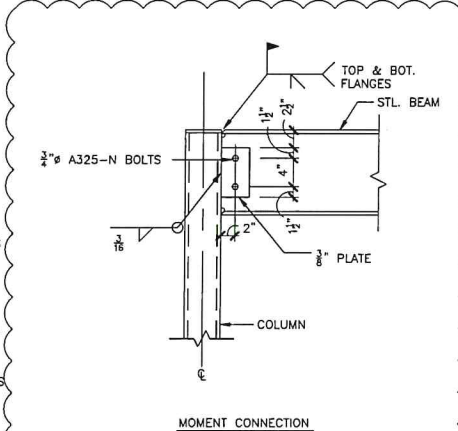
2 TYP. SHEAR WALL ELEV.  
SCALE 3/4"=1'-0"



7 SECTION  
SCALE: 3/4"=1'-0"



3 SIMPSON HOLD DOWN DETAIL  
SCALE: N.T.S.



8 TYP. DETAIL  
SCALE: 1"=1'-0"

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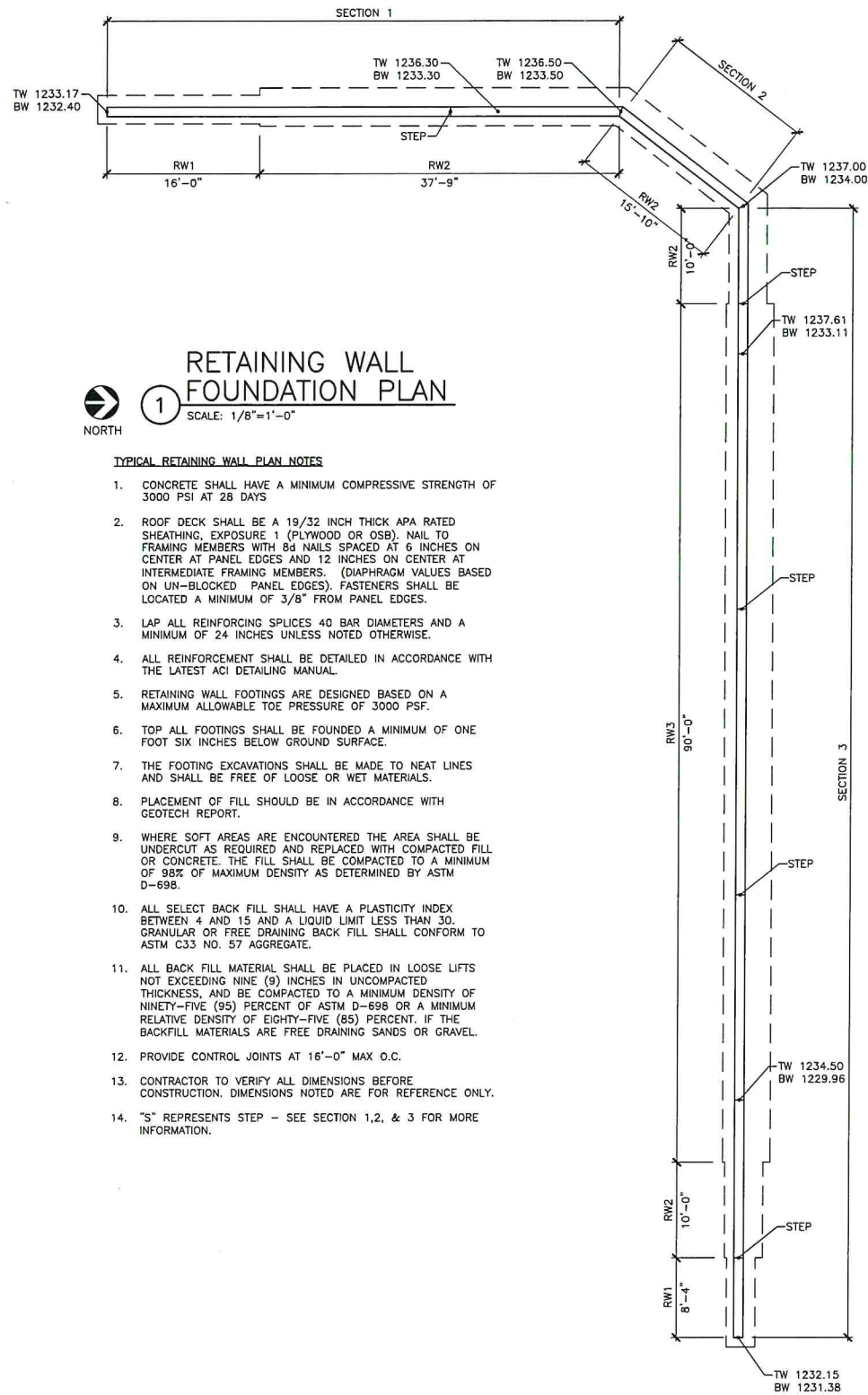
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SHEET  
**S6**  
FRAMING DETAILS

Thomas R. Sadler

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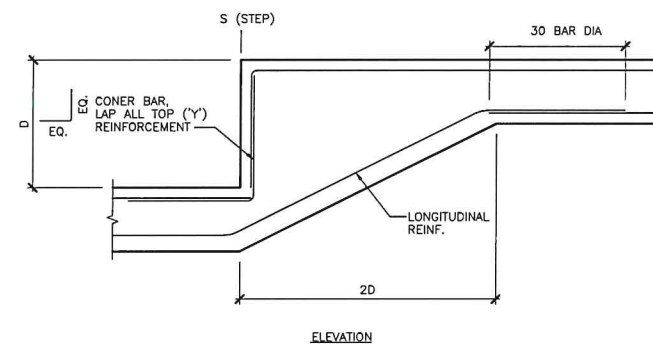
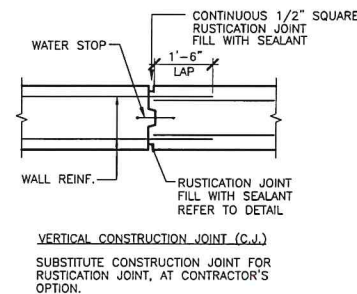
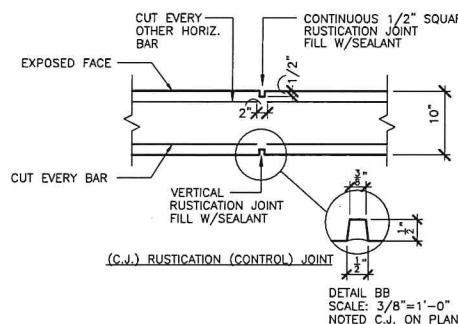
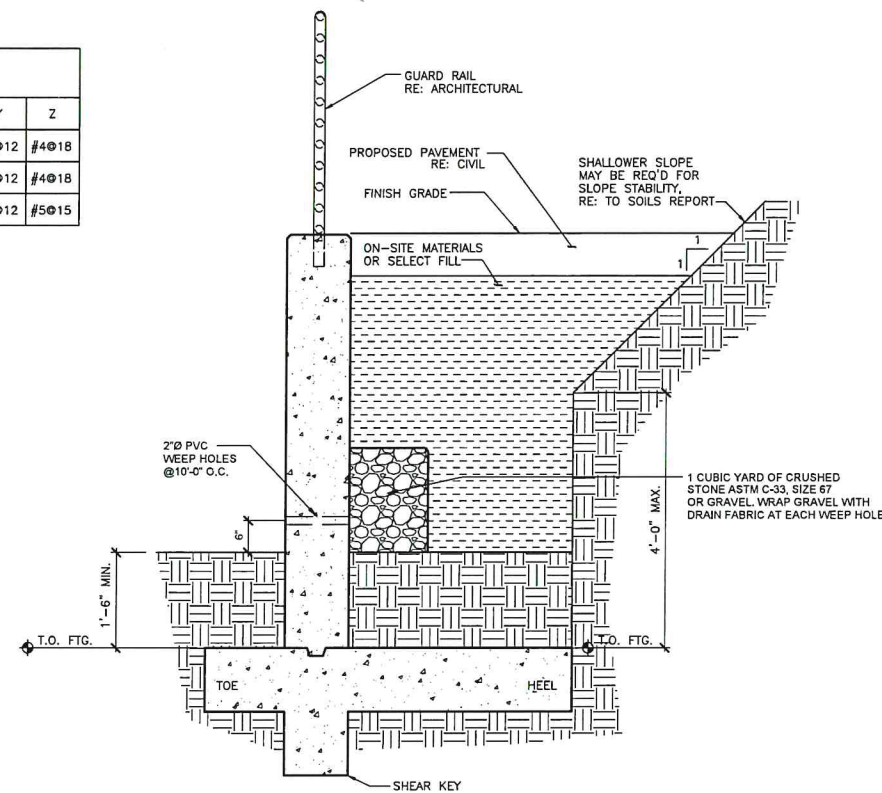
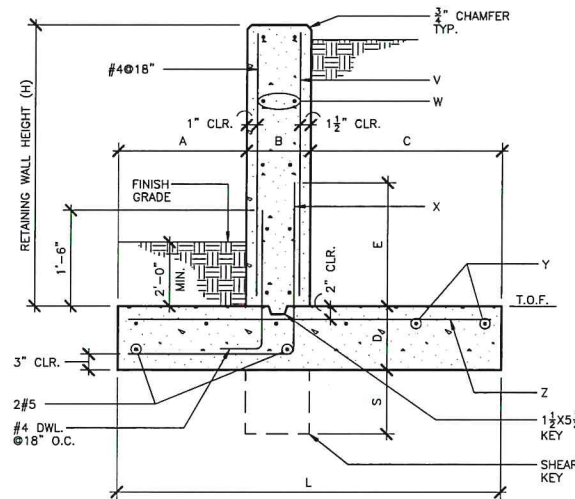




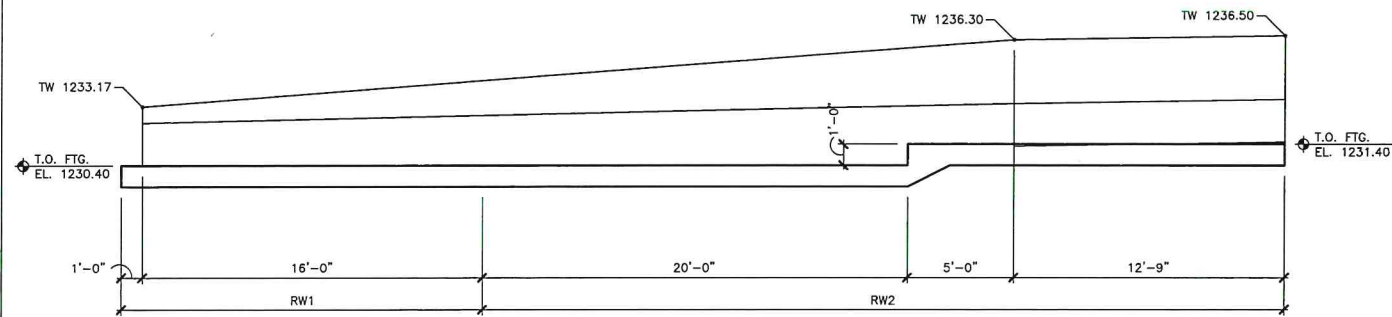
# **RETAINING WALL FOUNDATION PLAN** SCALE: 1/8"=1'-0"

- TYPICAL RETAINING WALL PLAN NOTES**
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS
  2. ROOF DECK SHALL BE A 19/32 INCH THICK APA RATED SHEATHING, EXPOSURE 1 (PLYWOOD OR OSB), NAIL TO FRAMING MEMBERS WITH 8d NAILS SPACED AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE FRAMING MEMBERS. (DIAPHRAGM VALUES BASED ON UN-BLOCKED PANEL EDGES), FASTENERS SHALL BE LOCATED A MINIMUM OF 3/8" FROM PANEL EDGES.
  3. LAP ALL REINFORCING SPLICES 40 BAR DIAMETERS AND A MINIMUM OF 24 INCHES UNLESS NOTED OTHERWISE.
  4. ALL REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL.
  5. RETAINING WALL FOOTINGS ARE DESIGNED BASED ON A MAXIMUM ALLOWABLE TOE PRESSURE OF 3000 PSF.
  6. TOP ALL FOOTINGS SHALL BE FOUNDED A MINIMUM OF ONE FOOT SIX INCHES BELOW GROUND SURFACE.
  7. THE FOOTING EXCAVATIONS SHALL BE MADE TO NEAT LINES AND SHALL BE FREE OF LOOSE OR WET MATERIALS.
  8. PLACEMENT OF FILL SHOULD BE IN ACCORDANCE WITH GEOTECH REPORT.
  9. WHERE SOFT AREAS ARE ENCOUNTERED THE AREA SHALL BE UNDERCUT AS REQUIRED AND REPLACED WITH COMPACTED FILL OR CONCRETE. THE FILL SHALL BE COMPACTED TO A MINIMUM OF 98% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-698.
  10. ALL SELECT BACK FILL SHALL HAVE A PLASTICITY INDEX BETWEEN 4 AND 15 AND A LIQUID LIMIT LESS THAN 30. GRANULAR OR FREE DRAINING BACK FILL SHALL CONFORM TO ASTM C33 NO. 57 AGGREGATE.
  11. ALL BACK FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING NINE (9) INCHES IN UNCOMPACTED THICKNESS, AND BE COMPACTED TO A MINIMUM DENSITY OF NINETY-FIVE (95) PERCENT OF ASTM D-698 OR A MINIMUM RELATIVE DENSITY OF EIGHTY-FIVE (85) PERCENT. IF THE BACKFILL MATERIALS ARE FREE DRAINING SANDS OR GRAVEL.
  12. PROVIDE CONTROL JOINTS AT 16'-0" MAX O.C.
  13. CONTRACTOR TO VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. DIMENSIONS NOTED ARE FOR REFERENCE ONLY.
  14. "S" REPRESENTS STEP - SEE SECTION 1, 2, & 3 FOR MORE INFORMATION.

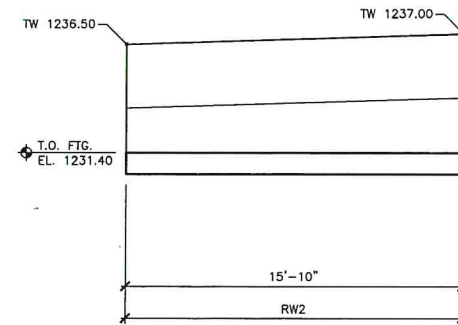
RETAINING WALL SCHEDULE															
MARK	H	L	A	B	C	D	E	S	V	W	X	Y	Z		
RW1	1'-6" TO 4'-0"	3'-0"	0'-9"	1'-0"	1'-3"	1'-0"	2'-0"	0	#4@18	#4@12	#4@18	#5@12	#4@18		
RW2	4'-1" TO 6'-0"	4'-0"	1'-0"	1'-0"	2'-0"	1'-0"	3'-0"	0	#4@18	#4@12	#4@18	#5@12	#4@18		
RW3	6'-1" TO 8'-0"	5'-0"	1'-3"	1'-0"	2'-9"	1'-0"	3'-0"	1'-0"	#4@16	#4@12	#5@16	#5@12	#5@15		



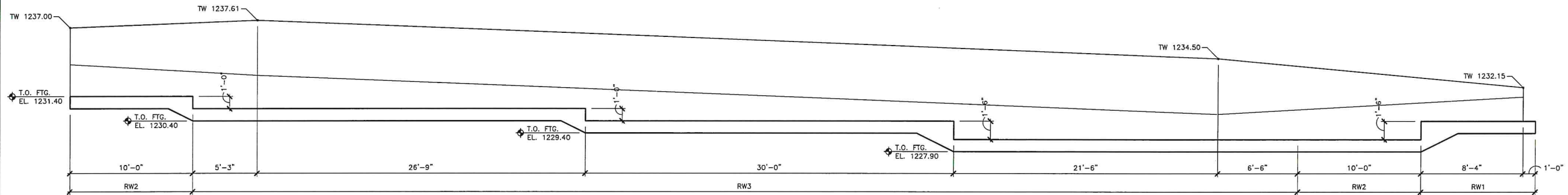




① SECTION 1 ELEVATION  
SCALE: 1/4"=1'-0"



② SECTION 2 ELEVATION  
SCALE: 1/4"=1'-0"



③ SECTION 3 ELEVATION  
SCALE: 1/4"=1'-0"

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Project No: 24-518  
Date: 10/08/2024  
Drawn By: GTS  
Checked By: TRS

SHEET  
**S8**  
RETAINING WALL  
ELEVATIONS



DIVISION 16-ELECTRICAL SPECIFICATION  
SECTION 16100 ELECTRICAL SPECIAL CONDITIONS

1. GENERAL

- A. APPLICABLE PROVISIONS OF AIA DOCUMENT A201, "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AND DIVISION 1 GENERAL CONDITIONS GOVERN WORK UNDER THIS SECTION AND ALL OTHER SECTIONS OF DIVISION 16.
- B. APPLICABLE PROVISIONS OF THIS SECTION GOVERN WORK UNDER ALL OTHER SECTIONS OF DIVISION 16. WORK COVERED BY THIS SECTION SHALL CONSIST OF PROVIDING ALL MATERIAL, LABOR, EQUIPMENT AND SERVICES NECESSARY FOR A COMPLETE, TESTED AND ADJUSTABLE ELECTRICAL INSTALLATION READY FOR OPERATION AS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.
- C. THE TERM CONTRACTOR AS USED IN THIS SECTION SHALL MEAN ANY CONTRACTOR OR SUBCONTRACTOR WHO HAS CONTRACTED TO PERFORM WORK INCLUDED IN AND DEFINED BY THIS SECTION AND ALL OTHER SECTIONS OF DIVISION 16.
- D. THE TERM "PROVIDE" AS USED IN THESE DRAWINGS IS DEFINED AS TO FURNISH, INSTALL AND CONNECT ALL ELECTRICAL WORK AS REQUIRED FOR A COMPLETE FUNCTIONAL AND CODE COMPLIANT INSTALLATION, READY FOR INTENDED USE.

2. EXISTING CONDITIONS

- A. THESE DRAWINGS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF DESIGN. THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO: SERVICE LOCATION, SERVICE LAYOUTS, SECONDARY FEEDER LENGTH, TELEPHONE SERVICE LOCATION, ETC., AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO BID. FAILURE TO DO SO MAY CONSTITUTE THAT THE CONTRACTOR PROVIDE ANY AND ALL ADDITIONAL EQUIPMENT, LABOR, ETC., TO MEET THE INTENDED DESIGN PARAMETERS.

3. CONTRACTOR'S RESPONSIBILITY

- A. PRIOR TO SUBMITTING HIS BID, CONTRACTOR SHALL CAREFULLY EXAMINE THESE CONSTRUCTION DOCUMENTS, THE DEVELOPER'S EXHIBITS, AND THE SITE, TO DETERMINE FULLY INTO DIFFICULTIES AND COSTS OF WORK, AND TO DETERMINE THE SCOPE AND CHARACTER OF WORK TO BE DONE. CONTRACTOR SHALL INCLUDE ALL NECESSARY COSTS TO LOCATE AND/OR EXTEND ALL UTILITIES INCLUDING LIGHTING PANELS, POWER PANELS, ELECTRICAL SERVICE, PHONE SERVICE AND/OR MODIFY EQUIPMENT TO MEET THE INTENT OF THE CONTRACT DOCUMENTS, THE OWNER, OWNER'S AGENT, ARCHITECT, ENGINEER OR DESIGNER SHALL NOT BE RESPONSIBLE FOR FAILURE OF THE CONTRACTOR TO DETERMINE DIFFICULTIES AND COSTS IN THE PROJECT OR FOR HIS OVERLOOKING OF THE REQUIREMENTS.
- B. IF THIS CONTRACTOR DOES NOT CLEARLY UNDERSTAND THE PLANS AND SPECIFICATIONS, OR IF THERE ARE ANY REQUIREMENTS WHICH ARE AMBIGUOUS IN THE CONTRACTOR'S OPINION, HE SHALL CALL THIS TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING. SINCE THIS CONTRACTOR WILL BE HELD RIGIDLY TO THE INTERPRETATIONS OF THE ARCHITECT AND ENGINEER.
- C. CONTRACTOR SHALL SCHEDULE HIS WORK IN COOPERATION WITH OTHER TRADES INSTALLING INTERRELATED WORK. ALL WORK SHALL BE SCHEDULED TO MAINTAIN SERVICE TO ALL REQUIRED AREAS DURING THE COURSE OF THE CONSTRUCTION EXCEPT FOR SHORT TERM PLANNED SHUTDOWNS, ANY OF WHICH SHALL BE PRE-SCHEDULED WITH THE OWNER'S AGENT AND THE LANDLORD.

4. WORKMANSHIP AND GUARANTEE

- A. IN ENTERING INTO A CONTRACT COVERING THIS WORK, THE CONTRACTOR ACCEPTS THE SPECIFICATIONS AND GUARANTEES THAT THE WORK WILL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR FURTHER GUARANTEES THAT THE WORKMANSHIP AND MATERIAL WILL BE OF THE BEST PROCURABLE AND THAT NOVE BUT EXPERIENCED WORKMEN EXPERIENCED IN EACH PARTICULAR CLASS OF WORK WILL BE EMPLOYED. CONTRACTOR FURTHER GUARANTEES TO REPLACE AND MAKE GOOD AT HIS OWN EXPENSE ANY DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL WHICH MAY DEVELOP WITHIN ONE (1) YEAR AFTER FINAL PAYMENT AND ACCEPTANCE BY THE ARCHITECT.

5. CODES AND STANDARDS

- A. CONTRACTOR WILL COMPLY IN ALL RESPECTS WITH THE ADOPTED BUILDING CODES, APPLICABLE LAWS, ORDINANCES, AND REGULATIONS AS MAY APPLY, ACCORDING TO THE RULING OF THE CONTROLLING PUBLIC OFFICIAL SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE LAWS, ORDINANCES AND REGULATIONS, OR WHICH DOES NOT RECEIVE THE APPROVAL OF THE CONTROLLING PUBLIC OFFICIAL. HE SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES. ALL ELECTRICAL EQUIPMENT SHALL BE UNDERWRITER'S LABORATORY LABEL.

6. FEES ON PERMITS

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND MAKING PAYMENT FOR ALL FEES, PERMITS AND INSPECTIONS RELATING TO HIS WORK.

7. CONTRACT DRAWINGS

- A. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND INTENT OF THE DESIGN AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONDITIONS AND THE WORK OF OTHER TRADES WILL PERMIT. REUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED, NOR IS IT IMPLIED THAT ALL CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE SYSTEMS OR BUILDING COMPONENTS HAVE BEEN INDICATED. THE CONTRACTOR SHALL INVESTIGATE ALL EXISTING CONDITIONS AFFECTING THE WORK AND ARRANGE HIS WORK ACCORDINGLY, PROVIDING SUCH FITTINGS, OFFSETS, ACCESSORIES AND DEVICES AS MAY BE REQUIRED. THE DRAWINGS AND SPECIFICATIONS ARE MUTUALLY COMPLEMENTARY, AND ANY WORK REQUIRED BY ONE BUT NOT BY THE OTHER SHALL BE PERFORMED BY BOTH. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS AND SERVICES REQUIRED FOR A COMPLETE AND WORKING PROJECT AT NO ADDITIONAL COST EVEN THOUGH EACH AND EVERY NECESSARY ELEMENT THEREOF IS NOT SPECIFICALLY IDENTIFIED HEREIN EACH AND EVERY NECESSARY ELEMENT THEREOF IS NOT SPECIFICALLY IDENTIFIED HEREIN.
- B. CONTRACTOR SHALL NOT SCALE FROM THE DRAWINGS BUT SHALL FOLLOW THE ARCHITECTURAL DRAWINGS OR EXISTING BUILDING CONDITIONS WHERE APPLICABLE IN ESTABLISHING DIMENSIONS AND LINES OF FIN. SINCE DIMENSIONS ON THE FINAL ARCHITECTURAL DRAWINGS OR AT THE SITE MAY NOT COINCIDE WITH THOSE SHOWN ON THE ELECTRICAL DRAWINGS, THE CONTRACTORS SHALL VERIFY WITH THE DIMENSIONED ARCHITECTURAL DRAWINGS OR THE SITE CONDITIONS THE EXACT MATERIAL QUANTITIES AND LENGTHS NECESSARY.
- C. SIGNIFICANT DEVIATIONS OR CHANGES FROM THE DRAWINGS WHICH ARE REQUIRED TO ACCOMPLISH THE INTENT OF THE CONTRACT DOCUMENTS MUST BE REVIEWED WITH THE ARCHITECT AND APPROVED BEFORE PROCEEDING.

8. SHOP DRAWINGS

- A. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, FOUR (4) COPIES MINIMUM, FOR ALL MANUFACTURED PRODUCTS. EACH SHOP DRAWING SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO ASSURE THAT ALL DIMENSIONS, QUANTITIES, CONNECTIONS, CAPACITIES AND ACCESSORIES SHOWN ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND SHALL BE MARKED OR STAMPED TO CONFIRM THAT SUCH REVIEW WAS MADE AND COMPLIANCE WAS CONFIRMED.
- B. APPROVAL OF SHOP DRAWINGS BY THE OWNER, OWNER'S AGENT, ARCHITECT, ENGINEER OR DESIGNER, WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH ALL TERMS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PERFORMANCE OF ALL EQUIPMENT PURCHASED, FOR PROPER FIT, AND OTHER DIMENSIONAL REQUIREMENTS.

9. RECORD DRAWINGS

- A. CONTRACTOR SHALL MAINTAIN AT THE JOB SITE ONE SET OF DOCUMENTS AS "RECORD DRAWINGS" FOR THE PURPOSE OF DAILY MARKING OF ALL SUBSTANTIAL REVISIONS TO THE DOCUMENTS INCLUDING BUT NOT LIMITED TO ELECTRICAL CHANGES AND LOCATIONS OF UTILITIES, PANELBOARDS, DISCONNECTS, STARTERS AND OTHER DEVICES REQUIRING PERIODIC OPERATIONAL ATTENTION, ADJUSTMENT, OR SERVICE INCLUDING ACCESS THERETO. AT THE COMPLETION OF THE PROJECT, THIS SET SHALL BE RETURNED TO THE ARCHITECT FOR THE PURPOSE OF MAKING FINAL "AS-BUILT DRAWINGS".

10. EQUIPMENT SUBSTITUTION

- A. SPECIFIC MANUFACTURERS AND MODELS OF EQUIPMENT HAVE BEEN USED IN THE DEVELOPMENT OF THE DRAWINGS AND DESIGNS. THIS CONTRACTOR MUST SUBMIT TO THE OWNER ANY CHANGES AND/OR SUBSTITUTIONS FOR APPROVAL PRIOR TO INSTALLATION OR EXECUTION. ANY CHANGES WHICH DO NOT RECEIVE THE OWNER'S APPROVAL, MAY BE SUBJECT TO REMOVAL OR REPLACEMENT AS ORIGINALLY SPECIFIED, AND WILL BE AT THE CONTRACTOR'S EXPENSE.
- B. IF THIS CONTRACTOR SUBSTITUTES FOR SPECIFIED EQUIPMENT ANY OTHER EQUIPMENT WHICH REQUIRES ANY CHANGES TO THE DESIGN, ALL COST OF REDESIGN AND RECONFIGURATION RESULTING FROM SAID SUBSTITUTION SHALL BE BORNE BY THE SUBMITTING CONTRACTOR.

11. EQUIPMENT INSTALLATION AND SUPPORT

- A. CONTRACTOR SHALL SUPPORT PLUMB, RIGID AND TRUE-TO-LINE ALL WORK AND EQUIPMENT INSTALLED. THIS CONTRACTOR SHALL DETERMINE HOW EQUIPMENT, FIXTURES, ETC., ARE TO BE SUPPORTED, MOUNTED, OR SUSPENDED AND SHALL PROVIDE ACCESSORIES REQUIRED FOR PROPER SUPPORT WHETHER SHOWN ON THE DRAWINGS OR NOT. IF SUPPORTS ARE REQUIRED, CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ARCHITECT FOR APPROVAL.
- B. PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS PRINTED INSTALLATION AND MAINTENANCE LITERATURE. COMPONENTS REQUIRING PERIODIC MAINTENANCE OR ADJUSTMENTS SHALL BE LOCATED OR INSTALLED AS TO PERMIT ACCESS WITHOUT DAMAGE TO STRUCTURE, FINISHES OR OTHER EQUIPMENT.
- C. ALL CONDUIT CONNECTING TO SWITCHGEAR, PANELS, MOTORS, AND OTHER EQUIPMENT SHALL BE INSTALLED WITHOUT STRAIN AT THE CONNECTIONS. THE CONTRACTOR MAY BE REQUIRED, AS DIRECTED, TO DISCONNECT CONDUITS TO DEMONSTRATE THAT THEY HAVE BEEN SO CONNECTED.

12. CLEANING

- A. COMPLETION AS IT PERTAINS TO THE CONTRACT COMPLETION DATE IS DEFINED AS THE DAY THE PROJECT IS TURNED OVER TO THE OWNER IN THOROUGHLY CLEAN CONDITION, READY FOR THE OWNER TO TAKE POSSESSION. ALL FIXTURES, MOTORS, EQUIPMENT AND ALL OTHER ELECTRICAL EQUIPMENT FURNISHED OR INSTALLED BY THE CONTRACTOR SHALL BE THOROUGHLY CLEANED.

13. TESTS

- A. PROVIDE THE TESTS AS OUTLINED HEREINAFTER AND OTHER TESTS NECESSARY TO ESTABLISH THE ADEQUACY, QUALITY, SAFETY, COMPLETED STATUS AND SUITABLE OPERATION OF EACH SYSTEM. CORRECT PROMPTLY ANY FAILURE OR DEFECTS REVEALED BY THESE TESTS AND RECONDUCT TEST ON THE CORRECTED ITEMS.
- B. TEST THE GROUNDS WITH A GROUND RESISTANCE DIRECT READING SINGLE-TEST MEGGER.
- C. INSULATION RESISTANCE BETWEEN PHASE CONDUCTORS AND GROUND NOT LESS THAN 1,000,000 OHMS.
- D. THE PANELBOARDS SHALL HAVE PHASE CURRENTS BALANCED TO WITHIN +/- 10% VARIATION BETWEEN AVERAGE PHASE CURRENT AND MEASURED INDIVIDUAL PHASE.
- E. ALL OPERATIONAL TEST OF THE EMERGENCY LIGHTS AND THE EXIT LIGHTS SHALL BE PERFORMED FOR THE OWNER TO DEMONSTRATE CONFORMANCE TO THE SPECIFICATIONS.

14. TEMPORARY ELECTRICAL SERVICE

- A. TEMPORARY ELECTRICAL SERVICE SHALL BE IN ACCORDANCE WITH THE BUILDING CODE. TEMPORARY LIGHTING SHALL BE PROVIDED BY A LAMP LOCATED FOR EVERY 625 SQUARE FEET OF BUILDING AREA WITH A MINIMUM OF ONE PER ROOM. THE LAMP TO BE 100 WATT AND SHALL BE MAINTAINED BY THE GENERAL CONTRACTOR.
- B. TEMPORARY POWER DISTRIBUTION SHALL BE SUFFICIENT TO ACCOMMODATE THE TEMPORARY LIGHTING AND CONSTRUCTION OPERATIONS, INCLUDING THE USE OF POWER TOOLS (BUT NOT INCLUDING HEAVY-DUTY ELECTRICAL WELDING UNITS), ELECTRICAL HEATING UNITS, AND START-UP OF SPECIFIED BUILDING EQUIPMENT, WHICH IS TO BE TESTED, STARTED OR PLACED INTO OUR USE PRIOR TO COMPLETION OF ITS PERMANENT POWER CONNECTIONS.

15. EXCAVATION AND BACKFILL

- A. CONTRACTOR SHALL DO ALL EXCAVATION REQUIRED AS SHOWN ON PLANS OR REQUIRED FOR PROPER OPERATION. EXCESS EXCAVATION BELOW THE REQUIRED LEVEL SHALL BE BACKFILLED WITH EARTH AND THOROUGHLY TAMPED. UTILITY SERVICES SHALL BE INSPECTED AND APPROVED BY THE PROPER INSPECTION AUTHORITY BEFORE BACKFILLING.

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
GC	GENERAL CONTRACTOR
EC	ELECTRICAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
WP	WEATHERPROOF
NL	NIGHT LIGHT (CONNECT TO UNSWITCHED LEG OF CIRCUIT NOTED)
GFI	GROUND FAULT CURRENT INTERRUPTER PROTECTED DEVICE
IG	ISOLATED GROUND
ST	SHUNT TRIP CIRCUIT
AF	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
PRS	PROJECT RESOURCE SOLUTIONS
PROVIDE	FURNISH AND CONNECT COMPLETE
⊕	JUNCTION BOX, MOUNTING HEIGHT
⊕	20A, 1P, 125V, GROUNDING TYPE DUPLEX RECEPTACLE (+18" AFF UNO)
⊕	20A, 1P, 125V, GROUNDING GFCI TYPE DUPLEX RECEPTACLE (+18" AFF UNO)
⊕	20A, 1P, 125V, GROUNDING TYPE DUPLEX RECEPTACLE (CLG MOUNTED)
⊕	20A, 1P, 125V, GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE
⊕	250 VOLT WALL OUTLET BY EC.
⊕	CEILING MOUNTED EXHAUST FAN WITH MANUAL DISCONNECT
⊕	DISCONNECT SWITCH: 30 AMP, NON-FUSED, 3 POLE
\$	LIGHT SWITCH
\$3	LIGHT SWITCH (3 WAY)
\$4	LIGHT SWITCH (4 WAY)
\$OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH AT 3'-6" AFF TO CENTERLINE (WATT STOPPER #DW100-WH OR EQUAL)
+12"	12" ABOVE FINISHED FLOOR TO CENTERLINE
⊕	PANELBOARD

THE WORD "PROVIDE" AS USED ON ANY ELECTRICAL DRAWING, SHALL BE DEFINED AS TO FURNISH, INSTALL AND CONNECT ALL ELECTRICAL WORK FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

DIVISION 16-ELECTRICAL SPECIFICATION  
SECTION 16200 ELECTRICAL POWER

1. RELATED DOCUMENTS

- A. APPLICABLE PROVISIONS OF AIA DOCUMENT A201, "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", DIVISION 1 GENERAL CONDITIONS AND SECTION 16100 ELECTRICAL SPECIAL CONDITIONS GOVERN WORK UNDER THIS SECTION.
- B. REFER TO SECTION 16100 ELECTRICAL SPECIAL CONDITIONS REGARDING REGULATIONS AND REQUIREMENTS AFFECTING ALL WORK DESCRIBED IN THIS SECTION.

2. POWER SERVICE

- A. POWER SERVICE FOR THIS PROJECT SHALL BE PROVIDED FROM THE UTILITY CO. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITY CO'S WORK AND MATERIALS ARE IN CONFORMANCE WITH THE UTILITY CO'S REQUIREMENTS.

3. NAMEPLATES

- A. ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO: PANELBOARDS, DISCONNECTS, TRANSFORMERS, CONTROLS, ETC., SHALL BE IDENTIFIED WITH THREE PLY LAMINATED PLASTIC. THE OUTSIDE LAMINATION SHALL BE BLACK ENGRAVING SHALL EXTEND THROUGH THE FRONT LAMINATION SO THAT THE BLACK LETTERS APPEAR ON A WHITE BACKGROUND. NAMEPLATES SHALL BE PERMANENTLY ATTACHED WITH SCREWS.
- B. CIRCUIT DIRECTORY SHALL BE TYPEWRITTEN (HANDWRITTEN IS NOT ACCEPTABLE) AND SHALL IDENTIFY CIRCUIT AS TO TYPE AND LOCATION AS FOLLOWS:  
"LTC" - FOR LIGHTING CIRCUIT FOLLOWED BY AREA IN WHICH CIRCUIT APPEARS, I.E. "STOCKROOM", "CASH WRAP", ETC.  
"RECEPT" - FOR RECEPTACLE CIRCUIT FOLLOWED BY AREA IN WHICH RECEPTACLE APPEARS, "STOREFRONT", "CASH REGISTER", ETC.  
"MOTOR" - FOR MOTOR FOLLOWED BY THE EQUIPMENT IDENTIFICATION AND AREA IN WHICH MOTOR IS LOCATED, I.E. "EXH FAN TOLLET", "AHU-ROOF", ETC.

4. CONDUIT

- A. ALL WIRING SHALL BE INSTALLED IN CONDUIT. THIN WALL EMT CONDUIT SHALL BE USED SIZES 1/2" THROUGH 2-1/2". ALL CONDUITS LARGER THAN 2-1/2" SHALL BE HEAVYWALL. CONDUITS PROVIDED UNDERGROUND OR IN CONCRETE SLABS SHALL BE PVC SCHEDULE 40. JACKETED FLEXIBLE STEEL CONDUIT (REALTITE) SHALL BE USED IN WET AREAS AND ON ALL NOTICED EQUIPMENT. "MC" CABLE MAY BE USED AT THE CONTRACTOR'S DISCRETION WITH APPROVAL BY THE LOCAL A.H.U. APPLICABLE CODES AS VERIFIED PRIOR TO BID, NO BX, ROMEX, ETC. SHALL BE ALLOWED.
- B. ALL OPENINGS IN FIRE AND SMOKE WALLS, PARTITIONS, FLOORS AND OTHER SIMILAR PENETRATIONS FOR ELECTRICAL CONDUITS, CABLE OR EQUIPMENT, WHETHER CUT OR IN PLACE, SHALL BE CLOSED WITH A UL APPROVED FIRE RESISTANT SMOKE/FLAME SEALANT TO MAINTAIN THE FULL RATING AND INTEGRITY OF THE PARTITIONS, WALLS OR FLOOR.
- C. CONDUIT BENDS FOR POWER AND LIGHTING CIRCUITS SHALL NOT BE LESS THAN STANDARD RADIUS BENDS. CONDUIT BENDS FOR FEEDERS, TELEPHONE AND COMMUNICATION CIRCUITS SHALL NOT BE LESS THAN LONG RADIUS BENDS.
- D. O.Z. TYPE EX, TX, OR AX CONDUIT EXPANSION DEFLECTION FITTINGS ARE REQUIRED IN ALL CONDUIT RUNS WHERE MOVEMENT MAY BE ENCOUNTERED. ALL EMT COUPLINGS SHALL BE COMPRESSION TYPE.
- E. EXPOSED CONDUIT SHALL BE SECURELY SUPPORTED IN PLACE PER CODE BUT ON A MAXIMUM OF 10 FOOT INTERVALS, WITHIN THREE FEET OF EACH BEND, AT EVERY OUTLET OR JUNCTION BOX AND AT THE END OF EACH STRAIGHT RUN TERMINATING AT A BOX OR CABINET. CONDUIT SHALL NOT BE SUPPORTED FROM DUCTWORK OR PIPE WORK. CONDUITS SHALL BE INSTALLED PARALLEL TO AND AT RIGHT ANGLES

TO THE BUILDING LINES. GENERALLY, CONDUIT SHALL BE INSTALLED IN CONTACT WITH STRUCTURAL PARTS OF THE BUILDING SO AS TO AVOID SUSPENDED LENGTHS OF CONDUIT. CONDUIT SHALL BE INSTALLED AS TO BE ACCESSIBLE FOR REPLACEMENT AND MAINTENANCE AND GENERALLY CONDUIT SHALL BE INSTALLED TO PERMIT DRAINAGE.

5. WIRE AND CABLE

- A. ALL WIRE AND CABLE SHALL BE COPPER AND INSTALLED IN CONDUIT. ALL WIRE AND CABLE FEEDERS AND BRANCH CIRCUITS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE APPLICABLE EDITION OF THE N.E.C. AND SHALL MEET ALL ASTM SPECIFICATIONS. WIRE AND CABLE SHALL BE NEW, SHALL HAVE SIZE, GRADE OF INSULATION VOLTAGE AND MANUFACTURER'S NAME PERMANENTLY MARKED ON OUTER COVERINGS AT REGULAR INTERVAL AND SHALL BE DELIVERED IN COMPLETE COILS OR REELS WITH IDENTIFYING SIZE AND INSULATION TAGS.
- B. THE ELECTRICAL CONTRACTOR SHALL CALCULATE VOLTAGE DROP ON CONDUCTORS WITH LENGTHS GREATER THAN 75 FEET FROM THE PANELBOARD AND PROPERLY SIZE THE CONDUCTORS PER N.E.C.
- C. POWER CONDUCTORS: NO WIRE LESS THAN NO. 12 SHALL BE USED EXCEPT FOR CONTROL CIRCUITS OR LOW VOLTAGE WIRING. WIRE SIZES NO. 12 TO NO. 10 SHALL BE SOLD EXCEPT WHERE OTHERWISE INDICATED. WIRE SIZES NO. 8 AND LARGER SHALL BE STRANDED. ALL WIRE SIZES SHOWN ARE AMERICAN WIRE GAUGE SIZES NO. 12 AWG THROUGH NO. 8 AWG SHALL BE "THINWALL" SIZE 4 AWG AND LARGER SHALL BE "THW".
- D. CONTINUITY: ALL WIRES SHALL BE CONTINUOUS FROM OUTLET TO OUTLET.
- E. ACCEPTABLE MANUFACTURERS: CABLE AND WIRE SHALL BE STANDARD TYPE AS MANUFACTURED BY GENERAL CABLE COMPANY, CAROL, ANACONDA, SOUTHWEST OR ITT ROYAL.

6. COLOR CODING

- A. A COLOR CODING SYSTEM AS LISTED BELOW SHALL BE FOLLOWED THROUGHOUT FOR FEEDERS AND BRANCH CIRCUITS AND USED AS A BASIS FOR BALANCING LOAD.  
-120/208V: PHASE A-BLACK, PHASE B-RED, PHASE C-BLUE.  
NEUTRAL-WHITE, GROUND-GREEN.

7. NOT USED.

8. NOT USED.

9. DISCONNECT SWITCHES

- A. PROVIDE DISCONNECT SWITCHES AS REQUIRED BY CODE. DISCONNECT SWITCHES SHALL BE NEW, HEAVY DUTY TYPE AND UNDERWRITER'S LABORATORIES LISTED, MANUFACTURED BY SCHNEIDER, ABB, EATON OR SIEMENS.

10. FUSES

- A. PROVIDE FUSES (300V OR LESS, 500A OR LESS) AS MANUFACTURED BY MERSEN, BUSMANN, OR LITTELFUSE.

11. GROUNDING

- A. CONTRACTOR SHALL PROVIDE GROUNDING PER N.E.C. ARTICLE 250 EQUIPMENT GROUNDING SHALL USE ONLY APPROVED GROUNDING CLAMPS AND CONNECTORS AS MANUFACTURED BY PENNIXION, BURNDY, OR D-Z WFG COMPANY.
- B. GROUNDING SHALL BE PROVIDED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250 AND THE UTILITY COMPANY REGULATIONS. CONTRACTOR SHALL CONNECT THE GROUNDING ELECTRODE CONDUCTORS TO THE NEUTRAL BAR INSIDE THE MAIN

SERVICE DISCONNECT SWITCH.

- C. THE EQUIPMENT GROUNDING SYSTEM SHALL CONSIST OF A CONTINUOUS CONDUIT INSTALLATION AND A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR. THIS GROUNDING CONDUCTOR SHALL BE PROVIDED IN EVERY CONDUIT OR RACEWAY WITH THE FEEDER OR BRANCH CIRCUIT CONDUCTORS. THIS GROUNDING SHALL BE EXTENDED FROM THE HOUSING OF EVERY ELECTRICAL LOAD.

12. TELEPHONE SERVICE

- A. THIS CONTRACTOR SHALL PROVIDE AN EMPTY CONDUIT WITH PULL STRING SIZED PER DRAWINGS FROM DEMARCATION POINT ROUTED TO A TELEPHONE TERMINATION BOARD FOR EACH TENANT SPACE. EC SHALL ALSO PROVIDE THE TELEPHONE TERMINATION BOARD AS DESCRIBED (1) 3' x 4' x 3/4" PLYWOOD PANEL, WALL MOUNTED ON AT LOCATION DIRECTED BY OWNER.

RECEIVED

NOV - 7 2024

PLANNING DEPARTMENT



10/10/2024



SHELL BUILDING  
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Revisions	OWNER COMMENTS	OWNER COMMENTS
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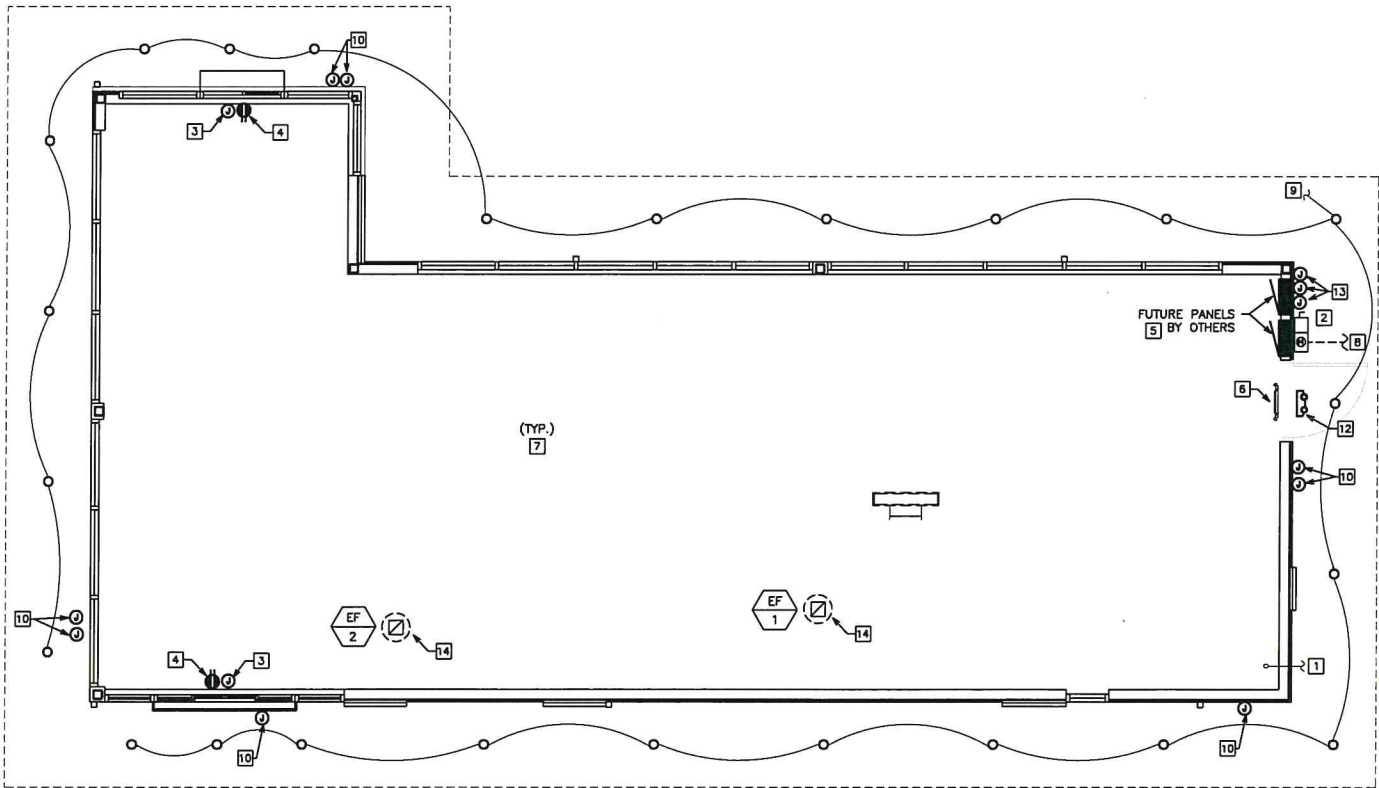
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SHEET  
**E100**  
E. SPECIFICATIONS





1 SHELL POWER PLAN  
Scale: 1/4" = 1'-0"

EMERGENCY LIGHT COMMENTS

ALL EMERGENCY AND EXIT LIGHTING AS PROVIDED SHALL BE INDEPENDENTLY TESTED IN FIELD FOR COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. APPROVAL SHALL BE AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION.

CONDUIT NOTES

ALL EMPTY AND SPARE CONDUIT SHALL BE PROVIDED WITH PULL STRING, LABELED END TO END AND EXTENDING ALONG THE ENTIRE LENGTH OF THE CONDUIT. CONDUIT DISTRIBUTION SHALL BE VERIFIED ON SITE AND IN COORDINATION WITH TENANT FINISHED INTERIOR DRAWINGS.

E.C. SHALL NOT STUB-UP CONDUIT WITHIN THE WALL WITHIN 18" OF STRUCTURAL WALL CORNERS OR WITHIN 18" OF THE END OF A STRUCTURAL WALL.

EXTERIOR INSTALLATION NOTES

DEVICES, BOXES, CONDUITS AND CONNECTIONS SHALL BE PROVIDED AS RATED FOR EXTERIOR USE. EXTERIOR OUTLETS TO BE PROVIDED WITH A WEATHERPROOF, WHILE-IN-USE COVER AND BE GFCI TYPE. UNUSED OR SPARE CONDUITS SHALL BE CAPPED FOR FUTURE USE AT BOTH ENDS.

SHEET NOTES

- EC SHALL PROVIDE (2) 2" EMPTY CONDUIT, OR AS REQUIRED BY BROADBAND PROVIDER, WITH PULL STRING FROM TELECOMMUNICATION PEDESTAL TO DEMARCATION POINT AT BUILDING'S MAIN POINT OF ENTRY TO THE REAR WALL OF TENANT'S SPACE ABOVE CEILING, SERVING VOICE CABLE AND INTERNET CABLE. COORDINATE DEMARC POINT WITH CONSTRUCTION MANAGER. TERMINATE CONDUIT ABOVE FUTURE MANAGER DESK LOCATION OR AS LOCATED BY TENANT. VERIFY LOCATION WITH TENANT INTERIOR PLANS.
- PROPOSED UTILITY METERING LOCATION, SEE ONE LINE DIAGRAM, SHEET E-401 FOR ADDITIONAL INFORMATION. ALL METERING SHALL BE APPROVED BY LOCAL UTILITY COMPANY PRIOR TO INSTALLATION. NEW EQUIPMENT SHALL BE RATED TO WITHSTAND AVAILABLE FAULT CURRENT AT THIS LOCATION.
- D/T AIR CURTAIN: PROVIDE DEDICATED CONDUIT TO POWER PANEL AND ALL NECESSARY WIRE AND CONNECTIONS FOR A FUNCTIONAL AIR CURTAIN SYSTEM. VERIFY UNIT SPECIFICATIONS AND POWER REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALL ELECTRICAL WORK PER ALL MANUFACTURER RECOMMENDATIONS. PROVIDE 10'-0" EXCESS COIL AT FUTURE PANELBOARD LOCATION FOR FUTURE CONNECTION BY TENANT.
- D/T WINDOW CONTROL: PROVIDE GFI RECEPTACLE AT WINDOW HEADER HEIGHT, ADJACENT TO WINDOW TO CONNECT WINDOW ELECTRICAL CORD. PROVIDE 3/4" EMPTY CONDUIT W/ PULL STRING TO FUTURE PANEL LOCATION FOR FUTURE CONNECTION.
- VERIFY LOCATION OF FUTURE ELECTRICAL PANELBOARDS WITH TENANT INTERIOR PLANS PRIOR TO ANY WORK.
- E.C. TO CONNECT TEMPORARY EMERGENCY LIGHTING TO CONSTRUCTION POWER, LITHONIA #140M-LED OR APPROVED EQUAL. PROVIDE PER ALL APPLICABLE CODE REQUIREMENTS. FIXTURES CONSIDERED TEMPORARY UNLESS APPROVED BY TENANT FOR PERMANENT USE.
- E.C. SHALL VERIFY ALL WORK PER LANDLORD WORK LETTER. COORDINATE WITH G.C. FOR SCOPE OF WORK AND VERIFY PRIOR TO ANY BID. ADJUST ANY WORK THESE PLANS AS NECESSARY TO MEET WORK SCOPE.
- TO UTILITY COMPANY TRANSFORMER. E.C. TO COORDINATE INSTALLATION OF ALL DEVICES, CONDUIT AND WIRE WITH UTILITY COMPANY PRIOR TO START OF PROJECT AND INSTALL PER AHJ AND UTILITY COMPANY REQUIREMENTS.
- E.C. SHALL COORDINATE LOCATION OF EXTERIOR LIGHTS WITH LL & OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN AND INSTALLATION. PROVIDE 1" CONDUIT EMPTY W/ PULL STRING TO FUTURE PANEL LOCATION. REFER TO PHOTOMETRIC DRAWINGS FOR FIXTURE SELECTIONS.
- E.C. TO PROVIDE WP JUNCTION BOX AND 1" EMPTY CONDUIT W/ PULL STRING STUBBED ABOVE INTERIOR CEILING FOR FUTURE CONNECTION TO TENANT SIGNAGE. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATION PLANS AND TENANT INTERIOR PLANS PRIOR TO ROUGH-IN. VERIFY CIRCUITING BY TENANT.
- NOT USED.
- E.C. TO PROVIDE WEATHERPROOF TYPE OUTDOOR EMERGENCY FIXTURE OUTSIDE ALL BUILDING ENTRY DOORS, EXIT LIGHT CO #EL-WETLED OR APPROVED EQUAL AND LOCATED ABOVE EACH DOOR, CONNECTED TO CONSTRUCTION POWER. REMOTE HEAD FIXTURES AS COMPATIBLE WITH SERVING INTERIOR EMERGENCY EGRESS LIGHTS SHALL BE ACCEPTABLE. CONNECT AHEAD OF ANY TEMPORARY LIGHTING CONTROLS. VERIFY FIXTURE SPECIFICATIONS PRIOR TO ANY ORDERING OR BID.
- E.C. TO PROVIDE (3) 1" EMPTY CONDUITS W/ PULL STRING, TERMINATING AT GRADE OUTDOORS AND EXTENDING ABOVE THE INTERIOR CEILING FOR FUTURE USE. VERIFY FINAL LOCATION WITH TENANT'S REPRESENTATIVE.
- E.C. TO PROVIDE #12 CONDUCTORS FOR CONNECTION OF EXHAUST FANS, CONNECT TO MANUFACTURER PROVIDED DISCONNECT. EXTEND BACK TO FUTURE TENANT PANEL LOCATION AND PROVIDE EXCESS 10'-0" LOOP OF WIRE FOR FUTURE CONNECTION BY TENANT. VERIFY FINAL LOCATIONS PRIOR TO ANY WORK.



10/10/2024



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**CASE**  
Engineering Inc.

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CERTIFICATE OF AUTHORITY NO. CA 8152

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3. 11/08/2024 OWNER COMMENTS

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SHEET  
**E201**  
SHELL POWER PLAN



# Sheet Notes

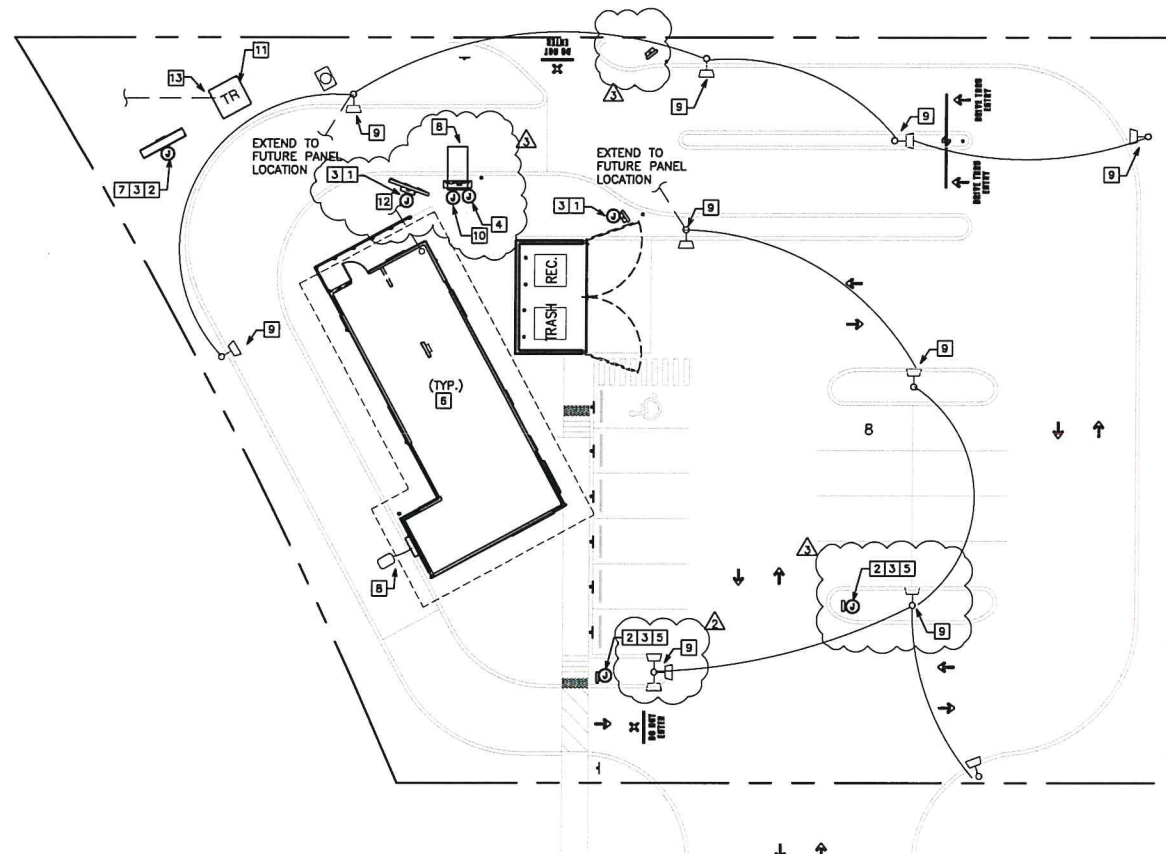
1. LANDLORD'S GC SHALL VERIFY FULL SCOPE OF WORK WITH LANDLORD WORK LETTER PRIOR TO BID. NO EXTRAS OR CHANGE ORDERS SHALL BE GIVEN FOR THE GC'S FAILURE TO FULLY UNDERSTAND SCOPE.
2. COORDINATE ALL CONDUIT ROUTING WITH ARCHITECTURAL AND CIVIL PLANS, AND OTHER TRADES.
3. SIGN LOCATIONS ON THIS PLAN ARE AS PROVIDED BY SHELL ARCHITECTURAL AND CIVIL PLANS. VERIFY FINAL LOCATIONS WITH TENANT FIT-OUT DRAWINGS PRIOR TO BID.
4. PROVIDE ALL UNDERGROUND ELECTRICAL CONDUITS, LABELED WITH PULL STRINGS FROM ELECTRICAL PANELS TO EXTERIOR DRIVE-THRU EQUIPMENT PER LAND LORD WORK LETTER. VERIFY LOCATION PRIOR TO ROUGH-IN.
5. CONTRACTOR TO PROVIDE EXTERIOR LIGHTING, CONDUIT, WIRING, FOOTINGS, POLES AND FIXTURES NECESSARY PER PHOTOMETRIC AND SITE PLAN DESIGN. CONFIRM FINAL APPROVED LOCATIONS PRIOR TO ANY WORK.
6. CONDUCTORS PROVIDED AS INSTRUCTED ON THIS PLAN SHEET SHALL BE MINIMUM #10 CONDUCTORS, #10 GROUND.
7. CONDUIT PROVIDED SHALL EXTEND TO INTERIOR OF BUILDING NEAREST TO LOCATION OF TENANT'S PANELBOARDS. MINIMUM 1" SCHEDULE 40 PVC FOR ALL CONDUIT SERVING OUTDOOR EQUIPMENT AND LIGHTING.

## SIGN COMMENTS

ANY SIGNAGE PROVIDED UNDER SHELL SCOPE IS TO BE PROVIDED UNDER A SEPARATE BID AND SEPARATELY PERMITTED FROM SHELL SCOPE PLANS.

# KEYED NOTES

1. PROVIDE WEATHERPROOF JUNCTION BOX WITH DISCONNECT SWITCH. (1) 1" PVC CONDUIT FOR POWER CONNECTION TO MENU SIGN OR PRE-MENU SIGN AND (1) 1" PVC CONDUIT WITH PULL STRING CONTINUOUS FOR DATA CONNECTION TO STARBUCKS SPACE. VERIFY ALL ELECTRICAL REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
2. ALL WORK SHALL BE COORDINATED WITH LANDLORD WORK LETTER. VERIFY SCOPE OF WORK TO PROVIDE FINAL CONNECTIONS, WIRING, CONDUIT, STUB-UPS, ETC. PRIOR TO ANY BID.
3. FUTURE CONNECTIONS SERVING THIS DEVICE SHALL BE CONTROLLED BY FUTURE LIGHTING CONTROL SYSTEM.
4. PROVIDE WEATHERPROOF JUNCTION BOX WITH DISCONNECT SWITCH. (2) EMPTY 1" PVC CONDUITS W/ PULL STRING FOR STARBUCKS POWER CONNECTION AND (2) EMPTY 1" PVC CONDUITS WITH PULL STRING CONTINUOUS TO STARBUCKS DRIVE-THRU WINDOW COMMUNICATIONS AREA. CONDUITS SHALL NOT BE EXTENDED BENEATH BUILDING SLAB. PROVIDE CONDUIT OUTSIDE OF THE BUILDING AND STUB-UP WITHIN THE DRIVE-THRU BUMP-OUT.
5. SIGNAGE/DT EQUIPMENT LOCATIONS SHOWN FOR ELECTRICAL PURPOSES ONLY. REFERENCE TENANT'S DRAWINGS FOR FINAL SIGNAGE LOCATIONS AND INFORMATION. PROVIDE MIN. 1" CONDUIT WITH PULL STRING, CAPPED. NO MORE THAN (3) SIGNS MAY BE DISTRIBUTED FROM A SINGLE HOME-RUN CONDUIT.
6. SITE LIGHTING AND SIGNAGE SHALL BE CONNECTED BY THE TENANT'S FIT-OUT ELECTRICAL CONTRACTOR TO FUTURE ELECTRICAL PANELS. E.C. SHALL TERMINATE CONDUIT TO THE INTERIOR OF THE BUILDING NEAR TO PANEL LOCATIONS.
7. PYLON/MONUMENT SIGN LOCATION SHOWN FOR ELECTRICAL PURPOSES ONLY. REFERENCE TENANT'S DRAWINGS FOR FINAL SIGNAGE LOCATION AND INFORMATION. PROVIDE MIN. 1" CONDUIT WITH PULL STRING, CAPPED.
8. E.C. TO COORDINATE WITH G.C. FOR INSTALLATION OF VEHICLE DETECTOR LOOPS AT DT SPEAKER POST / DT WINDOW, (1) 1" CONDUIT MIN. VERIFY EXACT REQUIREMENTS WITH MANUFACTURER INFORMATION. VERIFY EXACT LOCATION PRIOR TO INSTALLATION.
9. NEW POLE FIXTURES INCLUDING FOUNDATION, WIRING, ETC. TENANT TO PROVIDE FINAL CONNECTION AND LIGHTING CONTROLS. SEE PHOTOMETRIC DRAWING FOR LIGHTING FIXTURE SCHEDULE AND GENERAL PROPOSED LOCATIONS. VERIFY SCOPE OF WORK PRIOR TO BID. THE POLE BASE SHALL BE DESIGNED BY A STRUCTURAL ENGINEER AS HIRED BY THE E.C. OR ARCHITECT, WHICH SHALL BE SEPARATELY PERMITTED FROM THESE DRAWINGS.
10. EC SHALL VERIFY ALL REQUIREMENTS OF THE DOS CONTROL BOX PRIOR TO ANY WORK. VERIFY LOCATION OF CONTROL BOX WITH CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
11. PROPOSED LOCATION FOR UTILITY COMPANY TRANSFORMER. E.C. TO COORDINATE WITH THE UTILITY COMPANY TO DETERMINE LOCAL REQUIREMENTS AND THE FINAL LOCATION OF THE TRANSFORMER. THE E.C. SHALL PROVIDE THE FINAL LOCATION AND CONDUIT PATHWAY DISTANCE TO THE ENGINEER OF RECORD AS PART OF REVISED FAULT CURRENT CALCULATIONS.
12. E.C. TO COORDINATE WITH TELECOMMUNICATIONS COMPANY AND EXTEND CONDUITS TO POINT OF SERVICE TELECOMMUNICATIONS CONNECTION. SEE KEY NOTE #1, SHEET E201 FOR ADDITIONAL DETAIL.
13. 4" EMPTY CONDUIT WITH PULL STRING FOR PRIMARY SERVICE ENTRANCE CONDUCTORS. COORDINATION TERMINATION LOCATION AT UTILITY COMPANY POINT OF SERVICE DELIVERY WITH SERVING UTILITY COMPANY.



1 ELECTRICAL SITE PLAN  
Scale: 1/16" = 1'-0"

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Checked By: [blank]

SHEET  
**E301**  
E. SITE PLAN



## POLE MOUNTING NOTES

POLE LIGHT FIXTURES DESIGNED FOR USE WITH HUBBELL SSS-H-40-A POLE, NO GREATER THAN 18'-0" TALL.

THESE ARE DESIGNED AROUND AN ESTIMATED 90 MPH WIND SPEED PER THE AASHTO WIND MAP DATA AND LOCALLY AMENDED IBC INSTRUCTIONS.

## PHOTOMETRIC NOTES

ALL FIXTURE HEIGHTS ASSUME A BASELINE ELEVATION OF 0" A.F.F. AT THE CONSTRUCTED BUILDING'S FINISHED FLOOR SLAB. FIXTURE HEIGHTS GIVEN WHEN MOUNTED TO THE BUILDING ARE FOR THE CENTERLINE MOUNTING HEIGHT. FIXTURE HEIGHTS GIVEN WHERE POLE MOUNTED OR RECESSED ARE GIVEN FOR THE BOTTOM OF THE LENS OF THE LUMINAIRE AND DO NOT REFLECT THE HEIGHT OF THE POLE, BASE OR THE FIXTURE ITSELF.

LIGHTING SHOWN IS DESIGNED BASED ON THE WRITTEN LANDLORD'S CONTRACTOR LETTER TO DETERMINE FIXTURE OUTPUTS AND DISTRIBUTION AS TO MEET THE WRITTEN FOOT-CANDLE LEVELS REQUIRED. FIXTURES PER THE SCHEDULE MUST BE SEPARATELY APPROVED BY THE LANDLORD'S CONTRACTOR AND TENANT PRIOR TO PURCHASE AND INSTALLATION. ALTERNATIVE FIXTURES SHALL BE PROVIDED AS A SUBMITTAL TO THE ENGINEER FOR REVIEW. SUBMITTAL FOR THEIR PROPOSED ALTERNATIVE FIXTURE SHALL INCLUDE A PRODUCT DATA SHEET AND PHOTOMETRIC STUDY FOR COMPARISON TO THE PHOTOMETRIC STUDY PROVIDED HERE IN AS THE BASIS OF DESIGN.

PHOTOMETRIC CALCULATIONS AS DRAWN FACTOR THE SHELL CONSTRUCTION ONLY AND ASSUME NO TOPIARY, FOLIAGE, TREES OR OTHER BOUNDARIES, BARRIERS OR OBSTRUCTIONS THAT MAY BE PRESENT. LIGHT LEVELS SHOWN DO NOT REFLECT ADDITIONAL BOUNDARIES, OBSTRUCTIONS, TENANT CONSTRUCTION, ELEVATION CHANGES, OR EXISTING FIXTURES OR LIGHTING PROVIDED AWAY FROM THE SITE, AND MAY NOT FULLY REFLECT FINAL CONDITIONS OR CONSTRUCTION.



10/10/2024

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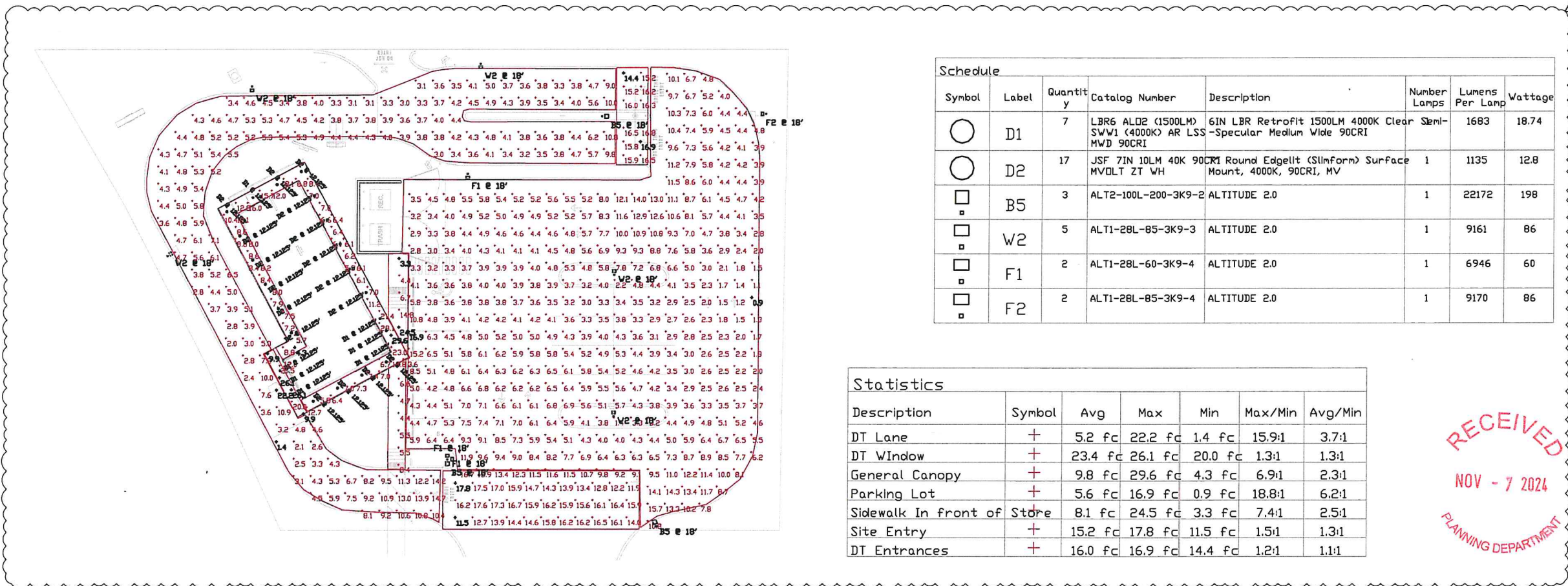
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**E302**

PHOTOMETRIC PLAN



1 SITE AND DRIVE THRU PHOTOMETRIC PLAN  
Scale: 1/16" = 1'-0"



## Schedule

Symbol	Label	Quantity	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Wattage
○	D1	7	LBR6 ALD2 (1500LM) SWW1 (4000K) AR LSS MWD 90CRI	6IN LBR Retrofit 1500LM 4000K Clear Semi-Specular Medium Wide 90CRI	1	1683	18.74
○	D2	17	JSF 71N 10LM 40K 90CRI Round Edgellit (Slimform) Surface Mount, 4000K, 90CRI, MV		1	1135	12.8
□	B5	3	ALT2-100L-200-3K9-2	ALTITUDE 2.0	1	22172	198
□	W2	5	ALT1-28L-85-3K9-3	ALTITUDE 2.0	1	9161	86
□	F1	2	ALT1-28L-60-3K9-4	ALTITUDE 2.0	1	6946	60
□	F2	2	ALT1-28L-85-3K9-4	ALTITUDE 2.0	1	9170	86

## Statistics

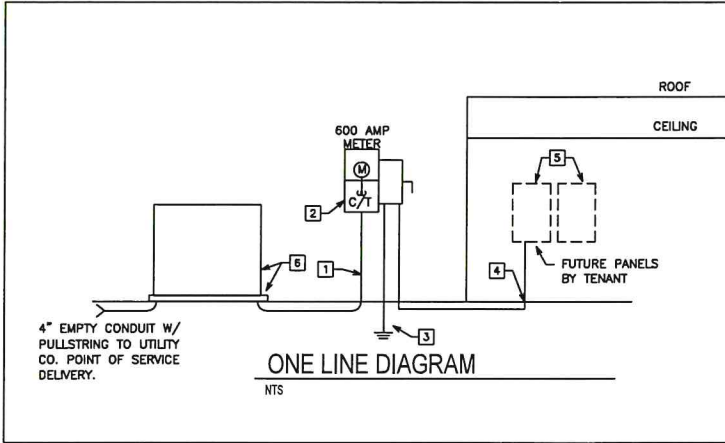
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
DT Lane	+	5.2 fc	22.2 fc	1.4 fc	15.9:1	3.7:1
DT Window	+	23.4 fc	26.1 fc	20.0 fc	1.3:1	1.3:1
General Canopy	+	9.8 fc	29.6 fc	4.3 fc	6.9:1	2.3:1
Parking Lot	+	5.6 fc	16.9 fc	0.9 fc	18.8:1	6.2:1
Sidewalk In front of Store	+	8.1 fc	24.5 fc	3.3 fc	7.4:1	2.5:1
Site Entry	+	15.2 fc	17.8 fc	11.5 fc	1.5:1	1.3:1
DT Entrances	+	16.0 fc	16.9 fc	14.4 fc	1.2:1	1.1:1

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ONE LINE DIAGRAM KEYED NOTES

- 1 EC TO PROVIDE (4) #350 KCIL IN EACH OF (2) SETS OF 3" C.
- 2 EC TO PROVIDE 600A, 120/208V, 3 PH., 4 W. SERVICE C/T & METER, 600A, 3-POLE, NEMA 3R, SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH WITH 600A, CLASS 'J' FUSES (BUSSMANN, MERSEN OR LITLTFUSE). VERIFY METERING REQUIREMENTS WITH LOCAL UTILITY COMPANY PRIOR TO BID.
- 3 ELECTRICAL SERVICE GROUND PER N.E.C. 250.66, SEE SERVICE GROUND DETAIL THIS SHEET.
- 4 EC SHALL PROVIDE (4) #350 KCIL AND (1) #1 GND IN EACH OF (2) 3" CONDUITS WITH ADDITIONAL 10'-0" EXCESS CONDUCTOR COIL FOR FUTURE EXTENSION AND CONNECTION TO FUTURE TENANT PANELS. TAPE ENDS OF CONDUCTORS.
- 5 PANELS TO BE PROVIDED BY TENANT FIT-OUT ELECTRICAL CONTRACTOR AT FUTURE DATE. SHELL PACKAGE ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTIONS TO FUTURE ELECTRICAL PANELS AS INSTRUCTED BY WORK LETTER. VERIFY RESPONSIBILITY TO PROVIDE FINAL CONNECTION OF EQUIPMENT IDENTIFIED IN THE WORK LETTER PRIOR TO BID. CIRCUITING TO BE DETERMINED AND PROVIDED BY TENANT INTERIOR FITOUT DRAWINGS.
- 6 E.C. TO COORDINATE WITH UTILITY COMPANY FOR INSTALLATION OF PAD MOUNTED UTILITY COMPANY TRANSFORMER. CONCRETE PAD PROVIDED BY E.C. IN ACCORDANCE WITH UTILITY COMPANY STANDARDS.

UTILITY TRANSFORMER FAULT CALCULATION		
SERVICE ENTRANCE		CALCULATION
VOLTAGE (L-L):	208V	I-FLA=[RATED KVA * 1000]/[V-L-L*SQRT(PHASE)]
PHASE (PH):	3PHASE	I-FLA= 625A
AMPS:	600A	
FULL LOAD KVA:	216KVA	M=100%/Z= 89.3
TRANSFORMER:	225KVA	I-SC=I-FLA*M=156 KA
IMPEDANCE (%Z):	1.12%Z	

CALCULATION IS BASED ON ESTIMATED TRANSFORMER SIZE WITH 1/2 FROM BUSSMANN SPD. CONTRACTOR SHALL CONTACT UTILITY AND VERIFY I-SC AVAILABLE AT SECONDARY OF TRANSFORMER. CONTACT ENGINEER FOR RE-CALCULATION IF LARGER THAN CALCULATED.

THE AMOUNT OF AVAILABLE FAULT CURRENT FROM THE UTILITY COMPANY WAS NOT KNOWN TO CASE ENGINEERING DURING THE DESIGN PHASE. FAULT CURRENT CALCULATIONS WERE PERFORMED BY CASE ENGINEERING BASED ON AN ASSUMED TRANSFORMER KVA RATING AND ASSUMED TRANSFORMER IMPEDANCE VALUE FOR THE UTILITY COMPANY TRANSFORMER TO ESTABLISH BASIS OF DESIGN AIC RATINGS AS IDENTIFIED ON THE DRAWINGS.

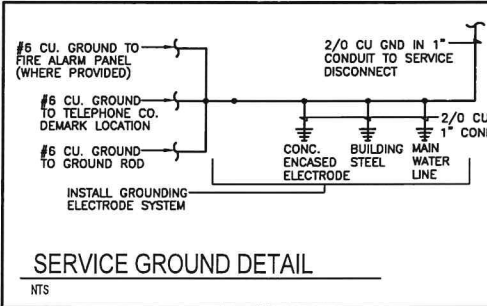
THESE VALUES ARE PROVIDED ONLY FOR THE RATING OF UTILITY EQUIPMENT FOR USE IN SHELL CONSTRUCTION. THIS ENGINEER ASSUMES NO RESPONSIBILITY FOR RATING OR APPROVING TENANT'S PERMANENT ELECTRICAL PANELBOARDS, AND THE TENANT'S ELECTRICAL ENGINEER OF RECORD FOR THE TENANT INTERIOR WORK SHALL PROVIDE NEW CALCULATIONS AND ALL APPROVALS FOR NEW EQUIPMENT AND DEVICES AS PART OF TENANT SCOPE OF WORK.

PANEL SCHEDULE NOTES

PER WORK LETTER REQUIREMENTS, ELECTRICAL PANELBOARDS AND BREAKERS ARE NOT PROVIDED UNDER THE LANDLORD WORKLETTER SCOPE OF WORK. THE LETTER REQUIRES THE INSTALLATION OF UTILITY SERVICE UP TO TENANT'S METER AND DISCONNECT SWITCH. CONDUIT AND CONDUCTORS SHALL BE PROVIDED UP TO THE FUTURE LOCATION OF TENANT'S PANELBOARDS. THE PANELBOARDS SHALL BE PROVIDED BY THE TENANT FIT-OUT ELECTRICAL CONTRACTOR AT A FUTURE DATE. THE SHELL PACKAGE ELECTRICAL CONTRACTOR SHALL MAKE CONNECTIONS TO PANELS AS FURNISHED BY TENANT FITOUT CONTRACTOR AS INSTRUCTED BY THE WORK LETTER.

METER FAULT CALCULATION		
STARTING I-SC:	56 KA	IMPEDANCE BASED ON 3 SINGLE
VOLTAGE (L-L):	208V	CONDUCTORS IN NON-MAGNETIC
PHASE (PH):	3PHASE	CONDUIT
FEEDER SIZE:	350	CALCULATION
FEEDER MATERIAL:	CU	I=[SQRT(PHASE)*L*(S-C)]/[Q*C*V-L-L]
PARALLEL SETS (Q):	2	I=0.511
FEEDER LENGTH (L):	50FT	M=1/(1+I)=0.662
FEET PER OHMS (Q):	22.737 FT/OHMS	I-SC=I-SC*M=36.9 KA

NOTE: CALCULATION BASED ON BUSSMANN SPD



E.C. TO PROVIDE GROUNDING FOR ALL SHOWN AS PRESENT AT THE COMPLETION OF CONSTRUCTION. GROUNDING PROVIDED SHALL BE AT A MINIMUM A CONCRETE ENCASED GROUNDING ELECTRODE AND CONNECTION TO BUILDING STEEL, METAL WATER PIPE, AND ALL BONDING JUMPERS AND CONNECTIONS NECESSARY.

ALL WIRE SHALL BE THHN/THWN TYPE. GROUND CONNECTIONS SHALL BE EXOTHERMIC WELDED, ERICO "CADWELD" OR APPROVED UL LISTED MECHANICAL AND COMPRESSION TYPE GROUNDING DEVICES. MAIN GROUND RODS TO BE LOCATED AT SERVICE ENTRANCE.



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Project No:	24097		
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Checked By:			

SHEET  
**E401**  
RISER/SCHEDULES



2

FAN SCHEDULE						
MARK	MANUFACTURER	MODEL NO.	CFM	SP	VOLTS/PH	REMARKS
EF-1	GREENHECK	G-090-VG	300	0.25	120/1	1,2
EF-2	GREENHECK	G-090-VG	300	0.25	120/1	1,2

1.

FURNISH AND INSTALL NEW EXHAUST FAN, WITH DIRECT DRIVE, DISCONNECT, SOLID STATE SPEED CONTROL, BACKDRAFT DAMPER, AND 12" HIGH INSULATED ROOF CURB.

2.

VERIFY ELECTRICAL VOLTAGE/PHASE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING UNIT.

GENERAL NOTES:

- A.
- PROVIDE WITH AIR CURTAIN READY ACCESS AA100 AT DRIVE THRU WINDOW PER TENANT'S CD'S OR IF REQUIRED BY LOCAL CODE.

B.

C.

D.

E.

NOTE:  
REFER TO TENANT'S CONSTRUCTION  
DOCUMENTS FOR FINAL LOCATIONS  
OF RTU'S AND EXHAUST FANS

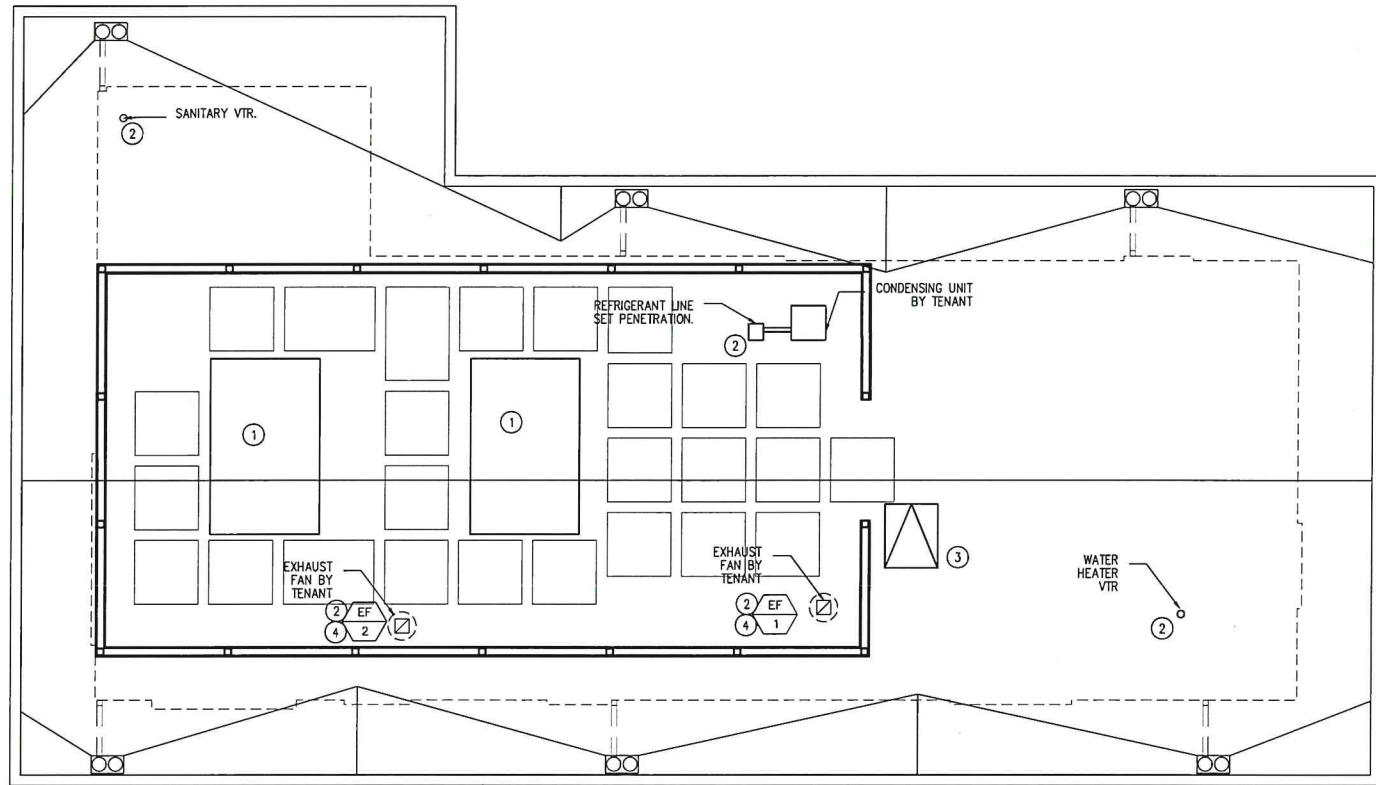
KEYED NOTES:

- 1
- PROVIDE CURB FOR NEW ROOFTOP UNIT PROVIDED BY TENANT. LOCATION TO BE DETERMINED BASED ON TENANT DRAWINGS.

2

3

4



1 MECHANICAL ROOF PLAN

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

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LICENSED PROFESSIONAL ENGINEER

MATTHEW R. CASE

33354

OKLAHOMA

10/10/2024



DIVISION 15000 MECHANICAL  
SECTION 15400 PLUMBING

1. SCOPE OF WORK

- A) THE WORK UNDER THIS SECTION OF SPECIFICATION SHALL INCLUDE ALL MATERIAL, EQUIPMENT AND LABOR REQUIRED TO INSTALL A COMPLETE PLUMBING INSTALLATION AS SHOWN ON THE DRAWINGS AND HEREIN. WORK SHALL BEGIN AT A POINT SHOWN ON THE DRAWINGS. FINAL CONNECTIONS TO SITE UTILITIES SHALL BE THIS CONTRACTOR.
- B) PROVISIONS OF SECTION 15100 "GENERAL CONDITIONS" SHALL BE AND ARE HEREBY MADE A PART OF THIS SECTION.

2. TEMPORARY WATER

- A) AS SOON AS PRACTICAL AFTER THE START OF CONSTRUCTION, THE WATER SERVICE SHALL BE EXTENDED INTO THE BUILDING.

3. CLEANING, PROTECTING AND ADJUSTMENTS

- A) THIS CONTRACTOR SHALL PROVIDE PROTECTIVE COVERINGS ON ALL FIXTURES AND EQUIPMENT FURNISHED. HE SHALL THOROUGHLY CLEAN ALL FIXTURES, EQUIPMENT AND PIPING FURNISHED.
- B) OPEN BENDS OF PIPING SYSTEM SHALL BE KEPT COVERED DURING CONSTRUCTION.
- C) THIS CONTRACTOR SHALL ADJUST ALL VALVES FOR THE SATISFACTORY OPERATION OF THE PLUMBING SYSTEM.

4. DOMESTIC WATER SERVICE

- A) THIS CONTRACTOR SHALL CONTINUE WATER SERVICE AS INDICATED ON THE DRAWINGS. WATER SERVICE SHALL BE TYPE 'L' WATER TUBING ABOVE GROUND AND TYPE 'K' FOR UNDERGROUND APPLICATIONS.
- B) TYPE "M" COPPER OR PLASTIC PIPING FOR DOMESTIC POTABLE WATER SUPPLIES IS NOT ACCEPTABLE.
- C) BELOW GRADE JOINTS AND/OR SOLDER CONNECTIONS ARE NOT ACCEPTABLE.

5. SANITARY SEWERS

- A) THIS CONTRACTOR SHALL CONNECT SANITARY SEWER AS INDICATED ON THE DRAWINGS. VERIFY DIRECTION OF FLOW PRIOR TO ANY ROUGH-IN WORK.
- B) EACH PIPE SHALL BE LAID TO THE LINE AND GRADE INDICATED ON THE PLANS AND SUCH A MANNER AS TO FORM A CLOSE CONCENTRIC JOINT WITH THE ADJOINING PIPE AND TO PRESENT OFFSETS IN FLOW LINE. ALL PIPE SHALL BE LAID WITH THE BELLS UPHILL.
- C) THE SUB-GRADES SHALL BE KEPT FREE FROM WATER WHILE PIPES ARE BEING LAID. ALL PIPE SHALL BE LAID WITH ENDS ABUTTING AND TRUE TO LINE AND GRADE. THEY SHALL BE FITTED AND MATCHED SO THAT THEY WILL FORM A SEWER WITH A SMOOTH AND UNIFORM INVERT.
- D) EACH JOINT SHALL BE CLEANED AS IT IS LAID AND ALL BELLS SHALL BE CLEANED BEFORE PIPES ARE JOINED.
- E) VITRIFIED CLAY PIPE SHALL BE JOINED USING COMPRESSION GASKET JOINTS IN ACCORDANCE WITH A.S.T.M. C-425

6. INSIDE WATER PIPING

- A) RUNOUTS TO FIXTURES SHALL HAVE AMPLE PROVISION FOR EXPANSION AND CONTRACTION, BOTH HORIZONTALLY AND VERTICALLY.
- B) ALL UNIONS IN COPPER LINES SHALL BE MUELLER "STREAMLINE" GROUND JOINTS OR EQUAL. PROVIDE DIELECTRIC UNIONS WHERE COPPER LINES ARE CONNECTED TO STEEL. PROVIDE UNIONS AT EACH EQUIPMENT CONNECTION.
- C) THIS CONTRACTOR SHALL FURNISH ALL VALVES OF ONE MANUFACTURER FIGURE NUMBER AND TYPE THROUGHOUT THE ENTIRE INSTALLATION OF WORK. UNLESS OTHERWISE SPECIFIED. INSTALL GATE VALVES AT EACH EQUIPMENT CONNECTION.
- D) GATE VALVES 2" AND SMALLER SHALL BE BRASS BODY, BRASS TRIM, NONRISING STEM, BUILT FOR 125# WORKING PRESSURE: CRANE #1320 (SOLDER-JOINT) OR #438 (SCREWED).
- E) CHECK VALVES 2" AND SMALLER SHALL BE BRASS BODY, SWING TYPE, BUILT FOR 125# WORKING PRESSURE: CRANE #1342 (SOLDER-JOINT) OR #372 (SCREWED).
- F) SIMILAR VALVES OF REPUTABLE MANUFACTURER, SUCH AS HAMMOND, NIBCO-SCOTT & JENKINS WILL BE ACCEPTABLE.
- G) AT EACH FIXTURE, PROVIDE AIR CHAMBERS NOT LESS THAN 12" LONG, SAME SIZE AS SUPPLY PIPE. THIS APPLIES TO ALL HOT AND COLD WATER SUPPLIES.
- H) UPON COMPLETION OF HIS WORK, THIS CONTRACTOR SHALL BALANCE THE HOT WATER SYSTEM THROUGHOUT BY MEANS OF ADJUSTMENT OF THE BALANCING VALVES.
- I) REFER TO SECTION 12D. IN THIS SPEC FOR PIPING INSULATION.

7. STERILIZATION OF DOMESTIC WATER SYSTEM

- A) THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE THOROUGHLY STERILIZED WITH A SOLUTION CONTAINING NOT LESS THAN 100 PARTS PER MILLION OF AVAILABLE CHLORINE. THE SOLUTION SHALL REMAIN IN THE SYSTEM FOR TWO (2) HOURS DURING WHICH TIME ALL VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER STERILIZATION, THE SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAN WATER UNTIL THE RESIDUE CHLORINE CONTENT IS NOT GREATER THAN THE CHLORINE LEVEL OF THE AVAILABLE WATER SUPPLY.

8. WASTE, SOIL, DRAIN AND VENT PIPING

- A) THE HOUSE DRAINS, SOIL WASTE AND VENT PIPE AND FITTINGS INCLUDING EXTENSIONS TO SEWERS SHALL BE OF SAND SPUN SERVICE WEIGHT CAST IRON PIPE OF THE SIZES INDICATED ON THE DRAWINGS. PIPE AND FITTINGS TO BE COATED ON THE INSIDE AND OUTSIDE WITH COAL TAR PITCH, CYLINDRICAL AND FREE FROM CRACKS OR OTHER DEFECTS. THE CONTRACTOR MAY USE SCHEDULE 40 PVC BELOW THE FLOOR SLAB, OTHERWISE ALL DWV PIPING MUST BE CAST IRON.
- B) ALL TRENCHES TO BE DUG WITH GRADUAL FALL, THE PIPING TO BE STRAIGHT AND THOROUGHLY YARNED WITH OAKUM AND POURED WITH MOLTEN LEAD AND THOROUGHLY CAULKED WITH CAULKING IRONS.
- C) THE ARRANGEMENT OF THE SYSTEM SHALL BE AS SHOWN ON THE DRAWINGS AND AS DIRECT AS POSSIBLE, AVOIDING ALL UNNECESSARY OFFSETS. THE STACKS SHALL BE FIRMLY SECURED IN POSITION WITH WROUGHT IRON CLAMPS AT EACH FLOOR.
- D) ALL CHANGES IN DIRECTION OF SOIL OR WASTE PIPE SHALL BE MADE BY MEANS OF "Y" BRANCHES AND 1/8 BENDS. NINETY DEGREE SHORT TURN FITTINGS WILL NOT BE PERMITTED EXCEPT TO INDIVIDUAL FIXTURE CONNECTIONS OR WHERE THE FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
- E) HANDHOLES WITH CAST IRON FERRULES AND HEAVY BRASS SCREWS FOR CLEANOUTS SHALL BE PLACED AT ENDS AND ALL CHANGES IN DIRECTION OF SOIL AND WASTE PIPE WHERE NOT OTHERWISE SHOWN OR WHERE REQUIRED AND BROUGHT UP TO THE FLOOR LINE WHERE PIPING IS CONCEALED BY MEANS OF "Y'S OR SUITABLE BENDS.
- F) ALL CHANGES IN DIRECTION OF SOIL OR WASTE PIPE SHALL BE MADE BY MEANS OF "Y" BRANCHES AND 1/8 BENDS. NINETY DEGREE SHORT TURN FITTINGS WILL NOT BE PERMITTED EXCEPT TO INDIVIDUAL FIXTURE CONNECTIONS OR WHERE THE FLOW IS FROM THE HORIZONTAL TO VERTICAL.
- G) HANDHOLES WITH CAST IRON FERRULES AND HEAVY BRASS SCREWS FOR CLEANOUTS SHALL BE PLACED AT ENDS AND ALL CHANGES IN DIRECTION OF SOIL AND WASTE PIPE WHERE NOT OTHERWISE SHOWN OR WHERE REQUIRED AND BROUGHT UP TO THE FLOOR LINE WHERE PIPING IS CONCEALED BY MEANS OF "Y'S OR SUITABLE BENDS.

- H) ALL TRAP SCREWS MUST BE OF FULL SIZE OF PIPE UP TO 4" AND 4" FOR ALL OVER THIS SIZE. CONNECTIONS BETWEEN OUTLETS OF FIXTURES AND SOIL OR WASTE PIPE SHALL BE MADE WITH "Y" BRANCHES TO "TY" BRANCHES WHEREVER POSSIBLE. ALL HORIZONTAL SOIL WASTE AND VENT PIPE SHALL BE GRADED TOWARD OUTLETS AND PIPE NOT BURIED SHALL BE INSTALLED ABOVE THE CEILING OR CLOSE AS POSSIBLE TO THE CONSTRUCTION ABOVE WHERE THERE IS NO CEILING.
- I) THE STACKS SHALL BE EXTENDED THROUGH ROOF OF BUILDING TO POINTS NOT LESS THAT 12" ABOVE ROOF. EXTENSIONS THROUGH ROOF SHALL BE MADE WATER-TIGHT BY MEANS OF A LEAD FLASHING OF FOUR POINTS SHEET LEAD SPREAD OVER A DISTANCE OF NOT LESS THAN TWELVE INCHES (12") AROUND PIPE. THIMBLE TO BE SOLDERED TO BASE AND EXTENDED OVER AND TURNED DOWN INTO END OF PIPE IN AN APPROVED MANNER.
- J) ALL CLEANOUTS IN FLOORS TO BE JOSAM #8360 OR AMERICAN FOUNDRY #427 ADJUSTABLE CLEANOUT WITH CAST IRON BODY, CAST BRASS SCORRIATED COVER WITH LETTERS C.O. CAST IN TOP AND CONCEALED BRASS PLUG.
- K) CLEANOUTS SHALL BE INSTALLED IN BASE OF EACH STACK. CONCEALED CLEANOUTS SHALL HAVE JOSAM #8600 OR AMERICAN FOUNDRY #71-F CAST BRASS CHROMIUM PLATED FLAT ACCESS COVER PLATES.
- L) AT THE CONTRACTOR'S OPTION HE MAY USE NO-HUB PIPE, FITTINGS, COUPLING AND GASKETS IN LIEU OF LEAD JOINTS IF APPROVED BY THE LOCAL CODES AND ORDINANCES.
- M) BELOW GRADE ONLY: IF APPROVED BY THE LOCAL CODES, SCHEDULE 40 PVC PIPE WITH DWV FITTINGS MAY BE USED FOR THE WASTE AND VENT SYSTEM. PVC PIPE AND FITTINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL CODES. ALL PIPING ABOVE GRADE SHALL BE CAST IRON.

9. VENT FLASHING

- A) EACH VENT FLASHING SHALL BE MADE WATER-TIGHT WITH THE ROOF BY PROPER LEAD FLASHING. FLASHING SHALL BE LEAD FOUR (4) POUNDS PER SQUARE FOOT.

10. WASTE, VENT AND WATER CONNECTIONS

- A) THE MINIMUM SIZE OF WASTE, VENT, AND WATER CONNECTION TO THE INDIVIDUAL FIXTURES SHALL BE PER ISOMETRIC DIAGRAM.

11. PLUMBING FIXTURES AND TRIM

- A) PLUMBING FIXTURES SHALL BE FURNISHED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER WITH PROPER CONNECTIONS TO SUPPLY AND DRAINAGE PIPING. ALL FIXTURES SHALL BE FREE OF FLAWS AND DEFECTS OF ANY SORT IN MATERIAL AND WORKMANSHIP AND SHALL OPERATE PERFECTLY WHEN INSTALLED IN ACCORDANCE WITH MANUFACTURER'S DIRECTION.
- B) MATERIALS: FIXTURES SHALL BE THE STANDARD PRODUCT OF ONE OF THE MANUFACTURER'S SCHEDULED, OR ANY EQUAL UNIT APPROVED BY THE OWNER.
- C) INSTALLATION: THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE PLUMBING FIXTURES AND ACCESSORIES DURING CONSTRUCTION. HE SHALL REPLACE AT HIS EXPENSE ANY MATERIAL THAT IS MARRED, SCRATCHED, DEFACED AND/OR BROKEN. FIXTURES SHALL BE COVERED WITH BUILDING PAPER AND WOODEN CRATES DURING CONSTRUCTION.
- D) CONTRACTOR SHALL PROVIDE ROUGH-IN AND SHALL CONNECT ALL FIXTURES TO THE PLUMBING SYSTEM. ALL FIXTURES TO BE INSTALLED TO DIMENSIONS WITH CHROME-PLATED SUPPLIES WITH STOPS.
- E) ALL FIXTURES INSTALLED TO DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- F) ALL WATER CLOSETS SHALL HAVE CAULKING BETWEEN THE FLOOR AND UNDERSIDE OF THE WATER CLOSET.

12. PLUMBING INSULATION

- A) ALL INSULATION SHALL HAVE COMPOSITE (INSULATION, JACKET OR FACINGS AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURE ASTM E-84, NFPA 225 UL 723 NOT EXCEEDING:
- FLAME SPREAD: 25, SMOKE DEVELOPED: 50, FUEL DISTRIBUTION: 50
- B) ALL ACCESSORIES SUCH AS ADHESIVES, MASTICS, CEMENTS, TAPES AND CLOTH FOR FITTINGS SHALL HAVE THE SAME COMPONENTS RATINGS AS LISTED ABOVE.
- C) INSULATION SHALL BE APPLIED ON CLEAN, DRY SURFACES AND AFTER INSPECTION AND RELEASE FOR INSULATION APPLICATION. ALL INSULATION SHALL BE CONTINUOUS THROUGH WALL AND CEILING OPENINGS AND SLEEVES. INSULATION ON ALL COLD SURFACES WHERE VAPOR BARRIER JACKETS ARE USED, WILL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL, INCLUDING ALL FITTINGS AND VALVES. ALL INSULATION TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S. FITTINGS SHALL BE FINISHED WITH 1/4" COAT OF INSULATING CEMENT AND CANVAS.
- D) INSULATION SCHEDULE:
- 1) DOMESTIC COLD WATER - 1/2" THICK ARMERFLEX PIPE COVERING
- 2) DOMESTIC HOT WATER - 1" THICK ARMERFLEX PIPE COVERING WITH AN R-VALUE: 4  
NOTE THAT ALL EXTERIOR INSULATION IS TO HAVE A SOLAR BARRIER JACKET TO PROTECT AGAINST UV RAYS.
- 3) UNDER LAVATORY - PROVIDE TRUE-BRO MOLDED VINYL INSULATION KIT COMPLETE.  
COLOR TO BE WHITE UNLESS NOTED OTHERWISE

13. NATURAL GAS PIPING SYSTEMS

ALL PIPING FROM GAS METER TO GAS-FIRED EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.

ALL GAS PIPING TO BE IN ACCORDANCE WITH LOCAL CODES, NFPA-54, IFGC AND UPC

ALL GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH NFPA-54, LOCAL CODES, AND REGULATIONS. ALL GAS PIPING SHALL BE SCHEDULE 40 BLACK OR GALVANIZED STEEL WITH BLACK OR GALVANIZED WITH MALLEABLE SCREWED FITTINGS. USE TEFLON TAPE ON ALL THREADED JOINTS. FITTINGS LARGER THAN TWO INCHES (2") SHALL BE WELDED. PROVIDE UNIONS AND GAS SHUT-OFF VALVES AT EACH PIECE OF GAS FIRED EQUIPMENT OR APPLIANCE.

ANY GAS PIPING CONCEALED IN CHASES AND/OR INACCESSIBLE CEILING IS TO BE WELDED WITH WELDED FITTINGS.

END OF SECTION 15400



10/10/2024



SHELL BUILDING  
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OKLAHOMA CITY, OK 73106

Revisions:  
2. 10/10/2024 OWNER COMMENTS  
3. 11/05/2024 OWNER COMMENTS

File Name: 24097  
Project No: 24097  
Date: 08/05/2024  
Drawn By:  
Checked By: TI

**CASE**  
Engineering Inc.

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CERTIFICATE OF AUTHORITY NO. CA 8152

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SHEET  
**P101**  
PLUMBING  
SPECIFICATIONS



GAS LOAD SUMMARY			
SYSTEM	DESIGNATION	EQUIPMENT	MBH
WATER HEATER	FUTURE	2 (TANK LESS)	38
BUILDING HEATING	RTU-1 (TENANT) ESTIMATE	ROOF TOP UNIT	12
	RTU-2 (TENANT) ESTIMATE	ROOF TOP UNIT	8
		<u>SUB-TOTAL</u>	59
TOTAL NATURAL GAS CONNECTED LOAD			59
GAS METER REQUIREMENTS	MBH CAPACITY		59
	TOTAL DEVELOPED LENGTH INCLUDING EQUIVALENT PIPE LENGTH FOR FITTING AND VALVE FRICTION LOSSES TO GAS METER.		65' FT X 1.3 =85'
	CONSULT GAS UTILITY COMPANY FOR REGULATOR RATING		

**NOTE:**  
WATER SERVICE PRESSURE SHALL BE MINIMUM OF 50 PSI AND NO GREATER THAN 65 PSI RESIDUAL PRESSURE AT LOCATION WHERE WATER SERVICE ENTERS PROJECT SPACE.  
  
IF THE PRESSURE IS UNDER 50 PSI AT POINT OF ENTRANCE TO STARBUCKS SPACE, PROVIDE A DOMESTIC WATER BOOSTER PUMP AND SURGE TANK TO MEET STARBUCKS MINIMUM REQUIREMENTS. THE LANDLORDS ENGINEER SHALL VERIFY THE INLET WATER PRESSURE FOR EACH PIECE OF EQUIPMENT WITH IN THE STORE. LOCATE BOOSTER PUMP ABOVE BOI CEILING ADJACENT TO WATER FILTRATION EQUIPMENT.

**NOTE:**  
VERIFY ROUTING REQUIREMENTS WITH TENANT AND CIVIL  
DRAWINGS PRIOR TO ANY WORK. CONTACT ENGINEER WITH  
ANY DISCREPANCIES.

**NOTE:**  
IF PERMANENT UTILITY SERVICE IS NOT AVAILABLE AT THE SCHEDULED DELIVERY DATE AS DEFINED IN THE LEASE, TEMPORARY SERVICE MUST BE PROVIDED BY LANDLORD.

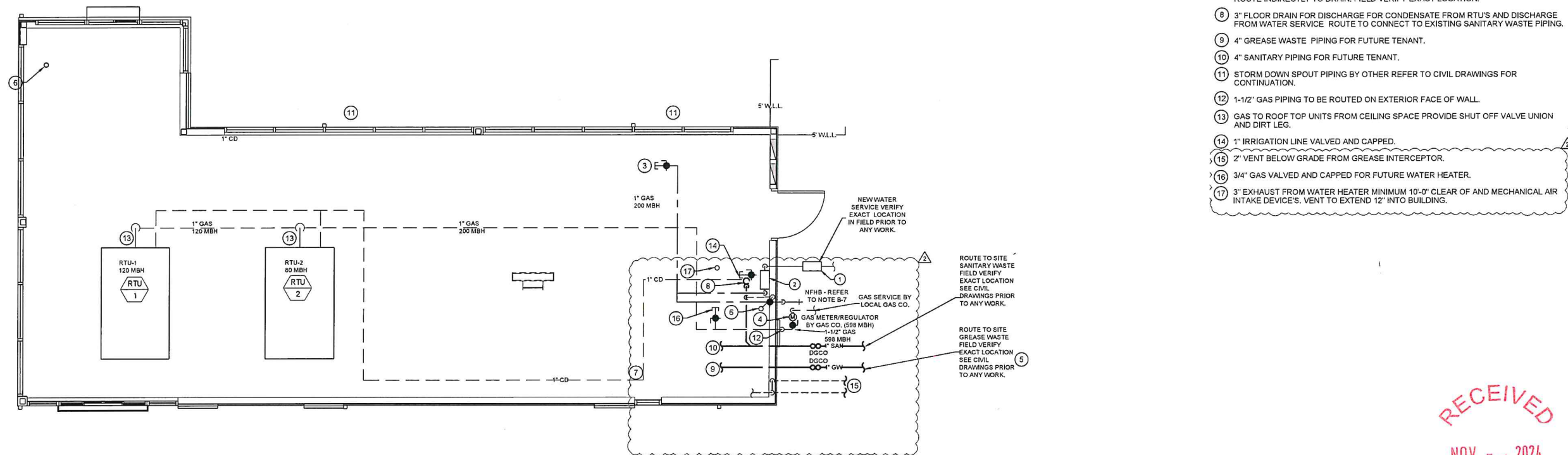
**NOTE:**  
FURNISH AND INSTALL A CERTIFIED TESTED BACK FLOW PREVENTER WITH PROTECTIVE ENCLOSURE AND SHUT OFF VALVE. BACKFLOW PREVENTION ASSEMBLY SHALL BE PROVIDE MAXIMUM WATER PRESSURE DROP 15 PSIC (POUNDS PER SQUARE INCH GAUGE), PREFERRED LOCATION IS ADJACENT TO WATER FILTRATION SYSTEM BACK OF HOUSE (BOH).

**NOTE:**

SANITARY SEWER INVERT ELEVATION SHALL START AT 2'-0" BELOW FINISHED FLOOR AT FURTHEST FIXTURE AND SLOPE 1/4" PER FOOT.

**NOTE:**

CONTRACTOR SHALL PUMP OUT, CLEAN OUT, FIELD VERIFY SIZE OF EXISTING INTERCEPTOR AND PREPARE FOR INSPECTION BY AHJ FOR CONTINUED USE. REPLACE IF REQUIRED.



## PLUMBING NOTES

SHEET NOTES

RECEIVED  
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PLANNING DEPARTMENT

# CASE

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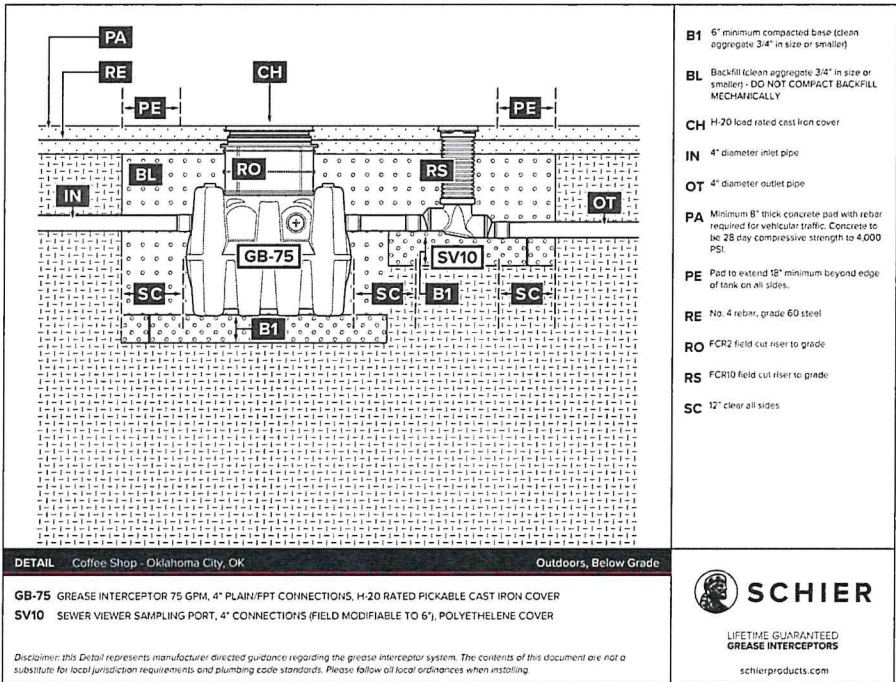
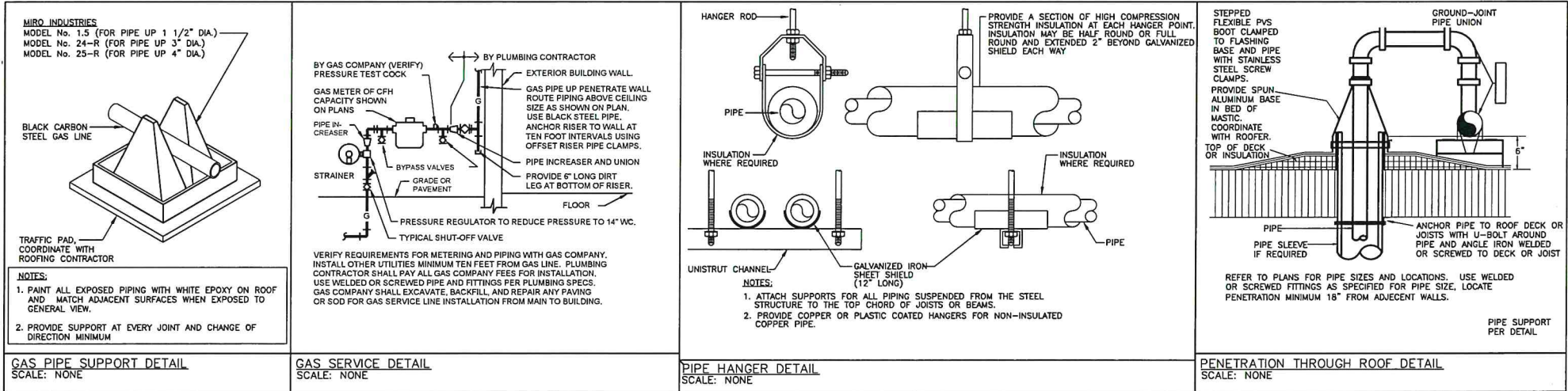
Revisions:		OWNER COMMENTS
2.	10/10/2024	OWNER COMMENTS
3.	11/06/2024	OWNER COMMENTS

File Name: 24097 A1.0  
 Project No: 24097  
 Date: 08/05/2024  
 Drawn By:  
 Checked By: T

SHEET  
**P201**  
PLUMBING  
FLOOR PLAN

# 1 PLUMBING PLAN





**GREASE INTERCEPTOR CALCULATIONS**

Reference No. 69737

Project Name: Coffee Shop - Oklahoma City, OK

**Step 1: Flow rate to grease interceptor**

Fixture flow rate: (cu in / 231) = gal x 0.75 / 2 min = 2 min flow rate

FIXTURE	Q <sub>FIX</sub>	Q <sub>FIX</sub> (GPM)	Q <sub>FIX</sub> (GPM)
3 Comp (13264)	3 Compartment Sink	16' x 19' x 14' (3)	1 12.768 20.73 GPM
Advansys (15186)	Dishwasher (Undercounter)	5 gal.	1 1.155 2.5 GPM
Countertop Rinser (22326)	Bar Sink One Bowl	26' x 9' x 12'	2 5.616 9.12 GPM
Floor Drain	Floor Sink	N/A	3 N/A 3 GPM
Floor Sink	Floor Sink	N/A	1 N/A 1 GPM
Hand Sink (14668)	Hand Sink	10' x 14' x 5'	1 700 1.13 GPM
Hand Sink (17809)	Hand Sink	10' x 6' x 5'	1 300 0.49 GPM
Ice Machine (10294)	Floor Sink	N/A	1 N/A 1 GPM
Mop Sink (10995)	Mop Basin	24' x 24' x 10'	1 5,760 9.35 GPM
Rinse Drop-In (10549)	Bar Sink One Bowl	12' x 20' x 14'	1 3,360 5.45 GPM
Rinse Drop-In (22630)	Pre-Rinse Sink One Bowl	27' x 26' x 14'	1 9,828 15.95 GPM
Water Filling Station (18743)	Floor Sink	N/A	1 N/A 1 GPM
<b>Total</b>			<b>70.72 GPM</b>

**Step 2: Grease Production**

Servings per day x Grease production value x Days between pump-outs = Grease output

Servings per day: 1000

Grease production value: 0.005 lbs per serving (Coffee Shop: Low / No flatware)

Days between pump-outs: 90 days

1000 x 0.005 x 90 = 450 lbs of FOG

SCHIER MODEL	Description: GREASE INTERCEPTOR 75 GPM, 4" PLAIN/FPT CONNECTIONS, H-20 RATED PICKABLE CAST IRON COVER
<b>GB-75</b>	Dimensions: Length: 47", Width: 33", Height: 39.75" Flow Rate/Grease Capacity: 75 GPM / 861 lbs Liquid Capacity: 125 gal

Specification Note: This Great Basin model has been sized to the flow rate and grease production requirements of the application and may not be substituted by liquid capacity alone. Any substitution requests must be approved by the specifying engineer and the authority having jurisdiction.

Please contact support@schierproducts.com for technical and procurement support for the specified Great Basin model.

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