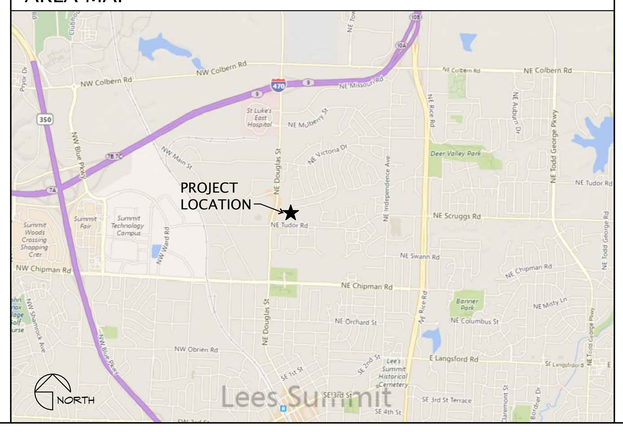
INDEX OF DRAWINGS

DOUGLAS

CORNER

LOT 1B, LEES SUMMIT, MISSOURI 64086

AREA MAP



General Project Information

1) **Project Information:**
   1.A) Name: Douglas Corner
   1.B) Legal Description: Lot 1B, Lees Summit, Missouri 64086
2) **Building Information:**
   2.A) Gross Floor Area: 7,820 sqft
   2.B) Number of stories: 1 story
   2.C) Height: 24'-0"

International Building Code Review

3) **Codes:** (As amended by the City of Lees Summit, Missouri)
   3.A) *2018 International Building Code*
   3.B) *2018 International Plumbing Code*
   3.C) *2018 International Mechanical Code*
   3.D) *2018 International Fuel Gas Code*
   3.E) *2018 International Residential Code*
   3.F) *2018 International Fire Code*
   3.G) *2017 National Electrical Code*
   3.H) *ICC/ANSI A117.1-2009, Accessible and Usable Buildings and Facilities*
4) **Use / Occupancy Classification:** (Chapter 3)
   4.A) Restaurant / A-2 Assembly
   4.B) Office / B – Business
   4.C) Retail / M – Mercantile
5) **Nonseparated Occupancies** (508.3):
   5.A) Allowable building area, height and number of stories (508.3.2): They shall be based on the most restrictive allowances for the occupancy groups under consideration. A-2 Assembly Group is the most restrictive
   5.B) Separation (508.3.3): No separation is required between nonseparated occupancies
6) **Fire Protection Systems:** (Chapter 9)
   6.A) An automatic sprinkler system will be provided throughout in accordance with NFPA 13.
   6.B) Sprinkler system supervision and alarms (903.4): All valves controlling the water supply for automatic sprinklers systems, pumps, tanks, water levels and temperatures, critical air pressures and water flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.
   6.C) A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more, or where the Group A occupant load is more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 7073 10 shall be considered as a single occupancy for the purposes of applying this section. It is not anticipated that tenant finish projects will exceed these conditions. A manual fire alarm system will not be provided.
   6.D) Group B (907.2.2): A manual fire alarm system is required when: 1. The combined Group B occupant load of all floors is 500 or more persons, 2. The group M occupant load is more than 100 persons above or below the lowest level of exit discharge, or 3. The fire area contains an ambulatory care facility. It is not anticipated that tenant finish projects will exceed these conditions. A manual fire alarm system will not be provided.
   6.E) Group M (907.2.7): A manual fire alarm system is required when: 1. The combined Group M occupant load of all floors is 500 or more persons, and 2. The group M occupant load is more than 100 persons above or below the lowest level of exit discharge. It is not anticipated that tenant finish projects will exceed these conditions. A manual fire alarm system will not be provided.
7) **Type of Construction:** (Chapter 6)
   7.A) Type VB
8) **Allowable Building Heights and Areas:** (IBC Chapter 5)
   8.A) Allowable Building Height in feet above grade Plane (Table 504.3): A, S = 60ft
   8.B) Allowable Number of Stories Above Grade Plane (Table 504.4): A-2, S = 2 stories
   8.C) Allowable Area Factor (Table 506.2): A-2, S1 = 24,000 sqft
9) **Fire-Resistance Rating Requirements for Building Elements:** (Tables 601)
   9.A) Structural Frame: 0 hours
   9.B) Bearing Walls Exterior: 0 hours but not less than per Table 602
   9.C) Bearing Walls Interior: 0 hours
   9.D) Nonbearing Walls and Partitions Exterior: per Table 602
   9.E) Nonbearing Walls and Partitions Interior: 0 hours
   9.F) Floor Construction and associated secondary members: 0 hours
   9.G) Roof Construction and associated secondary members: 0 hours
10) **Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distance (FSD):** (Table 602)
   10.A) FSD = 10' and greater for group A = 0 hour
11) **Exterior Wall Openings:** Maximum Area of Exterior Wall Openings Based on Fire Separation Distance (FSD) and Degree of Opening Protection (Table 705.8): FSD = 20' and greater = No limit
12) **Means of Egress:** (IBC Chapter 10)
   12.A) Occupant load (Table 1004.1.2): To be analyzed under each separate tenant finish package.
   Assumed occupant load for shell based on occupancy group M - Mercantile =
   7,820 sqft / 30 = 260.67 = 261 occupants
13) **Plumbing Requirements:** (Table 2902.1)
   13.A) To be analyzed under each separate tenant finish package.

ASSEMBLY OCCUPANCY CORRECTED TO A-2 △

STATE OF MISSOURI
KENNETH J. KLEFFNER
NUMBER A-2007038827
REGISTERED ARCHITECT
9-13-23

GUY GRONBERG ARCHITECTS, P.C.
119 SE 3rd St.
Lee's Summit, MO 64063
Phone 816.524.2525
Fax 816.524.4575

DOUGLAS | CORNER | LOT 1B, LEES SUMMIT, MISSOURI 64086

REV/#	DATE	DESCRIPTION
△	4-13-23	CITY COMMENTS

DATE: 08-11-2023
PROJECT# 23012

CS

INDEX

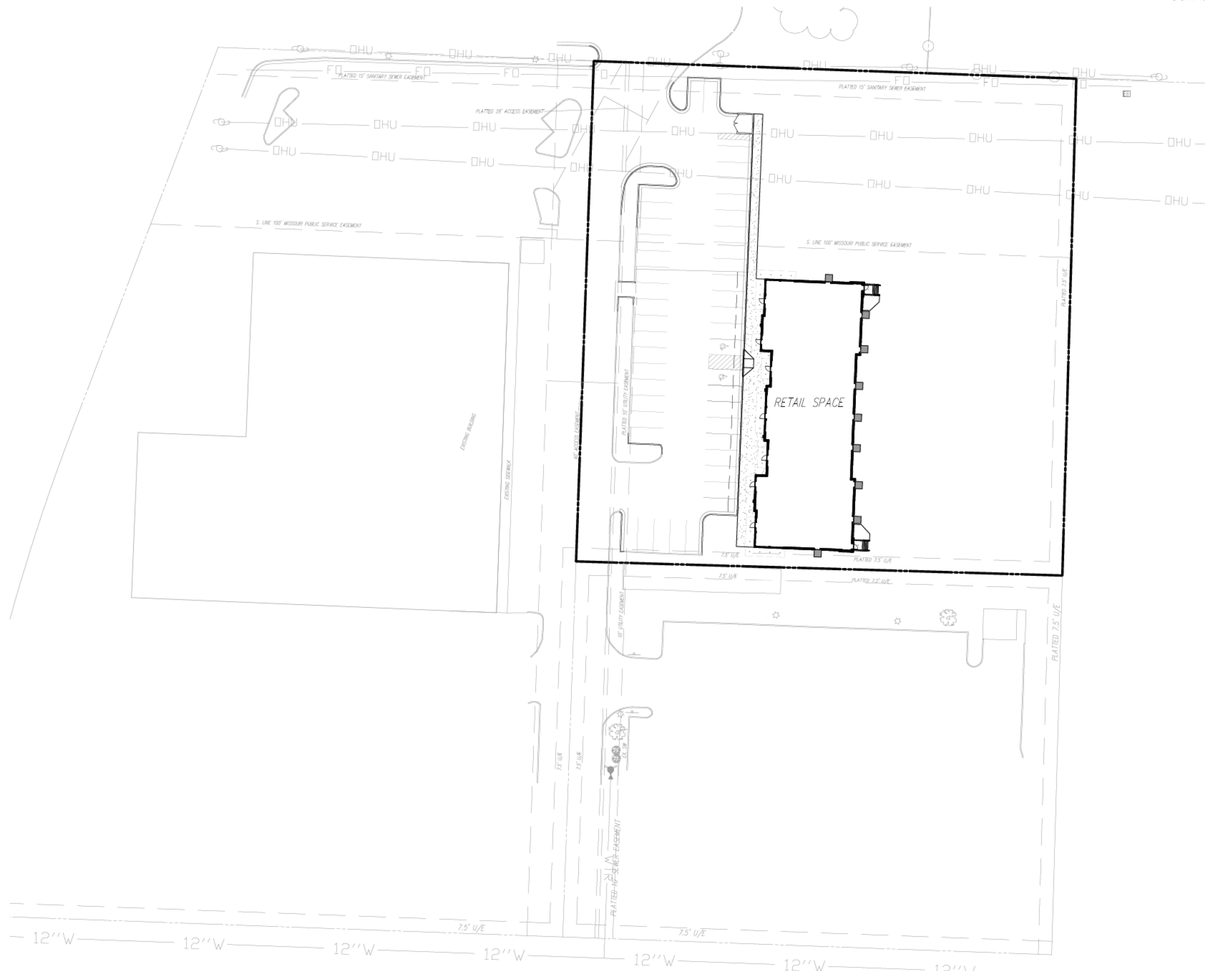
CIVIL SUBMITTAL

FINAL DEVELOPMENT PLAN

DOUGLAS CORNER - LOT 1C

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

RETAIL BUILDING



UTILITIES

City of Lee's Summit
Department of Public Works
220 SE Green
Lee's Summit, Mo.
816–969–1800

EVERGY
130 SE Hamblen Road
Lee's Summit, Mo.
816–347–4320

Spire
(Administrative Offices)
3025 SE Clover Rood
Lee's Summit, MO
816–537–4681

AT&T
Craig Perkins
500 E. 8th Street
Kansas City, MO 64106
816–275–2721

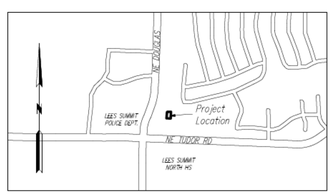
Comcast
New Construction Hotline
866–771–2281

Missouri One Call
1–800–344–7483

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

0 40' 60' 80'
SCALE IN FEET

VICINITY MAP



Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

PROJECT BENCHMARK:

#1 Iron bar at north west corner of property.
N 1006947.3760
E 2823375.6230
TOP ELEV. 1021.42

#2 Top of curb at corner of parking lot in Schlotsky's parking.
N: 1006628.2690
E: 2823585.0320
TOP ELEV. 1019.80

GENERAL NOTES:

1. The underground utilities shown herein have been plotted from available information and do not necessarily reflect the actual existence, or nonexistence, size, type, number, or locations of these or other utilities. The contractor shall be responsible for verifying the actual locations of all underground utilities, shown or not shown, and said utilities shall be located in the field prior to any grading, excavation, or construction of improvements. These provisions shall in now way absolve any party from complying with the "UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT", Chapter 319, RSMO.
2. Gas, Water, and other Utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers, including building laterals.
3. Prior to submittal of construction bids, the Contractor shall be required to visit the site to verify existing conditions and proposed improvements.
4. The Contractor shall be responsible for notification and coordination with all Utility Companies.
5. The Contractor shall notify the Engineer immediately of any discrepancies in the plans.
6. All sidewalk shall be ADA compliant.
7. There are no oil or gas wells located on the subject property as of May 9, 2023 as shown by the Missouri Geological Survey GEOSTRAT (Geosciences Technical Resource Assessment Tool).

ENGINEER
Hg CONSULT, INC.
15 Locust St.
Kansas City, MO 64108
(816) 703-7098
Contact - Kevin Sterrett

PLANS PREPARED FOR:
Capital Builders, LLC
1507 NE Wall St.
Lee's Summit, MO 64086
(816) 609-8633
Contact - Matt Hendrickson

NO.	BY	CK/APP	DATE	REVISION

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER 2644
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

R. KEVIN STERRETT, MO E-26440

Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005730 (MO.) / E-1736 (KS.) / LS 2019005467

COVER SHEET

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

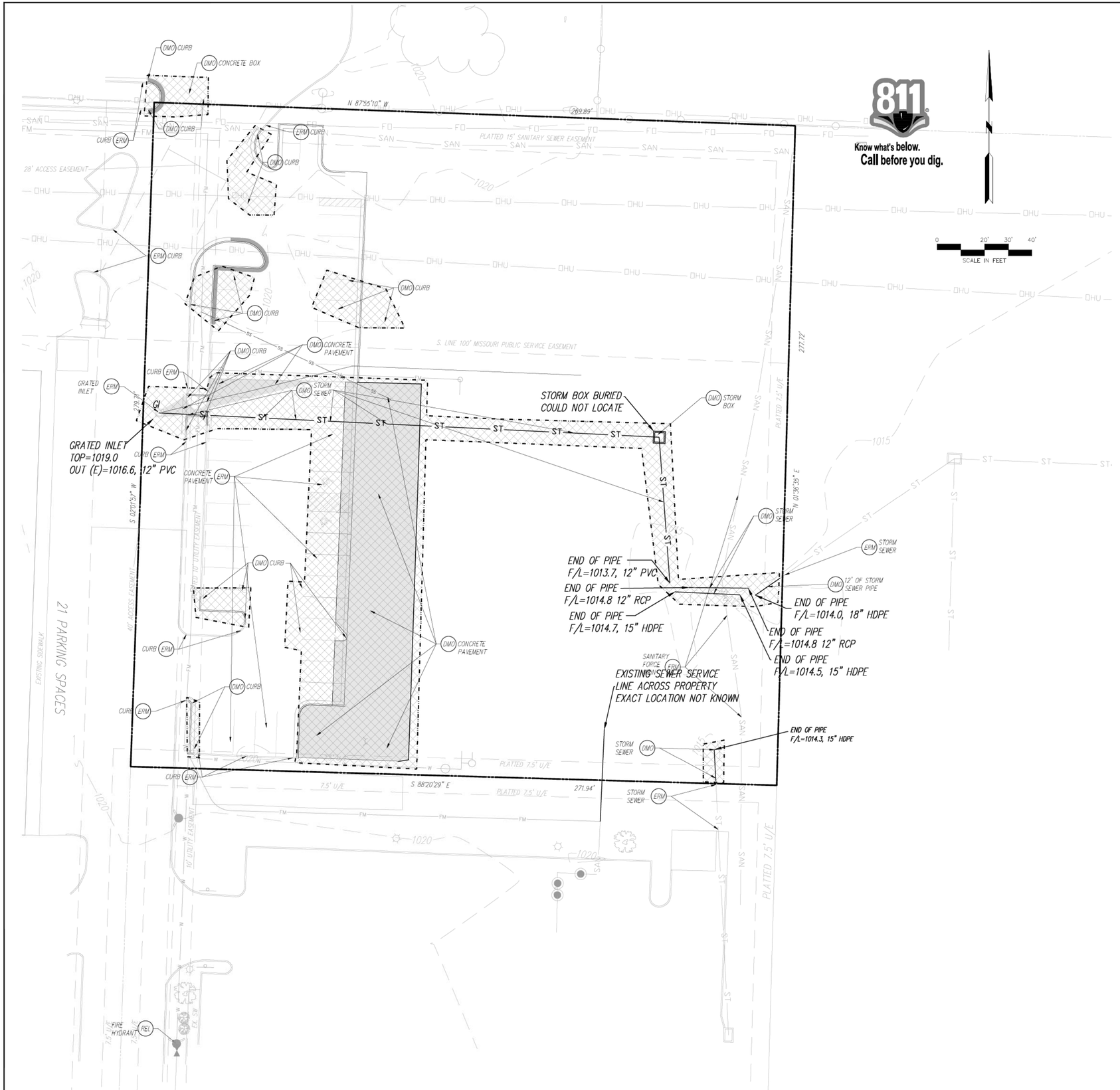
X-REF NO.
181099

DRAWING NO.
23–033PDP

DATE
MAY 10, 2023

JOB NO.
23–033

SHEET 1 OF 13



Know what's below.
Call before you dig.

0 20' 30' 40'
SCALE IN FEET

DEMOLITION PROPOSED FEATURES

- LIMITS OF DEMOLITION
- ALL TREES, STRUCTURES, AND UTILITIES WITHIN THE HATCHED AREAS ARE TO BE REMOVED, ANYTHING LOCATED OUTSIDE THE HATCHED AREAS ARE TO REMAIN UNLESS OTHERWISE SPECIFIED.
- FULL DEPTH PAVEMENT REMOVAL

DEMO NOTES

XXX Items labeled by the following symbols are shown on this sheet.

- (DMO) EXISTING TO BE REMOVED
- (ERM) EXISTING TO REMAIN
- (REL) EXISTING TO BE RELOCATED

DEMOLITION GENERAL NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE THE OWNER'S/DEVELOPER'S SITE WORK SPECIFICATIONS. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, WHETHER SHOWN OR NOT SHOWN AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL INSPECT AND TEST AS NECESSARY FOR ASBESTOS MATERIALS. REMOVAL OF ASBESTOS MATERIAL WILL MEET ALL LOCAL GOVERNING REQUIREMENTS.

NO.	BY	CK/APP	DATE	REVISION

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER E-26440
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

R. KEVIN STERRETT, MO E-26440

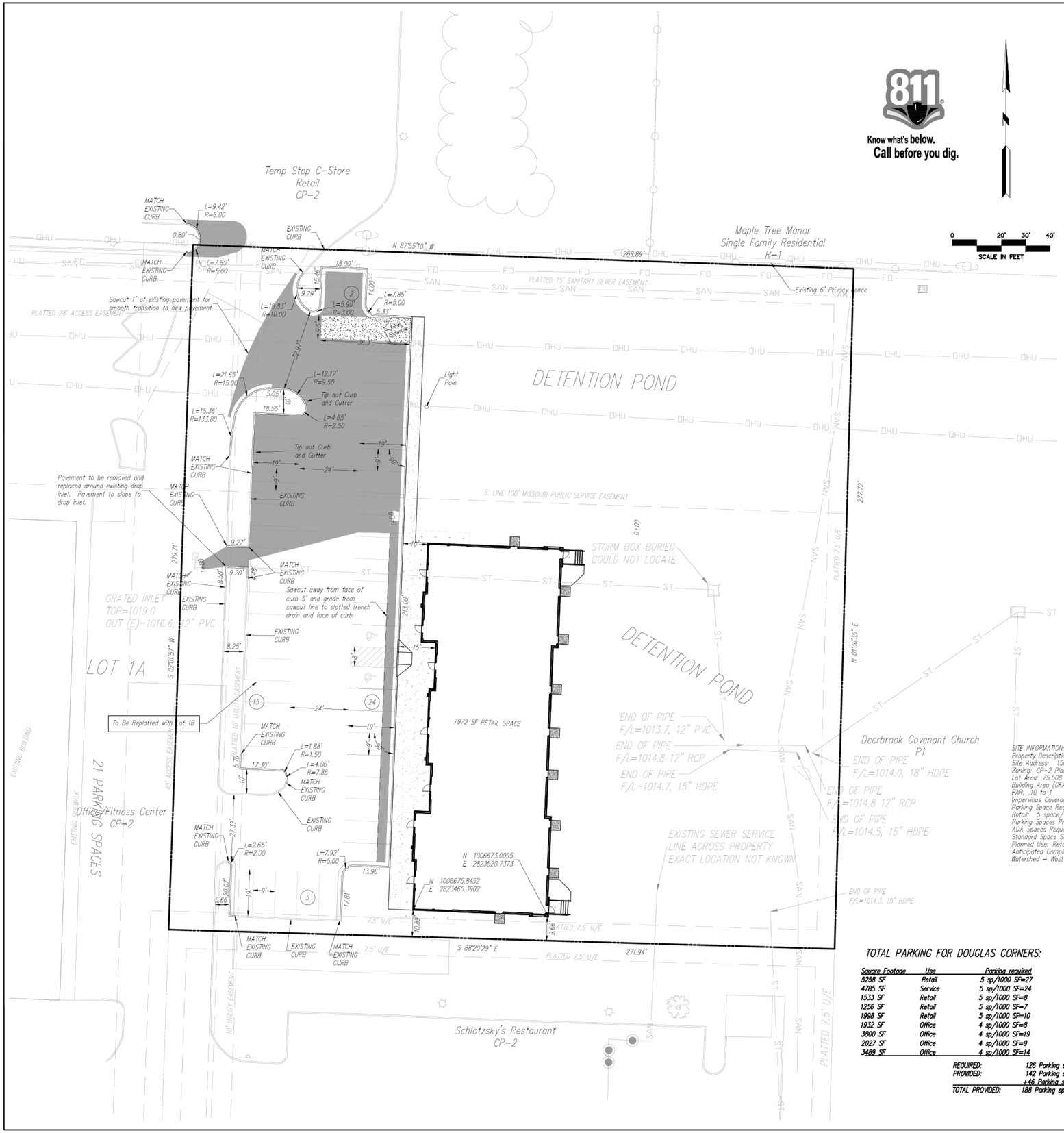
Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010000573 (MO.) / E-1736 (KS.) / LS 2019005467

DEMOLITION PLAN

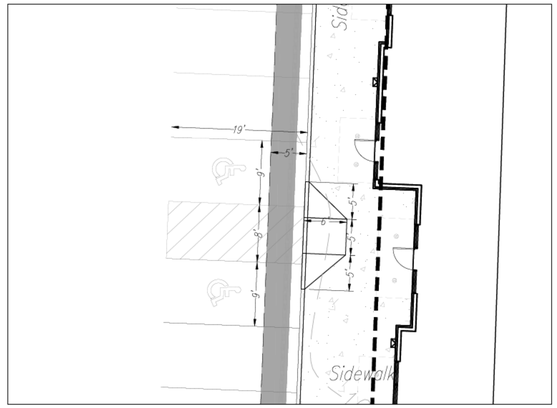
DOUGLAS CORNER BUILDING

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 181098
DRAWING NO. 23-033PDP
DATE MAY 10, 2023
JOB NO. 23-033
SHEET 2 OF 13



Know what's below.
Call before you dig.



DETAIL OF ADA PARKING STALLS
1"=10'

NOTES:
1. All construction and materials to conform to the city and the specifications and details per the Kansas City Metro Chapter APWA. It is advisable that the contractor become familiar with this document in the event that there is a discrepancy between this and the approved plan and the Manual. Advise the design engineer of any discrepancy prior to bidding or working on this project.
2. Silt fence shall be installed at the perimeter of all disturbed areas within the site during construction for erosion control.
3. Contractor shall contact the Development Engineering Inspections 48 hours prior to commencement of work at (816) 969-1800.
4. Contractor to locate and relocate any existing utilities that may conflict with construction as necessary.
5. All curb shall be CG-1 or integral with the sidewalk.
6. A handicap parking sign, 5' above finish grade, shall be placed at the head of the designated parking space.
7. There shall be two way traffic movement.
8. Perimeter parking area dimensions shown are to the back of curb.
9. All mechanical equipment shall be screened to 100% opacity and match building material (See Architectural Submittal). (Height of screen shall equal the height of mechanical equipment that is being screened).
10. See architectural submittal for all building dimensions, monument signs and lighting details.
11. This lot is not in a flood plane per FIRM Panel 417 of 625, Map No. 29095C0417G, dated Jan. 20, 2017.
12. ADA accessible ramp to have detectable surface on public handicap ramps only. Detectable surfaces do not need to be installed on the ramps at commercial drives. See KCAPWA web site for details.
13. Building coordinates are pointed to or measured at the outside face of building foundation corners. Contractor shall confirm building dimensions with structural drawings.
14. Other coordinates are pointed to or measured from the back of curb, back of wall or property corner location.
15. Contractor shall coordinate building entrances, egresses, walkways and door locations with architectural and structural drawings.
16. See architectural/structural/mechanical/electrical drawings for miscellaneous site equipment and pads.
17. Curb to be installed at proposed drives by saw cutting a clean straight edge of existing asphalt and forming curb to edge of gutter existing elevation.

SITE INFORMATION:
Property Description: Lot 1C, Douglas Corners
Site Address: 150 NE Tudor Road
Zoning: CP-2 Planned Community Commercial
Lot Area: 75,508 SF (1.73 AC)
Building Area (GFA): 7,792 SF Retail
FAR: .10 to 1
Impervious Coverage: 34,710 SF, 46%
Parking Space Required:
Retail: 5 space/1000 SF = 39 spaces
Parking Spaces Provided: 44 spaces
ADA Spaces Required/Provided: 2/2
Standard Space Size: 9'x19',
Planned Use: Retail Shops
Anticipated Completion: Spring / Summer 2024
Watershed – West Tributary to Prairie Lee Lake (East Fork of Little Blue River)

TOTAL PARKING FOR DOUGLAS CORNERS:

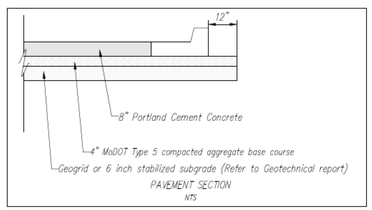
Square Footage	Use	Parking required
5258 SF	Retail	5 sp/1000 SF=27
4785 SF	Service	5 sp/1000 SF=24
1533 SF	Retail	5 sp/1000 SF=8
1256 SF	Retail	5 sp/1000 SF=7
1998 SF	Retail	5 sp/1000 SF=10
1932 SF	Office	4 sp/1000 SF=8
3800 SF	Office	4 sp/1000 SF=19
2027 SF	Office	4 sp/1000 SF=9
3489 SF	Office	4 sp/1000 SF=14
REQUIRED:		126 Parking spaces
PROVIDED:		142 Parking spaces
		+46 Parking spaces
TOTAL PROVIDED:		188 Parking spaces

Heavy Duty PCC Pavement

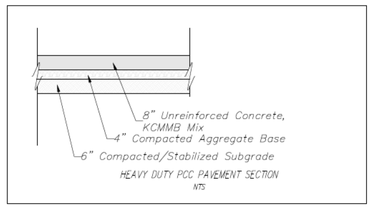
6" Concrete Pavement over 4" MoDOT Type 5 compacted aggregate base course

Sidewalk

All level landings to have a minimum of 18" of level pavement beyond the pull/latch side of all ADA doorways designated with "LEVEL LANDING"



PAVEMENT SECTION
NTS



HEAVY DUTY PCC PAVEMENT SECTION
NTS

NO.	BY	CK/APP

DATE	REVISION

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER 26440
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

R. KEVIN STERRETT, MO E-26440

Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.) / LS 2019005467

SITE DIMENSION PLAN

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.
181093
DRAWING NO.
23-033PDP
DATE
MAY 10, 2023
JOB NO.
23-033
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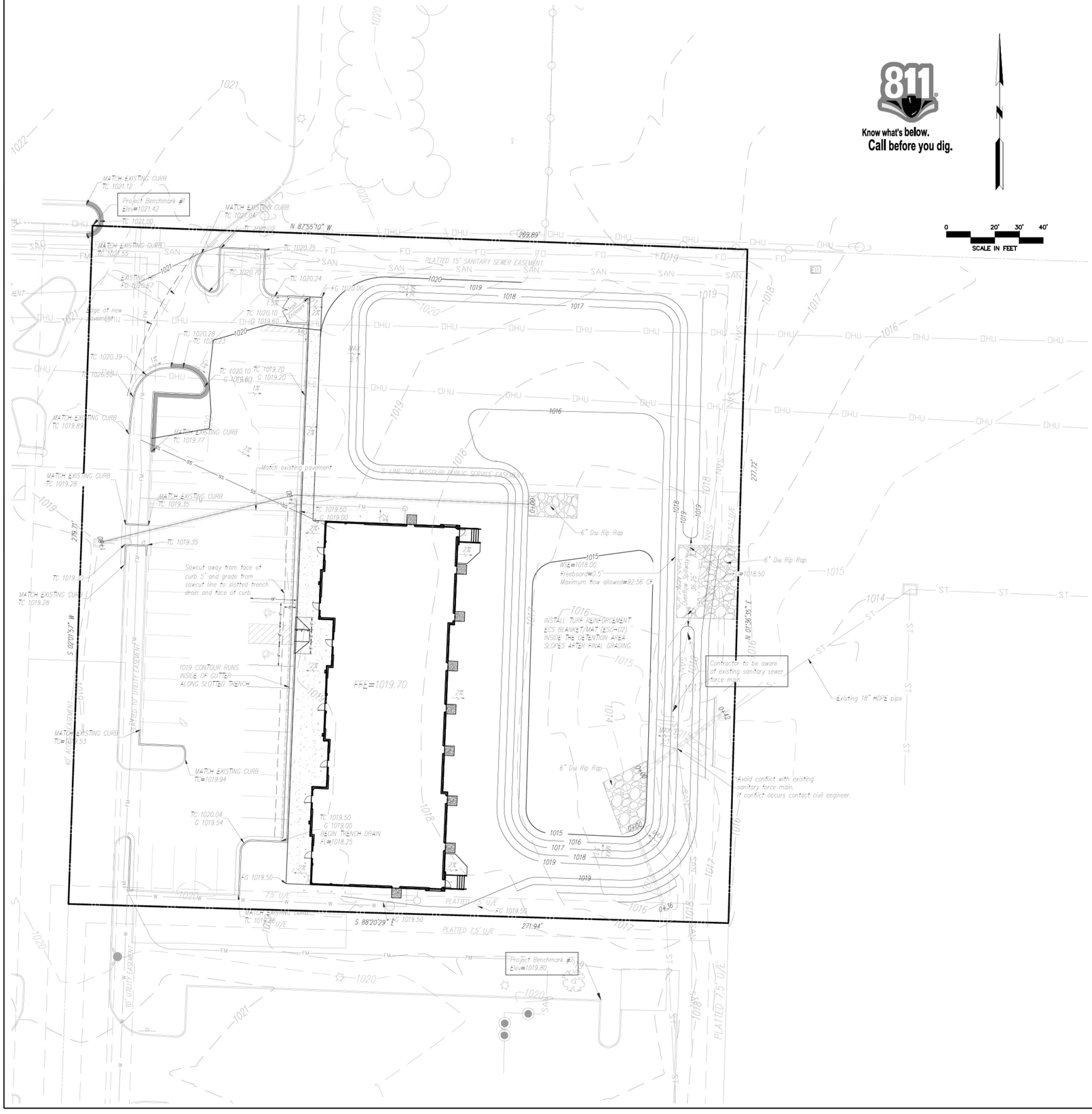
G:\Shared drives\Hg Projects (Yr 2010-2018)\2018\18.007.01 Douglas Corners (Thompson Properties)\Civil\DWG\23-033-FDP.dwg, 8/15/2023 12:59:28 PM, _AutoCAD PDF (General Document



Know what's below.
Call before you dig.

0 20' 30' 40'
SCALE IN FEET

GRADING AND DRAINAGE NOTES:

Information pertaining to under ground utilities was obtained from available records and field locations when possible, but the contractor must determine the exact location and elevation of all existing utilities by digging test pits by hand at all utility crossings in advance of machine trenching. If clearances are less than specified on these plans or 24", which ever is less, contact the Engineer and the Owner/ Developer prior to proceeding with construction.
All structures located within Right Of Way or otherwise noted on the these plans shall be constructed per City standards. If structure(s) are not prototypical or construction cannot be achieved contractor shall submit shop drawing to HG Consult, for review and approval.
Contractor shall be responsible for relocation or removal of existing underground utilities shown or not shown at no additional cost to the owner.
Contractor shall coordinate with utility companies on adjusting existing utility line as required by cut and fill at no additional cost to the owner.
Contractor shall be held responsible for the design and implementation of sheeting, shoring, bracing and special excavation measures required to meet OSHA, Federal, State and Local regulations pursuant to the installation of the work indicated on these drawings.
All disturbed areas and slopes shall be graded smooth and (4") of top soil applied. The area shall be seeded and watered until hardy grass growth has been established.
Storm drain pipe bedding shall be installed per APWA, section 2100.
See Erosion Control Plan for rip rap pad sizes.
Elevations are called out to top of curb, top of pavement, or top of structure, unless otherwise noted.
Parking lot grading shall be performed to route storm water as directed to the storm collection system.
All curb shall be CG-1.
Clear and grub areas to be filled, remove trees, vegetation, roots, or other debris, and other materials that would affect the stability of the fill.
Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.
Do not incorporate frozen material or soft, muck, or highly compressible materials into fill slopes.
Permanently stabilize all graded areas after final grading is completed on each area of the grading plan. apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed (see Erosion Control Plan(s).
Contractor shall match top of proposed drainage structures with proposed grades. if a discrepancy occurs between proposed grades and proposed structure tops, the grading shall govern. if the discrepancy is more than 4 inches the contractor shall contact the Engineer of Record.
All utilities, including storm sewer, shown within public easements or right of ways shall be constructed to the governing agency's specifications. All other utilities shall be constructed to the client's or the governing agency's specifications, whichever is more stringent, if there is a question as to which specifications should apply the contractor shall contact the Engineer of Record.
All existing structures, unless otherwise noted to remain. all fencing, trees, & etc., within construction area shall be removed & disposed of off site. unless otherwise noted. any burning on site shall be subject to local ordinances and/or the owner/developers standards and specifications.
All drainage structures shall be pre-cast.
All drainage structures and storm sewer pipes shall meet heavy duty traffic (H20) loading and be installed accordingly.
Contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company (STATE ONE CALL system) and locate all utilities prior to grading start.
Site grading shall not proceed until Erosion Control measures have been installed.
After permits have been obtained and Erosion Control measures installed, the contractor Shall grade building pad & aprons to 0" to - 1/2" of subgrade.

TC	Top of Curb
FG	Finish Grade
G	Gutter Elevation
HP	High Point
LP	Low Point
FFE	Finish Floor Elevation

KEY

PROPOSED		EXISTING
▬	Tip out curb and gutter	
——xxx——	1' Finish Grade Contours	——XXX——
——xxx——	5' Finish Grade Contours	——XXX——
X.X% →	Finish Grade slope	

Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

PROJECT BENCHMARK:

#1 Iron bar at north west corner of property.
N 1006947.3760
E 2823375.6230
TOP ELEV. 1021.42

#2 Top of curb at corner of parking lot in Schlotsky's parking.
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DATE	REVISION	NO.	BY	CK/APP

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RICHARD KEVIN STERRETT
NUMBER E-26440

August 15, 2023

R. KEVIN STERRETT, MO E-26440

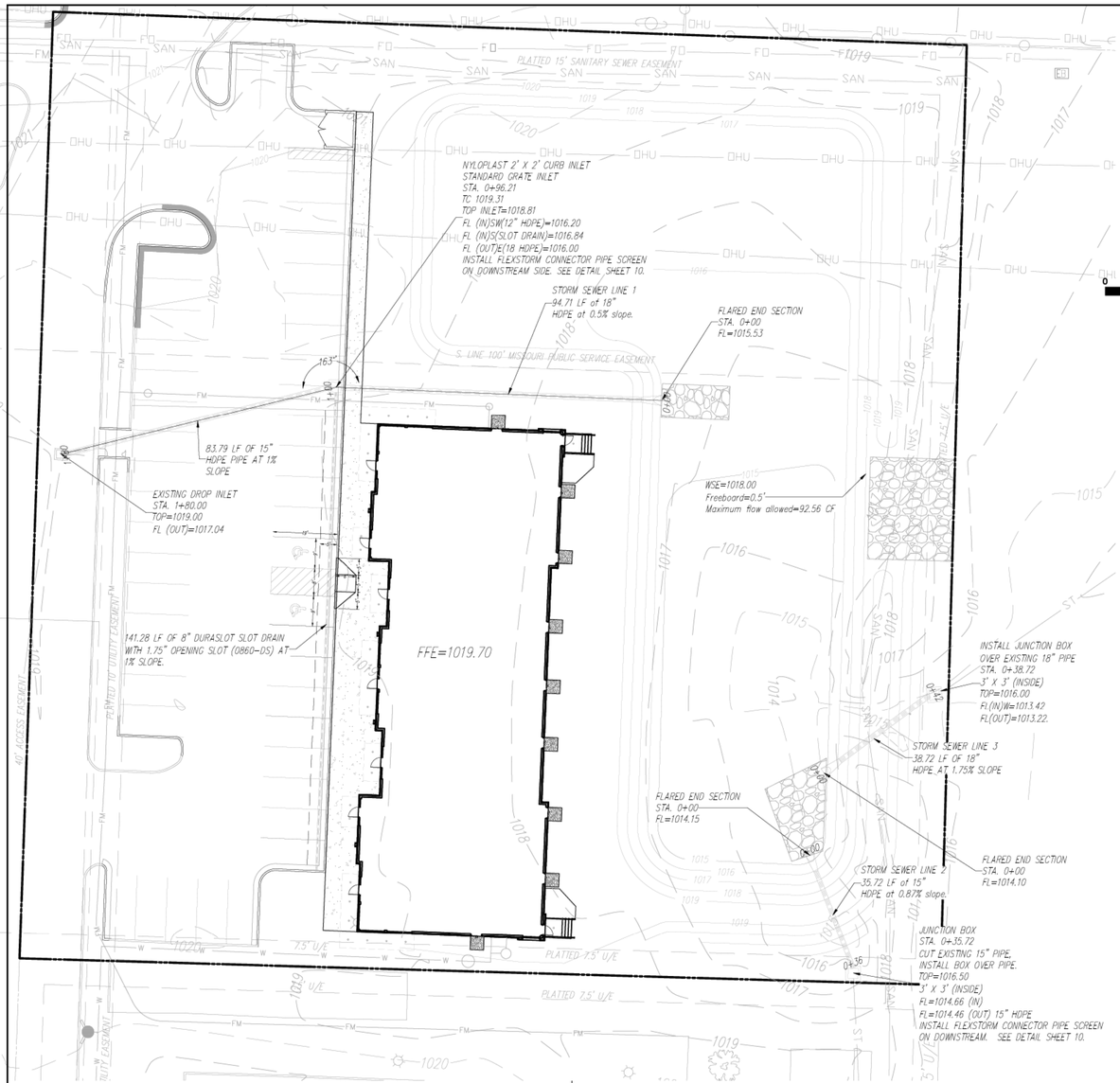
Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E201000573 (MO.) / E-1736 (KS.) / LS 2019005467

GRADING PLAN

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 18109B
DRAWING NO. 23-033PDP
DATE MAY 10, 2023
JOB NO. 23-033

4A SHEET OF 13



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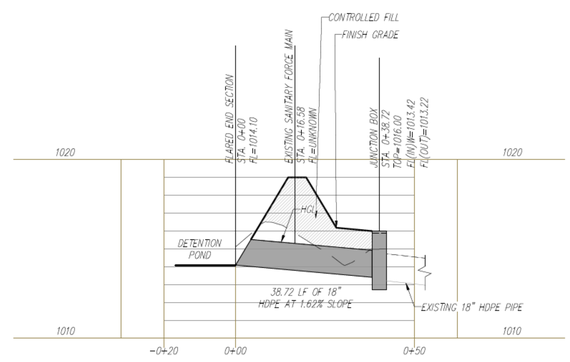
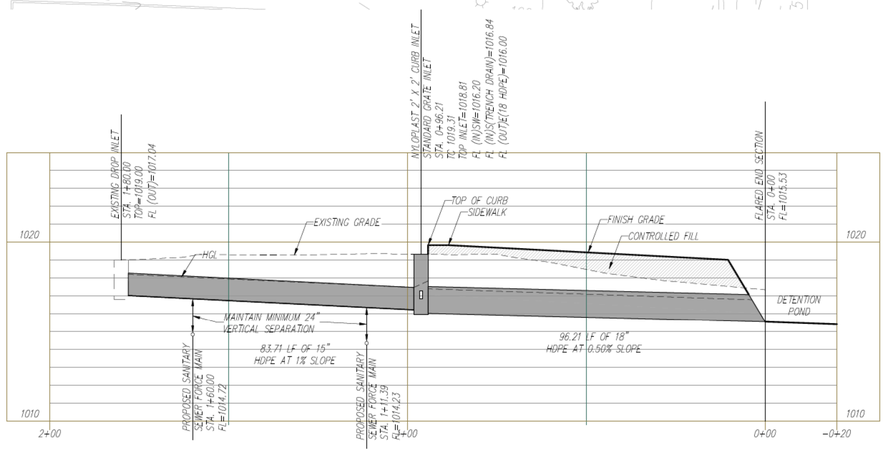


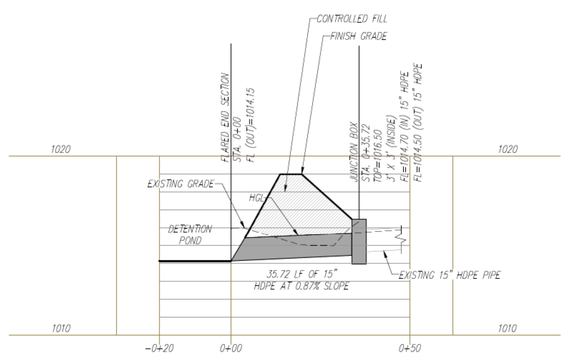
STORM SEWER LINE 3

Horiz. scale: 1"=50'
0 20' 30' 40'
SCALE IN FEET

Vert. scale: 1"=4'
0 4' 6' 8'
SCALE IN FEET



STORM SEWER LINE 1



STORM SEWER LINE 2

Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

PROJECT BENCHMARK:

#1 Iron bar at north west corner of property.
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E 2823375.6230
TOP ELEV. 1021.42

#2 Top of curb at corner of parking lot in Schlotsky's parking.
N: 1006628.2690
E: 2823585.0320
TOP ELEV. 1019.80

NO.	BY	CK/APP
DATE	REVISION	

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER E-26440
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

R. KEVIN STERRETT, MO E-26440

Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.) / LS 2019005467

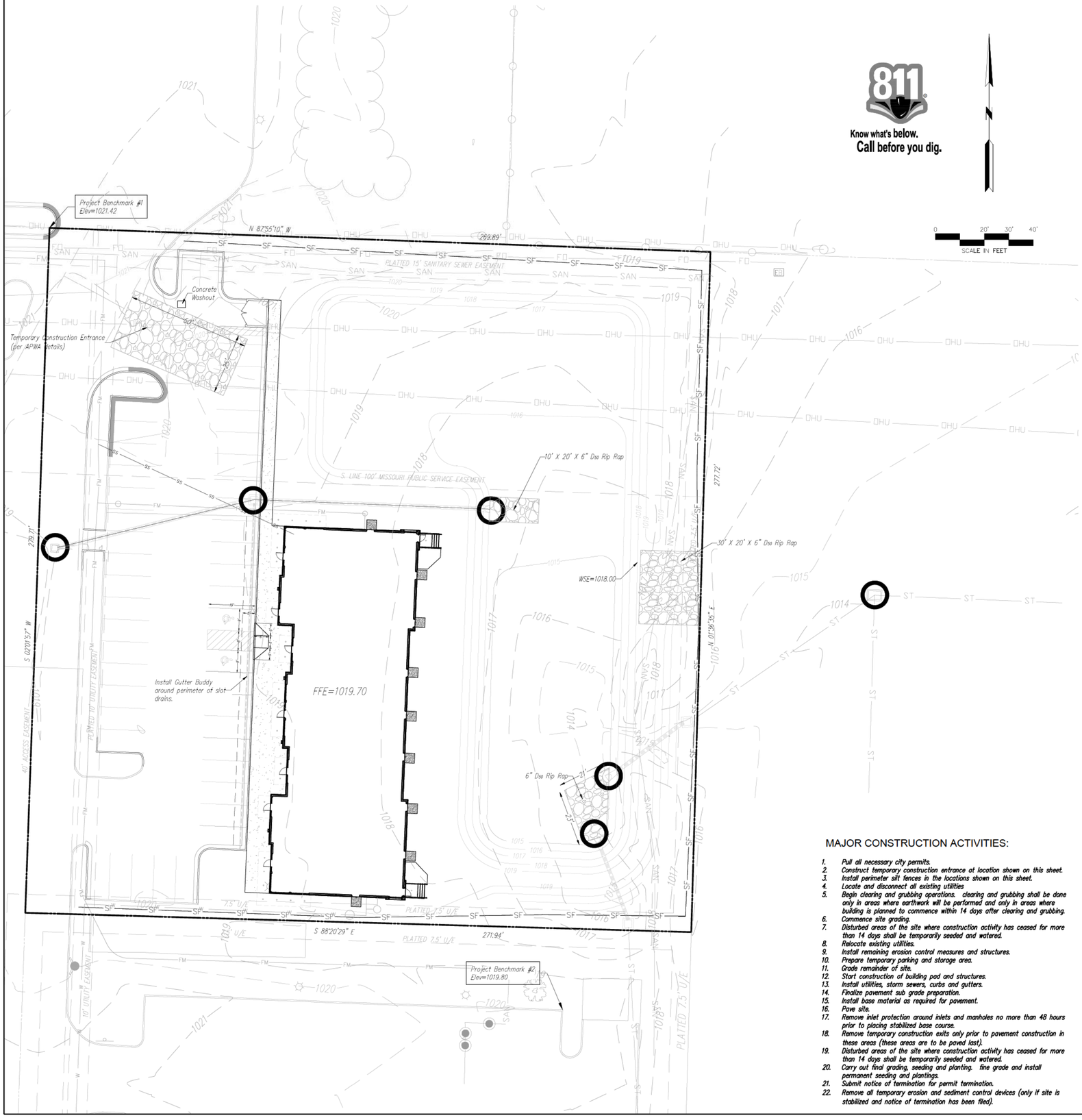
STORM SEWER LINE 1, 2 AND 3 PLAN AND PROFILE

DOUGLAS CORNER BUILDING

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.	181098
DRAWING NO.	23-033PDP
DATE	MAY 10, 2023
JOB NO.	23-033

4B SHEET OF 13



Know what's below.
Call before you dig.

0 20' 30' 40'
SCALE IN FEET

EROSION CONTROL GENERAL NOTES:

The contractor shall inspect, repair and add stone to the stone construction entrance when it becomes saturated with mud to insure it functions as it was intended.
The topsoil stockpile shall be graded to drain and seeded with a temporary seed mix.
All erosion and sediment control devices shall be inspected, cleaned repaired in accordance with the Storm Water Pollution Prevention Plan.
Temporary sediment control measures (silt fence, construction entrance, etc..) shall be maintained until all contributing areas are graded and stabilized.
Dust control on site shall be minimized by spraying water on dry areas of the site. the use of oils and other petroleum based or toxic liquids for dust suppression is strictly prohibited.
If the majority of mud or dirt is not removed from exiting traffic, contractor shall establish vehicle wash areas at construction traffic exit points and vehicle operation shall be intercepted and trapped before wash water is allowed to be discharged offsite. rinse-off will not be allowed outside the project construction limits.
Repair eroded areas immediately, reseed as necessary to maintain good vegetative cover, mow vegetative cover to maintain a maximum height of six inches, and remove trash as needed.
Inspect and repair the collection system (i.e. catch basins, piping, swales, rip rap, etc.) after significant rainfall to maintain proper functioning.
All existing structures, fencing, trees, etc., within the construction area shall be removed and disposed of off site per state and local ordinances. any burning on site shall be subject to local ordinances.
All wash water (concrete truck, vehicle cleaning, equipment cleaning, etc.) shall be disposed of in a manner that prevents contact between these materials and storm water that is discharged from the site.
All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately
Contractor shall remove all temporary erosion control devices/ditches and dispose of per local codes once the site has been stabilized. Contractor shall refer to the grading plan for final grades.
Land disturbing activities shall not commence until approval to do so has been received by governing authorities.
No land clearing or grading shall begin until all erosion control measures have been installed.
All exposed areas shall be seeded as specified within 14 days of final grading.
Should construction stop for longer than 14 days, the site shall be seeded as specified.
After every significant runoff producing rainfall event of 1/2" or greater and at least once a week:

A. Inspect the detention basin system for sediment accumulation, erosion, trash accumulation, vegetated cover, and general condition.
B. Check and clear the outfall device of any obstructions.

This plan shall not be considered all inclusive as the general contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
General Contractor shall comply with all State and Local ordinances that apply.
Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
General Contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
Additional erosion and siltation control methods and devices may be required as directed by the City or MoDNR.

MAJOR CONSTRUCTION ACTIVITIES:

1. Pull all necessary city permits.
2. Construct temporary construction entrance at location shown on this sheet.
3. Install perimeter silt fences in the locations shown on this sheet.
4. Locate and disconnect all existing utilities
5. Begin clearing and grubbing operations. clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 14 days after clearing and grubbing.
6. Commence site grading.
7. Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.
8. Relocate existing utilities.
9. Install remaining erosion control measures and structures.
10. Prepare temporary parking and storage area.
11. Grade remainder of site.
12. Start construction of building pad and structures.
13. Install utilities, storm sewers, curbs and gutters.
14. Finalize pavement sub grade preparation.
15. Install base material as required for pavement.
16. Pave site.
17. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
18. Remove temporary construction exits only prior to pavement construction in these areas (these areas are to be paved last).
19. Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.
20. Carry out final grading, seeding and planting. fine grade and install permanent seeding and plantings.
21. Submit notice of termination for permit termination.
22. Remove all temporary erosion and sediment control devices (only if site is stabilized and notice of termination has been filed).

Area of Disturbance: 1.70 AC

KEY

PROPOSED		EXISTING
SF SF	Proposed Silt Fence (ESC-03)	
	Inlet (ESC-06) and outlet protection (ESC-14)	
	Tip out curb and gutter	
xxx	1' Finish Grade Contours	xxx
xxx	5' Finish Grade Contours	xxx
	Temporary Construction Entrance (ESC-01)	
	6" Dso Rip Rap	

Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

PROJECT BENCHMARK:

#1 Iron bar at north west corner of property.
N 1006947.3760
E 2823375.6230
TOP ELEV. 1021.42

#2 Top of curb at corner of parking lot in Schlotsky's parking.
N: 1006628.2690
E: 2823585.0320
TOP ELEV. 1019.80

NO.	BY	CK/APP	DATE	REVISION

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER E-26440
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

R. KEVIN STERRETT, MO E-26440

Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010000573 (MO.) / E-1736 (KS.) / LS 2019005467

EROSION CONTROL PLAN

DOUGLAS CORNER BUILDING

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 181098
DRAWING NO. 23-033PDP
DATE MAY 10, 2023
JOB NO. 23-033
SHEET 5 OF 13

STORM SEWER NOTES:

1. All construction shall be in accordance with the latest edition of the City of Lee's Summit "DESIGN AND CONSTRUCTION MANUAL".
2. All pipe to be HDPE with smooth interior with a minimum "n" value of 0.011
3. Contractor shall verify the exact location and depth of all existing utilities prior to construction.
4. Elevations are called out to top of curb, top of pavement, or top of structure, unless otherwise noted.
5. See Storm Water Report for pipe sizing.
6. Parking lot grading shall be performed to route storm water as directed to the storm collection system.

Area 1
6.05 AC.

END OF PIPE
F/L=1013.7, 18" PVC
END OF PIPE
F/L=1014.8 12" RCP
END OF PIPE
F/L=1014.7, 15" HDPE
END OF PIPE
F/L=1014.0, 18" HDPE
END OF PIPE
F/L=1014.8 12" RCP
END OF PIPE
F/L=1014.5, 15" HDPE
END OF PIPE
F/L=1014.3, 15" HDPE

EXISTING SEWER SERVICE LINE ACROSS PROPERTY EXACT LOCATION NOT KNOWN

7,786 SF undisturbed

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

KEY

PROPOSED		EXISTING
979	Grades	960
	100 Year Overflow	
	Drainage Area	

0 30' 45' 60'
SCALE IN FEET

Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

DATE	REVISION	NO.	BY	CK/APP

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER 2644
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

R. KEVIN STERRETT, MO E-26440

Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.) / LS 2019005467

PRELIMINARY DEVELOPMENT
DRAINAGE AREA MAP

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.
181098
DRAWING NO.
23-033PDP
DATE
MAY 10, 2023
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23-033
SHEET 6 OF 13

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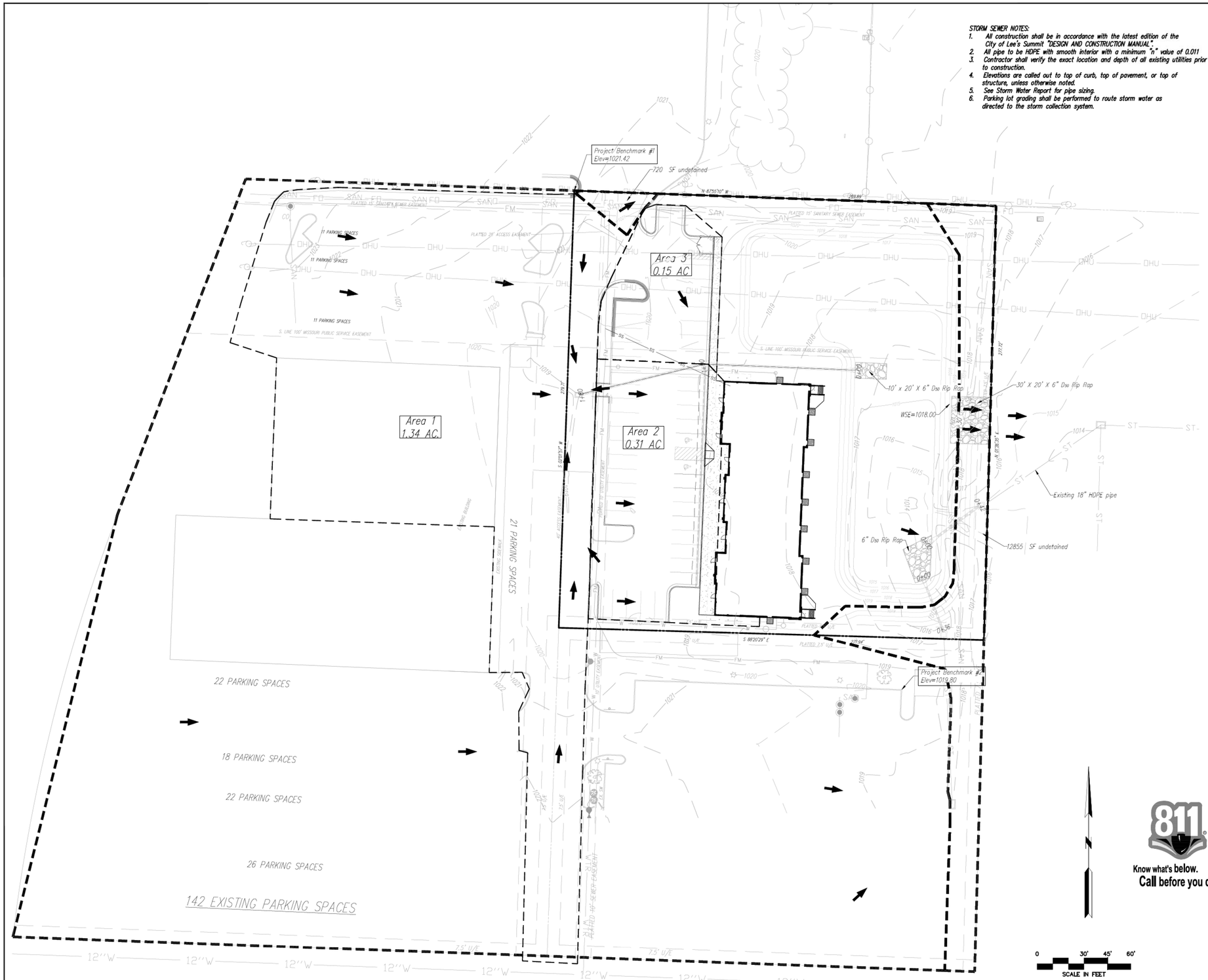
3. Contractor shall verify the exact location and depth of all existing utilities prior to construction.
4. Elevations are called out to top of curb, top of pavement, or top of structure, unless otherwise noted.
5. See Storm Water Report for pipe sizing.
6. Parking lot grading shall be performed to route storm water as directed to the storm collection system.

Detention Pond Details:

Elevation (feet)	Surf.Area (sq-ft)	Cum.Store (cubic-feet)
1014.10	52	0
1015	5,623	2,553
1016	10,269	10,499
1017	17,998	24,633
1018	20,048	43,657

Detention release was sized by Bentley PondPACK V8i and is sized to release the 100-year storm event over the proposed rip rap lined channel.



*Areas shown are impervious areas to drainage structures.

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KEY

PROPOSED		EXISTING
979	Grades	960
	100 Year Overflow	
	Drainage Area	

0 30' 45' 60'
SCALE IN FEET

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RICHARD KEVIN STERRETT
NUMBER 26440
REGISTERED PROFESSIONAL ENGINEER

August 15, 2023

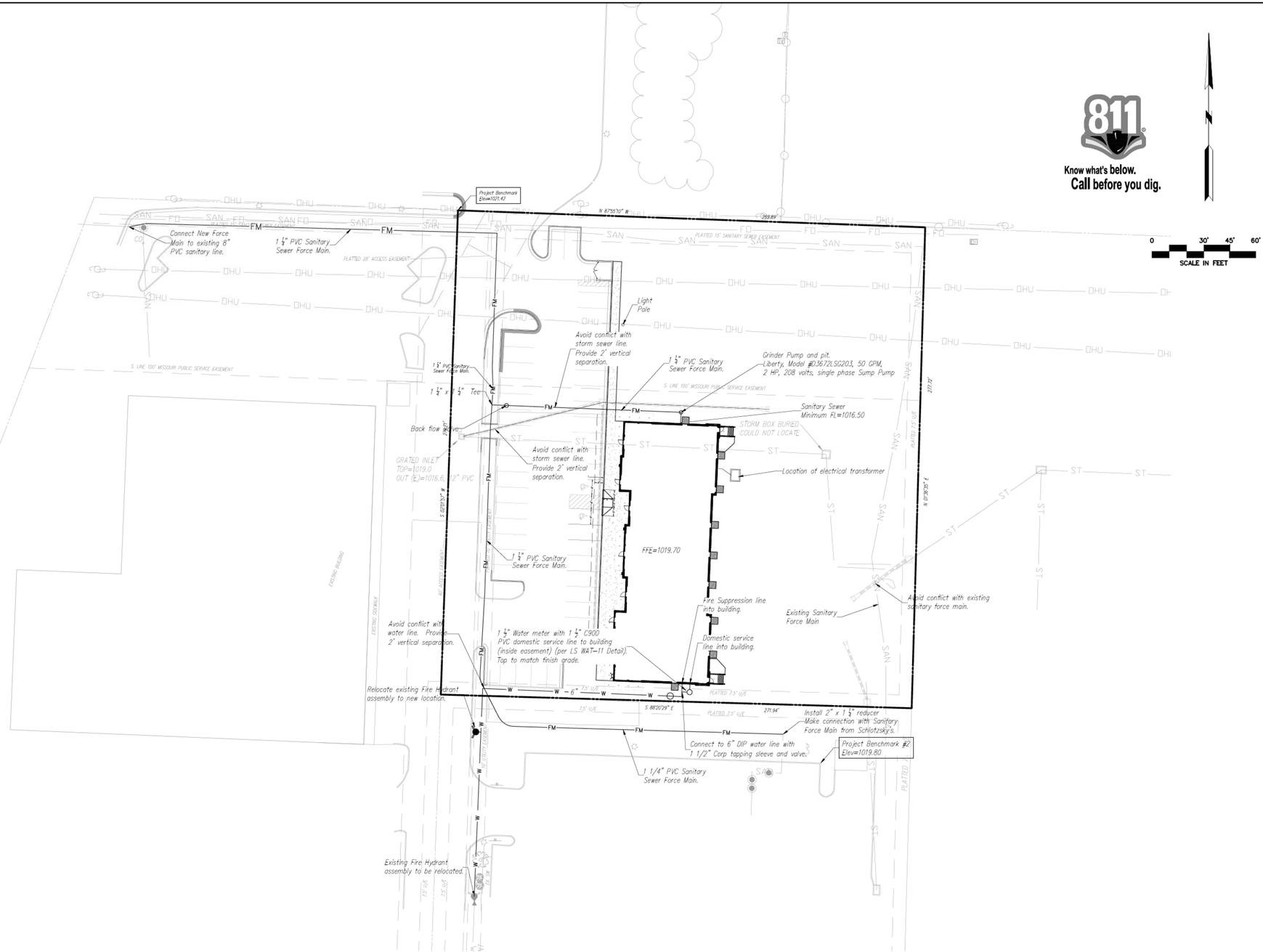
R. KEVIN STERRETT, MO E-26440

Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.) / LS 2019005467

POST DEVELOPMENT DRAINAGE AREA MAP

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 181098
DRAWING NO. 23-033FDP
DATE MAY 10, 2023
JOB NO. 23-033
SHEET 7 OF 13



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NOTE:
–If sprinkler system is installed in building FDC shall be installed within 100' from fire hydrant.
–If sprinkler system is installed in building DCBFV vault shall be installed within 50' from fire hydrant.

UTILITY NOTES:
1. All utility installation to be in accordance to Lee's Summit "DESIGN AND CONSTRUCTION MANUAL" per Ordinance 581.3. See manual for specifications and standard details.
2. Roof drains (RD) to be released directly into detention pond.
3. Contractor to contact the Water Utilities Department,Operations Division, at (816) 969-7606 to schedule water main taps and cut-ins, 48 hours in advance.
4. Thrust blocks to be provided at all water line bends and tee locations.
5. There will be no roof mounted mechanical units..
6. Domestic water lines to be 3/4" diameter Type K Copper from main to meter and 1" diameter C900 PVC from meter to building.
7. Contractor to coordinate with KCPL for temporary and permanent electric alignment and connection.
8. See MEP plans for all utility information inside of the building.

NO.	REVISION	DATE	BY	CK/APP

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UTILITY PLAN

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.
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DRAWING NO.
23-033PDP
DATE
MAY 10, 2023
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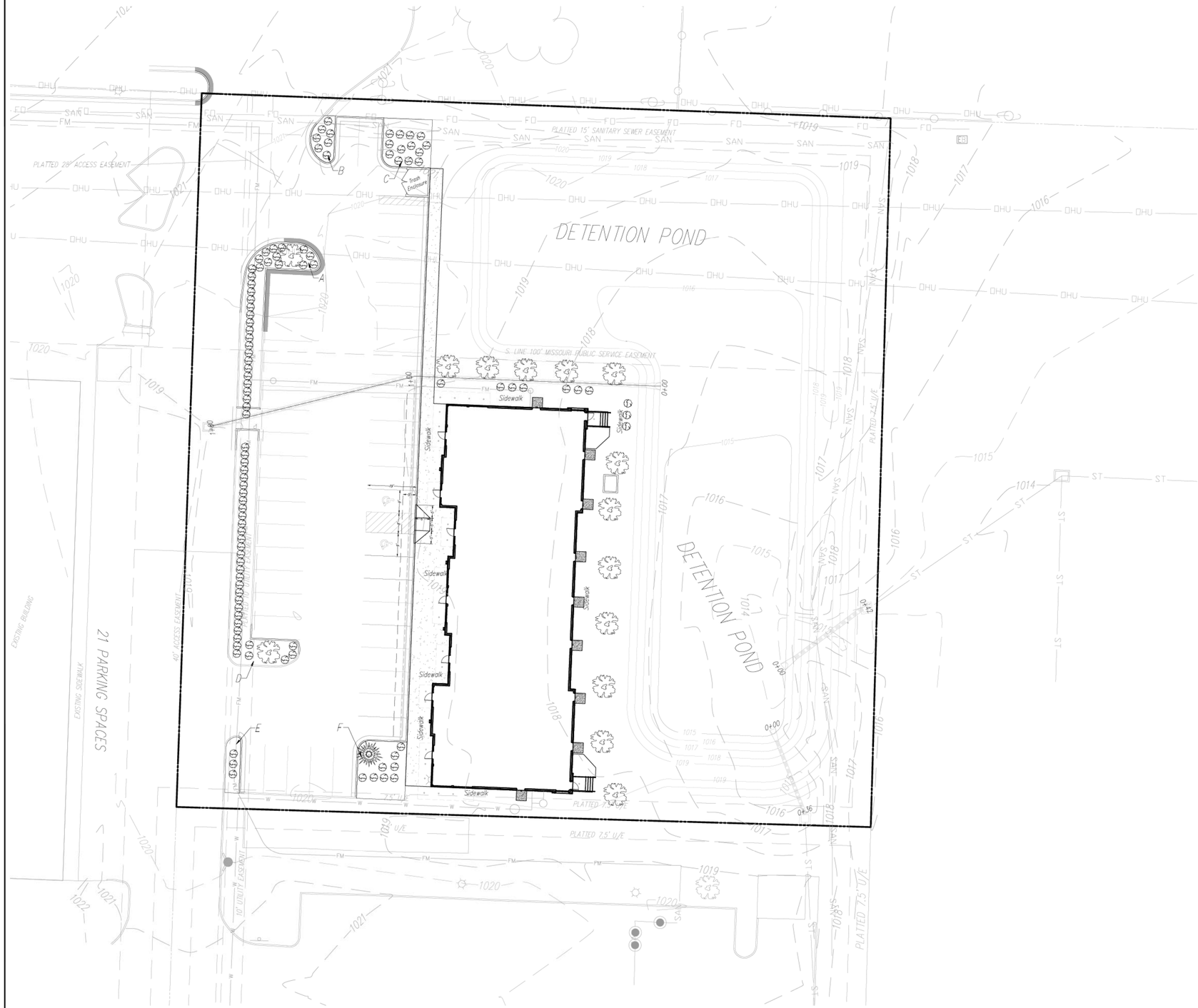
23-033



Interior Landscape

Area	SF
A	195 SF
B	139 SF
C	356 SF
D	183 SF
E	121 SF
F	427 SF
TOTAL	1392 SF

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

0 20' 30' 40'
SCALE IN FEET

NOTES:
1. *Open areas not covered with other landscaping materials shall be covered with sod.*
2. *All trees/shrubs are shown graphically, not numerically.*
3. *A 3 foot tall berm may be substituted for screening shrubs.*
4. *Trees shall be located a minimum distance of 5 feet from the sanitary and water lines as measured from the outside of the mature tree trunk to the outside of the pipe.*
5. *The trees and shrubs shown are for graphical purposes and does not represent the actual count required per the worksheet.*
6. *Evergreen shrubs used to screen mechanical equipment shall be equal height as the mechanical units at the time of planting.*
7. *Detention pond and slopes into pond to use TRM with seed and all other disturbed ground to be sodded.*

Worksheet for Tree and Shrub Requirements:

A – Size of development site	= 75,508 SF
B – Length of street frontage of development site	= 0 LF
C – Trees required on street frontage = 1/30 LF	= 0 Trees
D – Trees provided	= 0 Trees
E – Parking lot area	= 14,178 SF
F – Green space required in parking lot (E x 5%)	= 709 SF
G – Green space provided	= 1,392 SF
H – Shrubs required along frontage = 1/20 LF	= 0 Shrubs
Shrubs required along frontage (Parking lot screen) 270 LF at 12/40 LF	= 81 Shrubs
I – Shrubs Provided	
Shrubs Provided (Parking lot screen)	= 81 Shrubs
Shrubs Provided (Total frontage)	= 0 Shrubs
J – Quantity of additional trees required 1 tree per 5000 SF of open area (63,040/5,000)	= 13 Trees
K – Additional Trees Provided	= 15 Trees
L – Quantity of additional shrubs required 2 shrubs per 5000 SF of open area (63,040/5,000)	= 25 Shrubs
M – Additional Shrubs Provided	= 25 Shrubs

LANDSCAPE SCHEDULE:

SPECIES	CALIPER/HEIGHT	QUANTITY
"October Glory" Maple Acer Rubrum	3" caliper measured 6" from the ground	12
Eastern White Pine (or equal) Pinus Strobus	8' (at time of planting)	1
Evergreen Shrub (or equal)	24" Minimum height at time of planting	76

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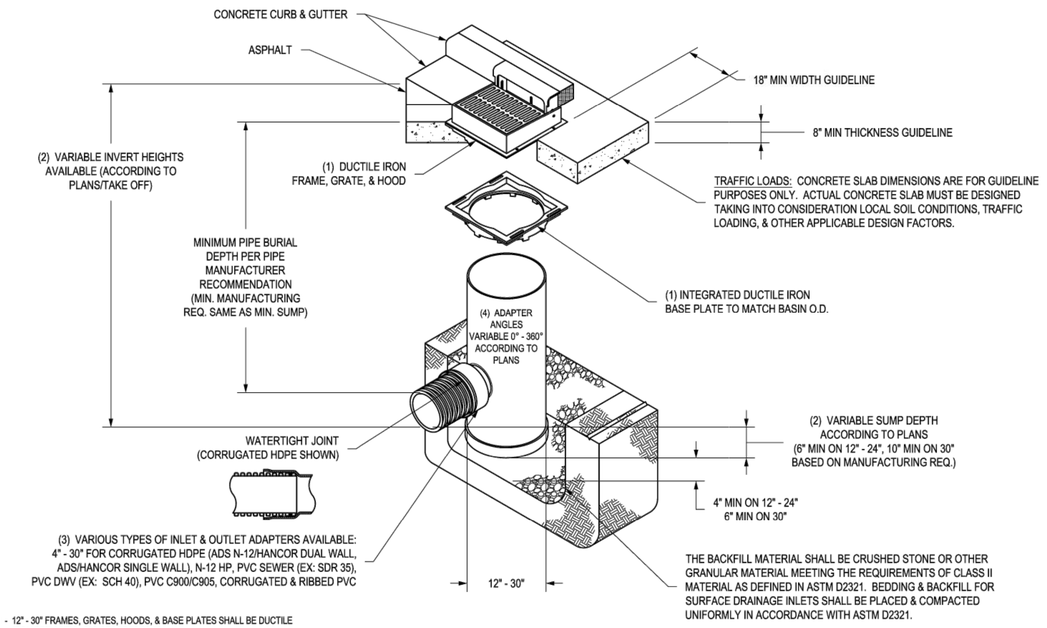
LANDSCAPE PLAN

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 181098
DRAWING NO. 23-033PDP
DATE MAY 10, 2023
JOB NO. 23-033

9 SHEET OF 13

NYLOPLAST 2 FT X 2FT CURB INLET STRUCTURE: 30 _ _ AGS _ _ X



1 - 12" - 30" FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
5 - ALL CURB INLET GRATE OPTIONS (STANDARD & DIAGONAL) SHALL MEET H-20 LOAD RATING

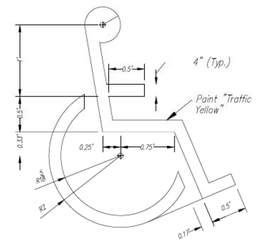
DRAWN BY EBC	DATE 1-23-06	MATERIAL	
REVISED BY EBC	DATE 3-17-10	PROJECT NO./NAME	
DWG SIZE A	SCALE 1:40	SHEET 1 OF 1	

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
DRAIN BASIN WITH 2 FT X 2 FT CURB INLET
QUICK SPEC INSTALLATION DETAIL

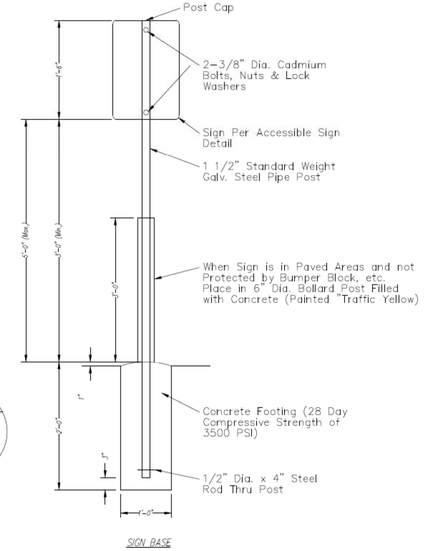
DWG NO. 7002-110-032 REV F

Colors
Legend and Border – Green
White Symbol on Blue Background
Background – White
(R7-8)



ACCESSIBLE PARKING SYMBOL
N.T.S.

NOTE: Symbol to be centered in parking space and oriented as illustrated on plans.

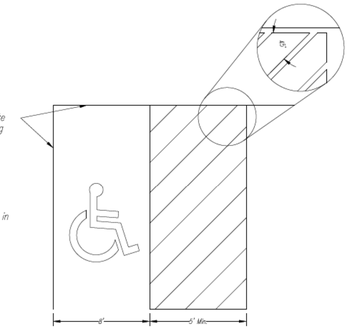


SIGN BASE

6"x12"

ACCESSIBLE SIGN DETAIL
N.T.S.

1. Mount 2 Accessible Signs to building. See plans for locations.
2. All signs should comply with U.S. Department of Transportation Federal Highway Administration's "Uniform Traffic Control Devices", and local codes as specified. Mount signs in accordance with manufacturer's instructions.



ACCESSIBLE STRIPING DETAIL
N.T.S.

R. KEVIN STERRETT, MO E-26440

NO.	REVISION	DATE	BY	CK/APP

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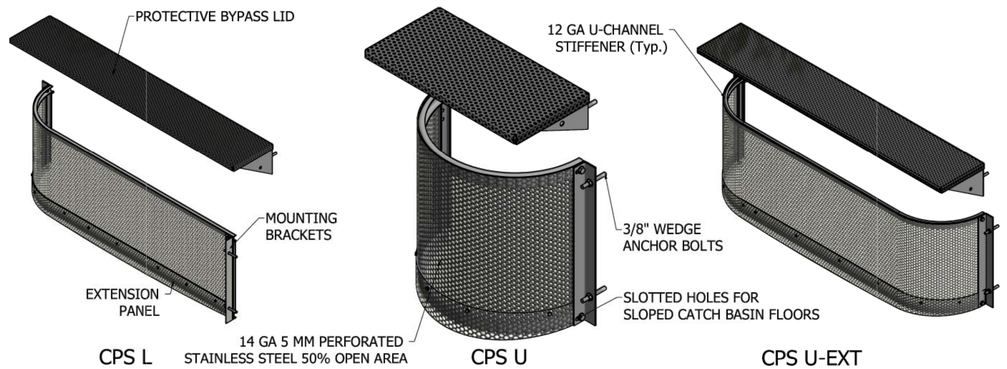
SITE DETAIL SHEET

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 181098
DRAWING NO. 23-033PDP
DATE MAY 10, 2023
JOB NO. 23-033

SHEET 10 OF 13

ADS FLEXSTORM: CONNECTOR PIPE SCREEN (CPS)



SIZING TABLE						MINIMUM BYPASS RATINGS for lid designs with 6" Freeboard									
CPS Flow Rates by Model $Q_{screen} = cA_{screen}\sqrt{2gh}$						B (bypass height) = 4"		B (bypass height) = 6"		B (bypass height) = 8"		B (bypass height) = 10"		B (bypass height) = 12"	
Model	Screen Length	Screen Height	A_{screen} (Net open area)	Q_{screen} Flow Rate (cfs)	L_{bypass} (ft)	Q4	H_4	Q6	H_6	Q8	H_8	Q10	H_{10}	Q12	H_{12}
3L18H-Bypass-Shape	3	18	1.80	8.72	3.00	3.93	8	5.52	7	6.81	6	7.77	5	13.19	10
4L18H-Bypass-Shape	4	18	2.45	11.84	4.00	5.24	8	7.35	7	9.08	6	10.36	5	17.58	10
5L18H-Bypass-Shape	5	18	3.09	14.96	5.00	6.55	8	9.19	7	11.35	6	12.95	5	21.98	10

Determine CPS model number based on screen length and height - bypass height - and screen shape. For example Model 3L18H-8-U is 3' wide x 18" tall, has 8" bypass height, and is "U" shaped. Custom lengths and heights are available for any catch basin.

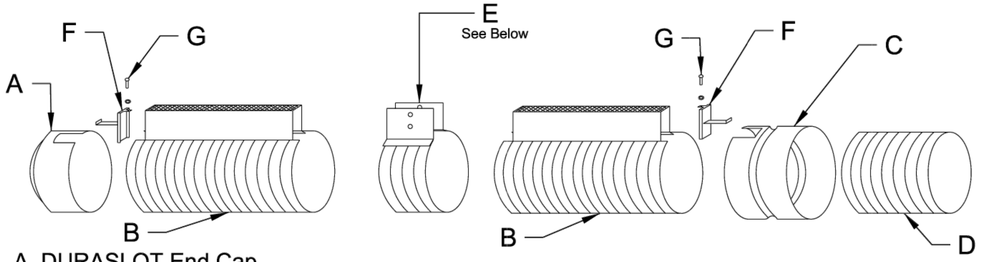
*LA County approved

*Full Capture Device as Certified by the California Regional Water Quality Control Board (CRWQCB)

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC A DIVISION OF ADS, INC.
WWW.INLETFILTERS.COM
(866) 287-8655 PH
(630) 355-3477 FX
INFO@INLETFILTERS.COM

SIZE	FRAME TYPE	DWG NO	REV
C	CPS	Flexstorm CPS	A

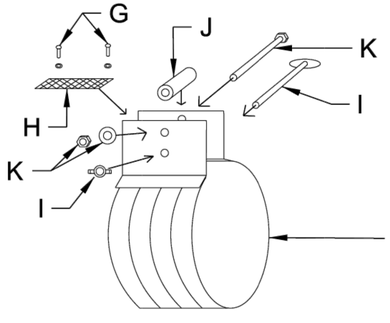
SCALE SHEET 1 OF 1



A. DURASLOT End Cap
B. DURASLOT Pipe
C. DURASLOT Adapter
D. ADS N-12 Pipe/Hancor HiQ
E. DURASLOT Coupler Band
F. DURASLOT Grate Anchor
G. ¼" SPHS x Long w/ Washer

H. DURASLOT Grate Connector
I. 5/16" Thumbscrew x 3" Long w/ 5/16" Wingnut
J. Plastic Sleeve Spacer (Goes on I. - not used with 4" DIA.)
K. Hex Head Assembly:
5/16" Hex Head Screw x 3" Long
w/ (2) Washers and 5/16" Hex Nut
(K. used with 12" DIA. and up, 6" Slot Height and Taller)

Each Cap A, Adapter C comes with an Anchor F
Each Coupler Band E comes with Hardware G,H,I,J,K



Title
DURASLOT® Surface Drains
Complete DURASLOT® Assembly Example

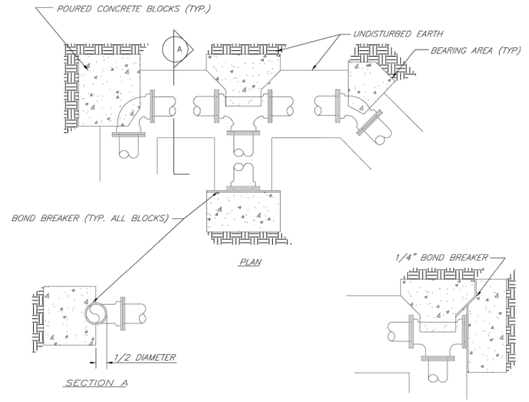
Duraslot Inc.
PO Box 1392
South Glens Falls, NY 12803
T: +1.518.747.7047
F: +1.518.747.6357

Dwg# ASG-01
Date 06.17.2013
Scale

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.6	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



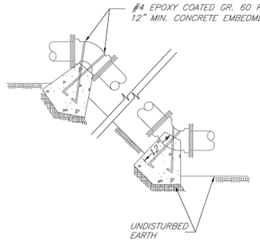
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
HORIZONTAL THRUST BLOCKS

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: WAT-1 | Rev: 1/14 | Rev:

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

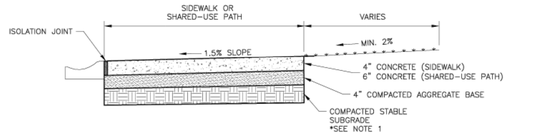
NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

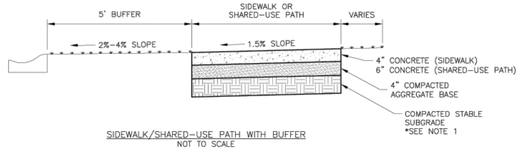


LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
VERTICAL THRUST BLOCKS

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: WAT-2 | Rev: 1/14 | Rev:



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE

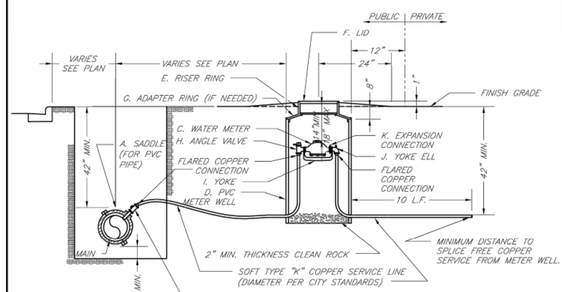


SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SIDEWALK/SHARED-USE PATH DETAIL

Date: 04/17 | Drawn By: MJF | Checked By: DL | GEN-2

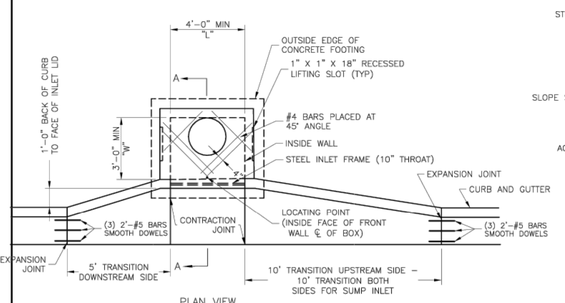


TYPICAL METER INSTALLATION – 2" AND SMALLER
NOT TO SCALE

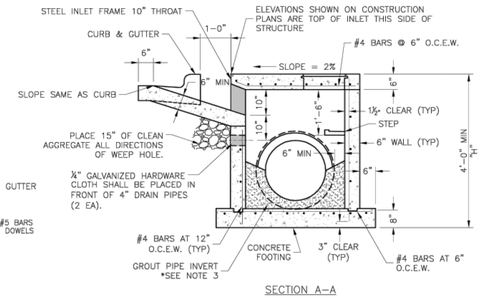
NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816-969-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SERVICE CONNECTION/METER WELL

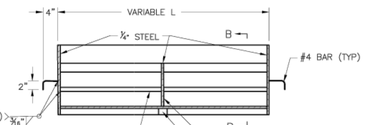
Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: WAT-11 | Rev: 1/14 | Rev:



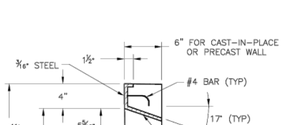
PLAN VIEW



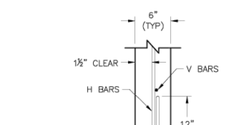
SECTION A–A



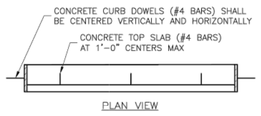
FRONT ELEVATION



SECTION B–B



WALL CORNER DETAIL



PLAN VIEW

STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

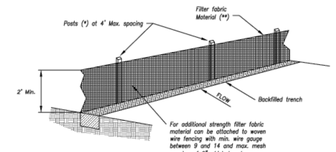
GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

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

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB INLET DETAIL
Project:

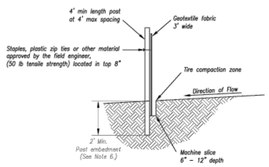
Drawn By: MJF | Checked By: DL | Date: 04/17 | Proj #:

STM-1



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ½" x 1 ½"
- NO.2 SOUTHERN PINE 2 ½" x 2 ½"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288



Notes:
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

SILT FENCE DETAILS
Not to Scale

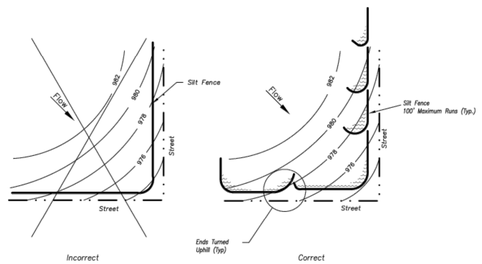
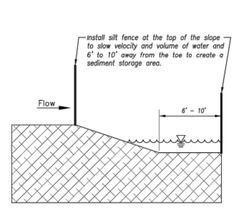
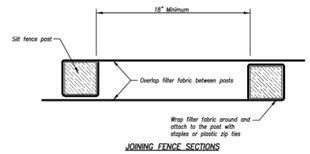


Figure A

SILT FENCE LAYOUT
Not to Scale

Maintenance:
1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.





JOINING FENCE SECTIONS
Not to Scale

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter APWA American Public Works Association
KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03
ADOPTED: 10/24/2016

CX/APP | BY | NO. | REVISION | DATE

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STATE OF MISSOURI RICHARD KEVIN STERRETT NUMBER PE-2004019440 REGISTERED PROFESSIONAL ENGINEER
R. KEVIN STERRETT, MO E-26440

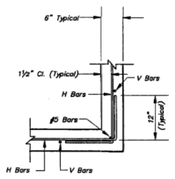
Hg Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.) / LS 2019005467

SITE DETAIL SHEET

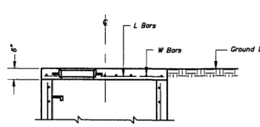
DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 18109B
DRAWING NO. 23-033PDP
DATE MAY 10, 2023
JOB NO. 23-033

SHEET 11 OF 13

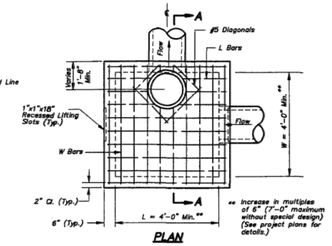


CORNER DETAIL



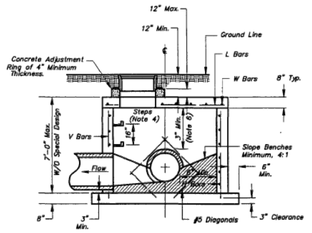
SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

NOTE: Ring & Cover to be Neenah R-1537, Clay & Bailey #2030, Deeter #2016, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)

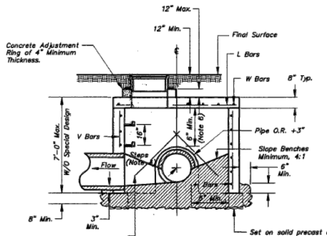


PLAN

** Increase in multiples of 6" (7'-0" maximum without special design) (See project plans for details.)



SECTION A-A
(Cast In Place)



SECTION A-A
(Precast)

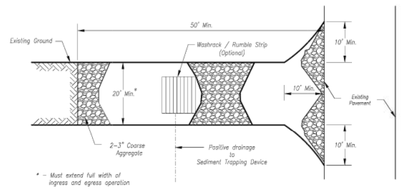
GENERAL NOTES:

1. Locate ring and cover over outlet.
2. All work and materials shall conform to Section 2600 APWA.
3. Use ¾" Chamfer strip or ½" R edger tool on all exposed concrete corners.
4. Steps required at 16" O.C. when depth from top of casting to invert exceeds 4'.
5. Boxouts will not be allowed to project through the Corners of the structure and the minimum distance between boxouts is 6" with 1 corner bar.
6. The minimum reinforcing shall be 1 H-Bar over a cast-in place pipe and 2 H-Bars over a precast boxout.
7. Limit opening height to 6" with No. 5 galvanized bars extending to corner rebars.
8. Show field inlet orientation on plans plus number and size of openings locating point at center of structure.
9. O.R. = one half outside pipe diameter (O.D.).
10. Reinforcing of covers in streets require special design.
11. Ring & Cover to be Neenah R-1736, Clay & Bailey #2008, Deeter #1315, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)

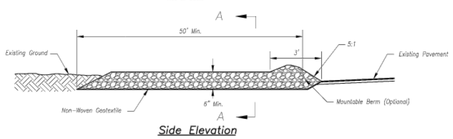
REINFORCING

BARS	BAR SIZE	SPACING (in.)
H	4	12
V	4	12
L	5	6
W	5	6

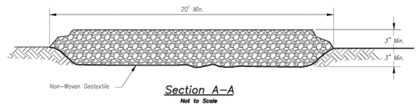
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
JJNCTION BOX DETAILS	STANDARD DRAWING NUMBER JB – 1
	ADOPTED: APRIL 17, 1996



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

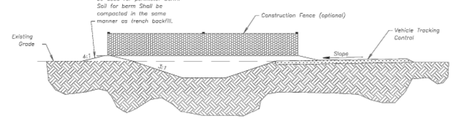
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout area shall be stabilized.



CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01
	ADOPTED: 10/24/2016

NO.	REVISION	DATE	BY	CK/APP

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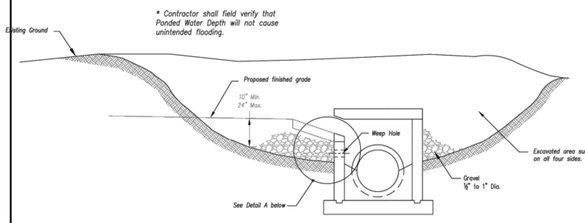
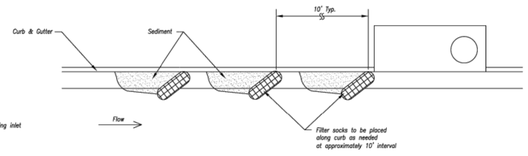
STATE OF MISSOURI
RICHARD KEVIN STERRETT
NUMBER E-26440
REGISTERED PROFESSIONAL ENGINEER

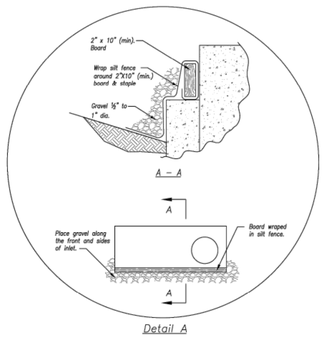
R. KEVIN STERRETT, MO E-26440

Consult engineers planners inc
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1796 (KS.) / LS 2019005467





On Grade Curb Inlet Protection



Detail A

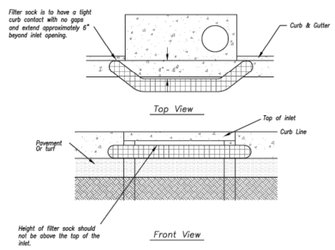
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

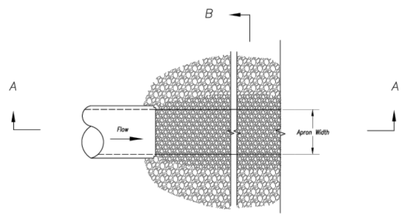


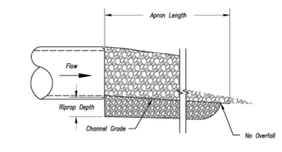
Sump Inlet Sediment Filter

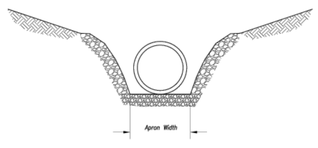
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06
	ADOPTED: 10/24/2016

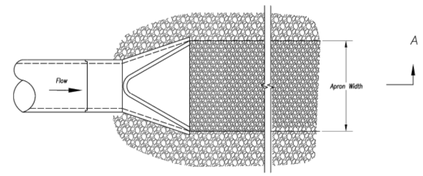
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

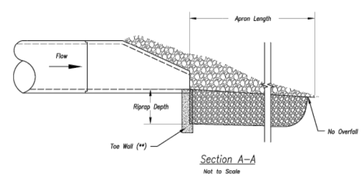






OUTLET PROTECTION W/O END SECTION





OUTLET PROTECTION WITH END SECTION

Notes:

1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METRO CHAPTER
OUTLET PROTECTION	STANDARD DRAWING NUMBER ESC-14
	ADOPTED: 10/24/2016

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

SITE DETAIL SHEET

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.	181098
DRAWING NO.	23-033PDP
DATE	MAY 10, 2023
JOB NO.	23-033

12 SHEET OF 13

3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5% SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

SECTION A-A

SECTION B-B

SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale

SIDEWALK CURB DETAIL
Not to Scale

CONTRACTION JOINT

ISOLATION JOINT

JOINT DETAILS
Not to Scale

CURB & GUTTER DETAIL AT RAMP
Not to Scale

TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

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

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-3A

STRAIGHT CURB
(TYPE C-1)

DOWELLED CURB
(TYPE DC)

CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)

STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)

ROLL BACK CURB & GUTTER
(TYPE CG-2)

CURB REPLACEMENT DETAIL

STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)

ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

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

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4

NO.	REVISION	DATE	BY	CK/APP

R. KEVIN STERRETT, MO E-26440

Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.) / LS 2019005467

GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS AND DRIVEWAY APPROACHES, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
9. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
10. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

DRIVEWAY WITH BUFFER
NOT TO SCALE

DRIVEWAY WITHOUT BUFFER
NOT TO SCALE

DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE

DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE

DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

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

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

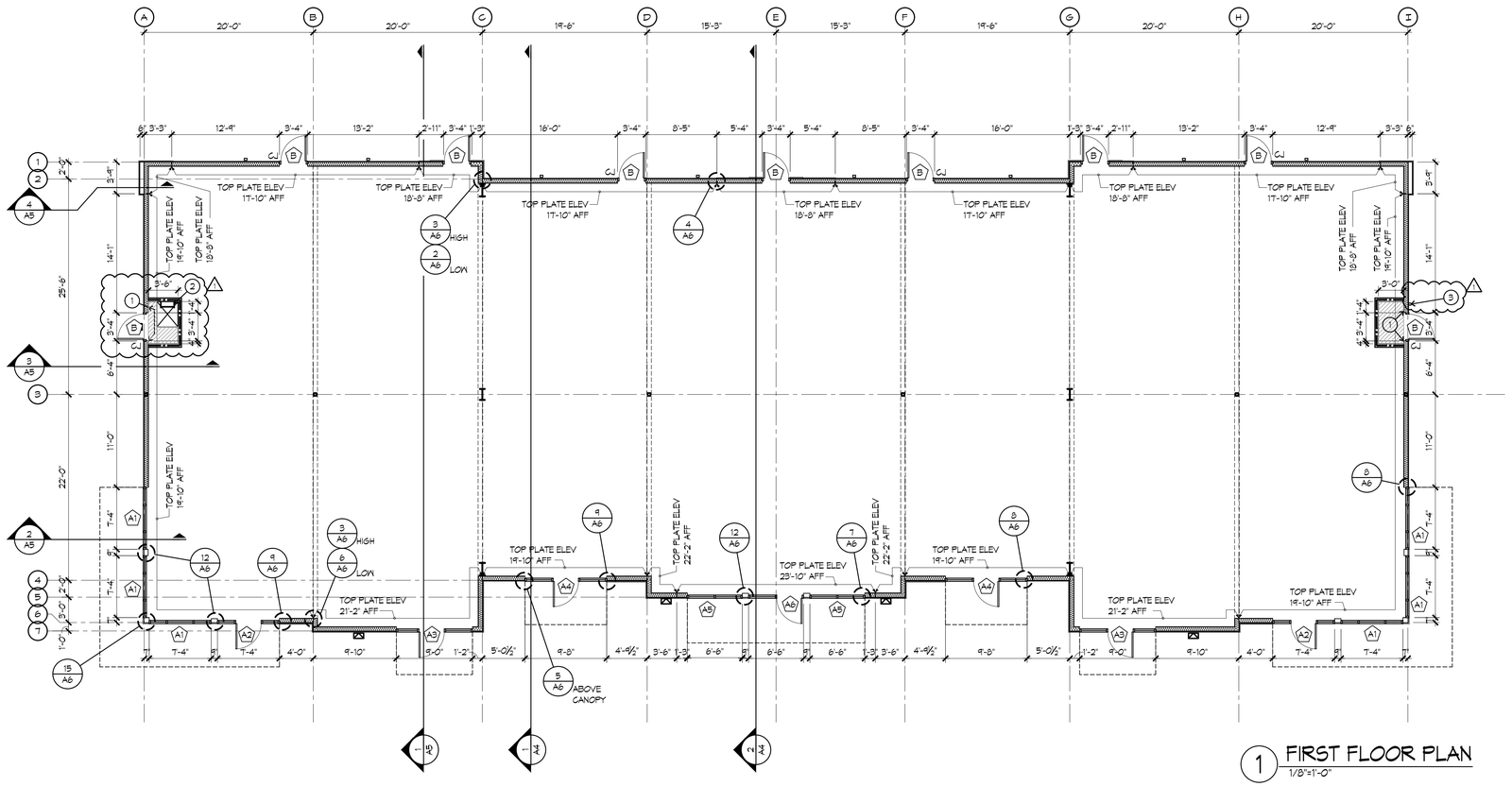
GEN-1

SITE DETAIL SHEET

DOUGLAS CORNER BUILDING
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.
181098
DRAWING NO.
23-033FDP
DATE
MAY 10, 2023
JOB NO.
23-033

13 SHEET OF 13



1 FIRST FLOOR PLAN
1/8"=1'-0"

NORTH

WALL TYPES

EXTERIOR LOAD BEARING WALL OF SHEATHING ON 2X6 WOOD STUDS. REFER TO SECTIONS, DETAILS, AND STRUCTURAL DRAWINGS FOR DETAIL INFORMATION. NO INTERIOR GYPSUM BOARD IS REQUIRED WHERE FSK INSULATION IS INSTALLED. AT CONTRACTOR OPTION KRAFT FACED INSULATION MAY BE USED PROVIDED IT IS COVERED WITH ONE LAYER OF GYPSUM BOARD PER SCHEDULE

NEW WALL OF 5/8" GYPSUM BOARD ON BOTH SIDES OF 2X4 FRAMING AT 16" O.C. INFILL ALL CAVITIES WITH SOUND BATT INSULATION. EXTEND WALL FROM FLOOR TO BOTTOM CHORD OF ROOF TRUSSES ABOVE.

PROPOSED LOCATION OF FUTURE DEMISING WALL. NO WORK UNDER THIS CONTRACT.

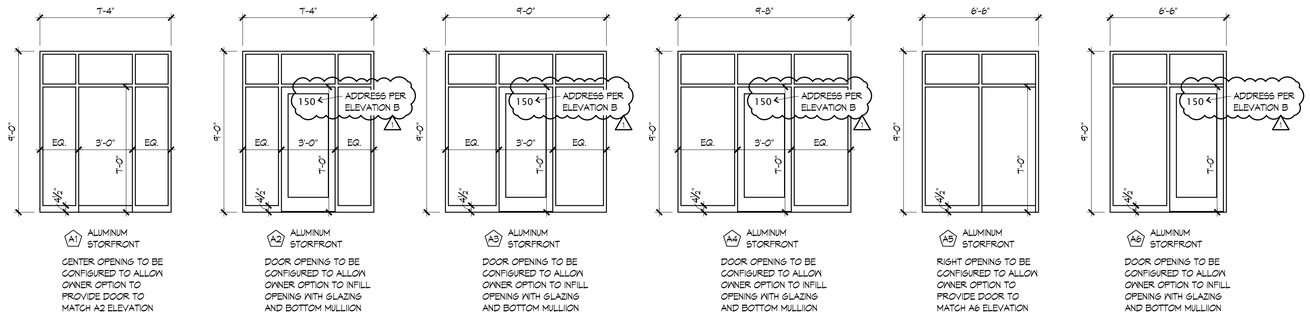
HORIZONTAL CEILING ASSEMBLY

ON BOTTOM CHORD OF ROOF TRUSSES INSTALL ONE LAYER OF GYPSUM BOARD

FLOOR PLAN NOTES

1. INSTALL AND FINISH ONE LAYER OF GYPSUM BOARD INTERIOR FACE OF WALL AND AT JAMBS AND HEAD OF DOOR.
2. PROVIDE ROOF ACCESS LADDER TO MEET THE REQUIREMENTS OF IMC SECTION 306.5.
3. PROVIDE AND INSTALL KNOXBOX AT 6'-0" AFF OVER FDC. THE KEY BOX SHALL BE OF AN APPROVED TYPE AND SHALL CONTAIN KEYS TO GAIN NECESSARY ACCESS. ORDER FROM KNOXBOX.COM.

DOOR, FRAME, AND WINDOW OPENINGS



A1 ALUMINUM STORFRONT
CENTER OPENING TO BE CONFIGURED TO ALLOW OWNER OPTION TO PROVIDE DOOR TO MATCH A2 ELEVATION

A2 ALUMINUM STORFRONT
DOOR OPENING TO BE CONFIGURED TO ALLOW OWNER OPTION TO INFILL OPENING WITH GLAZING AND BOTTOM MULLION

A3 ALUMINUM STORFRONT
DOOR OPENING TO BE CONFIGURED TO ALLOW OWNER OPTION TO INFILL OPENING WITH GLAZING AND BOTTOM MULLION

A4 ALUMINUM STORFRONT
DOOR OPENING TO BE CONFIGURED TO ALLOW OWNER OPTION TO INFILL OPENING WITH GLAZING AND BOTTOM MULLION

A5 ALUMINUM STORFRONT
RIGHT OPENING TO BE CONFIGURED TO ALLOW OWNER OPTION TO PROVIDE DOOR TO MATCH A6 ELEVATION

A6 ALUMINUM STORFRONT
DOOR OPENING TO BE CONFIGURED TO ALLOW OWNER OPTION TO INFILL OPENING WITH GLAZING AND BOTTOM MULLION

B WELDED EXTERIOR METAL FRAME AND INSULATED HOLLOW METAL DOOR

GLAZING

GZ1 ALL EXTERIOR GLAZING TO BE INSULATED GLAZING UNITS WITH LIGHT BRONZE TINTED LOW-E TEMPERED SAFETY GLASS

OPENING HARDWARE

VERIFY STYLE AND FINISH OF HARDWARE WITH OWNER

HW SET: A2, A3, A4 AND A6 ALUMINUM STOREFRONT DOORS
EACH TO HAVE:
1 SET PIVOT BY DOOR SUPPLIER.
1 EA INTERMEDIATE PIVOT
1 EA L9460 DEADBOLT WITH L283-711 LOCKED/UNLOCKED INDICATOR AND L583-363 EZ TURN ADA THUMBTURN
1 EA CYLINDER
1 EA CLOSER 4031EDA 689 LCN
1 EA THRESHOLD 2009APK PEMKO
1 EA DOOR SWEEP C627A AL NSP
1 EA SET PUSH PULL BAR
1 EA FLOOR STOP FS186 IVES
1 EA DRIP STRIP 16DKB NSP

HW SET: B
EACH TO HAVE:
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA MORTISE ENTRANCE L9453 SAT 626 SCH WITH L583-363 EZ TURN ADA THUMBTURN
1 EA CLOSER 4031EDA 689 LCN
1 SET SEALS 5050C BLK NSP
1 EA THRESHOLD 2009APK PEMKO
1 EA FLOOR STOP FS186 IVES
1 EA DRIP STRIP 16A NSP - FIELD PAINT TO MATCH DOOR

STATE OF MISSOURI
KENNETH J. KLEFFNER
NUMBER A-7
REGISTERED ARCHITECT
9-13-23

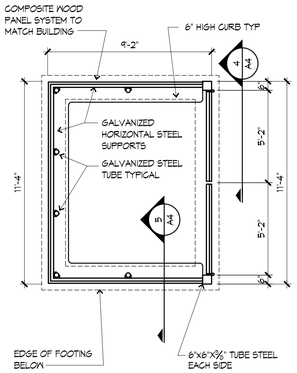
GUY GRONBERG ARCHITECTS, P.C.
119 SE 3rd St.
Lee's Summit, MO 64063
Phone 816.524.0919
Fax 816.524.4579

DOUGLAS | CORNER
LOT 1B, LEES SUMMIT, MISSOURI 64086

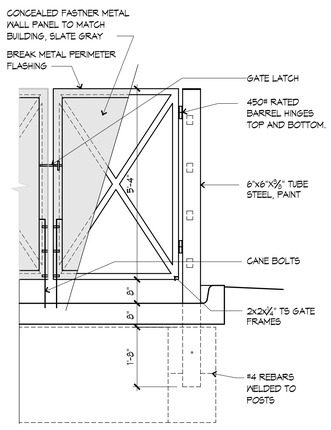
REV#	DATE	DESCRIPTION
1	9-13-23	CITY COMMENTS

DATE: 08-11-2023
PROJECT# 23012

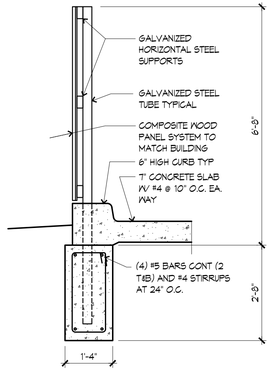
A1



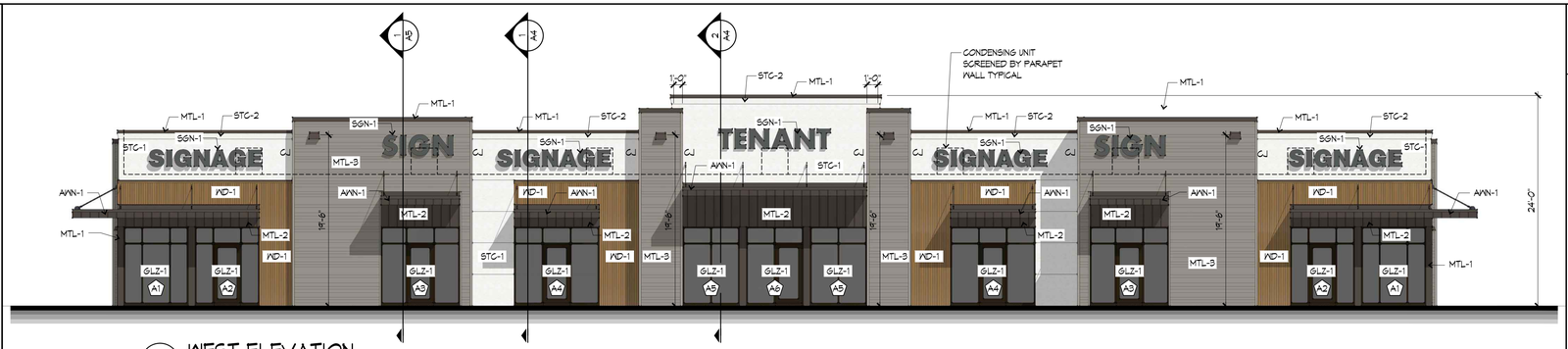
3 TRASH ENCLOSURE
1/4"=1'-0"



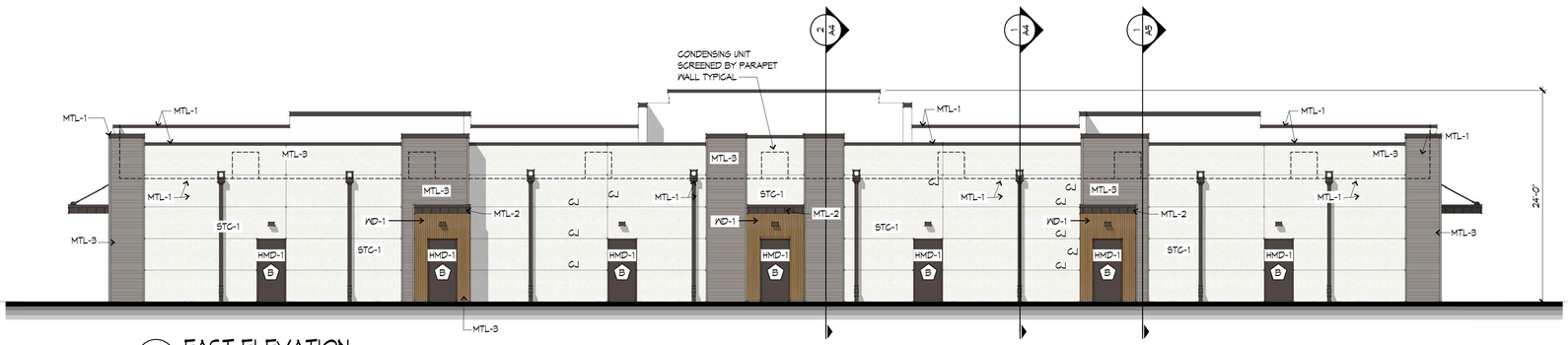
4 GATE ELEVATION
1/2"=1'-0"



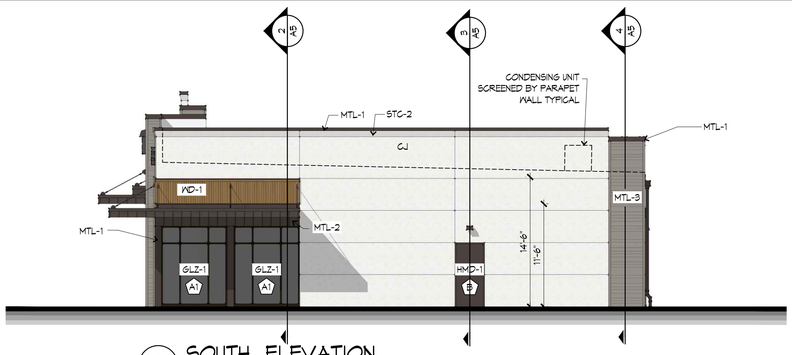
5 TRASH SECTION
1/2"=1'-0"



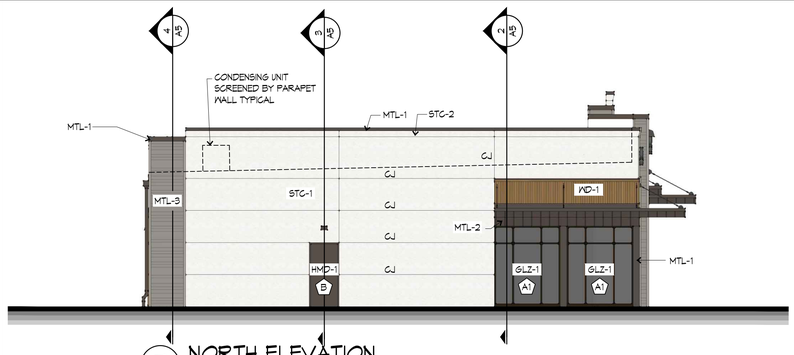
1 WEST ELEVATION
1/8"=1'-0"



2 EAST ELEVATION
1/8"=1'-0"



6 SOUTH ELEVATION
1/8"=1'-0"



7 NORTH ELEVATION
1/8"=1'-0"

8 TRASH ENCLOSURE ELEVATIONS
1/8"=1'-0"

EXTERIOR MATERIAL LEGEND

STC-1	CEMENTITIOUS STUCCO SYSTEM (COLOR = OFF WHITE)
STC-2	CEMENTITIOUS STUCCO SYSTEM WITH PROJECTED FOAM SHAPE (COLOR = OFF WHITE)
CJ	STUCCO CONTROL JOINT.
MTL-1	BREAK METAL FLASHINGS, SCUPPER HEADS AND DOWNSPOUTS (COLOR = DARK BRONZE)
MTL-2	FLUSH CONCEALED FASTNER METAL WALL PANEL - PAC-CLAD 12"W x 1"DP FLUSH PANELS (COLOR = DARK BRONZE)
MTL-3	ARCHITECTURAL METAL PANEL - ELEVATE (FORMERLY FIRESTONE) DELTA CFP-12 (50%), CFP-12B(25%), AND CF-12T(25%) INSTALLED IN A RANDOM MANNER TO PROVIDED VARIEGATED SPACING. (COLOR = SLATE GRAY)
AWN-1	BREAK METAL FACED CANOPY PER DETAIL 13/A6 (COLOR = DARK BRONZE)
GLZ-1	ALUMINUM STOREFRONT AND ENTRY SYSTEM. (COLOR = BLACK ANODIZED) WITH DOUBLE PANE INSULATED GLASS (COLOR = GRAY TINT)
GLZ-2	WOOD CASEMENT WINDOW WITH EXTERIOR ALUMINUM CLADDING AND 1" GRILLS. (COLOR = BLACK) WITH DOUBLE PANE INSULATED GLASS (COLOR = GRAY TINT)
HMD-1	HOLLOW METAL DOOR AND FRAME. PAINT (COLOR = DARK BRONZE TO MATCH MTL-1)
WD-1	COMPOSITE WOOD PANEL SYSTEM. NEWTECHWOOD EUROPEAN STYLE SIDING UH58 BELGIAN BOARD (COLOR = PERUVIAN TEAK)
SGN-1	WALL SIGN. TO BE SUBMITTED UNDER SEPERATE SIGN PERMIT

STATE OF MISSOURI
KENNETH J. KIEFFER
NUMBER A-7
REGISTERED ARCHITECT
08-11-2023

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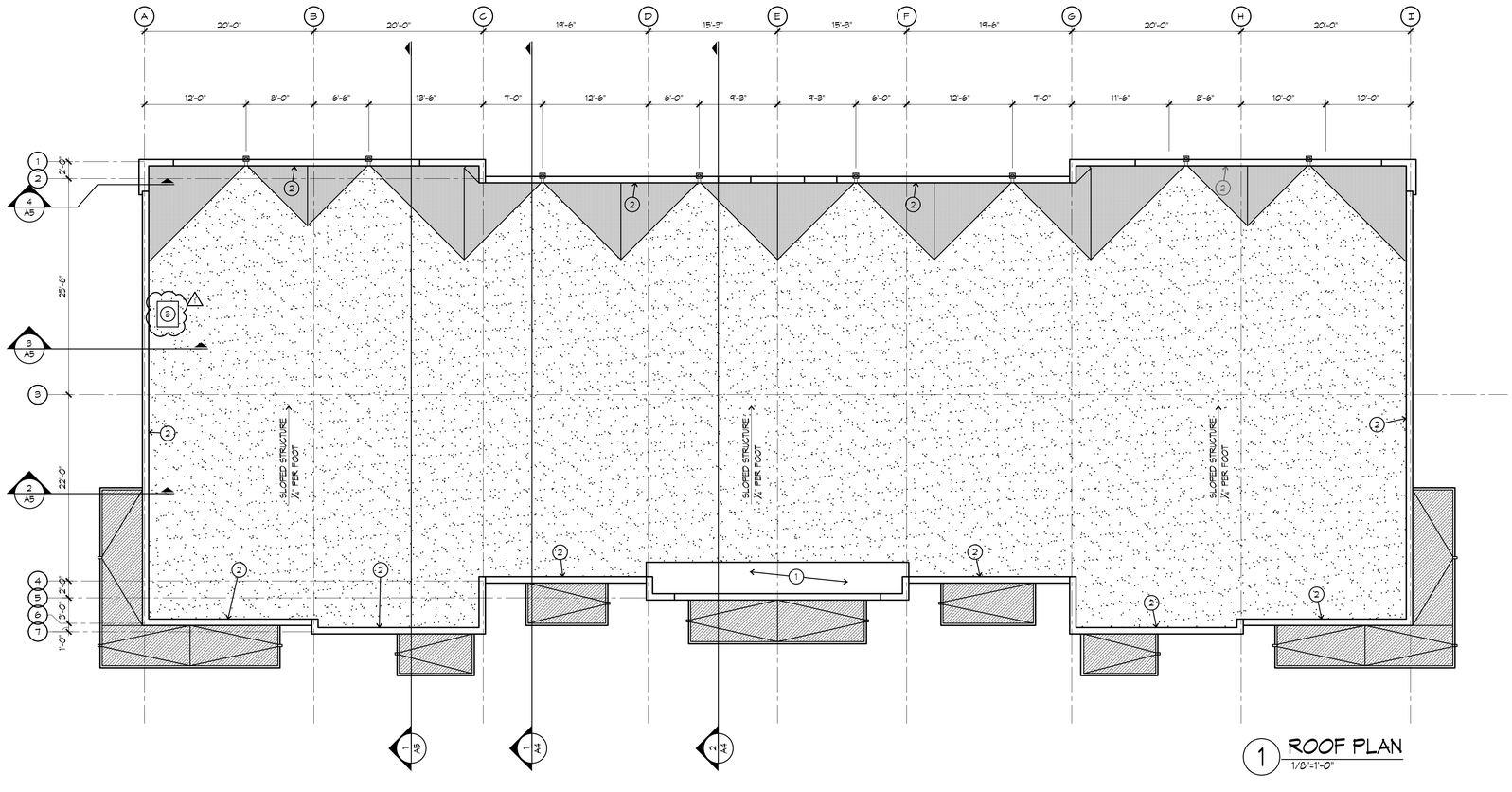
119 se 3rd st.
Lee's Summit, MO 64063
Phone: 816.524.0900
Fax: 816.524.4575

DOUGLAS | CORNER |
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV/#	DATE	DESCRIPTION
01	6-12-23	CITY COMMENTS
02	8-26-23	TRASH ENCLOSURE

DATE: 08-11-2023
PROJECT# 23012

A2



1 ROOF PLAN
1/8"=1'-0"

NORTH

ROOF PLAN LEGEND

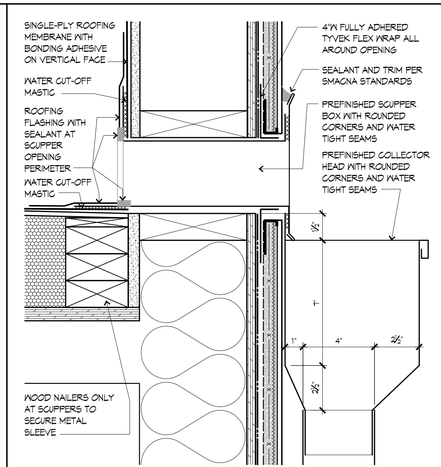
SINGLE PLY ROOFING OVER ½" DENS DECK OVER TWO LAYERS OF 2½" RIGID INSULATION WITH JOINTS STAGGERED

SINGLE PLY ROOFING OVER ½" DENS DECK OVER TAPERED INSULATION TO SLOPE ROOF AT ¼" PER FOOT TO THROUGH WALL SCUPPER OVER TWO LAYERS OF 2½" RIGID INSULATION WITH JOINTS STAGGERED.

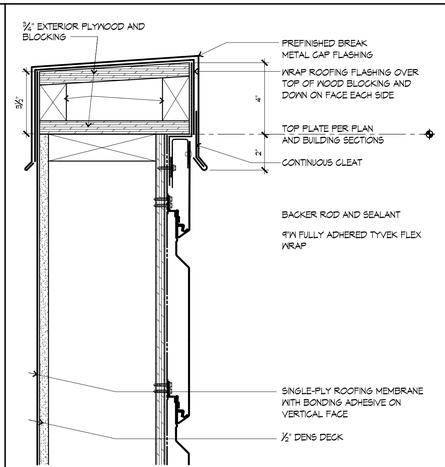
SINGLE PLY ROOFING OVER TAPERED INSULATION TO SLOPE ROOF TO ROOF EDGE SCUPPER. INSULATION TO BE 3¼" THICK AT PERIMETER OF ROOF AND ½" THICK AT SCUPPER.

FLOOR PLAN NOTES

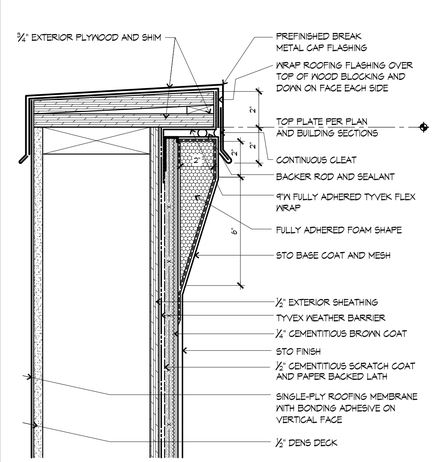
1. CONTINUE ROOFING AND INSULATION ON ANGLED SUPPORT BRACKETS PER SECTION 2/A4.
2. ON INTERIOR FACE OF PARAPET PROVIDE SINGLE PLY MEMBRANE WITH BONDING ADHESIVE ON VERTICAL FACE OF ¾" DENS DECK BOARD. TYP. WRAP ROOFING OVER TOP OF PARAPET. REFER TO DETAILS 2 AND 3 ON THIS SHEET.
3. BILCO 30"x36" TYPE S-40 ROOF HATCH. PROVIDE BILCO BIL-GUARD 2.0 HATCH RAIL SYSTEM RL2-S



4 TROUGH WALL SCUPPER
3"=1'-0"



3 PARAPET CAP AT CFP
3"=1'-0"



2 PARAPET CAP AT STUCCO
3"=1'-0"

STATE OF MISSOURI
KENNETH J. KUETTEL
NUMBER 2010038812
REGISTERED ARCHITECT
9-13-23

GUY GRONBERG ARCHITECTS, P.C.
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Lee's Summit, MO 64063
Phone 816.524.2525
Fax 816.524.4575

DOUGLAS | CORNER |

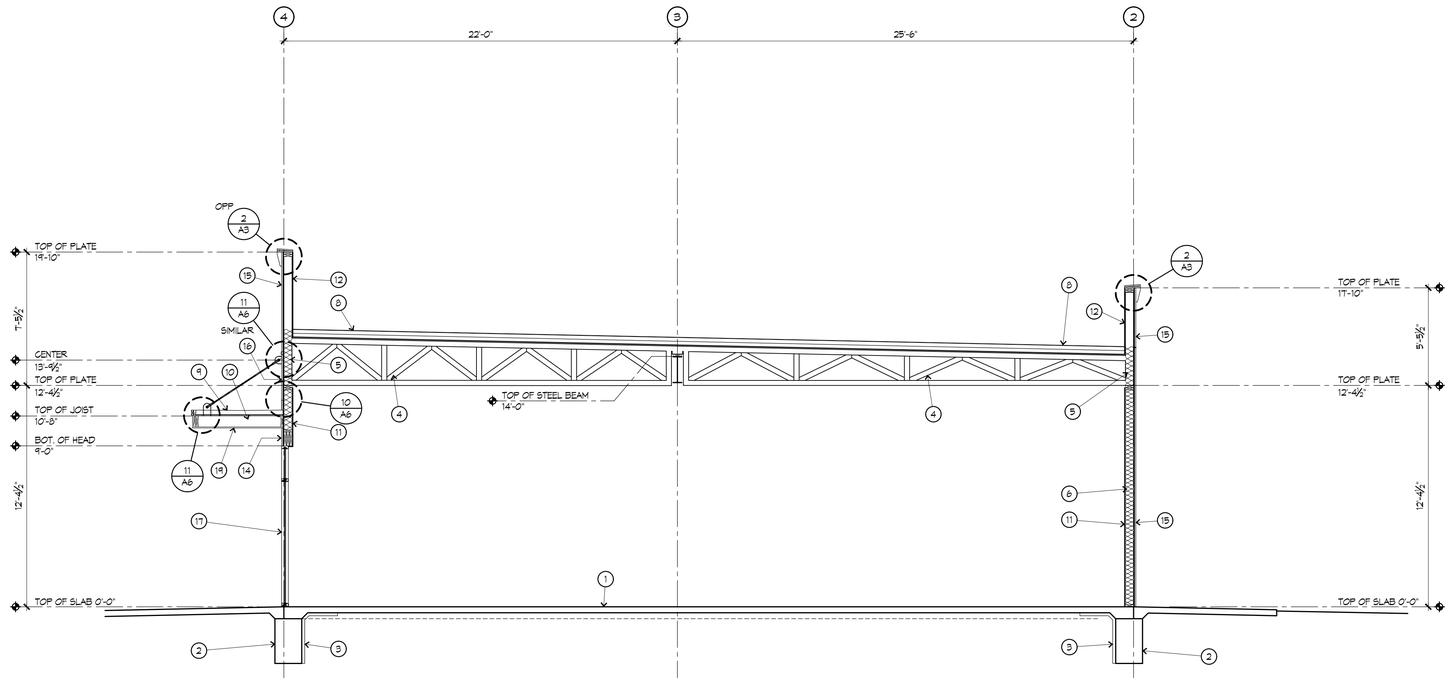
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV'S	DATE	DESCRIPTION
1	9-13-23	CITY COMMENTS

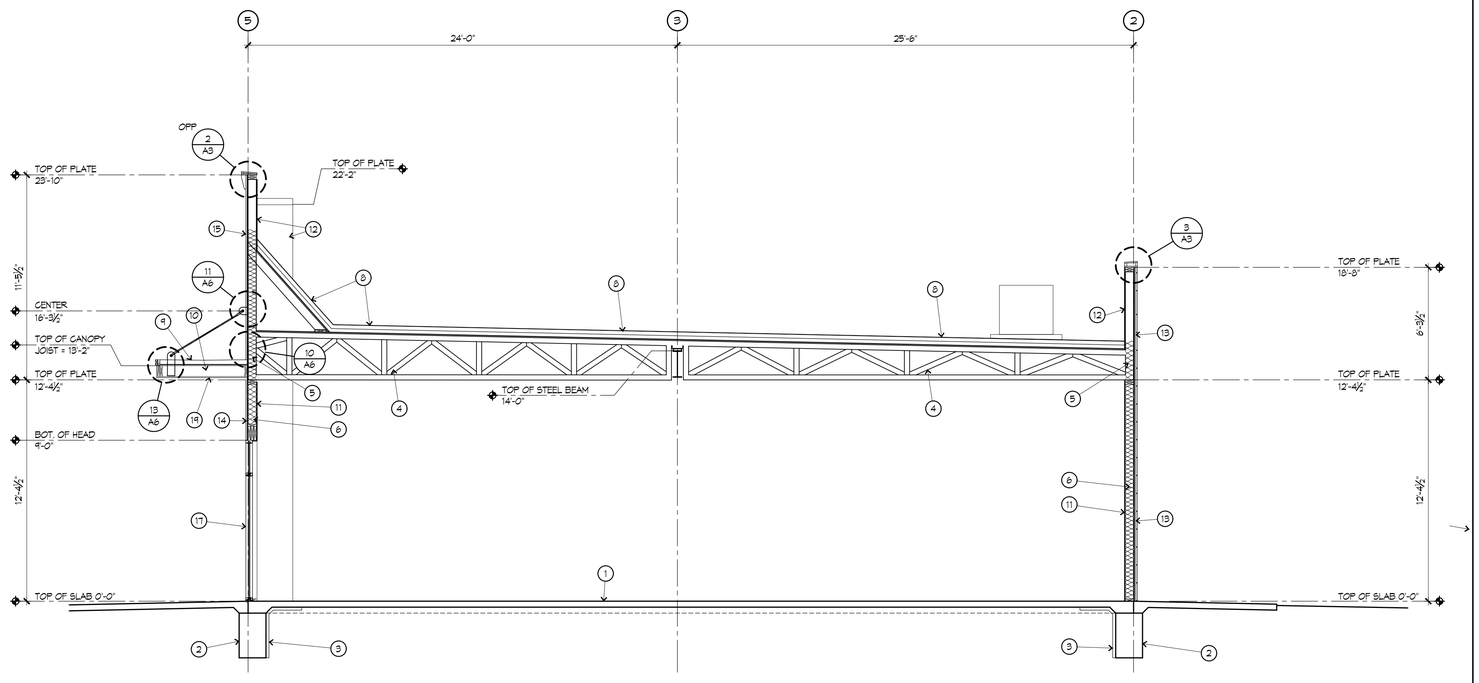
DATE: 08-11-2023

PROJECT# 23012

A3



1 BUILDING SECTION
1/4"=1'-0"



2 BUILDING SECTION
1/4"=1'-0"

SECTION NOTES

1. 4" CONCRETE SLAB ON VAPOR BARRIER ON 4" GRANULAR LEVELING COURSE - REFER STRUCT. DRAWINGS
2. CONCRETE TRENCH FOOTING - REFER STRUCT. DRAWINGS
3. 2" RIGID PERIMETER INSULATION
4. PRE-ENGINEERED WOOD ROOF TRUSSES AT 24" O.C. TOP CHORD TO SLOPE AT ¼" PER FOOT. REFER TO STRUCT. DRAWINGS
5. INSTALL 6¼" FSK BATT INSULATION BETWEEN JOISTS.
6. 2X6 LOAD BEARING WALL - REFER TO STRUCT. DRAWINGS. PROVIDE BATT INSULATION PER SPECIFICATIONS.
7. NOT USED
8. SINGLE PLY ROOF MEMBRANE PER SPECIFICATION OVER ½" DENS DECK BOARD, OVER TWO LAYERS OF 2½" RIGID INSULATION WITH JOINTS STAGGERED OVER PLYWOOD ROOF DECKING PER STRUCTURAL DRAWINGS
9. SINGLE PLY ROOF MEMBRANE PER SPECIFICATION OVER TAPERED CRICKETS OVER PLYWOOD ROOF DECKING PER STRUCTURAL DRAWINGS.
10. 2X8 WOOD JOISTS AT 24" O.C. REFER TO STRUCTURAL DRAWINGS.
11. AT CONTRACTOR OPTION PROVIDE GYPSUM BOARD OVER FRAMING - REFER TO SPEC. FOR TYPE AND THICKNESS OF GYPSUM BOARD
12. TYPICAL AT BACKSIDE OF PARAPETS INSTALL SINGLE-PLY ROOFING MEMBRANE WITH BONDING ADHESIVE ON VERTICAL FACE OVER 1/2" DENS DECK
13. CONCEALED FASTENER METAL WALL PANEL SYSTEM - MTL-3 WITH END CLOSURES, FLASHING, HANGER CLIPS ECT. PER MFGR STANDARDS. INSTALL OVER WEATHER BARRIER OVER EXTERIOR SHEATHING PER SPECIFICATION.
14. CONCEALED FASTENER METAL WALL PANEL SYSTEM - MTL-2 WITH END CLOSURES, FLASHING, HANGER CLIPS ECT. PER MFGR STANDARDS. INSTALL OVER WEATHER BARRIER OVER EXTERIOR SHEATHING PER SPECIFICATION.
15. CEMENTITIOUS STUCCO SYSTEM - STC-1 INSTALL OVER WEATHER BARRIER OVER EXTERIOR SHEATHING PER SPECIFICATION.
16. COMPOSITE WOOD PANEL SIDING SYSTEM - WD-1 WITH TRIMS AND FASTENERS PER MFGR. STANDARDS. INSTALL OVER WEATHER BARRIER OVER EXTERIOR SHEATHING PER SPECIFICATION.
17. ALUMINUM STOREFRONT AND ENTRY SYSTEM (COLOR = BLACK ANODIZED) WITH DOUBLE PANE INSULATED GLASS (COLOR = GRAY TINT)
18. HOLLOW METAL DOOR AND FRAME. PAINT
19. INSTALL DIRECT APPLIED EXTERIOR FINISH SYSTEM OVER EXTERIOR GYPSUM BOARD

STATE OF MISSOURI
KENNETH J. KLEFFNER
NUMBER A-2010038267
REGISTERED ARCHITECT
08-11-2023

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DOUGLAS | CORNER |

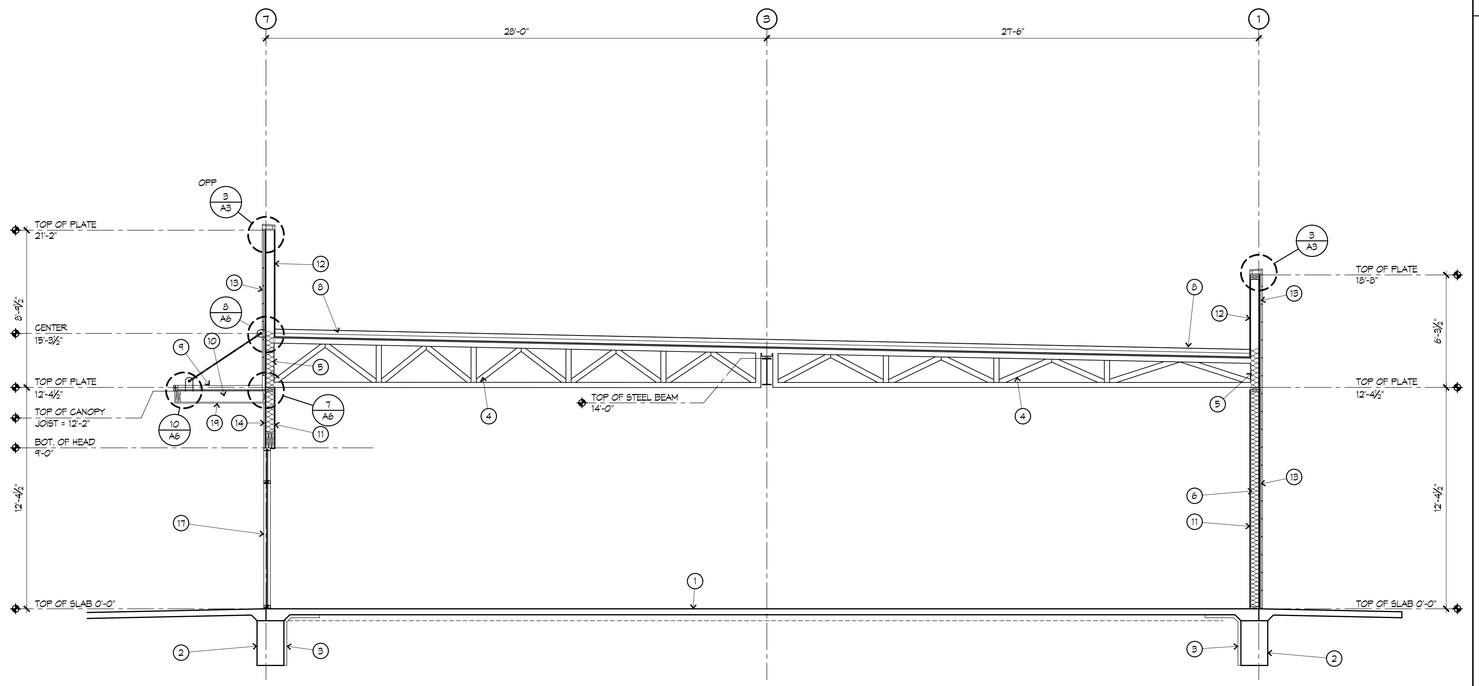
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

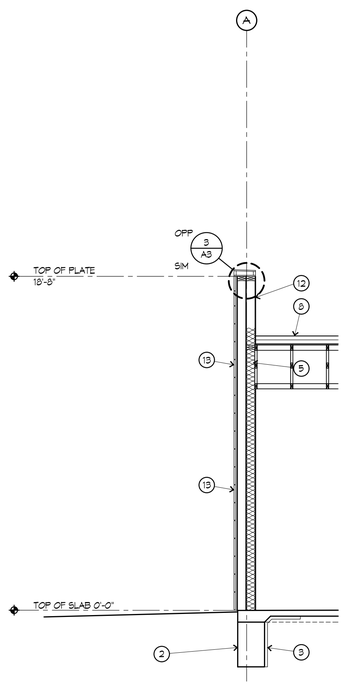
DATE: 08-11-2023

PROJECT# 23012

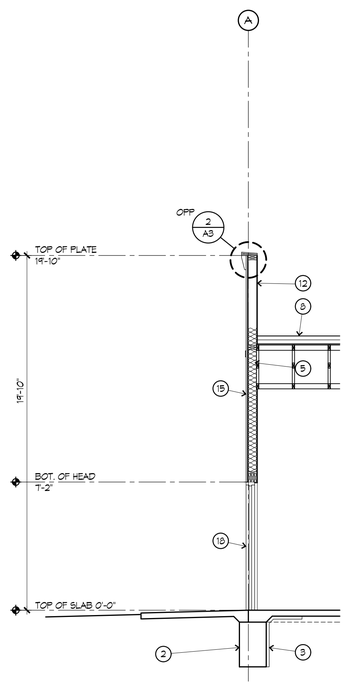
A4



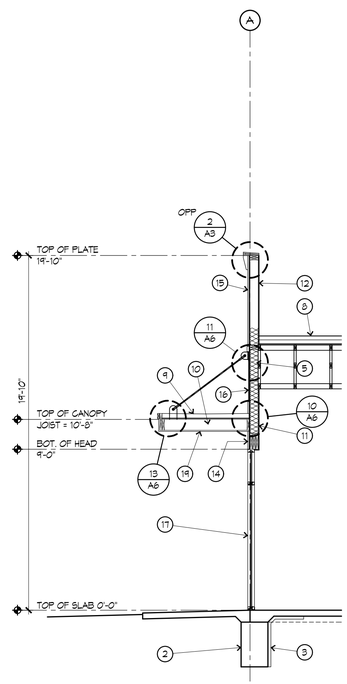
1 BUILDING SECTION
1/4"=1'-0"



4 WALL SECTION
1/4"=1'-0"



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



2 WALL SECTION
1/4"=1'-0"

SECTION NOTES

1. 4" CONCRETE SLAB ON VAPOR BARRIER ON 4" GRANULAR LEVELING COURSE - REFER STRUCT. DRAWINGS
2. CONCRETE TRENCH FOOTING - REFER STRUCT. DRAWINGS
3. 2" RIGID PERIMETER INSULATION
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7. NOT USED
8. SINGLE PLY ROOF MEMBRANE PER SPECIFICATION OVER ½" DENS DECK BOARD, OVER TWO LAYERS OF 2½" RIGID INSULATION WITH JOINTS STAGGERED OVER PLYWOOD ROOF DECKING PER STRUCTURAL DRAWINGS
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18. HOLLOW METAL DOOR AND FRAME. PAINT
19. INSTALL DIRECT APPLIED EXTERIOR FINISH SYSTEM OVER EXTERIOR GYPSUM BOARD

STATE OF MISSOURI
KENNETH KLEFFNER
NUMBER A-2007035827
REGISTERED ARCHITECT
08-11-2023

GUY GRONBERG ARCHITECTS, P.C.
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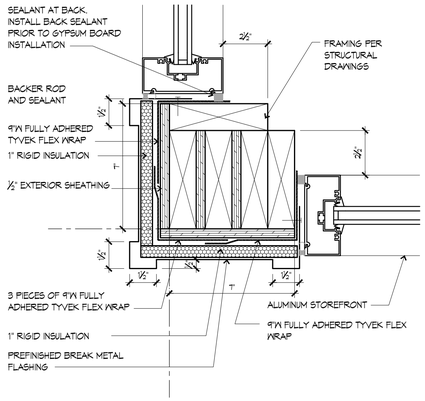
DOUGLAS | CORNER |
LOT 1B, LEES SUMMIT, MISSOURI 64086

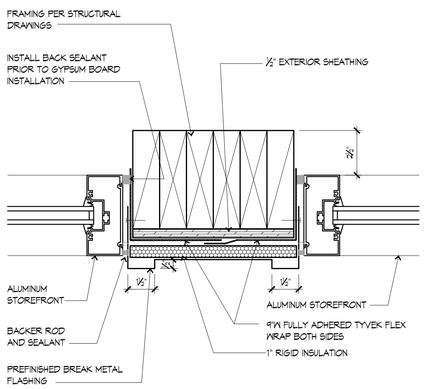
REV#	DATE	DESCRIPTION

DATE: 08-11-2023
PROJECT# 23012

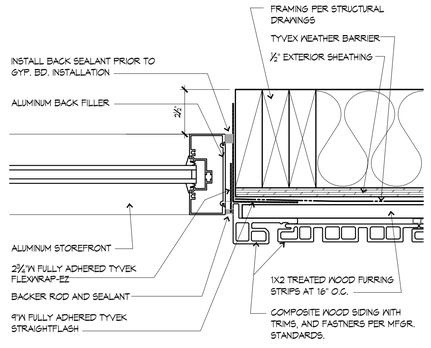
A5



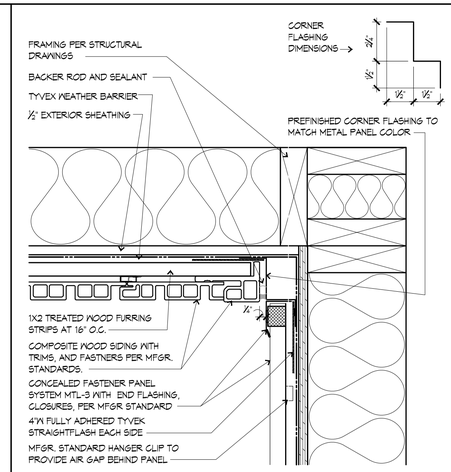
15 ALUM CORNER JAMB
3"=1'-0"



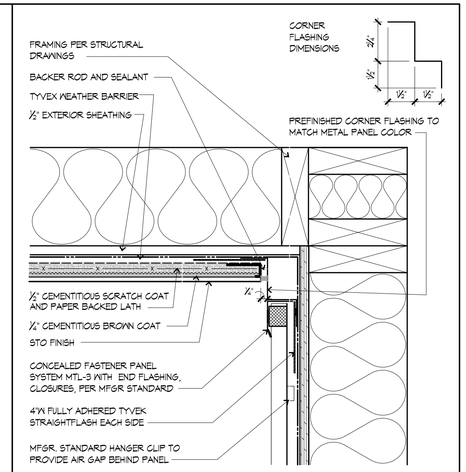
12 ALUM POST JAMB
3"=1'-0"



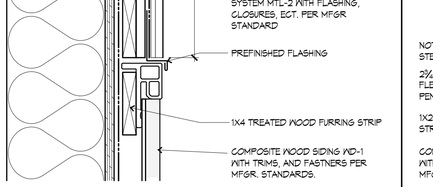
9 ALUM. JAMB AT WD-1
3"=1'-0" HOLLOM METAL JAMB SIMILAR



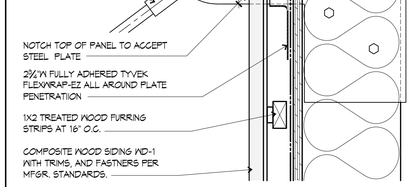
6 INSIDE CORNER WD-1 TO MTL-3
3"=1'-0"



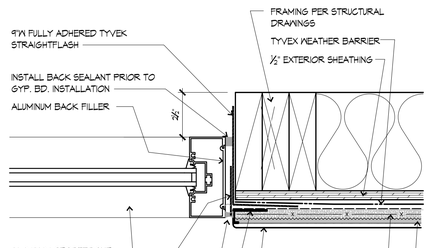
3 INSIDE CORNER STC-1 TO MTL-3
3"=1'-0"



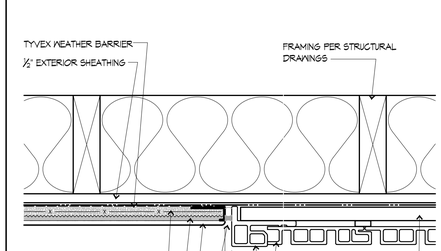
14 WD-1 FLASHING CAP
3"=1'-0"



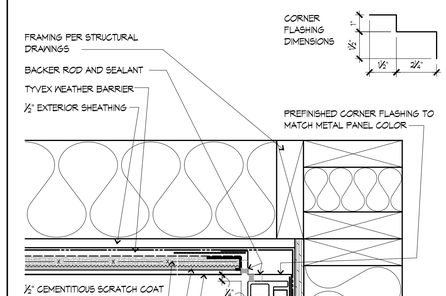
11 CANOPY SUPPORT
3"=1'-0"



8 ALUM. JAMB AT STC-1
3"=1'-0" HOLLOM METAL JAMB SIMILAR



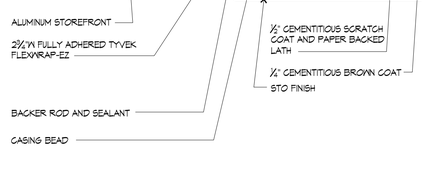
5 TRANSISTION STC-1 TO WD-1
3"=1'-0"



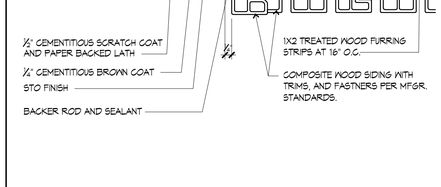
2 INSIDE CORNER STC-1 TO WD-1
3"=1'-0"

13 CANOPY EDGE
3"=1'-0"

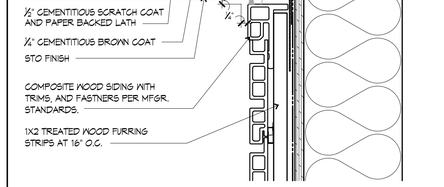
10 CANOPY FLASHING TYPICAL
3"=1'-0"



7 ALUM. JAMB AT MTL-3
3"=1'-0"



4 TRANSISTION MTL-3 TO STC-1
3"=1'-0"



1 TYPICAL CONTROL JOINT
3"=1'-0"

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Phone 816.524.0700
Fax 816.524.4570

08-11-2023

DOUGLAS | CORNER |
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

DATE: 08-11-2023
PROJECT# 23012

A6

DIVISION 1 - GENERAL REQUIREMENTS

GENERAL REQUIREMENTS 01000

1. The General Conditions of the Contract for Construction of A.I.A. Document A201, latest edition, forms part of this contract as if herein bound.
2. Satisfy all applicable local codes and ordinances. Reference the cover sheet for list of codes.
3. Contractor to pay for Construction Permit Fees, Excise Tax, Tap Fees, Ect. as applicable to Municipality and Utility Companies.

PRODUCTS

1. Where a specific manufacturer's product is named including make or model number or other designation, it has been selected to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics of the product. Unless otherwise indicated, provided the named product or a product that is equal to or exceeds the specified product.
2. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
3. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
4. All products, and materials used in conjuction with, are to be installed in strict conformance with manufacturers instruction.

SPECIAL CONDITIONS

1. General Contractor shall provide all water, light, and power necessary during construction until the completion of the building. All extensions, controls, and equipment beyond the points of temporary service shall be provided under the work of the respective Division requiring the same.
2. The General Contractor shall do all final cleaning of the building construction areas and wash windows.

DIVISION 2 - SITE WORK

SITE WORK / GENERAL

1. All sitework shall be as indicated on the Civil drawings and in the civil General Notes.
2. All sanitary sewer work, storm water disposal, and street work shall be accomplished in accordance with the City of Lees Summit, MO standards and ordinances.
3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, freezing temperatures or frost, and other hazards created by earthwork operations. Provide protective insulating materials as necessary and remove all frost from beneath foundations and footings prior to placing concrete.
4. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
5. Materials to be removed shall be considered to be earth. If rock is encountered, it shall be removed as an extra on a unit cost basis.
6. Remove waste material, including trash, and debris, and legally dispose of it off Owner's property.
7. All site preparation, fill, foundation subgrades, floor slab and pavement subgrades shall be installed per recommendations of The Geotechnical Report prepared for this site.

LANDSCAPING, SEEDING, SOD

1. Landscaping, seeding, and sod shall be as indicated on the Landscape Drawings, General Notes and Specifications.

PAVEMENTS

1. All pavements shall be as indicated on the Civil drawings and in the civil General Notes. All pavements shall be installed per recommendations of The Geotechnical Report prepared for this site.
2. Sidewalks areas shall be minimum 4" thick concrete, reinforced with 6 x 6 W1.4XW1.4 mesh over 4" rock. Walks adjacent to building shall be tied to building footings with #4 bars 18" o.c.

DIVISION 3 - CONCRETE

CONCRETE WORK

1. Provide footings, foundation walls, formwork, concrete floors, stoops, sidewalks, curbs, retaining walls, piers, reinforcement and all other concrete work required.
2. Materials used in this work shall meet the criteria outlined in the Structural General Notes. Reference Structural General Notes for concrete mix requirements. Grade beams, footings and walls shall be as detailed on the structural drawings.
3. Forms should be wood or steel, plumb and sufficiently straight to prevent leakage. Brace to prevent displacement. Use removable form ties and fill holes flush after removal.
4. Floor slabs on grade shall be on 10mil poly vapor barrier over 4" drainage fill. Thickness and reinforcing shall be as indicated on the structural drawings.
5. Provide 2" thick rigid extruded polystyrene insulation board on inside faces of trench footings and extend 24" horizontal below the floor slab.

DIVISION 4 - MASONRY

DIVISION 5 - METALS

STRUCTURAL STEEL AND MISCELLANEOUS STEEL

1. Reinforcing steel shall be as indicated in the structural General Notes.
2. All structural steel shall be as indicated in the structural General Notes.
3. Fabrication and erection shall be in accordance with AISC Specification for Design Fabrication and Erection of Structural Steel Buildings.

NOT USED

4. All steel shall be cleaned of rust and scale and shall receive a shop coat of rust inhibitive paint. Exterior exposed steel at lintels, etc. to be painted to match brick color.
5. Provide holes, anchors, plates and other items as required. Coordinate detail dimensions with other contractors' work.
6. Connections shall be as shown on final shop drawings. In general use welded connections for shop work and high-strength bolts or welding for field connections as called for on the approved shop drawings.
7. Provide loose plates, lintels, sheets plates, inserts and anchorages as required for complete installation.

DIVISION 6 - WOODS AND PLASTIC

CARPENTRY

1. Material used in this work shall meet the criteria outlined in the structural General Notes.
2. Each piece of framing lumber shall be identified by the grademark of an approved inspection agency or association.
3. All wood sills and sleepers in contact with masonry or concrete, and wood the bottom of which is 24" or less from the finished floor slab shall be CCA treated. Between the concrete foundation and sill plate provide STYROFOAM brand Sill Seal foam gasket, a flexible polyethylene gasketing strip, in 5.5" x 50' rolls.
4. All rough carpentry items shall be installed in accordance with IBC and/or FHA requirements whichever is most restrictive.
5. ½" sheathing to be min 7/16" thick 24/16 span-rated APA rated exterior plywood.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

WEATHER BARRIER

1. Weather Barrier shall by Tyvek Commercial Building Wrap as manufactured by Dupont. Secure to substrate and tape all seams per manufacturer's instructions. Seam tape to be compatible with barrier.
2. Window sealing tape shall be as indicated on drawings. Install at all windows, doors, and penetrations in exterior walls install per manufacturer's instructions.

SINGLE PLY ROOFING

1. The design for Single Ply roofing system is based on Carlisle's Sure-Weld TPO Specification. TPO roof Membrane to be installed using Carlisle's Sure-Weld MECHANICALLY FASTENED systems and installation methods. Install roofing and materials used in conjunction with roofing in strict conformance with roofing manufacturer's instructions in order to achieve manufacturers 20 year warranty. Subject to compliance with requirements, provide the named product or an approved equal.
2. Insulation shall be Carlisle HP-H Polyiso. Insulation shall be installed in two layers with joints staggered. Gaps greater than 1/4" are not acceptable. Thickness is to be as required to achieve an R-25.
3. Crickets shall be tapered Carlisle HP-H Polyiso. Slope to be ¼" per 12" min.
4. Adhesive shall be Carlisle Sure-Weld Bonding Adhesive
5. Cover Board shall be installed under all roof membrane and shall be Dens Deck Cover Board. Cover board shall be ½" thick over flat roofs. Provide and install ½" thick Cover Board on back side vertical surface of parapets.
6. Membrane sheet shall be Carlisle Sure-Weld TPO Reinforced Membrane, 60mils thick and white color.
7. Flashings shall be premolded accessories as supplied by Carlisle including but not limited to inside corners, outside corners, curb wrap corners, pipe wraps, split pipe seals, TPO Square Tubing Wraps, and molded sealant pockets. Where the use of premolded or pre-fabricated accessories is not feasible Sure-Weld flashing may be used.
8. Walkway protection shall be Sure-Weld Heat Weldable Walkway. Walkways are to be 34" wide, nominal 180 mils thick, white, with safety yellow welding tabs along both edges.

THERMAL INSULATION

1. Where insulating materials listed below will not be coverved with gypsum board substitute specified insulation w/ product of same thickness and R-value and similar facing, but such shall have a flame spread rating of 25 or less and a smoke developed rating of 50 or less when tested in accordance with ASTM E84 unless more stringent requirements are listed for a specific product.

2. Insulation Schedule
   - 2.1. First floor exterior walls: 6¼" - R19 batts of fiberglass with foil skrim kraft (FSK) vapor barrier - Certainteed CertaPro Thermal Foil Faced Batts. At contractors option 6¼" - R19 kraft faced insulation may be used ONLY if it is covered by minimum of one layer of gypsum board.
   - 2.2. Between roof trussed above bearings plate: 6¼" - R19 batts of fiberglass with foil skrim kraft (FSK) vapor barrier - Certainteed CertaPro Thermal Foil Faced Batts.
   - 2.3. See single ply roofing membrane specification for insulation at low sloped roofs (¼" per ft)
   - 2.4. Gaps and voids around door and window areas: Minimal expanding foam insulation shall be Dow Chemical Great Stuff. It is to be Tack free in 20 minutes and with full cure in 8 hours at room temperature and 50% relative humidity. It is to be paintable and stainable.
   - 2.5. Interior non-loadbearing walls: Unfaced Fiberglass Batts - Certainteed CertaPRO AcoustaTherm Batts

SHEET METAL COMPONENTS

1. Prefinished Sheet: Aluminum-Zinc Alloy-Coated Steel Sheet ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); structural quality and prepainted by the coil-coating process to comply with ASTM A 755/A 755M. Apply the following coil coating: High-Performance Organic Finish - Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

2. Schedule:
   - 2.1. MTL-1 Prefinished Cap, Faschia, and Miscellaneous Flashing: Form from 24ga Prefinished Sheet (unless noted otherwise) as detailed on the drawings.
   - 2.2. MTL-2 Flush concealed fastner metal wall panel - Pac-Clad 12"w x 1"dp flush panels. Form from 24ga Prefinished Sheet. To be formed on precision roll-foring equipment that includes levelers.
   - 2.3. MTL-3 Conceled fastener architectural metal panel - Elevate (formerly firestone) Delta CFP-12 (50%), CFP-12B (25%), and CFP-12T (25%) installed in a random manner to provided variegated spacing. Form from 22ga Prefinished Sheet. Provide metal end closures. Install with CFP-UNA 25 hanger clips

3. Anchor work in place with noncorrosive fasteners, adhesives, setting compounds, tapes and other materials and devices as recommended by manufacturer of each material or system. Provide for thermal expansion and building movements. Comply with recommendations of "Architectural Sheet Metal Manual" by SMACNA

SEALANTS

1. Schedule (Referece typical details on sheet A10)
   - 4 - Seal moving joints in metal work with elastomeric sealants. Water-tight / weatherproof performance of flashing and sheet metal work is required.
   - 51 - Joints at Stone Joints: Sonneborn, Sonolastic NP2, color to match Stone.
   - 52 - See aluminum storefront specification section.
   - 53 - Joints abutting Stone: Sonneborn, Sonolastic NP2, color to coordinate with stone.
   - 54 - Joints abutting Stucco: Sonneborn, Sonolastic 150 VLM, color to match stucco.
   - C1 - Interior joints in wet areas: GE Silicones, Sanitary SCS1700 Silicone Sealnt
   - C2 - Interior storefront to drywall and hollow metal to drywall: Pecora, AC-20 +Silicone

2. Joints and spaces to be caulked shall be clean, dry and free of dust, loose mortar or other foreign materials. After joints have been filled, they shall be neatly tooled to eliminate air pockets or voids and to provide a smooth, neat appearing surface. Compressible Filler is required for back-up of all joints and shall be polyethylene foam rod, Pecora Foam No. 88, or approved equal.

STATE OF MISSOURI
KENNETH J. KLEFFNER
2010038502
REGISTERED ARCHITECT
08-11-2023

GUY GRONBERG ARCHITECTS, P.C.
119 SE 3rd St.
Lee's Summit, MO 64063
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DOUGLAS | CORNER
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

DATE: 08-11-2023
PROJECT# 23012

A7

DIVISION 8 - DOORS AND WINDOWS

EXTERIOR ALUMINUM FRAMES, DOORS, AND WINDOWS

1. Aluminum Storefront and Windows to be Efco Corporation Series 403T 2"x4½" thermal storefront framing. Provide thermal sills and applied muntins as indicated on the drawings.
2. Aluminum doors to be Efco Corporation Series D500 Wide Stile 1¾" thick Standard aluminum swing entrance doors. Bottom Rail of door to be minimum of 10" high and provide matching intermediate rail at exit device hardware mounting hieght.
3. Minimum thickness of aluminum shall be 1/8". Slots shall receive thickness of glazing indicated on drawings.
4. Provide aluminum-framed systems, including anchorage, capable of withstanding without failure, load criteria outlined in the Structural General Notes.
5. Comply with manufacturer's instructions and recommendations for installation. Set units plumb and level, accurately aligned and securely anchored.
6. Head, sill, and intermediate mullion break metal flashings shall be formed from .032" aluminum sheet finished to match aluminum finish. Sealant (S2) shall be Sonneborn, Sonolastic NP2, with color to match aluminum finish. Sealants of storefronts/windows and associated flashings shall be done by aluminum storefront subcontractor or under his control.

STEEL FRAMES AND DOORS 08110

1. Drywall interior frames shall be manufactured from cold-rolled 16 gauge steel conforming to ASTM A366 or A620 & A569. Frames shall be knock-down, double return back bend (to prevent cutting into wall) flush hairline miter at the corner of the head and jamb, and the corner reinforced with a concealed clip. Each jamb is to have one compression anchor to securely hold the frame between the studs and maintain proper alignment.
2. Welded exterior frames are to be fabricated of either cold-rolled steel conforming to ASTM ASTM A366 or A620 & A569 at interior locations or hot-dipped galvanized steel conforming to ASTM A924 and A653 at exterior locations both of 16 gauge material. Fabricate frames with mitered or coped and continuously welded corners and seamless face joints. Provide welded frames with temporary spreader bars.
3. All Frames and Doors are to be thoroughly degreased and cleaned of all imperfections and provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is to be a preparatory base for necessary finish painting.
4. Frame Hardware Provisions: Frames are to be mortised, reinforced and drilled and tapped for all mortise finish hardware. Frames are to be reinforced only for surface mounted hardware, with drilling and tapping to be done in the field by the installation contractor. Steel plates and mortising boxes are to be welded to all hinge and lock reinforcement. Frames are handed. Hinge jambs are to be mortised for hinges with 7 gage steel hinge reinforcement welded in place and drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is to be prepared for 4-7/8" universal strike in accordance with ANSI A 115.1&2. Additional hardware reinforcement (e.g. closer/holder as indicated by hardware schedule) is to be 12 gage minimum steel welded in place. Three door mutes are to be provided per strike jamb and two for double swing heads.
5. Where fire rated openings are scheduled, provide fire rated frames and doors for the assembly with ratings as scheduled or noted. Frames and Doors shall have factory applied Underwriter Laboratories, Inc. metal label permanently affixed, identifying fire rating classification and time. Where required to achieve rating, due to size of openings, gauge of fire rated doors and frames shall be increased.
6. Exterior Steel doors are to be full-flush style with face sheets of 16ga hot-dipped galvanized steel conforming to ASTM A924 and A653. They are to have mechanically interlocked, hemmed, hairline seams on vertical edges and have no visible seams on faces (S.D.I. Design 1). Face sheets are to be totally supported by a foamed-in-place polyurethane core. The core is to fill the entire door cavity and be chemically bonded to all interior surfaces. Density of foam to exceed 1.8 pcf and it have a minimum crush strength of 3600 psf. The top and bottom door edges are to be closed with 16 gage steel channels welded in place.
7. Door Hardware Provisions: Hinge preparations are handed. Hinge edges are to be mortised for hinges with 7 gage steel hinge reinforcements welded inside the door edge and drilled and tapped for fasteners in accordance with ANSI A156.7. The lock edge is to have a standard bevel (1:16) and be prepared for locks in accordance with hardware schedule. Additional hardware reinforcement (e.g. closer/pulls as indicated by hardware schedule) is to be 12 gage steel channel.

DIVISION 8 - DOORS AND WINDOWS

GLASS AND GLAZING

1. 1" insulated tinted, low-E glass: Each pane shall be 1/4" thick plate or float glass. Units shall be dual-sealed silicone units. All units to have low-e coating per manufacturers standard. Where indicated also provide light bronze tint per manufacturers standard.
2. Clear tempered safety glass shall be prime glass type, which has been treated to strengthen glass in bending to not less than 4.5 times annealed strength.
3. Except as otherwise indicated, comply with glass manufacturer's instructions, glazing materials manufacturer's instructions, and "Glazing Manual" by FGMA and other technical publications of recognized authorities in the industry. Install each piece to achieve watertight and airtight performance, and to minimize breakage.
4. Provide glazing sealants, compounds, tapes and gaskets as indicated and required, making specific product selections in compliance with manufacturer's recommendations. Coordinate materials for compatibility, and do not use solvent-release materials for glazing laminate glass, sealant-edged insulated glass, or glazing plastics.

FINISH HARDWARE 08710

1. Provide finish hardware for all doors in project. See Door Hardware Schedule on drawings for specific information. The Contractor shall verify all keying requirements with owner prior to installation. Finish to be 26D (confirm w/ owner.) Hardware mounting heights by the door and hardware institute "Recommended Locations for Builders Hardware". Comply with all ADA requirements for hardware.

DIVISION 9 - FINISHES

CEMENTITIOUS STUCCO SYSTEMS

1. Cementitious Stucco System is to be Sto Powerwall as manufactured by Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120. Atlanta, GA 30331. Install products below per manufactures writtin installation instructions and specification "Sto Guide Specification 5504 StoPowerwall with Metal Plaster Base on Concrete, Concrete Masonry (CMU), and Frame Wall Construction"
2. Lath shall be minimum paper backed 2.5 lb./yd2 (1.4 kg/m2) self furred galvanized steel diamond mesh metal lath in compliance with ASTM C 847.
3. Mechanical Fasteners: Non-corroding fasteners in compliance with AISI S200 2007 and ASTM C 1513, minimum 11 gauge, 7/16 inch diameter head galvanized roofing nails with minimum ¾ inch (19mm) penetration into studs or minimum #8 Type S wafer head fully threaded corrosion resistant screws with minimum ¾ inch (19 mm) penetration into studs.
4. Provide Drip screed, casing bead, corner lath, expansion and control joint accessories. All accessories shall meet the requirements of ASTM C 1063 and its referenced documents. Accessories shall be either PVC plastic (ASTM D 1784, cell classification 13244C), Zinc (ASTM B 69), or galvanized metal (ASTM A 653 with G60 coating.) All accessories shall have perforated or expanded flanges and shall be designed with grounds for the specified thickness of stucco.
5. Stucco shall be 108 StoPowerwall Scratch & Brown portland cement-based stucco concentrate in compliance with ASTM C 926 factory proportioned, fiber reinforced portland cement based stucco for trowel or pump application, field mixed with graded sand (ASTM C 897) and potable water.
6. Application of Scratch Coat Stucco: Apply scratch coat in accordance with PCA Plaster (Stucco) Manual. Apply scratch coat to nominal thickness of 1/2 inch over metal lath surfaces. If weather is hot or surface is dry, dampen previous coat before applying mortar and thin stone veneer. If scratch coat is done in advance, use notch trowel to create texture for better bond. Smooth surface is not acceptable for bond.
7. Application of Brown Coat Stucco: Apply Brown coat as soon as the first coat is firm enough to receive the second coat without damage. Alternatively, moist cure the first coat up to 48 hours and dampen the scratched surface with water immediately before applying the second coat. Apply the second coat with sufficient pressure to ensure intimate contact with the first coat and as needed to bring the stucco to a uniform thickness that matches the grounds of the accessories. Use a rod or straight edge to bring the surface to a true, even plane. Fill depressions in plane with stucco. Final combined thickness of scratch and brown coats shall be uniform throughout the wall area and shall be 3/4 inch.
8. Finish coat shall be Sto Powerflex with texture as selected by owner.

DIVISION 9 - FINISHES

GYPSUM DRYWALL

1. Materials shall meet the following standards:
   1.1. Gypsum Wallboard - ASTM C36
   1.2. Nails - ASTM C380
   1.3. Metal Accessories - AGA A97.1
   1.4. Water Resistant Gypsum Backing Board - ASTM C1278 (paragraph 6.1)
2. Use gypsum board fasteners that are recommended by gypsum board manufacturer except as otherwise indicated. Furnish and install all trim accessories, adhesives and joint treatments per manufacturer's recommendations. All exposed gypsum board to be finished to Level 4 unless noted otherwise.
3. Schedule: (basis of design)
   3.1. Interior side of exterior walls: ½" Gold Bond XP Gypsum Board. Note: No gypsum board is required unless otherwise indicated. At owners option gypsum board may be installed. If installed Gypsum Board is to be installed from floor to underside of roof trusses.
   3.2. Interior partitions in mechanical equipment rooms: ⅝" Gold Bond XP Gypsum Board.

PAINT AND WOOD FINISHES

1. Paint shall be as manufactured by Sherwin Williams Paints or approved equal.
2. Surface Preparation for paint;
   2.1. General: Protect adjacent and underlying surfaces. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces of finishing. Correct defects and clean surfaces capable of affecting work of this section. Seal marks that may bleed through surface finishes with compatible sealer.
   2.2. Galvanized Steel: Remove surface contamination and oils and wash with solvent.
   2.3. Uncoated Ferrous Metals: Remove grease, mill scale weld splatter, dirt and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; wash with solvent. Apply treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned. Spot Prime paint after repairs.
   2.4. Shop primed Ferrous Metals: Sand and scrape to remove loose primer and rust. Feather edges to make patches inconspicuous. Clean with solvent. Prime bare steel surfaces.
   2.5. Other existing Surfaces: Remove loose, flaking, powdery, and peeling paints. Light sand painted surfaces. Fill holes, cracks, depressions and other imperfections with compatible patching compound; sand flush with surface. Remove oil, grease, and wax by scraping; solvent wash and thoroughly rinse. Remove rust by wire brushing to expose base metal.
3. Paint and wood finishes schedule;
   3.1. Paint all new and exisitng interior gypsum board walls in wet areas (Mechanical Rooms):
   1 ct. PrepRite 200 Latex Primer and
   2 cts. Waterbased Catalyzed Epoxy
   3.2. Interior gypsum board ceilings and soffits (unless noted otherwise):
   1 ct. PrepRite 200 Latex Primer
   2 cts. ProMar 200 Int. Latex Flat
   3.3. Interior and Exterior Ferrous metal (metal frames, exposed steel structure, misc. metal):
   Touch up factory prime coat with compatible Metal Primer or
   1 ct. Sprayed All Surface Enamel oil Primer
   2 cts. Sprayed A-100 Exterior Latex Satin.

DIVISION 10 - SPECIALTIES

FIRE EXTINGUISHER

1. Provide THREE Fire extinguishers. Fire extinguishers shall be Cosmic 5E (2A,10B,C) by J.L Industries or approved equal. Cabinets to be Ambassador by J.L Industries or approved equal, Not Fire-Rated, Tub - 10 1/2 x 24 x 5 1/2 inches. Trim Material - Steel, white epoxy primer finish, Trim Style Semi recessed 3" rolled edge. Door Style - Vertical Duo Panel with pull handle, Door Glazing - Clear Safety Glass, with Die Cut Letters - Vertical Red Reverse.

STATE OF MISSOURI
KENNETH J. KLEFFNER
NUMBER A-2010038825
REGISTERED ARCHITECT
08-11-2023

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REV#	DATE	DESCRIPTION

DATE: 08-11-2023
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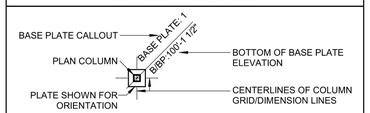
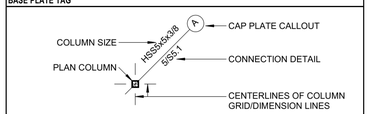
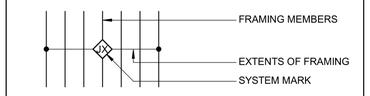
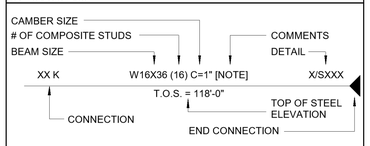
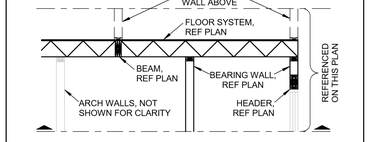
A8

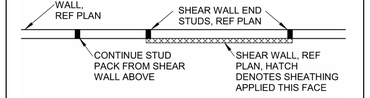


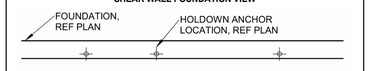


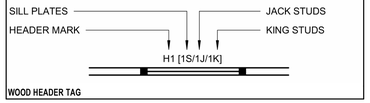












NOTES - STEEL

1. ALL STRUCTURAL STEEL TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE GOVERNING EDITION OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

2. BOLTED CONNECTIONS: ALL BOLTED CONNECTIONS SHALL BE SNUG-TIGHT IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM F3125 GRADE A325 OR A490 BOLTS" PUBLISHED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.

3. WELDED CONNECTIONS: ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING SOCIETY CODE" (AWS D1.1) PUBLISHED BY THE AMERICAN WELDING SOCIETY. ELECTRODES FOR WELDING SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 3.1 OF AWS D1.1. ALL WELDING TO BE DONE BY QUALIFIED WELDERS CONFORMING TO THE AMERICAN WELDING SOCIETY STANDARDS.

4. SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT THE WRITTEN APPROVAL OF APEX ENGINEERS, INC.

5. CHANGES IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS, AND HOLES, SLOTS, CUTS, ETC. THROUGH ANY MEMBER, ARE NOT PERMITTED UNLESS THEY ARE DETAILED ON THE APPROVED SHOP DRAWINGS.

6. NO FINAL BOLTING OR WELDING SHALL BE MADE UNTIL AS MUCH OF THE STRUCTURE AS WILL BE STIFFENED THEREBY HAS BEEN PROPERLY ALIGNED.

7. FABRICATE ALL BEAMS WITH THE MILL CAMBER UP UNO.

8. ALL VISIBLE WELDED CONNECTIONS ON ARCHITECTURAL ELEMENTS TO BE GROUND SMOOTH. DO NOT REDUCE THROAT SIZE OF WELD.

9. THE FABRICATOR SHALL BE RESPONSIBLE FOR THE DESIGN AND PERFORMANCE OF ALL CONNECTIONS NOT FULLY DESIGNED OR DETAILED IN THE CONTRACT DOCUMENTS. FABRICATOR TO PROVIDE ENGINEERED STAMPED SHOP DRAWINGS AND CALCULATIONS FOR ALL CONNECTIONS THAT DO NOT COMPLY WITH AISC STEEL CONSTRUCTION MANUAL CHAPTER 10 SIMPLE SHEAR CONNECTIONS.

10. STEEL MEMBERS ON THE EXT OF THE BUILDING OR EXPOSED TO SOIL MUST BE, AT A MIN, PROPERLY PRIMED WITH RUST INHIBITING PRIMER AND PAINTED. STEEL MEMBERS COMPLETELY ENCLOSED IN BUILDING ENVELOPE DO NOT REQUIRE PRIMER OR PAINT, UNO. REF ARCHITECTURAL DOCUMENTS FOR ADDITIONAL REQUIREMENTS OF EXPOSED STEEL.

NOTES - ROUGH CARPENTRY

1. CONTRACTOR IS RESPONSIBLE TO ADEQUATELY SHORE AND BRACE ALL FLOOR AND ROOF FRAMING AND WALLS DURING CONSTRUCTION.

2. NAILING: SHALL BE PER FASTENING SCHEDULE OF THE INTERNATIONAL BUILDING CODE. FOR PREFABRICATED CONNECTORS USE ALL FASTENERS AS PRESCRIBED BY THE MANUFACTURER.

3. ALL POST AND JAMBS ARE TO BE BLOCKED SOLID WITH THE SAME NUMBER OF PIECES AS THE POST OR JAMB WITHIN THE FLOOR SPACE AND CONTINUOUS TO THE FOUNDATION LEVEL. BLOCKING IS TO ALIGN WITH POST OR JAMBS.

4. SPECIES AND GRADES SHOWN IN SCHEDULE ARE THE MINIMUM ACCEPTABLE. BETTER GRADES MAY BE SUBSTITUTED.

5. PRESSURE TREATED WOOD TO BE USED WHEN EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY.

6. WOOD STRUCTURAL PANELS TO BE APA RATED AND EXPOSURE 1. PANELS TO BE MANUFACTURED PER US DEPARTMENT OF COMMERCE PRODUCT STANDARDS PS1 OR PS2.

7. ANY FASTENERS OR CONNECTORS TO AND THROUGH TREATED WOOD SHALL BE FASTENED WITH ASTM A153 CLASS D HOT DIP GALVANIZED OR STAINLESS STEEL FASTENERS.

8. WOOD FRAMING WILL HAVE SHRINKAGE. THE CONTRACTOR SHALL COORDINATE REQUIREMENTS TO ACCOMMODATE SHRINKAGE WITH OTHER TRADES.

9. BORED HOLES FOR HORZ PLUMBING PIPING SHALL BE PROVIDED WITH FLEXIBLE JOINTS TO PERMIT MOVEMENT.

10. RIGID ELECTRICAL CONDUIT INSTALLED VERTICALLY SHALL BE PROVIDED WITH FLEXIBLE JOINTS TO PERMIT MOVEMENT.

11. ALL DIMENSIONAL LUMBER SHALL BE GRADE STAMPED WITH MOISTURE CONTENT NOT TO EXCEED 19%.

12. INCISED STRUCTURAL LUMBER NOT PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

13. DIMENSIONAL LUMBER SIZES SHOWN ON PLANS ARE NOMINAL DIMENSIONS. DRESSED SIZES PUBLISHED IN THE LATEST EDITION OF AMERICAN SOFTWOOD LUMBER PS20 SHALL BE ACCEPTED AS MINIMUM NET SIZES CONFORMING TO SUCH NOMINAL SIZES.

14. WOOD HEADERS SHALL HAVE A FULL 3" LENGTH OF BEARING AT EACH END UNO.

15. ALL BEAMS AND JOISTS NOT BEARING ON SUPPORTING MEMBERS SHALL BE FRAMED WITH PREFABRICATED METAL JOIST HANGERS FOR REQUIRED CAPACITY. ALL PREFABRICATED METAL HARDWARE IS BY SIMPSON STRONG-TIE COMPANY OR APPROVED EQUIVALENT. CONNECTIONS IN CONTACT WITH PRESSURE TREATED WOOD SHALL HAVE G185 GALVANIZED COATING PER ASTM A653 AND HOT DIPPED GALVANIZED FASTENERS PER ASTM A153. ALTERNATE CORROSION RESISTANT CONNECTIONS IN ACCORDANCE WITH IBC WILL BE CONSIDERED. PRIOR WRITTEN APPROVAL BY THE STRUCTURAL EOR IS REQUIRED.

16. WALL, FLOOR, AND ROOF SHEATHING NAILS SHALL HAVE FULL HEADS. CLIPPED NAILS ARE NOT ALLOWED IN THESE APPLICATIONS.

17. NAIL TYPE USED IN WALL, FLOOR, AND ROOF WSP SHEATHING SHALL BE COMMON OR GALVANIZED BOX NAILS. SINKER NAILS, COOLER NAILS, ETC ARE NOT PERMITTED IN THESE APPLICATIONS.

18. ALL SIDE LOADED LVL BEAMS TO BE FASTENED TOGETHER PER MFR REQUIREMENTS.

19. ALL MULTI-PLY BEAMS TO BE SUPPORTED BY STUD PACK WITH (1) ADDITIONAL STUD THAN BEAM PLIES.

NOTES - PREFAB WOOD TRUSSES

1. TRUSSES TO BE DESIGNED AND ERECTED IN CONFORMANCE WITH TRUSS PLATE INSTITUTE SPECIFICATIONS AND RECOMMENDATIONS AND IN ACCORDANCE WITH LOCAL BUILDING CODES.

2. TRUSSES TO BE BRACED PER MFR RECOMMENDATIONS DURING ERECTION.

3. TRUSSES SHALL BE LATERALLY SUPPORTED AT ALL PANEL POINTS.

4. TRUSS MFR TO DESIGN AND PROVIDE ALL TRUSS CONNECTIONS.

5. TRUSS MFR IS TO SUBMIT LAYOUT PLANS AND CALCULATIONS FOR ALL TRUSSES. THE CALCULATIONS ARE TO BEAR A LICENSED PROFESSIONAL ENGINEER'S SEAL IN THE STATE OF WHICH THE PROJECT IS LOCATED. CALCULATIONS ARE TO SHOW LOADINGS, SPACING, STRESSES, CONFIGURATION, CONNECTIONS, GRADE OF MATERIAL, CAMBER, AND DEFLECTIONS.

6. FLOOR AND ROOF TRUSSES NOTED AS A DRAG TRUSS (DT) SHALL BE DESIGNED TO TRANSFER OR CARRY AXIAL LOAD NOTED ON FRAMING PLANS ACTING ALONG TRUSS TOP CHORD AND SHALL BE RESISTED ALONG BOTTOM CHORD OVER LENGTH NOT GREATER THAN LENGTH OF SHEAR WALL NOTED ON PLANS (IF APPLICABLE). ALL PROVIDED LOADS ON PLANS ARE ULTIMATE LEVEL (UNFACTORED WIND LOAD, UNO ON PLAN).

7. TRUSSES SHALL NOT BE NOTCHED, DRILLED, CUT, OR ALTERED WITHOUT WRITTEN APPROVAL OF THE TRUSS MANUFACTURER'S ENGINEER. PROPOSED MODIFICATIONS SHALL BE REVIEWED BY THE STRUCTURAL EOR PRIOR TO MODIFICATION.

8. THE WOOD TRUSS MFR SHALL BE REGISTERED AND APPROVED PER IBC SECTION 1704.5.2 FOR FABRICATION WITHOUT SPECIAL INSPECTION.

9. FLAT ROOF TRUSSES SHALL BE DESIGNED FOR AN ADDITIONAL LOAD OF MIN (2) 200 LB POINT LOADS SPACED AT 6'-0" APART ANYWHERE ALONG THE TOP CHORD FOR MECH CONDENSORS. MECH CONDENSORS SHALL BE PLACED SUCH THAT THEY ARE SUPPORTED BY AT LEAST (2) ROOF TRUSSES.

NOTES - GENERAL

1. THESE DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.

2. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

3. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

4. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.

5. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.

6. FOUNDATION WALLS SHALL NOT BE BACKFILLED UNTIL LOWER AND UPPER SLABS ARE IN PLACE AND REACH FULL STRENGTH UNLESS ADEQUATE BRACING IS PROVIDED. USE ONLY HAND-OPERATED TOOLS FOR COMPACTION ADJACENT TO FOUNDATION WALLS AND FOOTINGS. FOOTINGS SHALL BE BACKFILLED EVENLY ON BOTH SIDES.

7. UNLESS OTHERWISE NOTED, FIREPROOFING METHODS AND MATERIALS FOR STRUCTURAL MEMBERS ARE NOT SHOWN ON STRUCTURAL DRAWINGS. REFERENCE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE PROOFING METHODS AND MATERIALS.

8. DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS SHOWN ON PLANS.

9. THE CONTRACTOR SHALL INFORM THE ARCHITECT/ENGINEER OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT/ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS HE HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT/ ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.

10. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT/ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERRORS OF DETAILING, FABRICATION AND INSTALLATION. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS IN THE FIELD NECESSARY TO VERIFY OR SUPPLEMENT DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS AND HE SHALL VERIFY THAT ALL DIMENSIONS SHOWN ON THE SHOP DRAWINGS ARE COORDINATED WITH THE DIMENSIONS AND REQUIREMENTS OF THE CONTRACT DRAWINGS. REVIEW OF THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLETING THE WORK SUCCESSFULLY IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

12. SUBMIT PRINTS OR ELECTRONIC COPIES OF EACH SHOP DRAWINGS. REPRODUCIBLE COPIES OF CONTRACT DOCUMENTS SHALL NOT BE USED AS SHOP DRAWINGS. SHOP DRAWINGS SHALL BE REVIEWED BY CONTRACTOR PRIOR TO SUBMISSION. CONTRACTOR STAMP SHOP DRAWINGS ACCEPTING RESPONSIBILITY FOR COORDINATION OF DIMENSIONS SHOWN IN THE CONTRACT DOCUMENTS, QUANTITIES AND COORDINATION WITH OTHER TRADES. DRAWINGS NOT BEARING CONTRACTOR'S STAMP MAY BE REJECTED AT THE DISCRETION OF THE ARCHITECT OR STRUCTURAL ENGINEER.

13. REVIEW AND RETURN OF SHOP DRAWINGS SHALL BE BASED ON A MINIMUM OF TEN (10) WORKING DAYS IN THE STRUCTURAL ENGINEER'S OFFICE FROM RECEIPT OF SUBMISSION TO RETURN TO THE NEXT PARTY FOR THEIR ACTION. SHOP DRAWINGS SHOULD BE SUBMITTED INCREMENTALLY AS APPROPRIATE PACKAGES ARE PREPARED TO EQUALIZE THE WORKLOAD FOR REVIEW OF THE DRAWINGS. SUBMISSION OF A LARGE VOLUME OF SHOP DRAWINGS AT ONE TIME MAY RESULT IN REVIEW TIMES WHICH WILL EXCEED THOSE NOTED ABOVE. DEFINITION OF A "LARGE VOLUME" OF SHOP DRAWINGS IS SUBJECT TO INTERPRETATION.

NOTES - SHALLOW FOUNDATIONS

1. CONTRACTOR SHALL BE FULLY FAMILIAR WITH ALL ASPECTS OF THE SOILS REPORT BEFORE BEGINNING CONSTRUCTION.

2. CONTRACTOR SHALL USE THE SOILS REPORT FOR SPECIFICATIONS AND DETAILS FOR PLACEMENT OF PERIMETER DRAINS, UNDER-SLAB DRAINS, AND ANY OTHER SOILS RELATED ITEMS.

3. CONTRACTOR SHALL REFER TO THE SOILS REPORT FOR ALL SOIL CONDITIONING REQUIREMENTS PRIOR TO PLACING BUILDING FOUNDATIONS.

4. ALL FOOTING EXCAVATIONS TO BE APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

5. ALL EXT AND PERIMETER FOOTINGS SHALL EXTEND BELOW FROST DEPTH, REF DESIGN INFORMATION FOR FROST DEPTH.

NOTES - CONCRETE

1. ALL CONCRETE CONSTRUCTION TO CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", THE GOVERNING EDITION OF THE ACI 318, AND ACI "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" ACI 301, UNO.

2. WATER REDUCING ADD MIXTURES ARE ALLOWED IN CONCRETE MIX DESIGNS.

3. SYNTHETIC MICRO-FIBERS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED IN THESE DRAWINGS.

4. UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFERS AT THE EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.

5. REF ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIP SLOTS, REGLETS, MASONRY, ANCHORS, BRICK LEDGE ELEVATIONS AND FOR MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC.

6. REF ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES. WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF ACI 301.

7. REF MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR DRAINS, SLEEVES, OUTLET BOXES, CONDUIT, ANCHORS, ETC.

8. CONTACT APEX ENGINEERS, INC. IF HOUSE KEEPING PADS OR INERTIA BASES ARE REQUIRED BEYOND WHAT IS SHOWN IN THE STRUCTURAL CONTRACT DOCUMENTS.

9. ALL REINFORCING STEEL TO BE DETAILED IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."

10. REINFORCING SHALL BE CONTINUOUS WHEREVER POSSIBLE. SPLICES AND LAPS TO CONFORM TO ACI 318. REFER TO CONCRETE REBAR SCHEDULE.

11. DOWELS IN FOOTING, WALLS, AND DRILLED PIERS MUST BE IN POSITION BEFORE PLACING CONCRETE WHENEVER POSSIBLE.

12. REF TYP FOUNDATION DETAILS FOR INFORMATION ON REINFORCING REQUIREMENTS AT WALL AND SLAB OPENINGS.

13. REF TYP FOUNDATION DETAILS FOR INFORMATION ON REINFORCING REQUIREMENTS AT CORNER AND TEE INTERSECTIONS.

14. PROVIDE VERT CONTROL JOINTS ON ALL POURED CONCRETE WALLS AND BASEMENT WALLS, EXCEPT FOUNDATION STEM WALLS LOCATED IN THE GROUND. SPACE JOINTS AT 3 x WALL HEIGHT FOR WALLS LESS THAN 10'-0" AND WALL HEIGHT FOR TALLER WALLS. PROVIDE ADDITIONAL JOINT WITHIN 10'-0" OF CORNERS.

15. OPENINGS IN SLAB OF 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REF ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS.

MATERIAL SPECIFICATIONS

CONCRETE & REINFORCING STEEL SPECIFICATIONS

MATERIAL	SPECIFICATION
REINFORCING BARS	ASTM A615, GRADE 60
WELDED REBAR	ASTM A706
WELDED WIRE FABRIC	ASTM A1064
STUD RAIL ASSEMBLIES	ASTM A1044
PORTLAND CEMENT	ASTM C 150
FLY ASH	ASTM C 618, 15% MAX
CONCRETE AGGREGATES	ASTM C 33, 3/4" MAX AGGREGATE SIZE
EPOXY - THREADED ROD ANCHORS	HILTI HIT-HY 200 V3 A OR SIMPSON SET 3G
EPOXY - REINFORCING BARS	HILTI HIT-HY 200 V3 R OR SIMPSON SET 3G
POWDER-ACTUATED FASTENERS	HILTI 0.157" DIA X-U OR SIMPSON 0.157" DIA PDPA
REBAR CONDITIONS	**MINIMUM CONCRETE COVER**
FORMED SURFACES EXPOSED TO GROUND OR WEATHER	2"
UNFORMED SURFACE IN CONTACT WITH GROUND	3"
WALLS AND SLABS NOT EXPOSED TO GROUND OR WEATHER	1"
INTERIOR BEAMS AND COLUMNS (TO TIES OR STIRRUPS)	1 1/2"

CONCRETE MIX DESIGNS

CONCRETE USE	WEIGHT	28 DAY f'c	CEMENT TYPE	MAX W/C	SLUMP (+/-1")	%AIR
FOOTINGS	NW	3500 psi	I/II	0.55	5"	6% MAX
INT. SLAB ON GRADE	NW	4000 psi	I/II	0.45	5"	3% MAX

CONCRETE SLAB SPECIFICATIONS

FLATNESS CRITERIA	SPECIFICATION
FLOOR FLATNESS, FF	SOV: 35 | MLV: 25
FLOOR LEVELNESS, FL	SOV: 24 | MLV: 17

STEEL MATERIAL SPECIFICATIONS

MATERIAL	SPECIFICATION
WIDE FLANGE SHAPES (W)	ASTM A992
CHANNELS (C), ANGLES (L)	ASTM A36
PLATES	ASTM A36
HOLLOW STRUCTURAL SHAPES (HSS)	ASTM A500, GRADE C
HEADED ANCHOR STUDS	AWS D1.1 TYPE B / ASTM A29
HIGH STRENGTH BOLTS	ASTM F3125, GRADE A325
ANCHOR BOLTS (HEX-HEAD UNO)	ASTM F1554 (55 KSI) "S1"
EPOXY ANCHOR RODS	ASTM A36
POWDER-ACTUATED FASTENERS	HILTI 0.157" DIA X-U OR SIMPSON 0.157" DIA PDPA
STEEL DECK, PLAIN STEEL	ASTM A1008, (33 KSI)
STEEL DECK, GALVANIZED	ASTM A653, (33 KSI)
NON-SHRINK GROUT, COLUMN BASES	5000 PSI (28 DAY STRENGTH)

WOOD MATERIAL SPECIFICATIONS

MATERIAL	SPECIFICATION
JOISTS, RAFTER, HEADERS, BEAMS	No. 2 DF/L
TREATED LUMBER	No. 2 SP
STUDS, BEARING WALL	REF PLAN / SCHEDULE
SILL AND TOP PLATES	REF PLAN / SCHEDULE
HEAVY TIMBERS	No. 1 DF/L
GLULAM BEAMS - SINGLE SPAN	DF/DF 24F-V4
GLULAM BEAMS - MULTI SPAN	DF/DF 24F-V8
GLULAM COLUMNS	DF COMB #2
LAMINATED VENEER LUMBER, LVL	Fb = 2600 psi, E = 2.0 x 10E6 psi
LAMINATED STRAND LUMBER, LSL	Fb = 1700 psi, E = 1.3 x 10E6 psi
PARALLEL STRAND LUMBER, PSL	Fb = 2500 psi, E = 1.8 x 10E6 psi
BOLTS AND THREADED RODS	ASTM A307 (MIN.)
POWDER-ACTUATED FASTENERS	SIMPSON 0.157" DIA PDPAWL

FRAMING NAIL SPECIFICATIONS

	COMMON NAIL		BOX NAIL	
SIZE	DIAMETER	LENGTH	DIAMETER	LENGTH
6d	0.113"	2"	0.099"	2"
8d	0.131"	2 1/2"	0.113"	2 1/2"
10d	0.148"	3"	0.128"	3"
16d	0.162"	3 1/2"	0.135"	3 1/2"
20d	0.192"	4"	0.148"	4"
40d	0.225"	5"	0.162"	5"

NOTES - DEFERRED SUBMITTALS

1. THE ARCHITECT OR ENGINEER OF RECORD SHALL LIST THE DEFERRED SUBMITTALS ON THE PLANS FOR REVIEW BY THE BUILDING OFFICIAL.

2. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN THE GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.

3. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

4. DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND THAT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD.

5. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL.

6. SUBMITTALS SHALL INCLUDE DETAILED DRAWINGS OF EACH MEMBER AND ITS CONNECTIONS ALONG WITH SUPPORTING CALCULATIONS PREPARED UNDER THE SUPERVISION, BEARING THE SEAL AND SIGNATURE, OF A LICENSED PROFESSIONAL ENGINEER IN THE PROJECT JURISDICTION.

7. CONTRACTOR SHALL SUBMIT STRUCTURAL DEFERRED SUBMITTAL FOR THE FOLLOWING:

- PREFABRICATED WOOD TRUSSES
- GUARDRAILS AND HANDRAILS
- STEEL FABRICATED STAIRS AND LADDERS

NOTES - SHOP DRAWING SUBMITTALS

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. SHOP DRAWING REVIEW IS INTENDED FOR VERIFICATION OF DESIGN CONCEPT CONVEYANCE AND GENERAL CONFORMANCE TO CONTRACT DOCUMENTS ONLY.

2. CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE CLOUDED BY MFR/FABRICATOR. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW, UNO.

3. SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS SHOWN INCORRECTLY OR OMITTED AND NOT FLAGGED BY THE ENGINEER DURING REVIEW ARE NOT TO BE CONSIDERED CHANGES TO THE CONTRACT DOCUMENTS.

4. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY. DESIGNED SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER.

5. SHOP DRAWINGS MUST BE ORIGINAL DOCUMENTS. REPRODUCTION OF ANY PORTION OF THE CONTRACT DOCUMENTS FOR USE IN SUBMITTALS IS NOT PERMITTED AND MAY RESULT IN REJECTION.

6. THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.

7. CONTRACTOR SHALL SUBMIT STRUCTURAL SHOP DRAWINGS FOR THE FOLLOWING:

- CONCRETE MIX DESIGN, MATERIALS, AND TEST REPORTS
- CONCRETE REINFORCING STEEL, HARDWARE, AND FASTENERS
- STRUCTURAL STEEL FRAMING
- ROUGH CARPENTRY HARDWARE, AND FASTENERS
- ENGINEERED WOOD FRAMING

PLAN LEGENDS

BASE PLATE TAG

COLUMN TAG

FRAMING SYSTEM TAG

SYMBOL	END CONNECTION
►—	MOMENT CONNECTION, REF DETAILS
—| |—	BEAM SPLICE, REF DETAILS
|—	EMBED PLATE, REF DETAILS

STEEL BEAM TAGS

SYMBOL	DESCRIPTION
⊏—	CONCEALED FLANGE HANGER, REF SCHEDULE
⊨—	JOIST HANGER, REF SCHEDULE
|—	JOIST BEARING LOCATION
■ (X)	STUD PACK: (X) = REQUIRED NUMBER OF STUDS (STUD PACKS MUST BE AT LEAST MIN WIDTH OF THE MEMBER IT IS SUPPORTING, UNO. POSTS SUPPORTING MULTI-PLY LVL BEAMS TO HAVE (1)...
⊠	POST ABOVE. FRAMER MUST ENSURE THAT POST BEARS ON BEAM BELOW OR IS CONTINUOUS DOWN TO THE FOUNDATION LEVEL.

WOOD SYMBOLS

FRAMING LEGEND

NOTES:

1. THE FRAMING IN THIS EXAMPLE IS FOR REFERENCE ONLY, ACTUAL FRAMING SITUATIONS AND CONSTRUCTION TYPE MAY VARY.

2. ARCH WALLS ABOVE, NOT SHOWN FOR CLARITY.

3. FRAMING PLANS ARE CUT BELOW FRAMING LOOKING UP, SIMILAR TO A REFLECTED CEILING PLAN.

SHEAR WALL PLAN VIEW

SHEAR WALL FOUNDATION VIEW

SHEAR WALL PLAN LEGENDS

WOOD HEADER TAG

SYMBOLS & ABBREVIATIONS

X SX.X	DETAIL ON SHEET SHEET NUMBER	DETAILS, SECTIONS, AND ELEVATIONS
T.O.W. = XXX' - XX" B.O.W. = XXX' - XX"	ELEVATION (TOP) ELEVATION (BOTTOM)	FOUNDATION WALLS AND LEDGES (SIM)
T.O.X. XXX' - XX"	ELEVATION MARK	LEVELS, SPOT ELEVATIONS & PLAN ELEVATIONS
X	REVISION MARK	SHEET REVISIONS

ABV	DEFINITION	ABV	DEFINITION
ARCH	ARCHITECT	LLV	LONG LEG VERTICAL
BO	BOTTOM OF	LONG	LONGITUDINAL
BOF	BOTTOM OF FOOTING	MECH	MECHANICAL
BOS	BOTTOM OF STEEL	MEP	MECH, ELECTRICAL, PLUMBING
BOT | [B]	BOTTOM	MFR	MANUFACTURER
BOW	BOTTOM OF WALL	NA	NOT APPLICABLE
BRG	BEARING	NS	NEAR SIDE
CTR | [C]	CENTER	NTS	NOT TO SCALE
CGS	CENTER OF GRAVITY STRAND	OC	ON CENTER
CIP	CAST-IN-PLACE	OPP	OPPOSITE
CJ	CONTRACTION/CONTROL JOINT	PAF	POWDER ACTUATED FASTENER
CL	CENTERLINE	PARL	PARALLEL
CLR	CLEAR	PERP	PERPENDICULAR
COL	COLUMN	PI	POST-INSTALLED
CONT	CONTINUOUS	PT	POST-TENSION
DIA	DIAMETER	RAD	RADIUS
DT	DRAG TRUSS	REF	REFERENCE
EA	EACH	RTU	ROOF TOP UNIT
EL	ELEVATION	SIM	SIMILAR
EOD	EDGE OF DECK	SOG	SLAB ON GRADE
EOR	ENGINEER OF RECORD	STD	STANDARD
EOS	EDGE OF STEEL	[T]	TOP
EQ	EQUAL	T&B	TOP AND BOTTOM
EW	EACH WAY	TO	TOP OF
[E]	EXISTING	TOC	TOP OF CONCRETE
EXT	EXTERIOR	TOD	TOP OF DECK
FS	FAR SIDE	TOF	TOP OF FOOTING
FRT	FIRE RETARDANT TREATED	TOL	TOP OF LEDGE
FV	FIELD VERIFY	TOM	TOP OF MASONRY
GA	GAUGE	TOS	TOP OF STEEL
GC	GENERAL CONTRACTOR	TOW	TOP OF WALL
GT	GIRDER TRUSS	TR	TREATED
HAS	HEADED ANCHOR STUD	TRANS	TRANSVERSE
HORZ	HORIZONTAL	TYP	TYPICAL
INT	INTERIOR	UNO	UNLESS NOTED OTHERWISE
ISO	ISOMETRIC	VERT	VERTICAL
LLH	LONG LEG HORIZONTAL	WP	WORK POINT

SHEET LIST - STRUCTURAL

SHEET NUMBER	SHEET NAME
S100	GENERAL NOTES AND SPECIFICATIONS
S110	SPECIAL INSPECTIONS
S120	SCHEDULES
S130	ROOF LOADING DIAGRAMS
S200	FOUNDATION PLAN
S202	FIRST FLOOR SHEAR WALL PLAN
S210	ROOF FRAMING PLAN
S500	TYPICAL FOUNDATION DETAILS
S501	FOUNDATION DETAILS
S510	TYPICAL STEEL DETAILS
S511	STEEL FRAMING DETAILS
S520	TYPICAL WOOD DETAILS
S521	TYPICAL WOOD DETAILS
S522	WOOD FRAMING DETAILS
S523	WOOD FRAMING DETAILS
S530	TYPICAL WOOD BRACED WALL DETAILS

DESIGN INFORMATION

BUILDING CODE:	
2018 INTERNATIONAL BUILDING CODE AS ADOPTED AND/OR AMENDED BY LOCAL BUILDING CODES	
SOILS INFORMATION:	
SOILS ENGINEER: GEOTECHNOLOGY, INC	
REPORT NO.	J032145.01
REPORT DATE	05/22/2018
FROST DEPTH	36"
MAXIMUM ISOLATED PAD BEARING PRESSURE	2000 psf
MAXIMUM CONTINUOUS FOOTING PRESSURE	1500 psf
MINIMUM PAD FOOTING DIMENSION	2' - 0"
MINIMUM CONTINUOUS FOOTING WIDTH	1' - 6"
WIND DESIGN DATA:	**Main Building**
OCCUPANCY CATEGORY	II
ULTIMATE WIND SPEED (3 SECOND GUST), V	109 mph
WIND EXPOSURE CATEGORY	B
VELOCITY PRESSURE, q_z	14.9 psf
INTERNAL PRESSURE COEFFICIENT, GC_{pi}	+/-0.18
WIND DESIGN COMPONENTS & CLADDING DATA:	**Main Building**
EDGE REGION, a	5' - 0"

WALL ZONES	**10 SF**	**20 SF**	**50 SF**	**100 SF**	**200 SF**
4 & 5	20 psf	19 psf	18 psf	17 psf	16 psf
4	-21 psf	-20 psf	-19 psf	-18 psf	-17 psf
5	-26 psf	-24 psf	-22 psf	-20 psf	-19 psf
ROOF ZONES	**10 SF**	**20 SF**	**50 SF**	**100 SF**	**200 SF**
1' & 1	16 psf	16 psf	16 psf	16 psf	16 psf
2 & 3	20 psf	19 psf	18 psf	17 psf	16 psf
1'	-20 psf	-20 psf	-20 psf	-20 psf	-17 psf
1	-34 psf	-32 psf	-29 psf	-27 psf	-24 psf
2	-45 psf	-42 psf	-38 psf	-35 psf	-32 psf
3	-45 psf	-42 psf	-38 psf	-35 psf	-32 psf
1' & 1 OH	-31 psf	-30 psf	-30 psf	-29 psf	-24 psf
2 OH	-42 psf	-38 psf	-33 psf	-29 psf	-25 psf
3 OH	-58 psf	-51 psf	-42 psf	-36 psf	-29 psf

SEISMIC DESIGN SITE DATA:	
SPECTRAL RESPONSE COEFFICIENTS	$S_S = 0.099$ $S_1 = 0.068$
SITE CLASS (PER SOILS REPORT)	C
DESIGN SPECTRAL RESPONSE ACCELERATIONS	$S_{DS} = 0.086$ $S_{D1} = 0.068$
SEISMIC ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
SEISMIC DESIGN BUILDING DATA:	**Main Building**
LATERAL SYSTEM: A. BEARING WALL SYSTEMS, No. 15. LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE OR STEEL SHEETS	
RESPONSE MODIFICATION, R	6.50
DEF. AMPLIFICATION FACTOR, C_d	4.00
OVERSTRENGTH FACTOR, Ω	3.00
SEISMIC RESPONSE COEF., C_s	0.013
SEISMIC BASE SHEAR, V	3.7 kip
SEISMIC DESIGN CATEGORY	B
SEISMIC RISK CATEGORY	II
ROOF SNOW LOAD DATA:	Main Building
GROUND SNOW LOAD, P_g	20 psf
SNOW LOAD IMPORTANCE FACTOR, I_s	1.00
SNOW EXPOSURE FACTOR, C_e	1.00
THERMAL FACTOR, C_t	1.10
FLAT ROOF SNOW LOAD, P_f	20 psf
SLOPE FACTOR, C_s	1.00
SLOPED ROOF SNOW LOAD, P_s	20 psf
MINIMUM SNOW LOAD, P_m	20 psf

FIGURE 7-8 Configuration of Snow Drifts on Lower Roofs.

NOTE: DESIGNER MUST CONSIDER ALL SNOW LOAD CASES PER ASCE 7

	DRIFT DATA	
COMMENTS	LOAD, Pd	WIDTH, W
HIGH PARAPET	47.8 psf	11' - 6"
LOW PARAPET	29.1 psf	7' - 0"

GRAVITY LOAD DATA:

	LOADS	
OCCUPANCY OR USE	UNIFORM	POINT
ROOF DEAD LOADS		
• TYPICAL ROOF	22 psf	N/A
ROOF LIVE LOADS		
• ROOF AREAS NOT INTENDED FOR OCCUPANCY	20 psf	
• ROOF AREAS USED FOR ASSEMBLY PURPOSES	100 psf	
• ROOF AREAS USED FOR ASSEMBLY PURPOSES	100 psf	
• ROOF AREAS USED FOR OCCUPANTS	SAME AS OCCUPANCY SERVED	
• ROOF AREAS USED FOR OTHER OCCUPANCIES	SAME AS OCCUPANCY SERVED	
• ROOF FABRIC AWNINGS AND CANOPIES SUPPORTED BY A SKELETON STRUCTURE	5 psf	
• ROOF SCREEN ENCLOSURE SUPPORT FRAME	5 BASED ON TRIBUTARY AREA OF ROOF SUPPORTED BY THE FRAME MEMBER	200 lbs
• ROOF: ALL OTHER CONSTRUCTION	20 psf	
• ROOF: ORDINARY FLAT, PITCHED, AND CURVED	20 psf	
• VEGETATIVE AND LANDSCAPED ROOFS	100 psf	

PRE-ENGINEERED TRUSS DESIGN REQUIREMENTS	
ROOF TRUSSES	
MINIMUM DEFLECTION CRITERIA, UNO	
TOTAL LOAD:	L/240
TRANSIENT LOAD:	L/360
INTEGRATED PARAPETS	
MINIMUM DEFLECTION CRITERIA BASED ON WALL FINISH	
BRICK	L/600
STUCCO	L/360
OTHER BRITTLE	L/240
OTHER FLEXIBLE	L/120
PRE-ENGINEERED TRUSS DESIGN LOADING NOTES	
1. REFERENCE LOAD TABLES AND LOADING PLANS FOR TRUSS LOAD INFORMATION.	

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NUMBER
PE-2023000069
2023.08.11

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REV#	DATE	DESCRIPTION

DATE: 08-11-2023
PROJECT# 23012

S100

AISC TABLE N5.4-1

INSPECTION TASKS PRIOR TO WELDING	QC	QA
1. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
3. MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
4. WELDER IDENTIFICATION SYSTEM[1]	O	O
5. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O	O
6. CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
7. FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O	O
8. CHECK WELDING EQUIPMENT	O	-

[1] THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE

AISC TABLE N5.4-2

INSPECTION TASKS DURING WELDING	QC	QA
1. USE OF QUALIFIED WELDERS	O	O
2. CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	O	O
3. NO WELDING OVER CRACKED TACK WELDS	O	O
4. ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O	O
5. WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) • PROPER POSITION (F, V, H, OH)	O	O
6. WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O	O

AISC TABLE N5.4-3

INSPECTION TASKS AFTER WELDING	QC	QA
1. WELDS CLEANED	O	O
2. SIZE, LENGTH AND LOCATION OF WELDS	P	P
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P	P
4. ARC STRIKES	P	P
5. K-AREA[1]	P	P
6. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P
7. REPAIR ACTIVITIES	P	P
8. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P

[1] WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75 MM) OF THE WELD

AISC TABLE N5.6-1

INSPECTION TASKS PRIOR TO BOLTING	QC	QA
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O

AISC TABLE N5.6-2

INSPECTION TASKS DURING BOLTING	QC	QA
1. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O

AISC TABLE N5.6-3

INSPECTION TASKS AFTER BOLTING	QC	QA
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P

STATEMENT OF SPECIAL INSPECTION

IBC CODE REFERENCE	CONSTRUCTION TYPE	FREQUENCY CONT.	FREQUENCY PER.
1705.2	**STEEL CONSTRUCTION**		
1705.2.1	**STRUCTURAL STEEL**		
1. SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360. **(REFER TO AISC CHARTS ON THIS SHEET)**			
1705.3	**REINFORCED CONCRETE**		
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.			X
2. INSPECTION OF REINFORCING STEEL WELDING:			
A. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.			X
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"			X
C. INSPECT ALL OTHER WELDS		X	
3. INSPECTION OF ANCHORS CAST IN CONCRETE:			X
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.			
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.		X	
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A			X
5. VERIFYING USE OF REQUIRED MIX DESIGN			X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.		X	
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.		X	
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.			X
9. INSPECTION OF PRESTRESSED CONCRETE:			
A. APPLICATION OF PRESTRESSING FORCES.		X	
B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.		X	
10. ERECTION OF PRECAST CONCRETE MEMBERS.			X
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORING.			X
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED			X
SPECIAL INSPECTION AGENCY TO PERFORM TESTS AT SEVEN (7) DAYS AND AT TWENTY EIGHT (28) DAYS. A STRENGTH TEST SHALL BE THE AVERAGE OF THE STRENGTHS OF AT LEAST TWO (2) 6"x12" CYLINDERS OR AT LEAST THREE (3) 4"x8" CYLINDERS MADE FROM THE SAME SAMPLE OF CONCRETE. HOLD ONE ADDITIONAL CYLINDER IN RESERVE UNTIL PROJECT IS COMPLETED. TESTING LABORATORY IS TO FURNISH ARCHITECT/ENGINEER WITH TEST RESULTS PROMPTLY.			
FREQUENCY OF TESTING IS TO BE IN ACCORDANCE WITH ACI 318:			
A. AT LEAST ONCE EACH DAY A GIVEN CLASS IS PLACED			
B. AT LEAST ONCE FOR EACH 150 CUBIC YDS OF EACH CLASS PLACED EACH DAY			
C. AT LEAST ONCE FOR EACH 5000 SQFT OF SLAB WALL OR SURFACE AREA PLACED EACH DAY.			
1705.5	**WOOD CONSTRUCTION**		
1. HIGH-LOAD DIAPHRAGMS:			
A. THE WOOD STRUCTURAL PANEL SHEATHING TO ASCERTAIN WHETHER IT IS OF THE GRADE AND THICKNESS SHOWN ON THE APPROVED BUILDING PLANS.			X
B. NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES.			X
C. NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS AGREES WITH THE APPROVED BUILDING PLANS.			X
2. SHEAR WALLS AND BEARING WALLS			
A. GRADE AND THICKNESS OF WOOD STRUCTURAL PANELS.			X
B. NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES.			X
C. NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE CONDITIONS.			X
D. VERIFY THE TYPE, CONNECTION, AND ANCHORAGE OF HOLDDOWNS.			X
E. PROPRIETARY COMPONENTS INSTALLED PER MANUFACTURER SPECIFICATIONS.			X
F. VERIFY BLOCKING INSTALLATION AT PANEL EDGES.			X
G. GRADE AND NOMINAL SIZE OF CHORD STUDS.			X
3. DIAPHRAGMS AND FLOOR FRAMING			
A. VERIFY THE SIZE AND SPACING BETWEEN BOLTS, LAG SCREWS, AND FRAMING ANCHORS.			X
B. VERIFY CONNECTION OF DIAPHRAGMS TO SHEAR WALLS.			X
C. DIAPHRAGM BLOCKING PLACEMENT AND INSTALLATION.			X
D. DRAG TRUSS AND DRAG STRUT PLACEMENT AND CONNECTIONS.			X
E. SPLICE CONNECTIONS, SHEAR TRANSFER CLIPS, AND TRANSITION CONNECTIONS BETWEEN FLOOR.			X
F. PROPRIETARY COMPONENTS INSTALLED PER MANUFACTURER SPECIFICATIONS.			X
4. GENERAL WOOD FRAMING			
A. VERIFY THE SIZE AND SPACING BETWEEN BOLTS, LAG SCREWS, AND FRAMING ANCHORS.			X
B. NAIL OR SCREW DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND SPACING FOR BUILT UP WOOD MEMBERS.			X
C. JAMB AND SILL FRAMING.			X
D. ATTACHMENT AT BEAM BEARING LOCATIONS.			X
E. PROPRIETARY COMPONENTS INSTALLED PER MANUFACTURER SPECIFICATIONS.			X
F. CUTTING, NOTCHING, AND HOLES COMPLY WITH PLAN SPECIFICATIONS. VERIFY SIZE, LOCATION, AND SHAPE DO NOT EXCEED LIMITS IN FRAMING DETAILS AND WOOD SHRINKAGE DIAGRAM RECOMMENDATIONS.			X
1705.6	**SOILS**		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.			X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.			X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.			X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.		X	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.			X

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2023.08.11
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REV#	DATE	DESCRIPTION

DATE: 08-11-2023

PROJECT# 23012

S110

SCHEDULE - SHEAR WALLS

NOTES:
1. WSP = WOOD STRUCTURAL PANEL PLYWOOD OR OSB.
2. NAIL SIZES GIVEN ARE FOR COMMON NAILS OR GALVANIZED (HOT-DIPPED OR TUMBLED) BOX NAILS. SINKER NAILS, COOLER NAILS, ETC. SHALL NOT BE USED FOR WSP SHEAR WALLS.
3. SHEAR WALL NAILS SHALL HAVE FULL HEADS; CLIPPED NAILS ARE NOT ALLOWED.
4. ALL NAILS SHALL BE DRIVEN SUCH THAT THE HEAD IS FLUSH WITH FACE OF SHEATHING. DO NOT OVERDRIVE NAILS.
5. SOLEPLATE NAILS SHALL BE INSTALLED SUCH THAT THE NAILS FULLY ENGAGE THE RIM BOARD BELOW (IF APPLICABLE). REF TYP DETAILS.
6. PROVIDE INTERMEDIATE NAILING (FIELD) AT 12" OC, TYP.
7. PROVIDE (2) TOTAL RIMBOARDS OR A LAYER OF BLOCKING IN ADDITION TO THE RIMBOARD WHERE SOLE PLATE NAILING REQUIRES 2 ROWS OF FASTENERS PER SCHEDULE.
8. SILL ANCHORS MAY BE CAST-IN-PLACE J-BOLTS WITH 8" EMBED OR SIMPSON TITEN HD SCREW ANCHORS WITH 6" EMBED. REF SCHEDULE FOR BOLT DIA. BOTH BOLT TYPES REQUIRE 0.229"x3"x3" PLATE WASHER WITH EDGE OF PLATE LOCATED WITHIN ½" OF SHEAR WALL SHEATHING.
9. SHEAR WALL CLIPS TO BE A35/LTP4, REF PLAN FOR NUMBER OF CLIPS PER SHEAR WALL, 48" OC MAX UNO.
10. AT WALLS DESIGNATED AS FORCE TRANSFER SHEAR WALLS, PROVIDE SIMPSON STRAP ABOVE AND BELOW ALL OPENINGS PER SHEAR WALL DETAIL.
11. END STUDS MUST CONTINUE DOWN TO FOUNDATION WALL UNLESS INTERRUPTED BY TRANSFER BEAM.
12. JACK STUDS FOR OPENINGS DO NOT COUNT TOWARDS THE REQUIRED NUMBER OF END STUDS IN A SHEAR WALL.
13. PROVIDE DOUBLE STUDS AND BLOCKING NAILED TOGETHER WITH (2) 16d NAILS AT 6" OC OR 3" NOMINAL STUDS AND BLOCKING AT THE FOLLOWING CONDITIONS:
    i. 2" OC EDGE NAIL SPACING
    ii. 10d NAILS AT 3" OC OR SMALLER EDGE NAIL SPACING.
    iii. DOUBLE SIDED SHEAR WALL WHERE PANEL JOINTS ALIGN TO THE SAME STUD.
14. HOLDOWNS AND STRAPS OCCUR AT THE BOT OF WALLS. HOLDOWNS AND STRAPS BETWEEN FLOORS ARE CONTROLLED BY THE WALL ABOVE.
15. HOLDOWN DEVICES SHALL BE INSTALLED PER MFR SPECIFICATIONS
16. REF SHEAR WALL DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

		SHEATHING			EDGE NAILS		SILL PLATE ATTACHMENT	
MARK	BLOCKED	TYPE	THICKNESS	PLACEMENT	SIZE	SPACING	NAILING	1/2" DIA ANCHOR BOLT SPACING
S2-B	YES	WSP-SHEATHING	15/32"	ONE-SIDE	10d	4"	16d AT 4" OC	16"
S3-B	YES	WSP-SHEATHING	15/32"	ONE-SIDE	10d	3"	16d AT 3" OC STAGGERED	12"

SCHEDULE - HEADERS

NOTES:
1. JAMB AND SILL STUDS TO MATCH TYPICAL WALL STUDS UNO.

MARK	HEADER	COMMENTS
H2-9.25	(2) 1¾"x9¼" LVL	
H2-10	(2) 2x10	
H2-11	(2) 1¾"x11⅞" LVL	
H3-10	(3) 2x10	

SCHEDULE - BEAMS

MARK	BEAM SIZE	COMMENTS
B1	C6X8.2	COORDINATE PLACEMENT WITH CANOPY ROD ATTACHMENT
B2	(1) 2x8+(1) 2x12	2x12 FORMING CANOPY CURB

SCHEDULE - JOISTS

MARK	JOISTS	SPACING	COMMENTS
J1	2x8	16"	

SCHEDULE - TRUSSES

MARK	TRUSSES	SPACING	COMMENTS
T1	ROOF TRUSS	24"	COORDINATE PLACEMENT WITH CANOPY ROD ATTACHMENT

SCHEDULE - ROOF SHEATHINGS

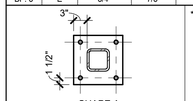
MARK	SHEATHING TYPE	SUPPORT ATTACHMENT [EDGE / FIELD]	BLOCKED
ROOF	5/8" (NOMINAL) APA RATED SHEATHING, EXPOSURE 1, 48/24 SPAN RATING	10d [6" OC / 12" OC]	No

SCHEDULE - BASE PLATES

NOTES:
1. PROVIDE 5/16" FILLET WELD AT COLUMN TO BASE PLATE CONNECTION.
2. CAST-IN PLACE ANCHORS TO BE HEX-HEAD ASTM F1554 (55 KSI) UNO.
3. POST INSTALLED EPOXY ANCHORS TO BE THREADED ROD INSTALLED IN EPOXY PER MATERIAL SPECIFICATIONS, UNO.
4. POST INSTALLED HILTI HUS-EZ ANCHORS TO BE INSTALLED PER MFR SPECIFICATIONS.
5. BASE PLATE WITH LESS THAN (4) ANCHORS REQUIRE COLUMNS BE DESIGNATED AS POSTS AND SHALL BE TEMPORARILY BRACED DURING ERECTION PER OSHA PART 1926. BY OTHERS. BRACING MAY BE REMOVED ONCE ATTACHMENTS TO MAIN STRUCTURE ARE COMPLETE.
6. MAX SIZES OF ANCHOR-ROD HOLES IN BASE PLATES SHALL FOLLOW TABLE 14-2 OF THE AISC MANUAL. AN ADEQUATE WASHER SHOULD BE PROVIDED FOR EA ANCHOR ROD.
7. PLATE WASHERS MUST BE WELDED TO THE BASE PLATE AT SHEAR TRANSFER CONDITIONS (I.E. MOMENT FRAME AND BRACED FRAME COLUMNS). PROVIDE 1/4" FILLET WELD ALL AROUND.

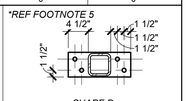
D = VARIES, COORDINATED WITH BEAM FLANGE WIDTH
bf = WIDTH OF BEAM FLANGE

TYPE	PLATE SHAPE	PLATE THICKNESS	BOLT DIAMETER	ANCHOR BOLT EMBED: CAST-IN-PLACE (HEX-HEAD)	ANCHOR BOLT EMBED: POST-INSTALLED / BOLT TYPE
BP: 1	A	1"	3/4"	8	8"
BP: 2	B	5/8"	1/2"	8	8"
BP: 3	E	3/4"	7/8"	8	8"

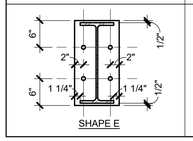


SHAPE A

*REF FOOTNOTE 5



SHAPE B

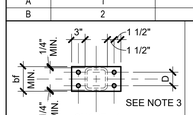


SHAPE E

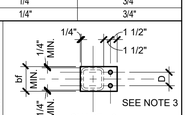
SCHEDULE - CAP PLATES

NOTES:
1. BOLT SIZE NOTE: FOR BEAMS WITH A FLANGE WIDTH LESS THAN 5", 5/8" BOLTS MAY BE USED FOR DETAILING TOLERANCES.
2. bf = WIDTH OF BEAM FLANGE.
3. D = VARIES, COORDINATE WITH BEAM FLANGE WIDTH.
4. W = JOIST GIRDER SEAT WIDTH PLUS 1" FOR FILLET WELD CONNECTION. VERIFY SEAT WIDTH WITH JOIST SUPPLIER PRIOR TO FABRICATION.
5. VERIFY BOLT PLACEMENT WITH JOIST SUPPLIER.

PLATE TYPE	SHAPE	PLATE THICKNESS	BOLT SIZE
A	1	1/4"	3/4"
B	2	1/4"	3/4"



SHAPE - 1



SHAPE - 2

SCHEDULE - CONTINUOUS FOOTINGS

MARK	WIDTH	DEPTH	LONG BARS	TRANS BARS
CF16	1' - 4"	36"	(4) #5 BARS [(2) AT T&B]	#3 TIES AT 18" OC

SCHEDULE - PAD FOOTINGS

MARK	LENGTH	WIDTH	DEPTH	REINFORCING
F42	3' - 6"	3' - 6"	36"	(10) #5 BARS EACH WAY [(5) AT T&B]
F54	4' - 6"	4' - 6"	12"	(6) #5 BARS EACH WAY
F54-F	4' - 6"	4' - 6"	36"	(12) #5 BARS EACH WAY [(6) AT T&B]

SCHEDULE - SLABS ON GRADE

NOTES:
1. PROVIDE CONTROL JOINTS (1/4 SLAB THICKNESS) SPACED AT 30xSLAB THICKNESS OC BOTH WAYS, NOT SHOWN FOR CLARITY.

MARK	SLAB THICKNESS	WEIGHT CLASS	SLAB REINFORCING	ADDITIONAL REQUIREMENTS
SG4	4"	NW	#3 AT 18" OC (C) EA WAY OR 6X6 W2.9XW2.9 WWF	15 MIL VAPOR BARRIER ON 4" OF 3/4" CLEAN, GRADED ROCK

SCHEDULE - WOOD WALLS

NOTES:
1. WALL SOLE PLATE ATTACHMENT, UNO: 1/2" DIA CAST-IN-PLACE ANCHORS WITH 7" EMBED AT 32" OC ATTACHMENT TO CONCRETE OR (2) ROWS OF 16d NAILS AT 16" OC STAGGERED WHEN FASTENING TO WOOD.
2. TYPICAL WALL SHEATHING, UNO: 15/32" APA RATED WSP, EXP. 1, 24/16 SPAN RATING. PANEL EDGES FASTENED WITH 8d NAILS AT 6" OC EDGE AND 12" OC IN THE FIELD.
3. REFERENCE SHEAR WALL SCHEDULE FOR ADDITIONAL NAILING REQUIREMENTS.
** = LATERAL CLIPS REQUIRED; PROVIDE SIMPSON A35 CLIP AT EACH STUD ABOVE HEADER, REFERENCE TYPICAL DETAILS FOR CLIP LOCATION.

MARK	MATERIAL	WALL STUDS	BLOCKING
DFL6	DF-L No. 2	2x6 AT 16"	AT SHEATHING PANEL EDGES (4'-0" OC MAX)
DFL6-2	DF-L No. 2	2x6 AT 16"	AT SHEATHING PANEL EDGES (4'-0" OC MAX)

SCHEDULE - WOOD HANGERS

NOTES:
1. ALL HANGERS ARE SIMPSON PRODUCTS UNO.
2. ALL EXTERIOR HANGERS TO BE ZMAX OR GALVANIZED.
3. INSTALL ALL HANGERS PER MANUFACTURERS RECOMMENDATIONS.
4. AT ROOF AND DECK LOCATIONS, USE FACEMOUT HANGERS UNO.
5. USE SCHEDULE UNO ON PLAN.
6. WHERE FACE-MOUNT HANGER HEADER/FACE FASTENER LENGTH IS GREATER THAN THICKNESS OF SUPPORT MEMBER, FASTENER MUST BE SUBSTITUTED RESPECTIVELY: 0.148" x 3" TO 0.148" x 2 1/2", 0.162" x 3 1/2" TO 0.162" x 2 1/2" PER SIMPSON MANUFACTURER REQUIREMENTS. EOR SHOULD BE NOTIFIED IF OTHER CONDITIONS EXISTS

BEAM	FACE MOUNT HANGER	TOP FLANGE HANGER	CONCEALED HANGER
2x12	LUS210	LB212AZ	N/A
2x4 Kickers	LUS4	LB24	N/A
(1) 2x8+(1) 2x12	LUS28	LB28	N/A
2x8	LUS28	LB28	N/A

SCHEDULE - WOOD FASTENING

IBC TABLE 2304.10.1

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION: EDGE	SPACING AND LOCATION: FIELD
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING[A]			
30. 3/8" - 1/2"	6d COMMON OR DEFORMED (2"x0.113") (SUBFLOOR AND WALL)	6"	12"
	8d COMMON OR DEFORMED (2-1/2"x0.131"x0.281" HEAD) (ROOF) OR RSRS-01 (2-3/8"x0.113") NAIL (ROOF)	6"[E]	12"[E]
	1-3/4" 16 GAGE STAPLE, 7/16" CROWN (SUBFLOOR AND WALL)	4"	8"
	2-3/8"x0.113"x0.266" HEAD NAIL (ROOF)	3"	3"
31. 19/32" - 3/4"	1-3/4" 16 GAGE STAPLE, 7/16" CROWN (ROOF)	3"	3"
	8d COMMON (2-1/2"x0.131"); OR 6d DEFORMED (2"x0.113") (SUBFLOOR AND WALL)	6"	12"
	8d COMMON OR DEFORMED (2-1/2"x0.131"x0.281" HEAD) (ROOF) OR RSRS-01 (2-3/8"x0.113") NAIL (ROOF)	6"[E]	6"[E]
	2-3/8"x0.113" NAIL; OR 2" 16 GAGE STAPLE, 7/16" CROWN	4"	8"
32. 7/8" - 1-1/4"	10d COMMON (3"x0.148"); OR 8d DEFORMED (2-1/2"x0.131"x0.281" HEAD)	6"	12"
OTHER EXTERIOR WALL SHEATHING			
33. 1/2" FIBERBOARD SHEATHING	1-1/2"x0.120" GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER)	3"	6"
34. 25/32" FIBERBOARD SHEATHING	1-3/4"x0.120" GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER)	3"	6"
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
35. 3/4" AND LESS	8d COMMON (2-1/2"x0.131"); OR 6d DEFORMED (2"x0.113")	6"	12"
36. 7/8" - 1"	8d COMMON (2-1/2"x0.131"); OR 6d DEFORMED (2"x0.113")	6"	12"
37. 1-1/8" - 1-1/4"	10d COMMON (3"x0.148"); OR 8d DEFORMED (2-1/2"x0.131")	6"	12"
PANEL SIDING TO FRAMING			
38. 1/2" OR LESS	6d CORROSION-RESISTANT SIDING (1-7/8"x0.106"); OR 6d CORROSION-RESISTANT CASING (2"x0.099")	6"	12"
39. 5/8"	8d CORROSION-RESISTANT SIDING (2-3/8"x0.128"); OR 8d CORROSION-RESISTANT CASING (2-1/2"x0.113")	6"	12"
INTERIOR PANELING			
40. 1/4"	4d CASING (1-1/2"x0.080"); OR 4d FINISH (1-1/2"x0.072")	6"	12"
41. 3/8"	6d CASING (2"x0.099"); OR 6d FINISH (PANEL SUPPORTS AT 24 INCHES)	6"	12"

NOTES:
A. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO IBC SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
B. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
C. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.
D. RSRS-01 IS A ROOF SHEATHING RING SHANK NAIL MEETING THE SPECIFICATIONS IN ASTM F1667.
E. TABULATED FASTENER REQUIREMENTS APPLY WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN 140 MPH. FOR WOOD STRUCTURAL PANEL ROOF SHEATHING ATTACHED TO GABLE-END ROOF FRAMING AND TO INTERMEDIATE SUPPORTS WITHIN 48 INCHES OF ROOF EDGES AND RIDGES, NAILS SHALL BE SPACED AT 4 INCHES ON CENTER WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH IN EXPOSURE B OR GREATER THAN 110 MPH IN EXPOSURE C. SPACING EXCEEDING 6 INCHES ON CENTER AT INTERMEDIATE SUPORTS SHALL BE PERMITTED WHERE THE FASTENING IS DESIGNED PER THE AWC NDS.
F. FASTENING IS ONLY PERMITTED WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN OR EQUAL TO 110 MPH.
G. NAILS AND STAPLES ARE CARBON STEEL MEETING THE SPECIFICATIONS OF ASTM F1667. CONNECTIONS USING NAILS AND STAPLES OF OTHER MATERIALS, SUCH AS STAINLESS STEEL, SHALL BE DESIGNED BY ACCEPTABLE ENGINEERING PRACTICE OR APPROVED UNDER SECTION 104.11.

SCHEDULE - HOLDDOWNS

NOTES:
1. EMBEDMENT DEPTH IS FROM TOP OF FOOTING. INCREASE ANCHOR LENGTH AS REQUIRED FOR SLAB THICKNESS.
2. FOR HDU14 OR GREATER USE HEAVY HEX NUT.
3. HD19 REQUIRES DF END STUDS AND HD EMBED PLATE.
4. GC TO VERIFY LOCATION OF ANCHOR BOLTS PRIOR TO FOUNDATION WALL REBAR INSPECTION.
5. ALL HOLDOWNS ARE SIMPSON PRODUCTS UNO.
6. FOR POST-INSTALLED ANCHORS REF MATERIAL SPECIFICATIONS FOR EPOXY AND ANCHOR ROD REQUIREMENTS.

MARK	HOLDDOWN	ANHOR BOLT DIAMETER	MIN EMBEDMENT
HDU2	HDU2-SDS2.5	5/8"	5"
HDU5	HDU5-SDS2.5	5/8"	5"
HDU8	HDU8-SDS2.5	7/8"	7"
HDU11	HDU11-SDS2.5	1"	9"
HDU14	HDU14-SDS2.5	1"[2]	11"
HD19	HD19 [3]	1 1/4"[2]	HDEP #1

SCHEDULE - WOOD FASTENING

IBC TABLE 2304.10.1

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
ROOF		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW.	(3) 8d COMMON (2-1/2"x0.131"); OR (3) 10d BOX (3"x0.128")	EA END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d COMMON (2-1/2"x0.131")	EA END, TOENAIL
	(2) 16d COMMON (3-1/2"x0.162")	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON (3-1/2"x0.162") AT 6" OC	FACE NAIL
2. CEILING JOIST TO TOP PLATE	(3) 8d COMMON (2-1/2"x0.131"); OR (3) 10d BOX (3"x0.128")	EA JOIST, TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST)	(3) 16d COMMON (3-1/2"x0.162"); OR (4) 10d BOX (3"x0.128")	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	PER IBC TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	(3) 10d COMMON (3"x0.148"); OR (4) 10d BOX (3"x0.128")	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE	(3) 10d COMMON (3"x0.148"); OR (3) 16d BOX (3-1/2"x0.135"); OR (4) 10d BOX (3"x0.128")	(2) TOENAILS ONE SIDE AND (1) TOENAL OPP SIDE
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	(2) 16d COMMON (3-1/2"x0.162"); OR (3) 10d BOX (3"x0.128")	END NAIL
	(3) 10d COMMON (3"x0.148"); OR (4) 16d BOX (3-1/2"x0.135"); OR (4) 10d BOX (3"x0.128")	TOENAIL
WALL		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (3-1/2"x0.162"); OR	24" OC, FACE NAIL
	10d BOX (3"x0.128")	16" OC, FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTION WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON (3-1/2"x0.162")	16" OC, FACE NAIL
	16d BOX (3-1/2"x0.135")	12" OC, FACE NAIL
10. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON (3-1/2"x0.162")	16" OC EA EDGE, FACE NAIL
	16d BOX (3-1/2"x0.135")	12" OC EA EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	(4) 8d COMMON (2-1/2"x0.131"); OR (4) 10d BOX (3"x0.128")	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON (3-1/2"x0.162")	16" OC FACE NAIL
	10d BOX (3"x0.128")	12" OC FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d COMMON (3-1/2"x0.162"); OR (12) 10d BOX (3"x0.128")	EA SIDE OF END JOINT, FACE NAIL (MIN 24" LAP SPLICE LENGTH EA SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3-1/2"x0.162")	16" OC FACE NAIL
	16d BOX (3-1/2"x0.135")	12" OC FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	(2) 16d COMMON (3-1/2"x0.162"); OR (3) 16d BOX (3-1/2"x0.135")	16" OC FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	(4) 8d COMMON (2-1/2"x0.131"); OR (4) 10d BOX (3"x0.128"); OR	TOENAIL
	(2) 16d COMMON (3-1/2"x0.162"); OR (3) 10d BOX (3"x0.128")	END NAIL
17. TOP PLATE, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d COMMON (3-1/2"x0.162"); OR (3) 10d BOX (3"x0.128")	FACE NAIL
18. 1" BRACE TO EA STUD AND PLATE	(2) 8d COMMON (2-1/2"x0.131"); OR (2) 10d BOX (3"x0.128")	FACE NAIL
19. 1"x6" SHEATHING TO EA BEARING	(2) 8d COMMON (2-1/2"x0.131"); OR (2) 10d BOX (3"x0.128")	FACE NAIL
20. 1"x8" AND WIDER SHEATHING TO EA BEARING	(3) 8d COMMON (2-1/2"x0.131"); OR (3) 10d BOX (3"x0.128")	FACE NAIL
FLOOR		
21. JOIST TO SILL, TOP PLATE, OR GIRDER	(3) 8d COMMON (2-1/2"x0.131"); OR (3) 10d BOX (3"x0.128")	TOENAIL
22. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d COMMON (2-1/2"x0.131"); OR 10d BOX (3"X0.128")	6" OC, TOENAIL
23. 1"x6" SUBFLOOR OR LESS TO EA JOIST	(2) 8d COMMON (2-1/2"x0.131"); OR (3) 10d BOX (3"x0.128")	FACE NAIL
24. 2" SUBFLOOR TO JOIST OR GIRDER	(2) 16d COMMON (3-1/2"x0.162")	FACE NAIL
25. 2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	(2) 16d COMMON (3-1/2"x0.162")	EA BEARING, FACE NAIL
26. BUILT-UP GIRDERS AND BEAM, 2" LUMBER LAYERS	20d COMMON (4"x0.192")	32" OC, FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	10d BOX (3"x0.128")	24" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND: (2) 20d COMMON (4"x0.192"); OR (3) 10d BOX (3"x0.128")	ENDS AND AT EA SPLICE, FACE NAIL
27. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(3) 16d COMMON (3-1/2"x0.162"); OR (4) 10d BOX (3"x0.128")	EA JOIST OR RAFTER, FACE NAIL
28. JOIST TO BAND JOIST OR RIM JOIST	(3) 16d COMMON (3-1/2"x0.162"); OR (4) 10d BOX (3"x0.128")	END NAIL
29. BRIDGING OR BLOCKING TO JOIST, RAFTER, OR TRUSS	(2) 8d COMMON (2-1/2"x0.131"); OR (2) 10d BOX (3"x0.128")	EA END, TOENAIL

SCHEDULE - CONCRETE REBAR

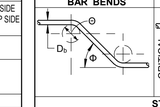
DEVELOPMENT LENGTHS - l_d

BAR SIZE	f'c = 3000 PSI: STD. l_d TYP.	f'c = 3000 PSI: STD. l_d TOP	f'c = 3000 PSI: CLASS B TYP.	f'c = 3000 PSI: CLASS B TOP	BAR SIZE	f'c = 4000 PSI: STD. l_d TYP.	f'c = 4000 PSI: STD. l_d TOP	f'c = 4000 PSI: CLASS B TYP.	f'c = 4000 PSI: CLASS B TOP
#3	17"	22"	22"	28"	#3	15"	19"	19"	25"
#4	22"	29"	29"	38"	#4	19"	25"	25"	33"
#5	28"	36"	37"	47"	#5	24"	31"	32"	41"
#6	33"	43"	43"	56"	#6	29"	37"	38"	49"
#7	48"	63"	63"	82"	#7	42"	54"	55"	71"
#8	55"	72"	72"	94"	#8	48"	62"	63"	81"
#9	62"	81"	81"	106"	#9	54"	70"	71"	91"

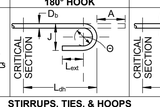
STANDARD HOOKS & BAR BENDS

BAR SIZE	L_{dh}	"Θ"	180° HOOK: L_{ext}	180° HOOK: A	180° HOOK: J	90° HOOK: L_{ext}	90° HOOK: A
#3	6"	2 1/4"	2 1/2"	5"	3"	4 1/2"	6"
#4	8"	3"	2 1/2"	6"	4"	6"	8"
#5	10"	3 3/4"	2 1/2"	7"	5"	7 1/2"	10"
#6	12"	4 1/2"	3"	8"	6"	9"	12"
#7	14"	5 1/4"	3 1/2"	10"	7"	10 1/2"	14"
#8	16"	6"	4"	11"	8"	12"	16"
#9	18"	9 1/2"	4 1/2"	15"	11 3/4"	13 1/2"	19"

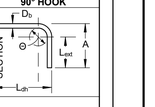
BAR BENDS



180° HOOK



90° HOOK



STIRRUPS, TIES, & HOOPS

BAR SIZE	"Θ"	90° HOOK: L_{ext}	90° HOOK: A	135° HOOK: L_{ext}	135° HOOK: A	180° HOOK: L_{ext}	180° HOOK: A
#3	1 1/2"	3"	4"	3"	4 1/4"	2 1/2"	4"
#4	2"	3"	4 1/2"	3"	4 1/2"	2 1/2"	5"
#5	2 1/2"	3 3/4"	6"	3 3/4"	5 1/2"	2 1/2"	6"
#6	4 1/2"	9"	12"	4 1/2"	8"	3"	8"
#7	5 1/4"	10 1/2"	14"	5 1/4"	9"	3 1/2"	10"
#8	6"	12"	16"	6"	10 1/2"	4"	11"

90° HOOK

135° HOOK

180° HOOK

RECTANGULAR BEAM/COLUMN TIE

CIRCULAR COLUMN/PIER TIE

BAR CLEARANCE

BAR SPLICE

NOTES:
1. USE THE ABOVE TABLE UNLESS NOTED OTHERSIZE ON PLAN OR IN DETAILS.
2. PROVIDE 6" LAP AT ALL WELDED WIRE FABRIC JOINTS.
3. PROVIDE 1 D_b (1" MINIMUM) CLEARANCE BETWEEN ADJACENT BARS.
4. PROVIDE WIRE TIES AT EACH END OF BAR SPLICE.
5. DO NOT PROVIDE CLASS A SPLICE UNLESS SPECIFICALLY DETAILED.

STATE OF MISSOURI — LOGAN KYLE MAUPIN — NUMBER PE-2023000069 — 2023.08.11 — PROFESSIONAL ENGINEER

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DOUGLAS CORNER

LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

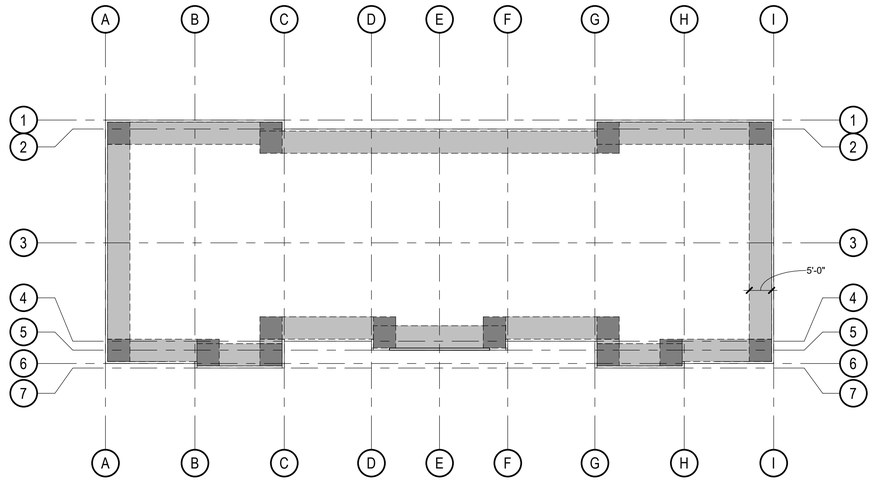
DATE: 08-11-2023

PROJECT# 23012

S120

GROSS WIND UPLIFT

ROOF ZONE 1 = REF GENERAL NOTES (ULT)
ROOF ZONE 2 = REF GENERAL NOTES (ULT)
ROOF ZONE 3 = REF GENERAL NOTES (ULT)



UPLIFT DIAGRAM

1/16" = 1'-0"

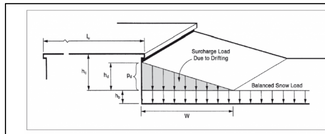
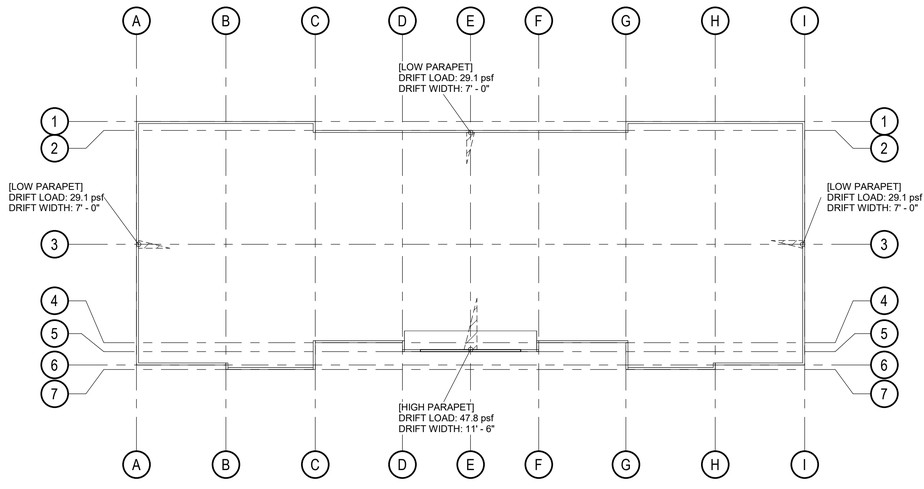


FIGURE 7-8 Configuration of Snow Drifts on Lower Roofs.

NOTE: DESIGNER MUST CONSIDER ALL SNOW LOAD CASES PER ASCE 7

COMMENTS	DRIFT DATA	
	LOAD, Pd	WIDTH, W
HIGH PARAPET	47.8 psf	11' - 6"
LOW PARAPET	29.1 psf	7' - 0"



SNOW DRIFT DIAGRAM

1/16" = 1'-0"

STATE OF MISSOURI
LOGAN K. LAMERTON
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DOUGLAS CORNER

LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

DATE: 08-11-2023

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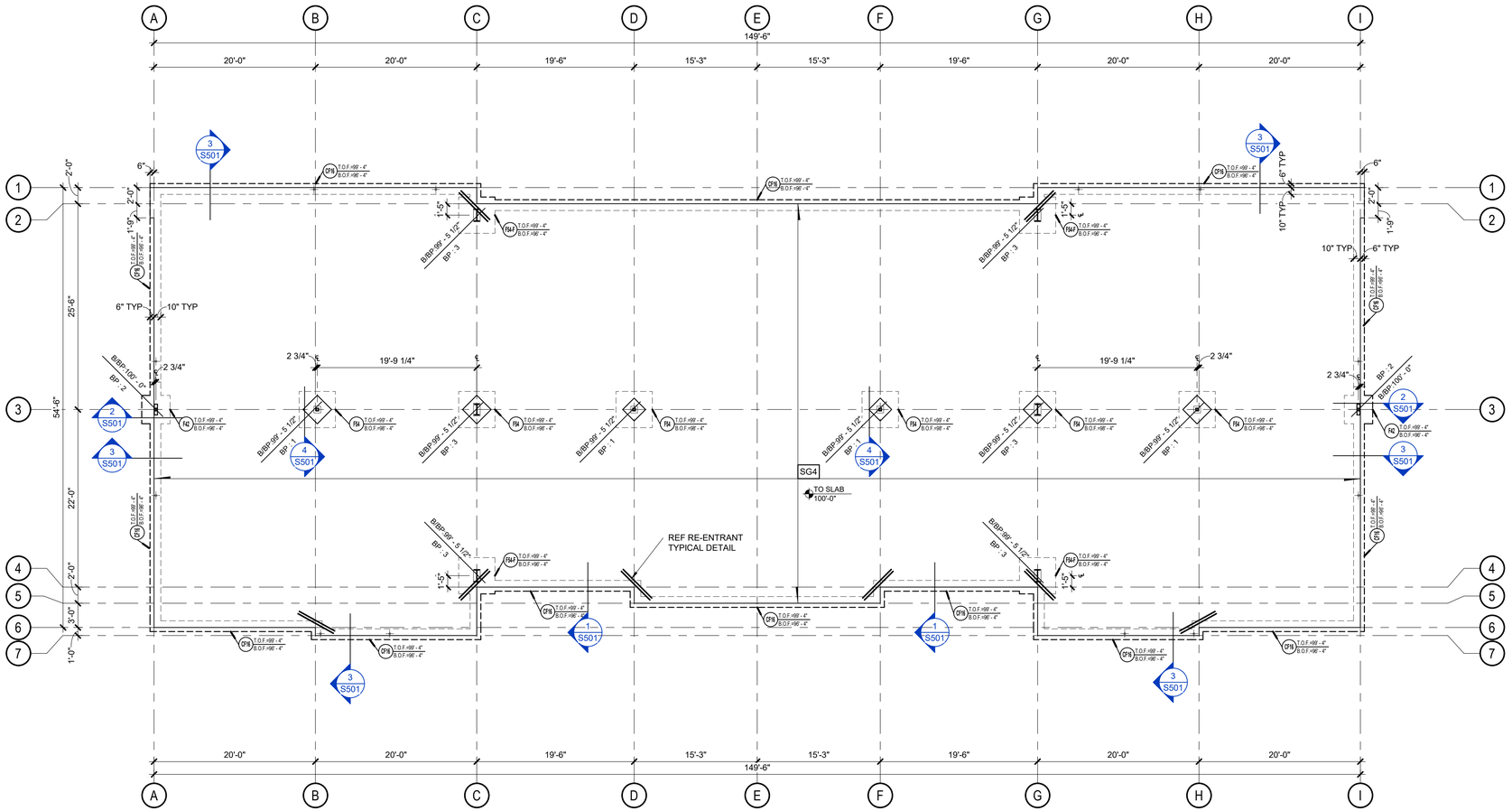
S130



PLAN NOTES - FOUNDATIONS

1. CONTRACTOR TO VERIFY ALL FOUNDATION ELEVATIONS AND STEPS PER SITE CONDITIONS.
2. TOP OF SLAB ELEVATION SHOWN IN PLAN IS FOR REFERENCE ONLY.
3. REFERENCE ARCHITECTURAL DRAWINGS FOR WALL OPENING DIMENSIONS, EXTERIOR FINISHES AND ADDITIONAL NOTES.
4. REFERENCE GENERAL NOTES SHEET FOR ADDITIONAL FOUNDATION SPECIFICATIONS.
5. CONTRACTOR TO CONTACT APEX ENGINEERS, INC AT LEAST 48 HRS IN ADVANCE OF ANY CONCRETE POUR.

SCHEDULE - PAD FOOTINGS

MARK	LENGTH	WIDTH	DEPTH	REINFORCING
F42	3' - 6"	3' - 6"	36"	(10) #5 BARS EACH WAY [(5) AT T&B]
F54	4' - 6"	4' - 6"	12"	(6) #5 BARS EACH WAY
F54-F	4' - 6"	4' - 6"	36"	(12) #5 BARS EACH WAY [(6) AT T&B]

SCHEDULE - CONTINUOUS FOOTINGS

MARK	WIDTH	DEPTH	LONG BARS	TRANS BARS
CF16	1' - 4"	36"	(4) #5 BARS [(2) AT T&B]	#3 TIES AT 18" OC

SCHEDULE - SLABS ON GRADE

NOTES:
1. PROVIDE CONTROL JOINTS (1/4 SLAB THICKNESS) SPACED AT 30xSLAB THICKNESS OC BOTH WAYS, NOT SHOWN FOR CLARITY.

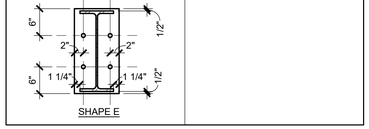
MARK	SLAB THICKNESS	WEIGHT CLASS	SLAB REINFORCING	ADDITIONAL REQUIREMENTS
SG4	4"	NW	#3 AT 18" OC (C) EA WAY OR 6X6 W2.9XW2.9 WWF	15 MIL VAPOR BARRIER ON 4" OF 3/4" CLEAN, GRADED ROCK

SCHEDULE - BASE PLATES

NOTES:
1. PROVIDE 5/16" FILLET WELD AT COLUMN TO BASE PLATE CONNECTION.
2. CAST-IN PLACE ANCHORS TO BE HEX-HEAD ASTM F1554 (55 KSI) UNO.
3. POST INSTALLED EPOXY ANCHORS TO BE THREADED ROD INSTALLED IN EPOXY PER MATERIAL SPECIFICATIONS, UNO.
4. POST INSTALLED HILTI HUS-EZ ANCHORS TO BE INSTALLED PER MFR SPECIFICATIONS.
5. BASE PLATE WITH LESS THAN (4) ANCHORS REQUIRE COLUMNS BE DESIGNATED AS POSTS AND SHALL BE TEMPORARILY BRACED DURING ERECTION PER OSHA PART 1926, BY OTHERS. BRACING MAY BE REMOVED ONCE ATTACHMENTS TO MAIN STRUCTURE ARE COMPLETE.
6. MAX SIZES OF ANCHOR-ROD HOLES IN BASE PLATES SHALL FOLLOW TABLE 14-2 OF THE AISC MANUAL. AN ADEQUATE WASHER SHOULD BE PROVIDED FOR EA ANCHOR ROD.
7. PLATE WASHERS MUST BE WELDED TO THE BASE PLATE AT SHEAR TRANSFER CONDITIONS (I.E. MOMENT FRAME AND BRACED FRAME COLUMNS). PROVIDE 1/4" FILLET WELD ALL AROUND.

D = VARIES, COORDINATED WITH BEAM FLANGE WIDTH
bf = WIDTH OF BEAM FLANGE

TYPE	PLATE SHAPE	PLATE THICKNESS	BOLT DIAMETER	ANCHOR BOLT EMBED	
				CAST-IN-PLACE (HEX-HEAD)	POST-INSTALLED / BOLT TYPE
BP: 1	A	1"	3/4"	8	8"
BP: 2	B	5/8"	1/2"	8	8"
BP: 3	E	3/4"	7/8"	8	8"



SHAPE A

SHAPE B

SHAPE E

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

STATE OF MISSOURI
LOGAN W. LAMERTZ
NUMBER PE-2023000069
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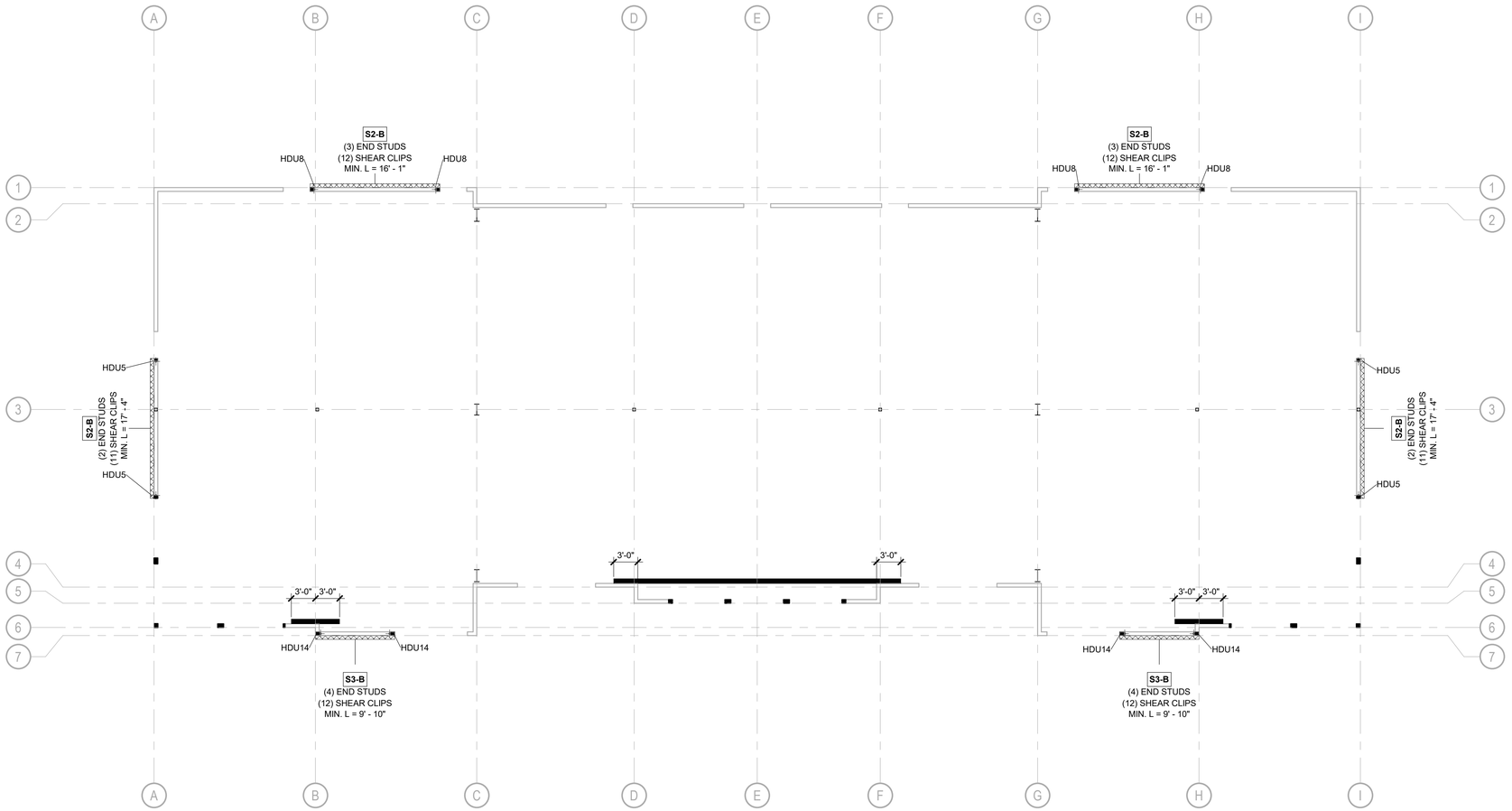
DOUGLAS CORNER
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

DATE: 08-11-2023
PROJECT# 23012

S200



PLAN NOTES - DIAPHRAGM

1. ROOF SHEATHING THICKNESS AND SPAN RATING MAY BE INCREASED FOR ROOFING MATERIAL REQUIREMENTS AND WARRANTIES. SHEATHING THICKNESS INCREASE SHALL BE COORDINATED WITH ARCHITECT.
2. CONTRACTOR SHALL PROVIDE ADDITIONAL SOLID BLOCKING AS REQUIRED FOR DIAPHRAGM NAILING REQUIREMENTS. SOLID BLOCKING SHALL BE OF MIN NOMINAL 2x4 IN SIZE AND SHALL BE MIN #3 GRADE MATERIAL.
3. SOLID BLOCKING SHALL BE CUT TIGHT TO ADJACENT MEMBERS TO ENSURE ADEQUATE LOAD TRANSFER.
4. NAIL TYPE USED IN FLOOR/ROOF SHEATHING SHALL BE COMMON OR GALVANIZED BOX NAIL. SINKER NAILS, COOLER NAILS, ETC ARE NOT PERMITTED AT THESE APPLICATIONS.
5. NAILS USED FOR FLOOR/ROOF SHEATHING SHALL HAVE FULL HEADS. CLIPPED NAILS ARE NOT PERMITTED IN THESE APPLICATIONS.

LEGEND - DIAPHRAGM

	= DIAPHRAGM BOUNDARY NAILING: 10d NAILS AT 6" OC, CONTRACTOR SHALL ADD BLOCKING AS REQUIRED.
	= DIAPHRAGM BOUNDARY NAILING: 10d NAILS AT 4" OC, CONTRACTOR SHALL ADD BLOCKING AS REQUIRED.
	= DIAPHRAGM BOUNDARY NAILING: 10d NAILS AT 3" OC STAGGERED, CONTRACTOR SHALL ADD BLOCKING AS REQUIRED.
	= DIAPHRAGM BOUNDARY NAILING: 10d NAILS AT 2" OC STAGGERED, CONTRACTOR SHALL ADD BLOCKING AS REQUIRED.
	= BLOCKED DIAPHRAGM WITH PANEL EDGE FASTENING AT 6" OC EDGES, 12" OC FIELD.
	= SIMPSON LSTA12 STRAP, ATTACH WITH (10) 10d NAILS AT EACH TRUSS . ATTACH TO 2x6 CONT BLOCKING BETWEEN TRUSSES, INSTALL STRAP PER SIMPSON SPECIFICATIONS.
	= SIMPSON CS14 COIL STRAP INSTALLED DIRECTLY OVER SHEATHING (ALT OF (2) CSHP18 COIL STRAPS). INSTALL (2) PLIES OF BLOCKING AS REQUIRED.

SCHEDULE - HOLDDOWNS

NOTES:
1. EMBEDMENT DEPTH IS FROM TOP OF FOOTING. INCREASE ANCHOR LENGTH AS REQUIRED FOR SLAB THICKNESS.
2. FOR HDU14 OR GREATER USE HEAVY HEX NUT.
3. HD19 REQUIRES OF END STUDS AND HD EMBED PLATE.
4. GC TO VERIFY LOCATION OF ANCHOR BOLTS PRIOR TO FOUNDATION WALL REBAR INSPECTION.
5. ALL HOLDOWNS ARE SIMPSON PRODUCTS UNO.
6. FOR POST-INSTALLED ANCHORS REF MATERIAL SPECIFICATIONS FOR EPOXY AND ANCHOR ROD REQUIREMENTS.

MARK	HOLDDOWN	ANHOR BOLT DIAMETER	MIN EMBEDMENT
HDU2	HDU2-SDS2.5	5/8"	5"
HDU5	HDU5-SDS2.5	5/8"	5"
HDU8	HDU8-SDS2.5	7/8"	7"
HDU11	HDU11-SDS2.5	1"	9"
HDU14	HDU14-SDS2.5	1"[2]	11"
HD19	HD19 [3]	1 1/4"[2]	HDEP #1

SCHEDULE - SHEAR WALLS

NOTES:
1. WSP = WOOD STRUCTURAL PANEL PLYWOOD OR OSB.
2. NAIL SIZES GIVEN ARE FOR COMMON NAILS OR GALVANIZED (HOT-DIPPED OR TUMBLED) BOX NAILS. SINKER NAILS, COOLER NAILS, ETC. SHALL NOT BE USED FOR WSP SHEAR WALLS.
3. SHEAR WALL NAILS SHALL HAVE FULL HEADS, CLIPPED NAILS ARE NOT ALLOWED.
4. ALL NAILS SHALL BE DRIVEN SUCH THAT THE HEAD IS FLUSH WITH FACE OF SHEATHING. DO NOT OVERDRIVE NAILS.
5. SOLEPLATE NAILS SHALL BE INSTALLED SUCH THAT THE NAILS FULLY ENGAGE THE RIM BOARD BELOW (IF APPLICABLE). REF TYP DETAILS.
6. PROVIDE INTERMEDIATE NAILING (FIELD) AT 12" OC, TYP.
7. PROVIDE (2) TOTAL RIMBOARDS OR A LAYER OF BLOCKING IN ADDITION TO THE RIMBOARD WHERE SOLE PLATE NAILING REQUIRES 2 ROWS OF FASTENERS PER SCHEDULE.
8. SILL ANCHORS MAY BE CAST-IN-PLACE J-BOLTS WITH 8" EMBED OR SIMPSON TITEN HD SCREW ANCHORS WITH 6" EMBED. REF SCHEDULE FOR BOLT DIA. BOTH BOLT TYPES REQUIRE 0.229"x3"x3"x3" PLATE WASHER WITH EDGE OF PLATE LOCATED WITHIN ½" OF SHEAR WALL SHEATHING.
9. SHEAR WALL CLIPS TO BE A35/LTP4, REF PLAN FOR NUMBER OF CLIPS PER SHEAR WALL, 48" OC MAX UNO.
10. AT WALLS DESIGNATED AS FORCE TRANSFER SHEAR WALLS, PROVIDE SIMPSON STRAP ABOVE AND BELOW ALL OPENINGS PER SHEAR WALL DETAIL.
11. END STUDS MUST CONTINUE DOWN TO FOUNDATION WALL UNLESS INTERRUPTED BY TRANSFER BEAM.
12. JACK STUDS FOR OPENINGS DO NOT COUNT TOWARDS THE REQUIRED NUMBER OF END STUDS IN A SHEAR WALL.
13. PROVIDE DOUBLE STUDS AND BLOCKING NAILED TOGETHER WITH (2) 16d NAILS AT 6" OC OR 3" NOMINAL STUDS AND BLOCKING AT THE FOLLOWING CONDITIONS:
    i. 2" OC EDGE NAIL SPACING
    ii. 10d NAILS AT 3" OC OR SMALLER EDGE NAIL SPACING
    iii. DOUBLE SIDED SHEAR WALL WHERE PANEL JOINTS ALIGN TO THE SAME STUD.
14. HOLDOWNS AND STRAPS OCCUR AT THE BOT OF WALLS. HOLDOWNS AND STRAPS BETWEEN FLOORS ARE CONTROLLED BY THE WALL ABOVE.
15. HOLDOWN DEVICES SHALL BE INSTALLED PER MFR SPECIFICATIONS
16. REF SHEAR WALL DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

MARK	BLOCKED	SHEATHING			EDGE NAILS		SILL PLATE ATTACHMENT	
		TYPE	THICKNESS	PLACEMENT	SIZE	SPACING	NAILING	1/2" DIA ANCHOR BOLT SPACING
S2-B	YES	WSP-SHEATHING	15/32"	ONE-SIDE	10d	4"	16d AT 4" OC	16"
S3-B	YES	WSP-SHEATHING	15/32"	ONE-SIDE	10d	3"	16d AT 3" OC STAGGERED	12"

FIRST FLOOR SHEAR WALL PLAN
1/8" = 1'-0"

STATE OF MISSOURI
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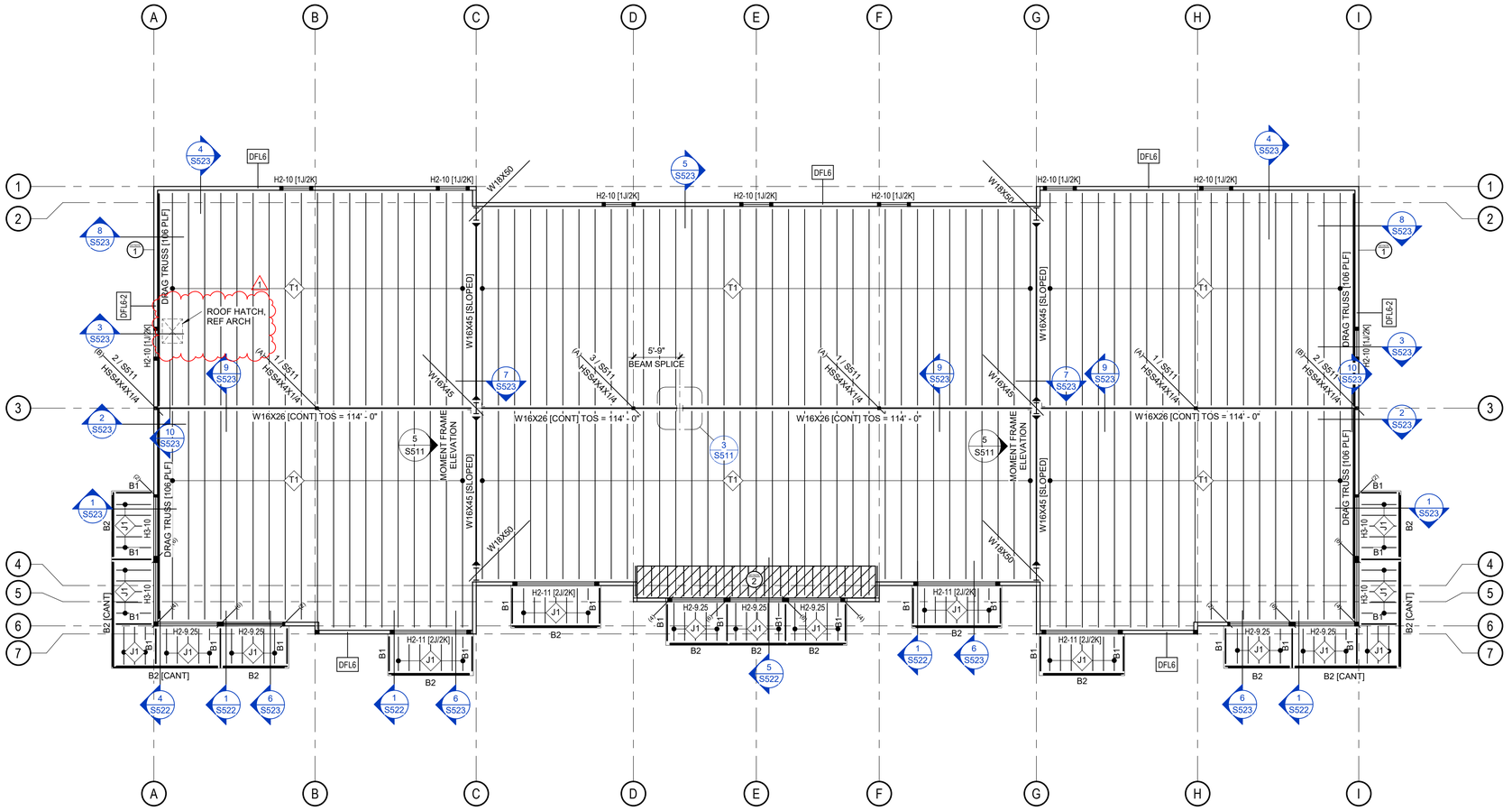
DOUGLAS CORNER
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

DATE: 08-11-2023
PROJECT# 23012

S202



PLAN NOTES - WOOD ROOF FRAMING

1. REFERENCE "LOADING DIAGRAMS" SHEET FOR DESIGN LOADS.
2. WOOD COLUMNS AND STUD PACKS TO BE CONTINUOUS DOWN TO FOUNDATION OR STEEL FRAMING. PROVIDE BLOCKING AS REQUIRED TO MAINTAIN CONTINUITY.
3. REF PLANS FOR TOP OF STEEL BEAM ELEVATIONS.
4. ROOF CONSTRUCTION: REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ROOF MATERIAL, ROOF SLOPE, WATERPROOFING MEMBRANE, AND INSULATION.
5. REFERENCE MECHANICAL DRAWINGS FOR ADDITIONAL RTU INFORMATION.
6. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF OPENINGS WITH MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS.
7. REFERENCE GENERAL NOTES AND SPECIFICATIONS FOR ABBREVIATIONS, SYMBOLS, AND ADDITIONAL SPECIFICATIONS.

SCHEDULE - WOOD WALLS

NOTES:
1. WALL SOLE PLATE ATTACHMENT, UNO: 1/2" DIA CAST-IN-PLACE ANCHORS WITH 7" EMBED AT 32" OC ATTACHMENT TO CONCRETE OR (2) ROWS OF 16d NAILS AT 16" OC STAGGERED WHEN FASTENING TO WOOD.
2. TYPICAL WALL SHEATHING, UNO: 15/32" APA RATED WSP, EXP. 1, 24/16 SPAN RATING. PANEL EDGES FASTENED WITH 8d NAILS AT 6" OC EDGE AND 12" OC IN THE FIELD.
3. REFERENCE SHEAR WALL SCHEDULE FOR ADDITIONAL NAILING REQUIREMENTS.
** = LATERAL CLIPS REQUIRED; PROVIDE SIMPSON A35 CLIP AT EACH STUD ABOVE HEADER, REFERENCE TYPICAL DETAILS FOR CLIP LOCATION.

MARK	MATERIAL	WALL STUDS	BLOCKING
DFL6	DF-L No. 2	2x6 AT 16"	AT SHEATHING PANEL EDGES (4'-0" OC MAX)
DFL6-2	DF-L No. 2	2x6 AT 16"	AT SHEATHING PANEL EDGES (4'-0" OC MAX)

SCHEDULE - TRUSSES

MARK	TRUSSES	SPACING	COMMENTS
T1	ROOF TRUSS	24"	COORDINATE PLACEMENT WITH CANOPY ROD ATTACHMENT

SCHEDULE - JOISTS

MARK	JOISTS	SPACING	COMMENTS
J1	2x8	16"	

SCHEDULE - HEADERS

NOTES:
1. JAMB AND SILL STUDS TO MATCH TYPICAL WALL STUDS UNO.

MARK	HEADER	COMMENTS
H2-9.25	(2) 1¾"x9¼" LVL	
H2-10	(2) 2x10	
H2-11	(2) 1¾"x11⅞" LVL	
H3-10	(3) 2x10	

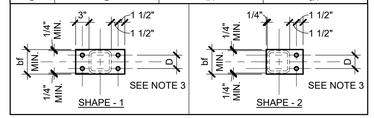
SCHEDULE - BEAMS

MARK	BEAM SIZE	COMMENTS
B1	C6X8.2	COORDINATE PLACEMENT WITH CANOPY ROD ATTACHMENT
B2	(1) 2x8+(1) 2x12	2x12 FORMING CANOPY CURB

SCHEDULE - CAP PLATES

NOTES:
1. BOLT SIZE NOTE: FOR BEAMS WITH A FLANGE WIDTH LESS THAN 5", 5/8" BOLTS MAY BE USED FOR DETAILING TOLERANCES.
2. bf = WIDTH OF BEAM FLANGE.
3. D = VARIES, COORDINATE WITH BEAM FLANGE WIDTH.
4. W = JOIST GIRDER SEAT WIDTH PLUS 1" FOR FILLET WELD CONNECTION. VERIFY SEAT WIDTH WITH JOIST SUPPLIER PRIOR TO FABRICATION.
5. VERIFY BOLT PLACEMENT WITH JOIST SUPPLIER.

PLATE TYPE	SHAPE	PLATE THICKNESS	BOLT SIZE
A	1	1/4"	3/4"
B	2	1/4"	3/4"



SCHEDULE - ROOF SHEATHINGS

MARK	SHEATHING TYPE	SUPPORT ATTACHMENT [EDGE / FIELD]	BLOCKED
ROOF	5/8" (NOMINAL) APA RATED SHEATHING, EXPOSURE 1, 48/24 SPAN RATING	10d [6" OC / 12" OC]	No

SCHEDULE - KEYNOTE LEGEND

KEYNOTE	COMMENT
1	BALLOON FRAMED WALL
2	SPF STUD GRADE OR BETTER 2x6 KICKERS AT EACH TRUSS PARAPET

ROOF FRAMING PLAN
1/8" = 1'-0"

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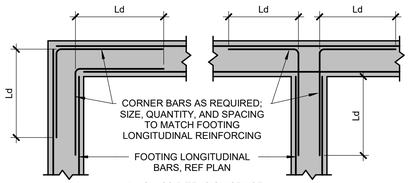
REV#	DATE	DESCRIPTION
1	9/7/23	CITY COMMENTS

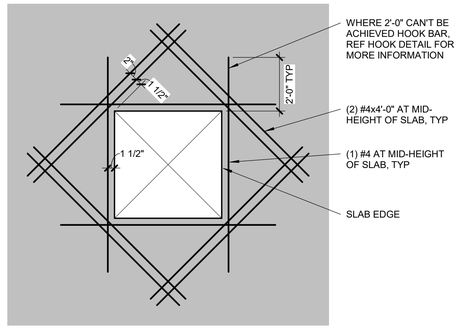
DATE: 08-11-2023
PROJECT# 23012

S210



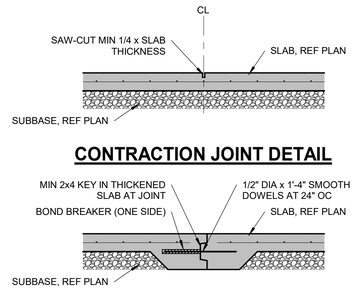
12 TYPICAL FOUNDATION CORNER DETAIL

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



8 TYPICAL OPENING IN CONCRETE SLAB ON GRADE

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

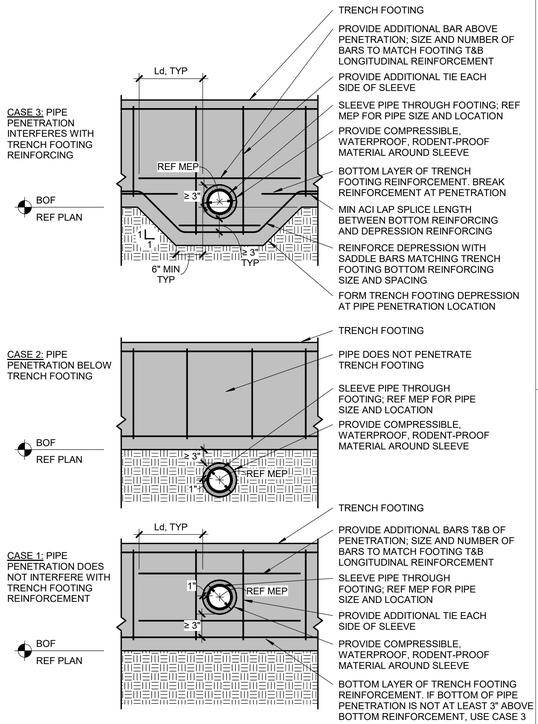


CONTRACTION JOINT DETAIL

CONSTRUCTION JOINT DETAIL

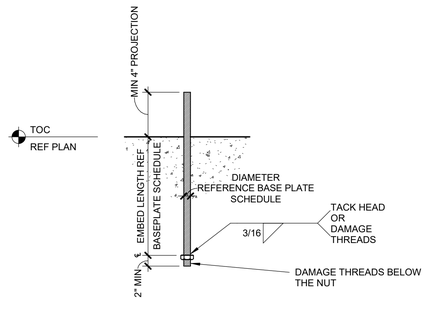
4 SLAB ON GRADE CONTROL JOINT

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



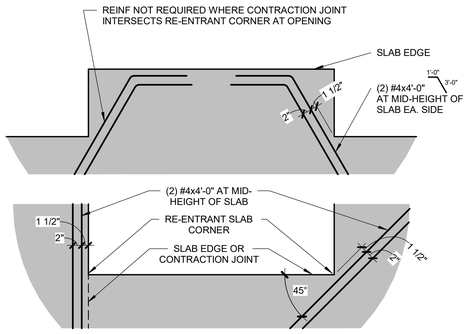
14 TRENCH FOOTING AT PIPE PENETRATION

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



11 TYPICAL ANCHOR BOLT

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



7 TYPICAL RE-ENTRANT CORNER IN CONCRETE SLAB ON GRADE

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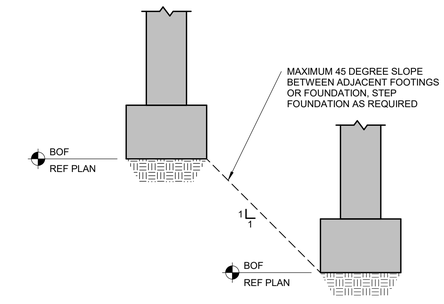
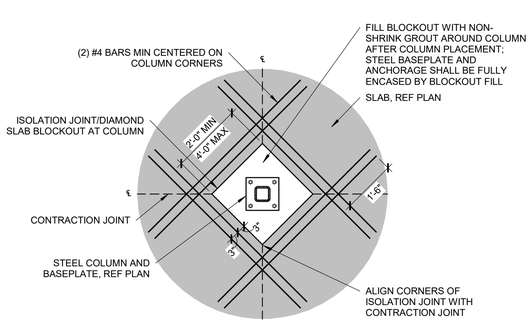


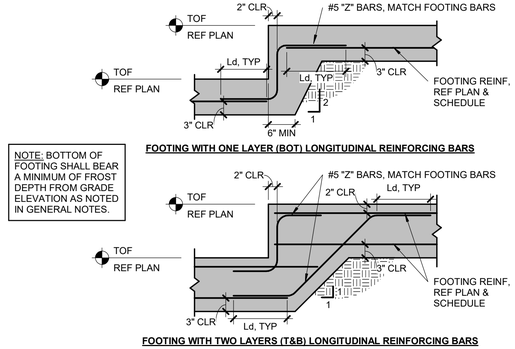
3 MAXIMUM SLOPE BETWEEN ADJACENT FOUNDATIONS

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



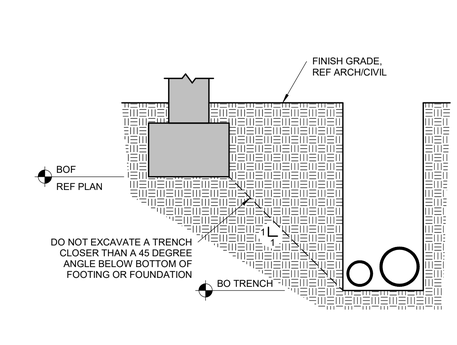
10 TYPICAL STEEL COLUMN ISOLATION JOINT

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



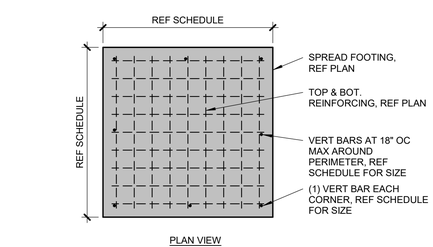
6 TYPICAL FOOTING STEP

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



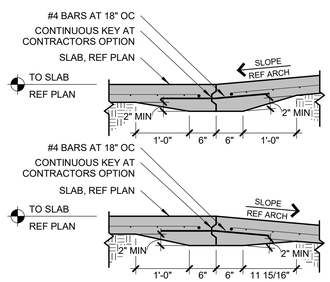
2 MAXIMUM SLOPE BETWEEN FOUNDATION AND TRENCH

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



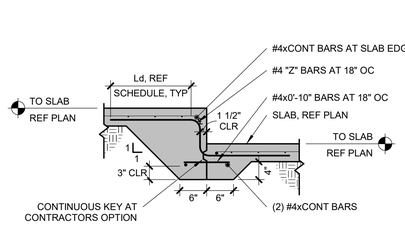
13 TYP DEEP SPREAD FOOTING VERTICAL REINFORCING

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



9 SLAB ON GRADE AT RAMP

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



5 TYPICAL CONCRETE SLAB ON GRADE STEP

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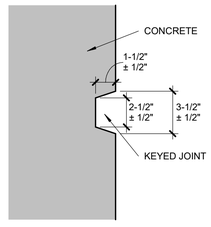

1 TYPICAL KEY IN CONCRETE

S500 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

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DOUGLAS CORNER

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REV#	DATE	DESCRIPTION

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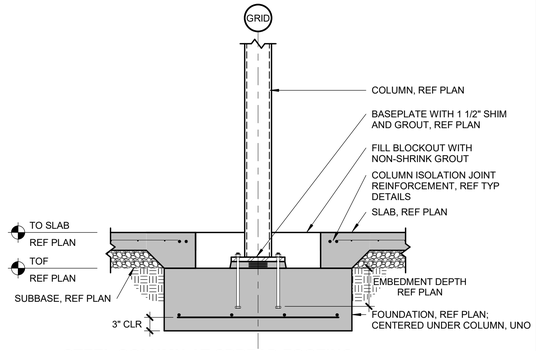
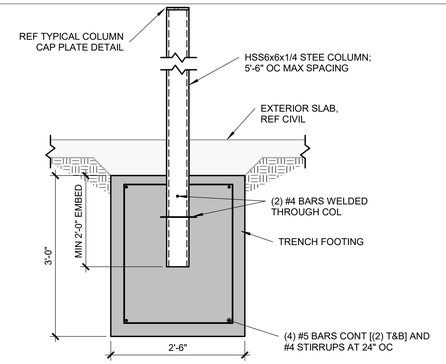
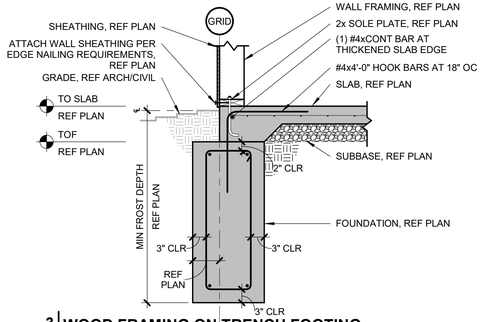
S500



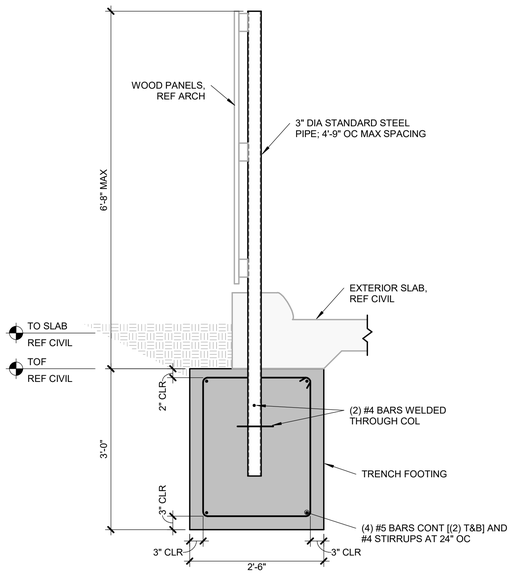
4 STEEL COLUMN AT SPREAD FOOTING WITH THICKENED SLAB
S501 3/4" = 1'-0"



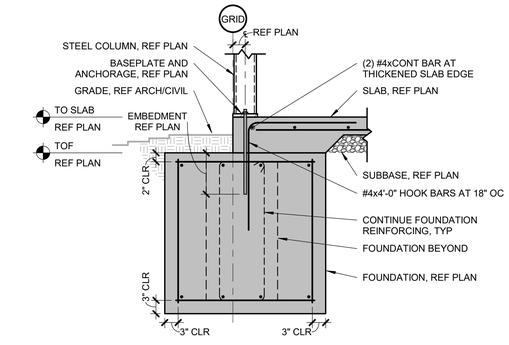
6 TRASH ENCLOSURE CORNER POST
S501 3/4" = 1'-0"



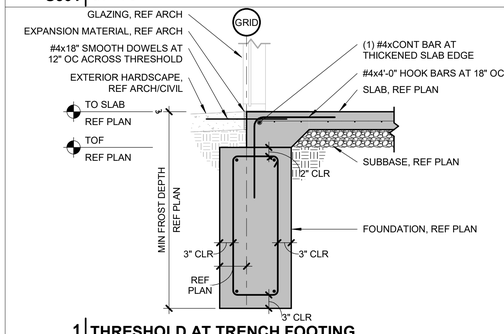
3 WOOD FRAMING ON TRENCH FOOTING
S501 3/4" = 1'-0"



5 TYPICAL TRASH ENCLOSURE POST
S501 3/4" = 1'-0"



2 HSS COLULMN AT EXTERIOR SPREAD FOOTING
S501 3/4" = 1'-0"



1 THRESHOLD AT TRENCH FOOTING
S501 3/4" = 1'-0"

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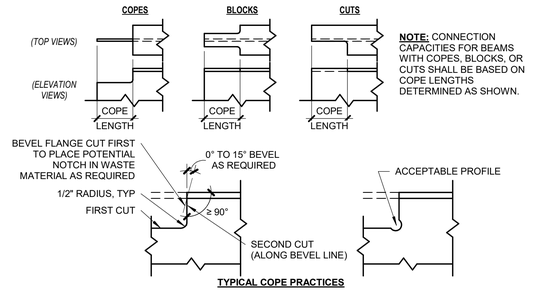
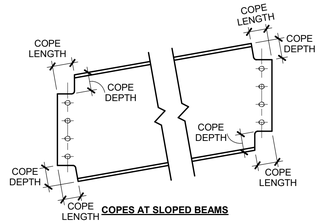


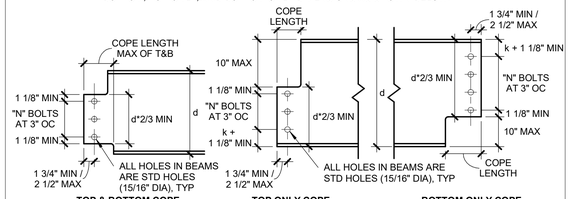
NOTE: CONNECTION CAPACITIES FOR BEAMS WITH COPES, BLOCKS, OR CUTS SHALL BE BASED ON COPE LENGTHS DETERMINED AS SHOWN.

TYPICAL COPE PRACTICES



COPES AT SLOPED BEAMS

NOTE: MIN AND MAX DIMENSIONS FOR SLOPED BEAMS SHALL MEET TOP & BOTTOM, TOP ONLY, AND BOTTOM ONLY DIMENSIONS AS SHOWN BELOW.



TOP & BOTTOM COPE **TOP ONLY COPE** **BOTTOM ONLY COPE**

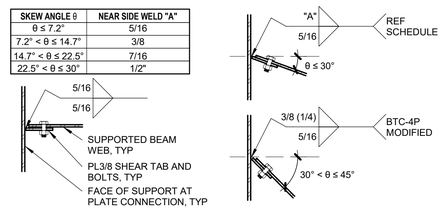
USE TOP COPED VALUES IN TABLE

7 | 3/8" SINGLE PLATE 7/8" BOLT CONNECTION - TYPICAL BEAM COPE

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

SKEW ANGLE θ	NEAR SIDE WELD "A"
θ ≤ 7.2°	5/16
7.2° < θ ≤ 14.7°	3/8
14.7° < θ ≤ 22.5°	7/16
22.5° < θ ≤ 30°	1/2"



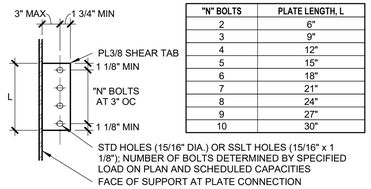
ORTHOGONAL CONNECTION
PLAN VIEW

SKEWED CONNECTION
PLAN VIEW

4 | 3/8" SINGLE PLATE CONNECTION - PLATE WELD CONNECTION

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

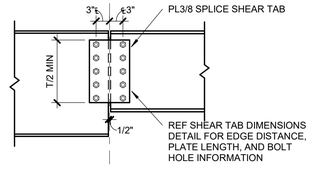


"N" BOLTS	PLATE LENGTH, L
2	6"
3	9"
4	12"
5	15"
6	18"
7	21"
8	24"
9	27"
10	30"

3 | 3/8" SINGLE PLATE 7/8" BOLT CONNECTION - SHEAR TAB DIMENSIONS

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

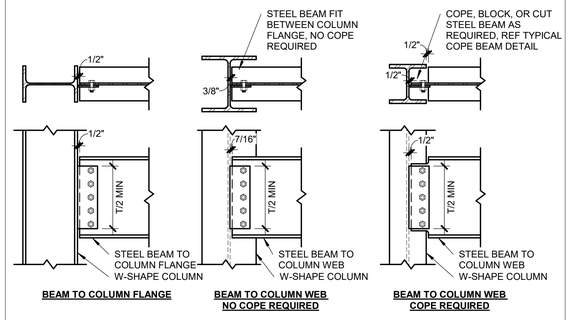


NOTE: THE TABULATED CONNECTION CAPACITY FOR BOTH THE CARRIED AND CARRYING BEAM SHALL MEET OR EXCEED LOAD AS INDICATED ON PLAN. SPLICE SHEAR TAB LENGTH SHALL SATISFY THE T/2 REQUIREMENT FOR BOTH THE CARRIED AND THE CARRYING BEAM.

9 | 3/8" SINGLE PLATE CONNECTION - BEAM SPLICE CONNECTION

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS



BEAM TO COLUMN FLANGE **BEAM TO COLUMN WEB NO COPE REQUIRED** **BEAM TO COLUMN WEB COPE REQUIRED**

6 | 3/8" SINGLE PLATE CONNECTION - BEAM TO W-SHAPE COLUMN

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

SCHEDULE - 3/8" PLATE CONNECTION

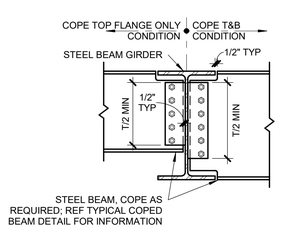
NOMINAL BEAM DEPTH, d	NUMBER OF 7/8" DIA A325N BOLTS
8" - 10"	2
12" - 14"	3
16"	4
18"	5
21"	6
24"	7

NOTES:
1. d = DEPTH OF THE CARRIED BEAM.
2. LISTED NUMBER OF BOLTS ARE APPLICABLE TO SIMPLE SHEAR CONNECTIONS DEFINED AS, "CONVENTIONAL CONFIGURATION," PER AISC STEEL CONSTRUCTION MANUAL, CHAPTER 10. INCLUDED SUPPLEMENTAL DETAILS SPECIFY REQUIRED DIMENSIONAL REQUIREMENTS TO MEET THIS CONNECTION TYPE AND SHALL BE FOLLOWED FOR USE OF THIS TABLE.
3. TYPICAL SINGLE PLATE CONNECTIONS AS SPECIFIED BY THIS TABLE AND SUPPORTING TYPICAL DETAILS ARE UNO BY PLAN NOTES OR SPECIFIC CUT DETAILS ON PLAN, SECTION, ETC.
4. IT IS THE RESPONSIBLY OF THE CONTRACTOR AND/OR FABRICATOR TO CONTACT THE EOR IF BEAM TO SUPPORT DIMENSION CONSTRAINTS DO NOT MEET TYPICAL SINGLE PLATE CONNECTION CRITERIA FOR ALTERNATE CONNECTION INFORMATION.

2 | 3/8" SINGLE PLATE 7/8" BOLT CONNECTION - BOLT SCHEDULE

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS



8 | 3/8" SINGLE PLATE CONNECTION - BEAM TO GIRDER

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

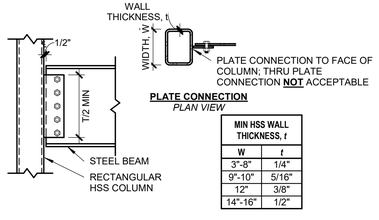


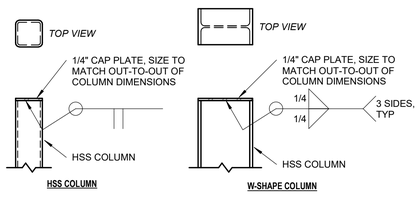
PLATE CONNECTION
PLAN VIEW

MIN HSS WALL THICKNESS, t	
W	t
3"-8"	1/4"
9"-10"	5/16"
12"	3/8"
14"-16"	1/2"

5 | 3/8" SINGLE PLATE CONNECTION - BEAM TO HSS COLUMN

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS



HSS COLUMN **W-SHAPE COLUMN**

1 | TYPICAL COLUMN CAP PLATE

S510 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

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LOGAN KY WAMPLER
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2023.08.11
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DOUGLAS CORNER

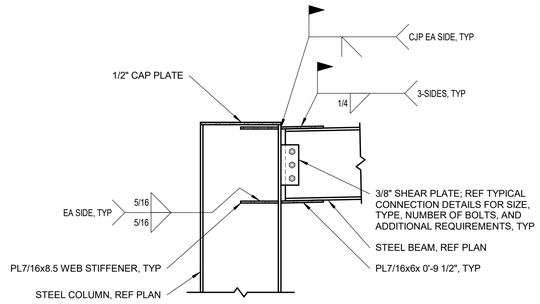
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

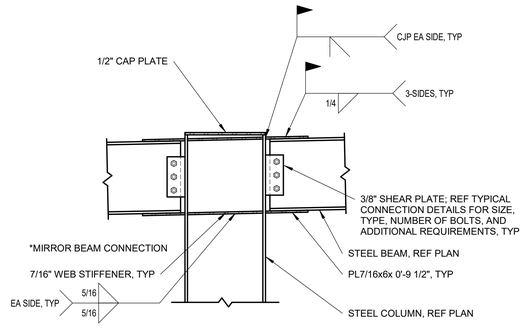
DATE: 08-11-2023

PROJECT# 23012

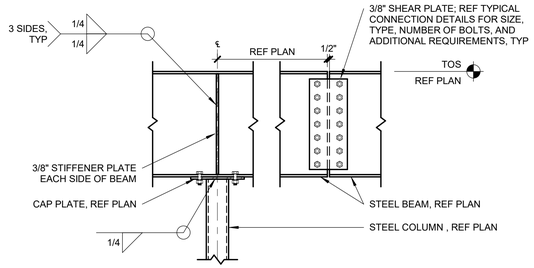
S510



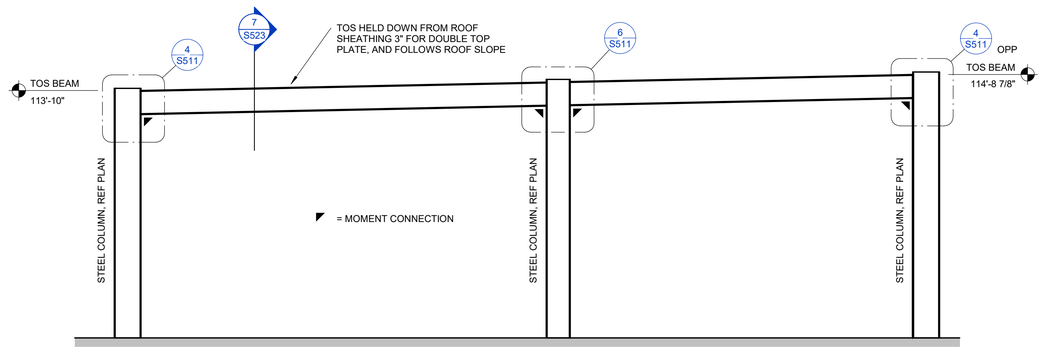
4 MOMENT FRAME END BEAM CONNECTION
S511 3/4" = 1'-0"



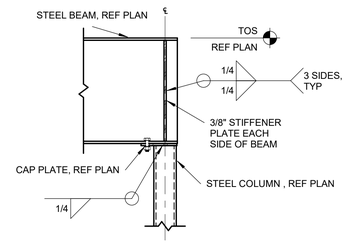
6 MOMENT FRAME INTERMEDIATE BEAM CONNECTION
S511 3/4" = 1'-0"



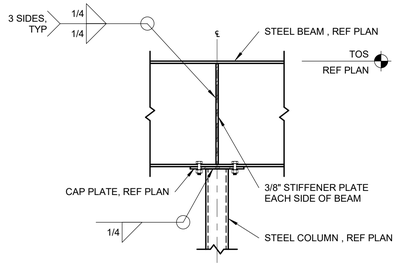
3 WIDE FLANGE BEAM SPLICE
S511 3/4" = 1'-0"



5 MOMENT FRAME ELEVATION
S511 1/4" = 1'-0"



2 STEEL BEAM BEARING ON STEEL HSS COLUMN
S511 3/4" = 1'-0"



1 STEEL BEAM CONTINUOUS ON STEEL HSS COLUMN
S511 3/4" = 1'-0"

STATE OF MISSOURI
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DOUGLAS CORNER
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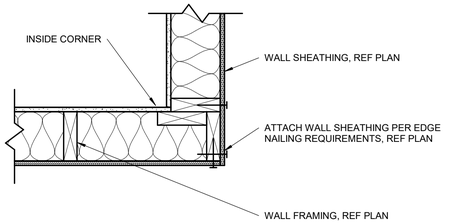
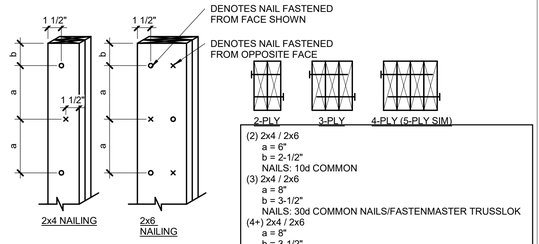


10 TYPICAL THREE STUD CORNER

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

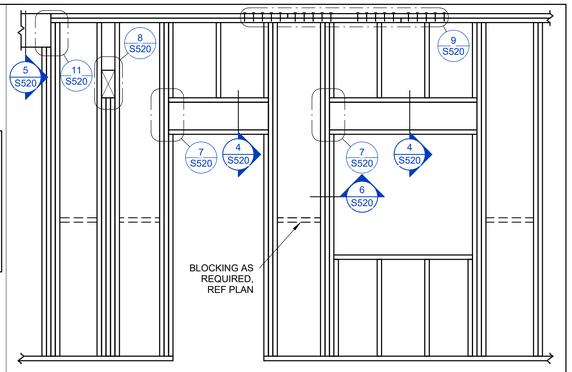


(2) 2x4 / 2x6
a = 6"
b = 2-1/2"
NAILS: 10d COMMON
(3) 2x4 / 2x6
a = 8"
b = 3-1/2"
NAILS: 30d COMMON NAILS/FASTENMASTER TRUSSLOK
(4+) 2x4 / 2x6
a = 8"
b = 3-1/2"
NAILS: FASTENMASTER TRUSSLOK OR LOGHOG

NOTES:
1. ADJACENT NAILS ARE DRIVEN FROM OPPOSITE SIDES OF COLUMN.
2. ALL NAILS/SCREWS SHALL PENETRATE ALL LAMINATIONS AND AT LEAST 75% OF THE OUTERMOST LAMINATION
3. REFERENCE MINIMUM FASTENER LENGTH
(2) 2x - 2 5/8" (2) 1 3/4" - 3 1/16"
(3) 2x - 4 1/8" (3) 1 3/4" - 4 13/16"
(4) 2x - 5 5/8" (4) 1 3/4" - 6 9/16"
(5) 2x - 7 1/8" (5) 1 3/4" - 8 5/16"

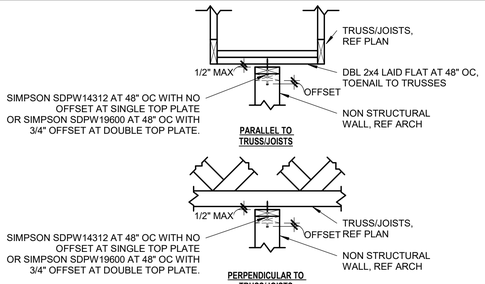
6 TYPICAL BUILT-UP STUD COLUMN

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



3 TYPICAL WOOD FRAMED WALL

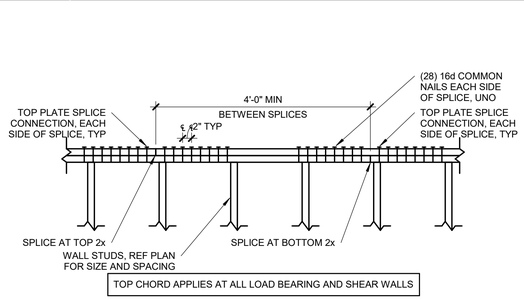
S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



NOTES:
1. FOR CLARITY, TRUSSES ARE SHOWN IN THIS DETAIL. HOWEVER, DETAIL APPLIES TO ALL FLOOR/ROOF FRAMING TYPES.
2. CEILING FINISH SHALL NOT BE ATTACHED TO ROOF TRUSS WITHIN 12" OF WALL.

13 ARCHITECTURAL WALL CONNECTION

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



TOP CHORD APPLIES AT ALL LOAD BEARING AND SHEAR WALLS

9 TYPICAL PLATE SPLICE

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

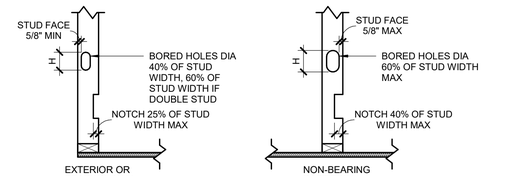
SCHEDULE - TYPICAL BUILT-UP WOOD BEAM

PLYS	TOP LOADING	SIDE LOADING
2-PLY	(3) ROWS OF 16d x 3" NAILS AT 6" OC (ALT SIDES)	ADDITIONAL LOAD IF APPLICABLE; ADDITIONAL (3) ROWS OF 16d x 3" NAILS AT 6" OC IF LOADED ON BOTH FACES; (3) ROWS OF 16d x 3" NAILS AT 6" OC ON LOADED FACE
3-PLY	(3) ROWS OF 16d x 3 1/2" NAILS AT 6" OC (EA SIDES)	ADDITIONAL LOAD IF APPLICABLE; ADDITIONAL (4) ROWS OF 16d NAILS AT 6" OC IF LOADED ON BOTH FACES; (4) ROWS OF 16d x 3" NAILS AT 6" OC ON LOADED FACE OUTSIDE PLY; (4) ROWS OF 16d x 3" NAILS AT 9" OC ON MIDDLE PLY
4-PLY	(2) ROWS OF 1/2" DIA A307 THRU BOLTS AT 12" OC STAGGERED	ADDITIONAL LOAD IF APPLICABLE; (3) 1/2" DIA A307 THRU BOLTS AT 9" OC. ALL ROWS STAGGERED

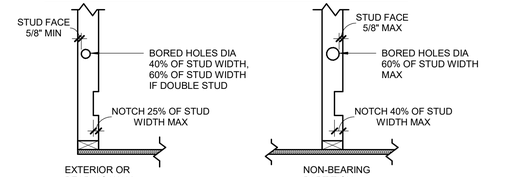
NOTES:
1. NAILING SHOWN APPLIES UNLESS SPECIFICALLY NOTED IN DETAILS.
2. SPACE NAILS EVENLY THROUGHOUT DEPTH OF BEAM.

5 TYPICAL BUILT UP WOOD BEAM

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



ALTERNATE FOR OBLONG BORED HOLES



PENETRATIONS THRU STUDS

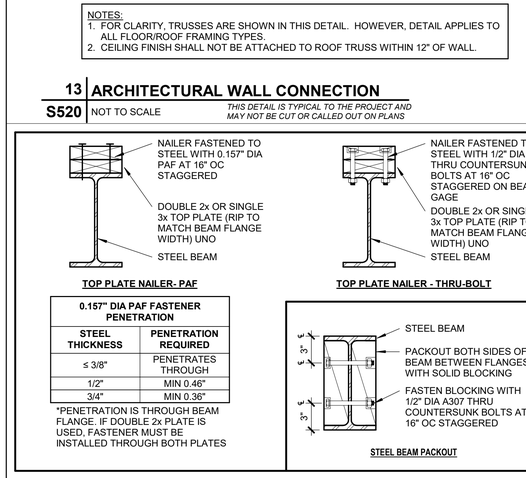
NOTE:
1. SEE SECTION R602.6 AND FIGURES R602.6.1 AND R602.6.2
2. **VERTICAL HOLE SIZE (H):**
- LVLS 1&2: D + 1/2"
- LVL 3: D + 1"
- LVL 4: D + 1 1/4"
- LVL 5: D + 1 1/2"

3. TOP AND BOTTOM PLATE HOLES. CUT OR NOTCH THAT IS 50% OR MORE OF WIDTH MUST BE REPAIRED USING 16 GA (MIN) METAL TIE THAT IS AT LEAST 1-1/2" WIDE IF WALL IS A SHEAR WALL IT MUST BE REPAIRED USING HARDY FRAME SADDLE (HFS).

WALL SIZE	WALL STUDS: BORED HOLE SIZE — LOAD BEARING OR EXT WALL 40%	LOAD BEARING OR EXT WALL 60%	NON-LOAD BEARING 60%	NOTCH — LOAD BEARING 25%	NOTCH — NON-LOAD BEARING 40%	PLATES: TOP & BOT 50%
2x4	1 3/8"	-	2 1/8"	7/8"	1 3/8"	1 3/4"
(2) 2x4	-	2 1/8"	2 1/8"	7/8"	1 3/8"	1 3/4"
2x6	2 1/4"	-	3 15/16"	1 3/8"	2 1/4"	2 3/4"
(2) 2x6	-	3 5/16"	3 15/16"	1 3/8"	2 1/4"	2 3/4"
2x8	2 7/8"	-	4 3/8"	1 13/16"	2 7/8"	3 5/8"
(2) 2x8	-	4 3/8"	4 3/8"	1 13/16"	2 7/8"	3 5/8"

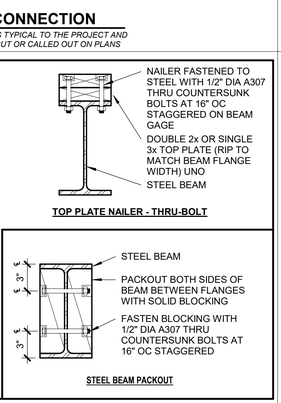
2 CUTTING, NOTCHING, AND BORED HOLES IN STUDS AND PLATES

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



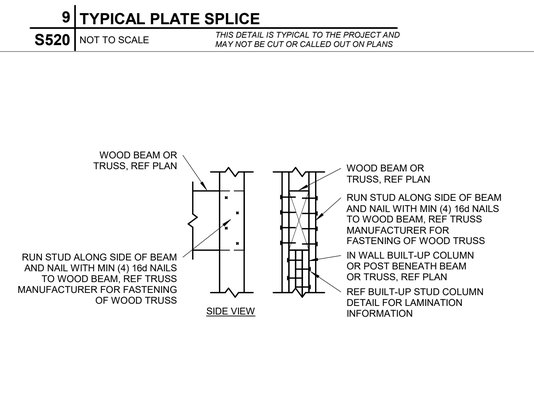
0.157" DIA PAF FASTENER PENETRATION	
STEEL THICKNESS	PENETRATION REQUIRED
≤ 3/8"	PENETRATES THROUGH
1/2"	MIN 0.46"
3/4"	MIN 0.36"

*PENETRATION IS THROUGH BEAM FLANGE. IF DOUBLE 2x PLATE IS USED, FASTENER MUST BE INSTALLED THROUGH BOTH PLATES



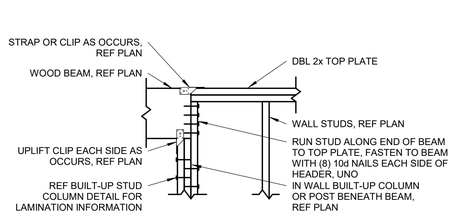
12 TYPICAL STEEL BEAM FLANGE BLOCKING AND TOP PLATE NAILER

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



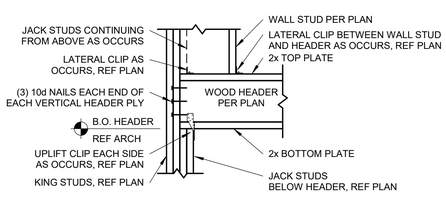
8 TYPICAL BEAM OR TRUSS AT STUD WALL

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



11 FLUSH WOOD BEAM AT WOOD STUD WALL

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

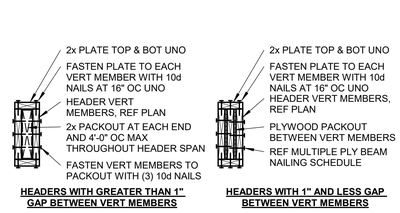


SCHEDULE - WOOD JAMB

OPENING WIDTH	UPLIFT CLIP	LATERAL CLIP
UP TO 3'-4"	N/A	N/A
3'-5" TO 10'-0"	SIMPSON H2.5A EA SIDE	SIMPSON A35

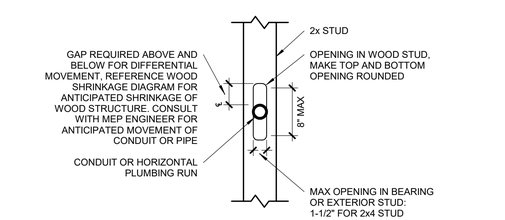
7 TYPICAL JAMB DETAIL

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



4 TYPICAL WOOD HEADER DETAIL

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*



1 WOOD STUD PENETRATION FOR SHRINKAGE

S520 | NOT TO SCALE | *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

STATE OF MISSOURI — LOGAN KYLE DOUGLAS — NUMBER PE-2023000069 — 2023.08.11 — PROFESSIONAL ENGINEER

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DOUGLAS CORNER
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REV#	DATE	DESCRIPTION

DATE: 08-11-2023
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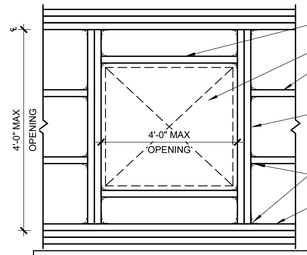


SCHEDULE - EXTRA THROUGH JOIST

NUMBER OF CUT JOISTS	TOTAL NUMBER OF EXTRA THROUGH JOISTS*
1	2
2	3
3	4

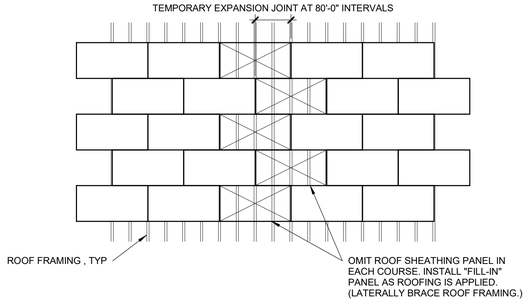
*REF MULTIPLE PLY BEAM NAILING SCHEDULE

NOTE: THIS DETAIL APPLIES FOR FRAMING WITH UNIFORM LOADING. CONTACT EOR FOR CONDITIONS WHERE UNIFORM LOADING DOES NOT APPLY.

3 TYPICAL MECHANICAL OPENING IN WOOD FRAMING

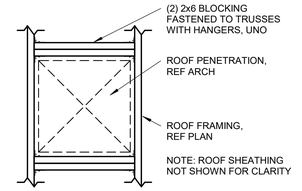
S521 NOT TO SCALE — *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

CAUTION: DURING PERIOD OF CONSTRUCTION WHEN TEMPORARY EXPANSION JOINTS CREATE GAPS IN THE ROOF, SUITABLE PROTECTIVE BARRICADES SHALL BE INSTALLED TO PREVENT WORKERS FROM FALLING THROUGH OPEN AREAS.



4 TEMPORARY EXPANSION JOINT DETAIL FOR ROOFS

S521 NOT TO SCALE — *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

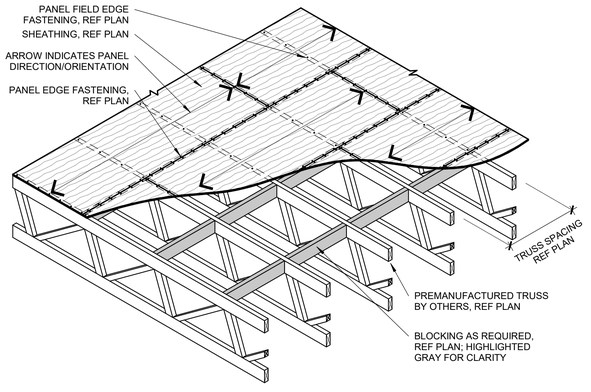


NOTE: THIS DETAIL APPLIES TO PENETRATIONS BETWEEN ROOF RAFTERS. CUTTING OF RAFTERS IS NOT PERMITTED.

2 TYPICAL ROOF PENETRATION DETAIL

S521 NOT TO SCALE — *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

NOTES:
1. NAILS TO BE COMMON NAILS OR GALVANIZED (HOT-DIPPED OR TUMBLED) BOX NAILS. SINKER NAILS, COOLER NAILS, ETC SHALL NOT BE USED.
2. NAILS SHALL HAVE FULL HEADS, CLIPPED NAILS ARE NOT ALLOWED.
3. PANELS SHALL NOT BE LESS THAN 4'-0"x8'-0" EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING, WHERE MINIMUM PANEL DIMENSIONS SHALL BE 24" UNLESS SUPPORTED BY AND FASTENED TO FRAMING MEMBERS.
4. ALL NAILS SHALL BE DRIVEN SUCH THAT THE HEAD IS FLUSH WITH FACE OF SHEATHING. **DO NOT OVERDRIVE NAILS**.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM EDGE OF PANELS.
6. THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS AND BLOCKING SHALL BE 2" NOMINAL OR GREATER AT ADJOINING PANEL EDGES EXCEPT THAT A 3" NOMINAL OR GREATER WIDTH AT ADJOINING PANEL EDGES AND STAGGERED NAILING AT ALL PANEL EDGES WHERE EDGE NAIL SPACING OF 2-1/2" OC OR LESS IS SPECIFIED, OR 10d COMMON NAILS HAVING PENETRATION INTO FRAMING MEMBERS AND BLOCKING OF MORE THAN 1-1/2" IS SPECIFIED AT 3" OC OR LESS EDGE NAILING.



1 TYPICAL WOOD TRUSS WOOD DIAPHRAGM

S521 NOT TO SCALE — *THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS*

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2023.08.11
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DOUGLAS CORNER

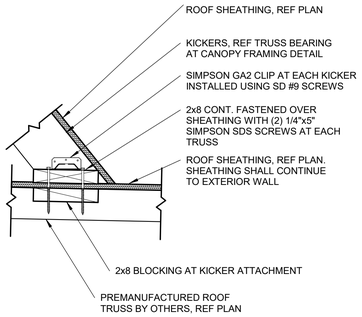
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

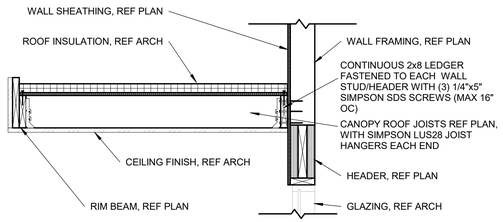
DATE: 08-11-2023

PROJECT# 23012

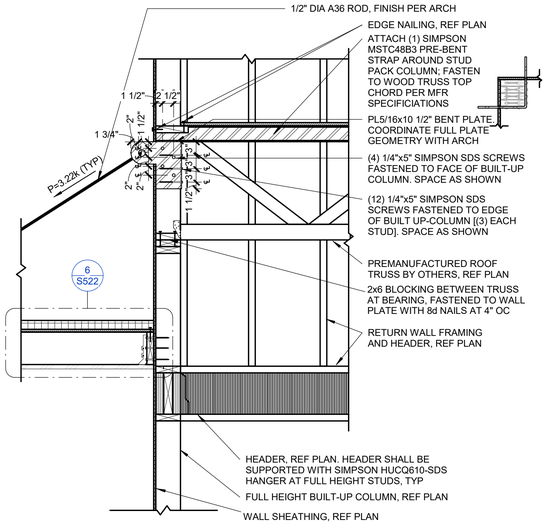
S521



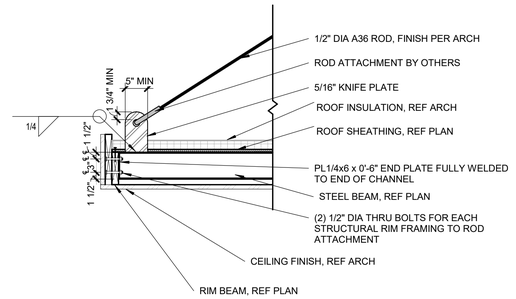
7 ROOF KICKER BASE ATTACHMENT
S522 | 1 1/2" = 1'-0"



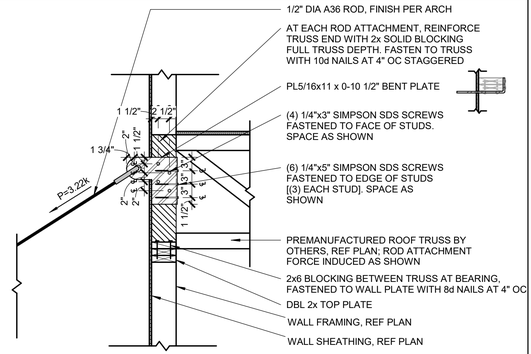
6 TYPICAL CANOPY FRAMING
S522 | 3/4" = 1'-0"



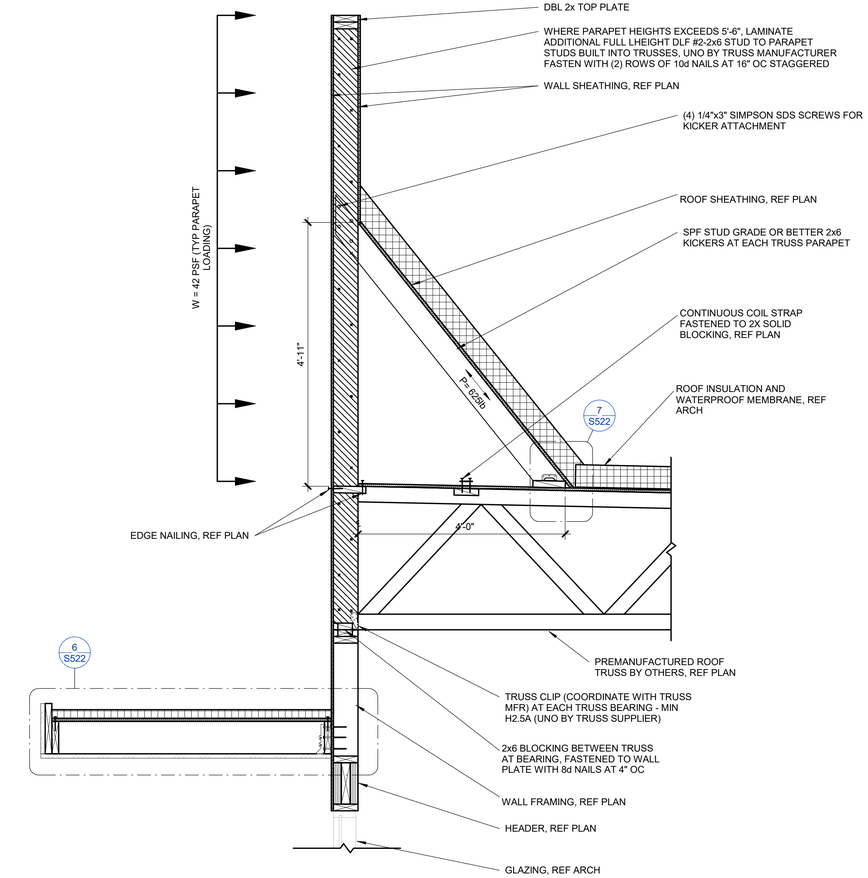
4 CANOPY TOP SUPPORT AT CORNER
S522 | 3/4" = 1'-0"



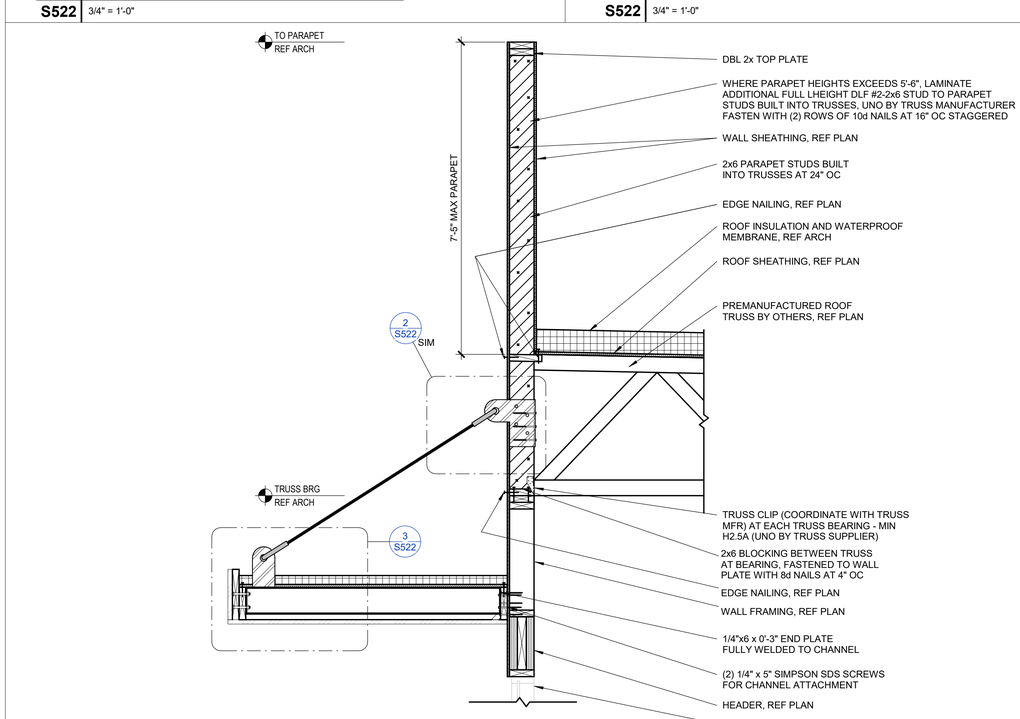
3 TYP CANOPY SUPPORT AT BOTTOM
S522 | 3/4" = 1'-0"



2 TYP CANOPY SUPPORT AT TOP
S522 | 3/4" = 1'-0"



5 W ROOF TRUSS BEARING AT CANOPY
S522 | 3/4" = 1'-0"



1 W EXTERIOR ROOF FRAMING AT CANOPY SUPPORT
S522 | 3/4" = 1'-0"

STATE OF MISSOURI
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DOUGLAS CORNER
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REV#	DATE	DESCRIPTION

DATE: 08-11-2023
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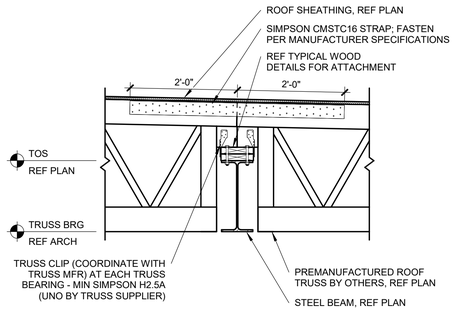
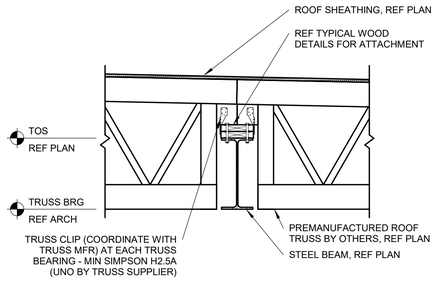
S522



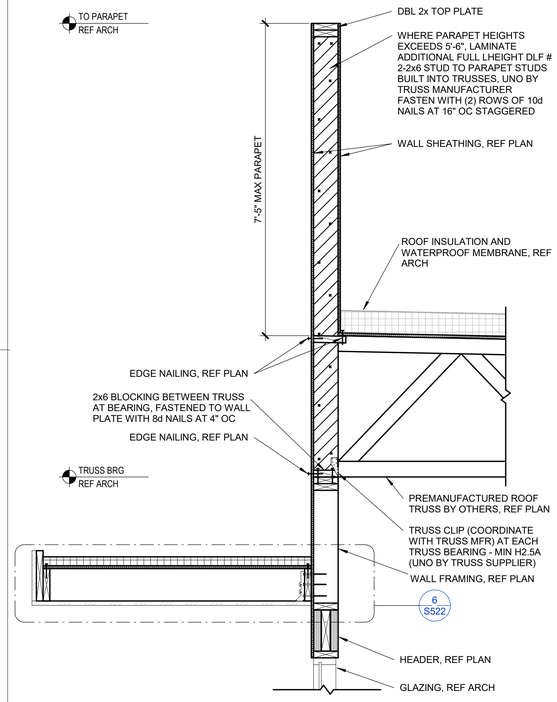
10 WOOD TRUSSES AT INTERIOR STEEL BEAM AT BUILDINGS ENDS

S523 | 3/4" = 1'-0"



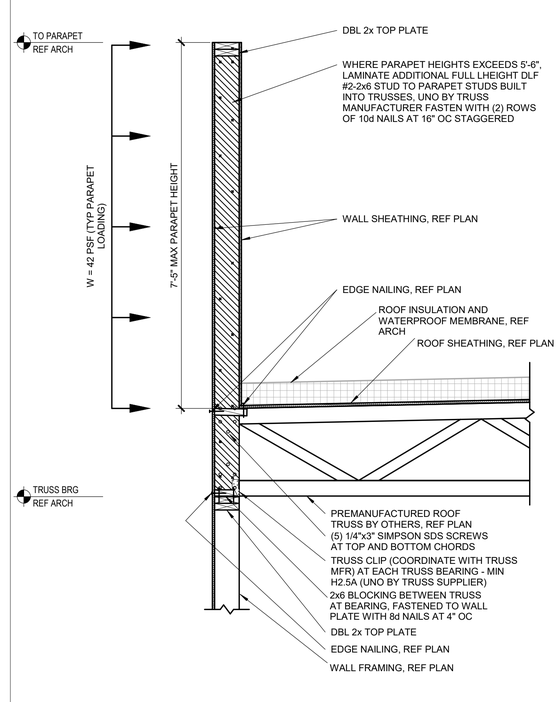
9 WOOD TRUSSES AT INTERIOR STEEL BEAM

S523 | 3/4" = 1'-0"



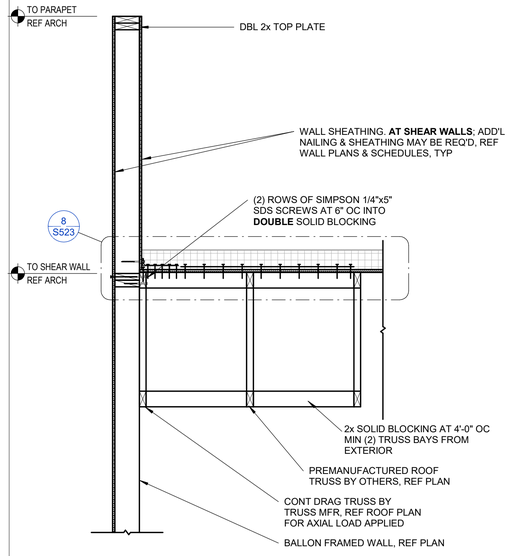
6 W ROOF TRUSS BEARING AT CANOPY FRAMING

S523 | 3/4" = 1'-0"



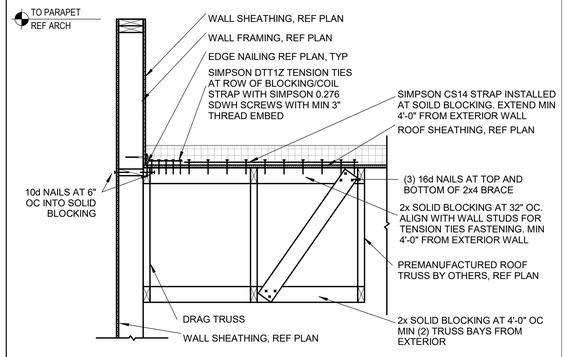
4 E ROOF TRUSS BEARING WITH PARAPET REINFORCEMENT

S523 | 3/4" = 1'-0"



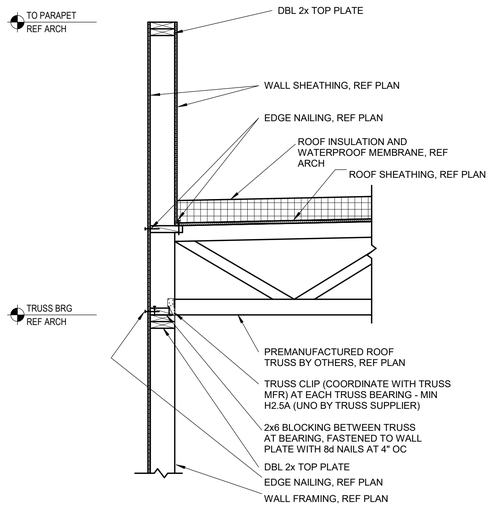
2 N/S ROOF FRAMING AT SHEAR WALL

S523 | 3/4" = 1'-0"



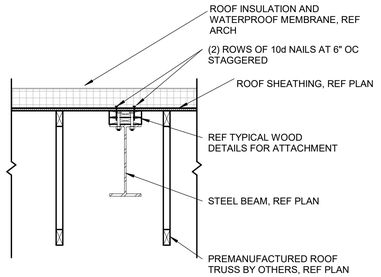
8 N/S EXTERIOR BALLOON FRAMING

S523 | 3/4" = 1'-0"



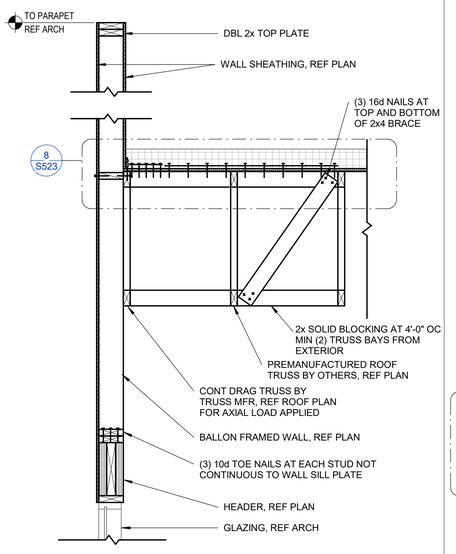
5 E EXTERIOR ROOF TRUSS BEARING

S523 | 3/4" = 1'-0"



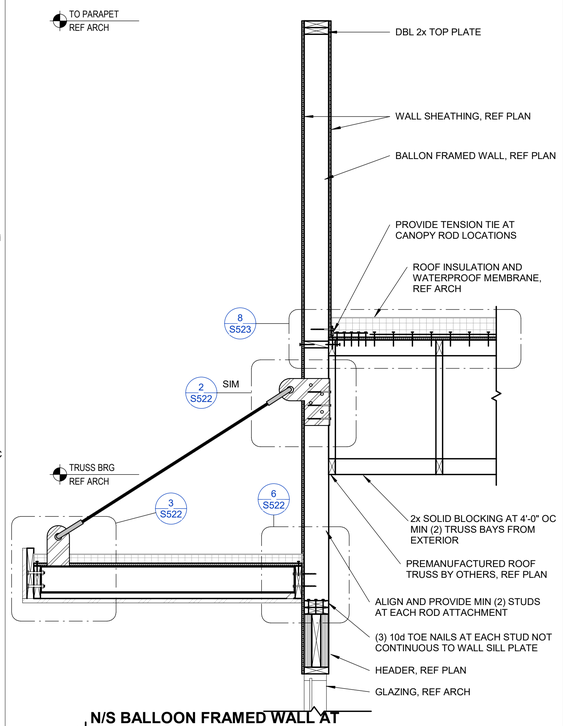
7 ROOF ATTACHMENT TO MOMENT FRAME

S523 | 3/4" = 1'-0"



3 N/S EXTERIOR BALLOON FRAMING AT OPENING

S523 | 3/4" = 1'-0"



1 N/S BALLOON FRAMED WALL AT CANOPY SUPPORT

S523 | 3/4" = 1'-0"

STATE OF MISSOURI
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DOUGLAS CORNER
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REV#	DATE	DESCRIPTION

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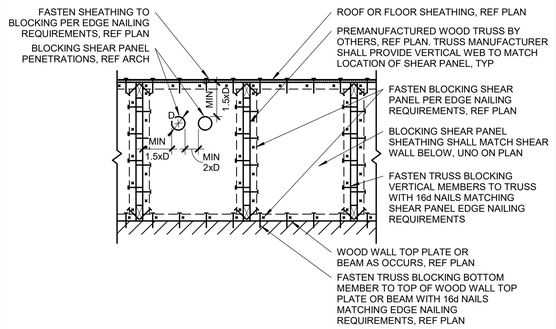
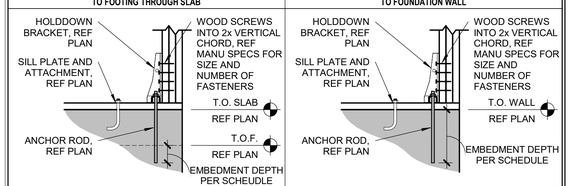


3 | TRUSS BLOCKING SHEAR PANEL

S530 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS

SHEAR WALL HOLDDOWN ATTACHMENT

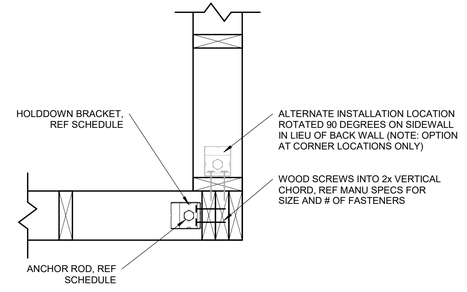


NOTE: REFERENCE SHEAR WALL PLANS, SHEAR WALL SCHEDULE, AND HOLDOWN SCHEDULE FOR SILL PLATE ATTACHMENT, HOLDOWN BRACKET, AND ANCHORAGE INFORMATION. ALL PRODUCTS SHALL BE INSTALLED PER MANUFACTURERE SPECIFICATIONS.

2 | TYPICAL WOOD HOLDDOWN ANCHOR TO FOOTING

S530 | NOT TO SCALE

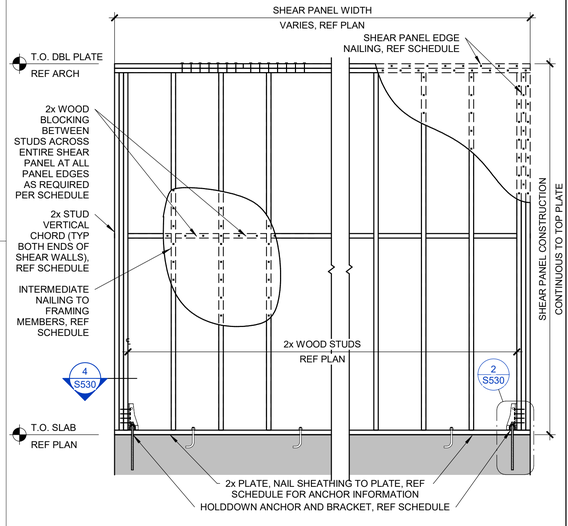
THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS



4 | TYPICAL HOLDDOWN ANCHOR PLAN

S530 | NOT TO SCALE

THIS DETAIL IS TYPICAL TO THE PROJECT AND MAY NOT BE CUT OR CALLED OUT ON PLANS



1 | TYPICAL SINGLE STORY BRACED WOOD WALL

S530 | NOT TO SCALE

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DOUGLAS CORNER

LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION

DATE: 08-11-2023

PROJECT# 23012

S530

GAS UNIT HEATER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	CFM	WEIGHT (LBS)	INPUT (MBH)	OUTPUT (MBH)	EFF.	ELECTRICAL V/PH	ELECTRICAL FLA	REMARKS
UH-1	REZNOR	UDAP-100	1,345	96	100	80	80.00%	115V/1PH	2.4	1,2
UH-2	REZNOR	UDAP-100	1,345	96	100	80	80.00%	115V/1PH	2.4	1,2

REMARKS:
1. PROVIDE WITH THERMOSTAT AND CONTROL TRANSFORMER.
2. PROVIDE MANUFACTURER'S HANGER KIT.
3. PROVIDE 4" TYPE B VENT.

ELECTRIC HEATER SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	WEIGHT	CFM	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL kW	NOTES
EUH-1	FIRE RISER ROOM	OUELLET	OHVU03008AM	40	300	208	3	3	A-E

NOTES:
- A. MOUNT 8'-0" ABOVE FINISHED FLOOR WITHOUT OBSTRUCTING AIRFLOW.
- B. PROVIDE NECESSARY MOUTING BRACKET AND ACCESSORIES FOR HORIZONTAL MOUNTING.
- C. PROVIDE WALL MOUNTED THERMOSTAT.
- D. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
- E. PROVIDE RELAY AND TRANSFORMER FOR CONNECTION TO 24V THERMOSTAT.
- F. INSTALL RECESSED IN WALL. COORDINATE COLOR WITH ARCHITECT. PROVIDE TAMPERPROOF BUILT-IN THERMOSTAT.

PLUMBING FIXTURE SCHEDULE

FD	FLOOR DRAIN: SOUIX CHIEF 842-4PNR, FLOOR DRAIN, PVC BODY AND CLAMPING COLLAR, ADJUSTABLE 6-1/2" ROUND NICKEL BRONZE STRAINER. PROVIDE WITH PROSET SYSTEMS "TRAP GUARD" INSERT FOR ACTUAL FLOOR DRAIN MODEL AND SIZE PROVIDED.
RPZ1	WATTS #LF009, 1-1/2", REDUCED PRESSURE BACKFLOW PREVENTER, LEAD FREE BRONZE BODY CONSTRUCTION, TWO IN-LINE INDEPENDENT CHECK VALVES, REPLACEABLE CHECK SEATS WITH AN INTERMEDIATE RELIEF VALVE AND BALL VALVE TEST COCKS.
RPZ2	WATTS #LF009, 1", REDUCED PRESSURE BACKFLOW PREVENTER, LEAD FREE BRONZE BODY CONSTRUCTION, TWO IN-LINE INDEPENDENT CHECK VALVES, REPLACEABLE CHECK SEATS WITH AN INTERMEDIATE RELIEF VALVE AND BALL VALVE TEST COCKS.
HB	HOSE BIB, FREEZELESS, WOODFORD MODEL 65, ASSE 1019-B CERTIFIED WITH ASSE 1011 VACUUM BRAKER, LOOSE KEY OPERATOR, 3/4" MPT INLET.

FIXTURE BRANCH CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
FLOOR DRAIN	-	-	4"	2"
WALL HYDRANT	3/4"	-	-	-
NOTE:	PIPE SIZES SHOWN ARE MINIMUM.			

DUPLEX SEWAGE GRINDER PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	GPM	HEAD (FT. WC)	HP	ELECTRICAL (EACH PUMP) VOLTS	PHASE	FULL LOAD AMPS	LOCKED ROTOR AMPS	WEIGHT (LBS)	NOTES
GP-1	LIBERTY	D3672LSG203	50	31	2	208	1	15	53	515	A-G

NOTES:
- A. THIS IS A PREASSEMBLED DUPLEX GRINDER SYSTEM WITH TWO (2) IDENTICAL PUMPS. ELECTRICAL INFO ABOVE IS FOR ONE PUMP. ELECTRICAL SERVICE SHALL BE SIZED TO SUPPORT BOTH PUMPS RUNNING SIMULTANEOUSLY
- B. PROVIDE FACTORY MOUNTED GUIDE RAIL SYSTEM WITH QUICK DISCONNECT.
- C. PROVIDE THREE (3) FLOAT SWITCHES AND A HIGH WATER ALARM.
- D. PROVIDE AE24HC NEMA 4X CONTROL PANEL. MOUNT ON WALL NEXT TO DUPLEX SYSTEM.
- E. PUMPS SIT TOGETHER IN A 36" ID X 96" DEEP FIBERGLASS BASIN.
- F. COORDINATE DISCHARGE HEIGHT WITH CIVIL PLANS PRIOR TO PURCHASE.
- G. PROVIDE ONE (1) 42" OD X 3/8" THICK ROUND STEEL COVER.

MECHANICAL & PLUMBING SPECS

1. GENERAL PROVISIONS:
   - A. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE PLUMBING AND MECHANICAL SYSTEMS OUTLINED.
   - B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATIONS OF COMPLIANCE OR APPROVAL AS REQUIRED BY AUTHORITIES.
   - C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.
   - D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.
   - E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, PIPE, DUCT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL ACCEPTANCE.
   - F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE MAINTAINED.
   - G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.
   - H. INSPECTION OF THE SITE: THIS CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE MEP DRAWINGS, SPECIFICATIONS, DETAIL, AND THE SITE. THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SPECIAL OR UNUSUAL PROBLEMS, CONFLICTS, OR OBSTRUCTIONS THAT AFFECT HIS BID.
   - I. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE MECHANICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS AND FITTINGS REQUIRED FOR INSTALLATION. DO NOT SCALE DRAWINGS. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DATA AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION SECTIONS WHERE MECHANICAL WORK INTERFACES WITH OTHER TRADES.
   - J. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS OR WITH CODE REQUIREMENTS, THE NOTE OR CODE WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE JOB OR HIGHER STANDARD SHALL PREVAIL.
   - K. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE FOR EXPOSED WORK. COORDINATE WITH WORK OF OTHER SECTIONS. COMPLY WITH APPLICABLE REGULATIONS AND CODE REQUIREMENTS. PROVIDE PROPER CLEARANCES FOR SERVICING.
   - L. INCLUDE ALL BASIC MATERIALS AND CONSTRUCTION METHODS INCLUDING PIPES, PIPE FITTINGS, AND SPECIALTIES AND SUPPORTING DEVICES, VALVES, PIPE AND VALVE IDENTIFICATION, PUMPS, VIBRATION ISOLATION, ETC.
   - M. FURNISH ADEQUATE ACCESS PANELS AND DOORS TO ALLOW FOR FUTURE PIPING ALTERATIONS, REPLACEMENT, AND MAINTENANCE OF PIPING. PROPERLY IDENTIFY ALL ACCESS PANELS AND DOORS.

2. OPERATION AND MAINTENANCE MANUALS:
   - A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.
   - B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATING AND MAINTENANCE MANUALS.

3. MANUFACTURERS:
   - A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN.
   - B. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT OTHER THAN THE SPECIFIED EQUIPMENT BEING FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

4. MOTORS:
   - A. PROVIDE THERMAL OVERLOAD PROTECTION FOR EACH MOTOR PROVIDED BY THIS WORK.

5. PLUMBING:
   - A. PROVIDE CLEANOUTS AT EACH CHANGE IN DIRECTION AND AT 100 FOOT INTERVALS IN STRAIGHT RUNS.
   - B. ALL SEWER PIPING LOCATED INSIDE THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES.
     1. INSTALL 2-1/2" AND SMALLER PIPE AT 1/4" PER FOOT FALL.
     2. INSTALL 3" AND LARGER PIPE AT 1/8" PER FOOT FALL.

6. PIPING
   - A. DOMESTIC COLD, HOT, AND HOT WATER RECIRCULATING (ABOVEGROUND).
     1. TYPE L HARD DRAWN COPPER TUBING, ASTM B-88 WITH WROUGHT BRONZE SOLDERED FITTINGS.
     2. GATE VALVE: CRANE #428 OR EQUAL.
     3. BALL VALVE: CRANE #932 OR EQUAL.
   - B. SANITARY SEWER AND VENTS (UNDERGROUND, INTERIOR TO BUILDING).
     1. POLYVINYL CHLORIDE (PVC) DMV PIPE, SCHEDULE 40, SOLVENT JOINT.
     2. SEWER LINES SHALL BE LOCATED IN GENERAL AS SHOWN ON THE DRAWINGS. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN SUCH A MANNER AS TO MAINTAIN PROPER CLEARANCES AND SUFFICIENT SLOPE TO ENSURE DRAINAGE.
   - C. NATURAL GAS PIPING:
     1. SCHEDULE 40 BLACK STEEL PIPING: 2" AND SMALLER WITH SCREWED JOINTS AND 150 LB. MALLEABLE IRON SCREWED FITTINGS. PIPE 2-1/2" AND LARGER SHALL USE STANDARD WEIGHT BLACK STEEL WELDING FITTINGS WITH WELDED JOINTS.
     2. GAS VALVES SHALL BE ROCKWELL 142/143, PLUG VALVE.
     3. SUPPORT PIPING AT INTERVALS NOT TO EXCEED THOSE LISTED IN TABLE 415.1 OF THE I.F.G.C.
     4. PROVIDE A.G.A. APPROVED SHUT OFF VALVES AND DIRT LEGS AT CONNECTIONS TO ALL EQUIPMENT.
   - D. ALL PIPE HANGERS AND SUPPORTS SHALL BE STANDARD PRODUCTS OF GRINNELL, FEE AND MASON, OR ANVIL. HANGER SPACING SHALL BE IN ACCORDANCE WITH MSS-SP-69.

7. INSULATION:
   - A. ALL INSULATIONS AND ACCESSORIES SHALL HAVE A FIRE HAZARD CLASSIFICATION WITH A FLAME SPREAD RATING OF NOT OVER 25, A FUEL CONTRIBUTION RATING OF NOT OVER 50, AND A SMOKE DEVELOPMENT RATING OF NOT OVER 50, IN ACCORDANCE WITH NFPA.
   - B. PIPE INSULATION (ABOVE GRADE):
     1. THE PIPE INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 BTU PER IN/HR*SQ-FT*°F OR LESS.
     2. FLEXIBLE CLOSED CELL ELASTOMERIC THERMAL INSULATION, UNSLIT OR PRESLIT WITH PRESSURE SENSITIVE ADHESIVE SYSTEM FOR CLOSURE AND VAPOR SEALING, EQUAL TO ARMSTRONG AP ARMAFLEX OR ARMAFLEX 2000.
     3. THICKNESS:
        - a. DOMESTIC COLD WATER: 1/2"

8. TESTING, BALANCING AND CLEANING:
   - A. ALL PIPING SHALL BE TESTED FOR LEAKS BEFORE BEING CONCEALED IN WALL CONSTRUCTION OR COVERED WITH INSULATION.
   - B. SEWER AND VENT PIPING SHALL BE HYDROSTATICALLY TESTED WITH NO LESS THAN 10 FEET OF HEAD FOR A PERIOD OF NOT LESS THAN 15 MINUTES, PER THE LOCAL PLUMBING CODE, WITH NO LEAKS.
   - C. DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 60 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS.
   - D. NATURAL GAS SYSTEMS SHALL BE TESTED WITH COMPRESSED AIR AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE , BUT NOT LESS THAN 50 PSIG FOR A PERIOD OF 2 HOURS WITH NO LEAKS.

9. FLUES AND ACCESSORIES:
   - A. PROVIDE MANUFACTURERS STANDARD ACCESSORY ITEMS INCLUDING BIRD PROOF TOP, STORM COLLAR, ROOF THIMBLE, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION. ROOF THIMBLES THROUGH THE BUILDING ROOF SHALL BE SUITABLE FOR USE WITH THE ROOF PROVIDED.
   - B. FLUES FOR HEATERS SHALL BE DOUBLE WALL TYPE B EQUAL TO METALBESTOS. PROVIDE MANUFACTURER'S STANDARD FITTING AND ACCESSORIES (ROOF THIMBLE, STORM COLLAR, COUNTER FLASHING, ETC.) AS REQUIRED FOR A COMPLETE INSTALLATION.

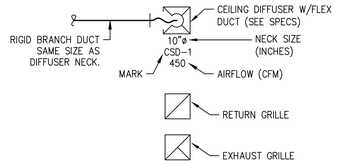
10. ELECTRIC WALL HEATERS
   - A. UNIT SHALL INCLUDE ELECTRIC HEATING ELEMENTS WITH SAFETY AND DISCONNECT DEVICES AS REQUIRED BY NEC, INCLUDING RELAYS, CONTROLLERS AND REQUIRED EQUIPMENT TO FORM A COMPLETE AND FUNCTIONAL HEATER.
   - B. ELEMENTS SHALL BE HEAVY DUTY ALUMINUM-FINNED, COPPER CLAD STEEL SHEATH. PROVIDE AUTOMATIC RESET THERMAL OVER-HEAT PROTECTION. THERMAL PROTECTOR SHALL BE LINEAR TYPE TO SENSE TEMPERATURES THE ENTIRE LENGTH OF HEATING ELEMENT.
   - C. FANS SHALL BE DIRECT DRIVE USING PERMANENT SPLIT CAPACITOR TYPE MOTORS WITH BUILT-IN AUTOMATIC RESET MOTOR OVERLOAD PROTECTION.

M&P SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE NECESSARILY USED ON THE DRAWINGS.

HVAC EQUIPMENT & DUCTWORK

- SPIN-IN FITTING WITH MANUAL VOLUME DAMPER
- BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER
- ELBOW WITH TURNING VANES
- RETURN, EXHAUST, OR OUTSIDE AIR DUCT UP
- RETURN, EXHAUST, OR OUTSIDE AIR DUCT DOWN
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- EQUIPMENT WITH FLEXIBLE DUCT CONNECTION
- MANUAL VOLUME DAMPER
- SQUARE TO ROUND TRANSITION
- DUCT TRANSITION
- (T) THERMOSTAT
- DUCT MOUNTED SMOKE DETECTOR



HVAC EQUIPMENT & DUCTWORK

SYMBOL	DESCRIPTION
SS	SANITARY SEWER (ABOVE GRADE)
SS	SANITARY SEWER (BELOW GRADE)
CD	CONDENSATE DRAIN
V	VENT PIPING
G	G = GAS PIPING LESS THAN 2 PSI
MPG	MPG = GAS PIPING 2 PSI
CW	COLD WATER PIPING
HW	HOT WATER PIPING
HWR	RECIRCULATING HOT WATER
CA	COMPRESSED AIR
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	CHECK VALVE/BACKFLOW PREVENTER
	GATE VALVE
	BALL VALVE
	PLUG VALVE
	FLOOR CLEANOUT (FCO)
	WALL CLEANOUT (WCO)
	FLOOR DRAIN
	FLOOR SINK
	HOSE BIB

ANNOTATION

- (#) PLAN WORK NOTE
- (RTU 1) MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- (-) PLUMBING FIXTURE DESIGNATION
- CONNECTION POINT OF NEW WORK TO EXISTING
- (A / M1) DETAIL REFERENCE UPPER NUMBER INDICATED DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- (E) DENOTES EXISTING ITEM

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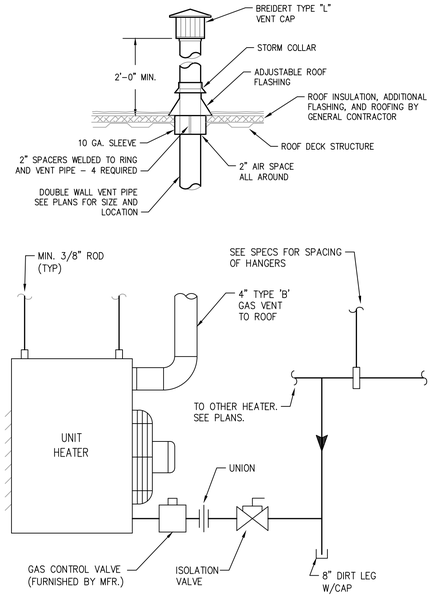
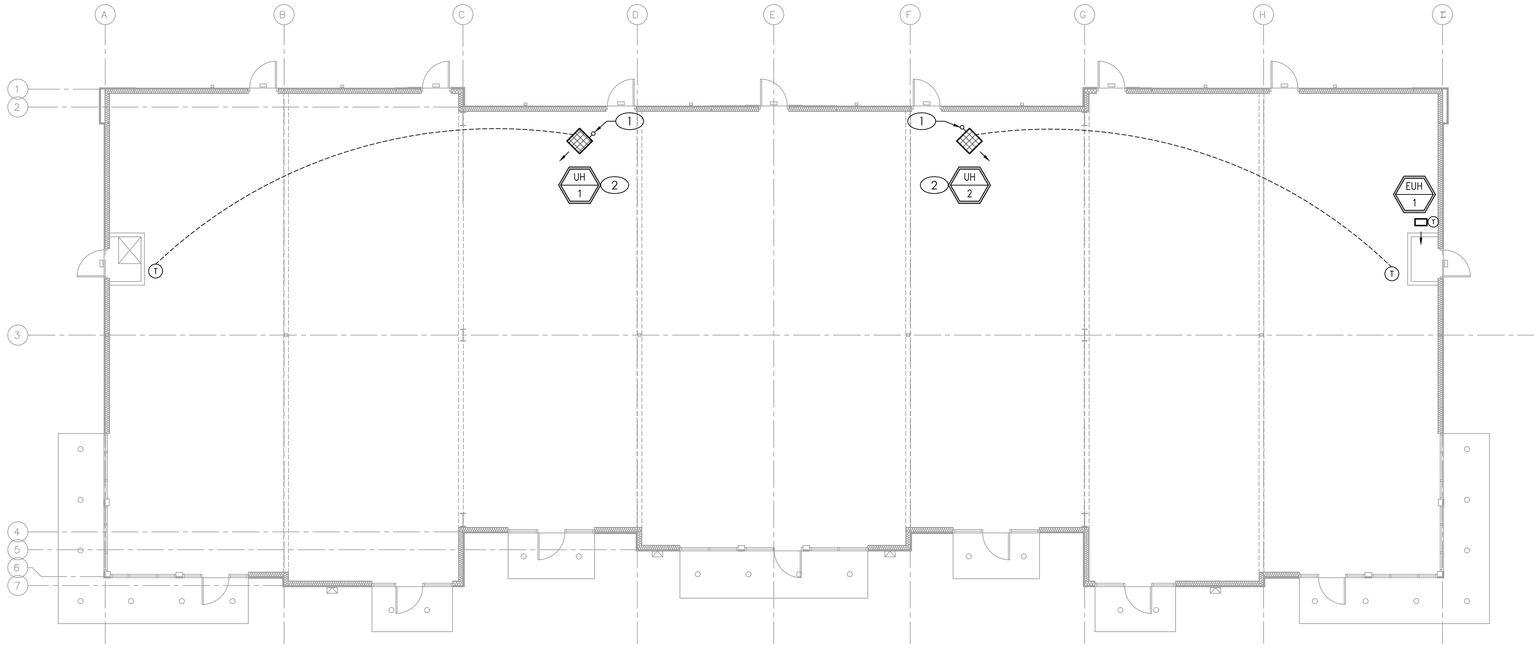
MECHANICAL & PLUMBING SPECIFICATIONS, SYMBOLS, SCHEDULES AND DETAILS

MP1



GAS FIRED UNIT HEATER 2

SCALE : NO SCALE



MECHANICAL PLAN - MAIN LEVEL 1

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

NORTH

KEYED PLAN NOTES

1. 4" DIA FLUE THROUGH ROOF. LOCATE MIN. 3'-0" FROM EDGE OF ROOF. COORDINATE PENETRATION OF ROOFING MEMBRANE WITH ROOFING CONTRACTOR SO NOT TO VOID ROOF WARRANTY. SEAL ROOF PENETRATION WEATHERTIGHT.
2. GAS FIRED UNIT HEATER. LOCATED TOP 18" FROM CEILING. SUPPORT FROM OVERHEAD STRUCTURE AS REQUIRED.

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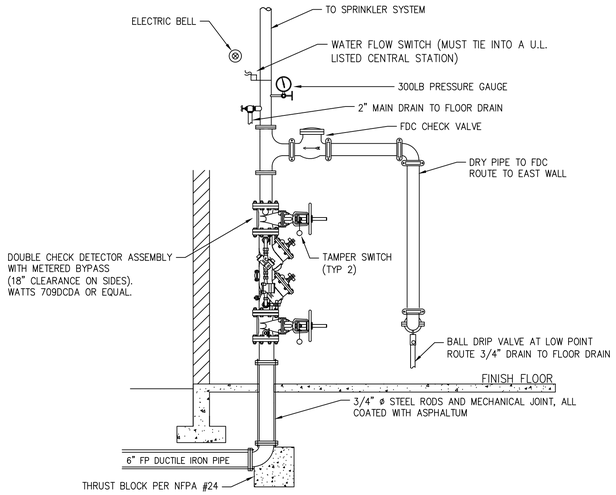
MECHANICAL PLAN

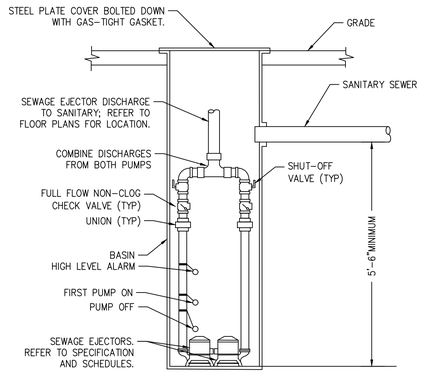
M1



NOTES:
1) SEE NFPA 13 FOR CONNECTIONS PASSING THROUGH OR UNDER FOUNDATION WALLS.
2) ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER. DIMENSIONS FROM FACE-OF-PIPE SHALL MEASURE A MINIMUM OF 12" OFF THE BACK WALL, 18" ON EACH SIDE, AND 36" CLEAR IN FRONT. ALL VALVES NO MORE THAN 7'-0" AFF.
3) TAMPER SWITCH OR CHAIN & LOCK REQUIRED FOR CONTROL VALVES.
4) MONITORING SYSTEM: PROVIDE A SYSTEM FOR DETECTION OF FLOW AND SUPERVISION OF VALVES, CAPABLE WITH COMMUNICATING WITH OWNER'S MONITORING COMPANY. PROVIDE ALL WIRING. ROUTE COMMUNICATION CABLE TO TELEPHONE EQUIPMENT FOR CONNECTIONS BY OWNER.
5) DRAWING IS SCHEMATIC. ORIENT VALVE SO THAT 36" CLEAR IS IN FRONT OF HANDWHEEL.
6) SERVICE SIZE TO BE DETERMINED BY FIRE PROTECTION CONTRACTOR. SIZE SHOWN FOR BIDDING PURPOSE ONLY.

FIRE SPINKLER RISER - WET PIPE (4)

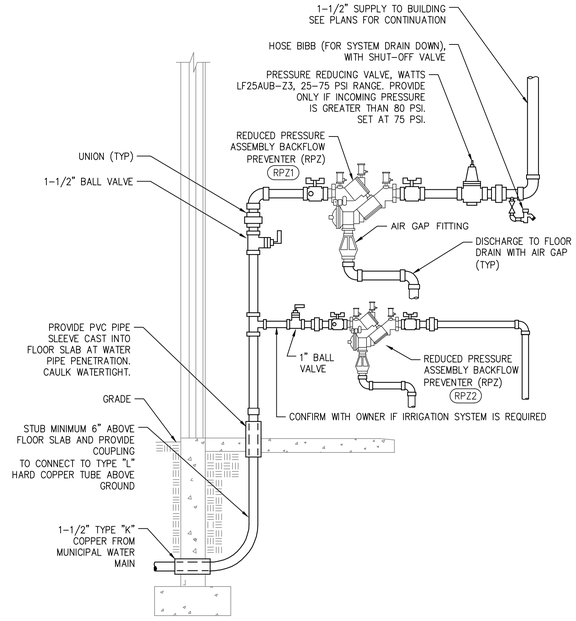
SCALE : NO SCALE



NOTE: ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. PIT EXCAVATION IS BY PLUMBING CONTRACTOR. LOCATE FLOATS AT ELEVATIONS RECOMMENDED BY PUMP MANUFACTURER. LOCATE PIT WITHIN 1'-0" OF WALL TO SUPPORT PIPES EXITING PIT AND ALLOW 3'-0" ACCESS SPACE IN FRONT OF PIT. LOCATE REMOTE CONTROL PANEL AS CLOSE AS POSSIBLE TO PIT. VERIFY EXACT ENTERING INVERT ELEVATION PRIOR TO ORDERING BASIN TO MAINTAIN MINIMUM BOTTOM ELEVATION OF 5'-6" BELOW ENTERING INVERT.

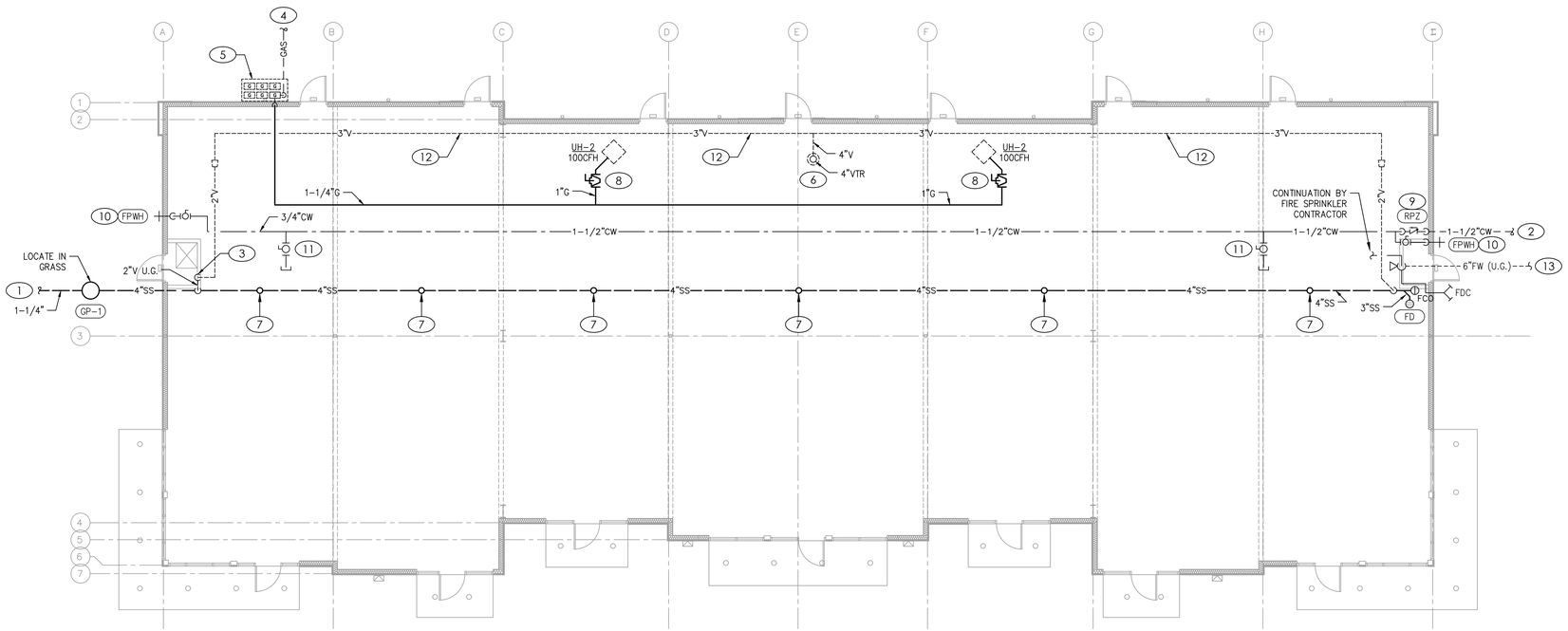
DUPLEX SEWAGE EJECTOR (3)

SCALE : NO SCALE



DOMESTIC WATER ENTRY (2)

SCALE : NO SCALE



PLUMBING PLAN - MAIN LEVEL (1)

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

GENERAL WORK NOTES

A. ROUTE PIPING AS HIGH AND AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE ROUTING WITH ALL EXISTING CONDITIONS, EQUIPMENT, STRUCTURAL ELEMENTS, DUCTWORK, ETC.

B. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.

(#) KEYED PLAN NOTES

1. 1-1/4" SANITARY FORCED MAIN TO UTILITY SERVICE. REFER TO CIVIL PLANS FOR CONTINUATION.
2. 1-1/2" DOMESTIC COLD WATER TO UTILITY SERVICE. CONTRACTOR SHALL WORK WITH THE WATER COMPANY AND BEAR ALL COSTS FOR THE INSTALLATION OF A NEW WATER MAIN ENTRANCE, INCLUDING TAP, METER, METER PIT, PIPING, ETC. FOR A COMPLETE INSTALLATION.
3. 2" VENT FROM UNDERGROUND UP TO CEILING SPACE.
4. GAS PIPING TO UTILITY MAIN. TOTAL ESTIMATED GAS LOAD FOR BUILDING = 1,200 MBH. REFER TO CIVIL PLANS FOR CONTINUATION. CONTRACTOR TO COORDINATE WITH GAS UTILITY FOR INSTALLATION.
5. COORDINATE WITH GAS COMPANY FOR INSTALLATION OF (1) ONE INITIAL METER AND A METER BANK WITH CAPACITY FOR (6) TOTAL METERS. COORDINATE SPACE REQUIREMENTS WITH UTILITY. INITIAL GAS DEMAND IS 200CFH @ 7"W.C.
6. 4" VENT THRU ROOF. LOCATE MINIMUM 3'-0" FROM EDGE OF ROOD. COORDINATE PIPE PENETRATION WITH ROOFING CONTRACTOR SO NOT TO VOID ROOF WARRANTY. SEAL ROOF PENETRATION WEATHERTIGHT.
7. INSTALL 4" SANITARY SEWER STUB-OUT AND CAP FOR FUTURE TENANT CONNECTION. EXTEND 4" PVC UP 6" ABOVE FINISHED FLOOR.
8. 1" GAS TO FURNACE. PROVIDE SHUT-OFF VALVE AND DIRT LEG PRIOR TO FINAL CONNECTION.
9. 1-1/2" VALVE AND 1-1/2" RPZ BACKFLOW PREVENTER APPROVED FOR DOMESTIC WATER SERVICE. INSTALL BACKFLOW PREVENTER 24" ABOVE FINISHED FLOOR (CENTERLINE ELEVATION) AS REQUIRED PER LOCAL AHJ. PROVIDE MINIMUM 12" CLEARANCE FRONT AND BACK. PROVIDE DRAIN FROM BFP TO FLOOR DRAIN AND DISCHARGE WITH AIR GAP. PROVIDE PRESSURE REDUCING VALVE IF SERVICE PRESSURE AT DOMESTIC WATER ENTRY EXCEEDS 75 P.S.I. DOWNSTREAM OF REDUCED PRESSURE BACKFLOW PREVENTER. SEE INSTALLATION DETAIL.
10. 3/4" CW DOWN IN WALL TO FREEZE PROOF WALL HYDRANT. LOCATE SHUT OFF VALVE IN CEILING OF CLOSET.
11. PROVIDE 3/4" VALVED AND CAPPED COLD WATER LINE FOR FUTURE CONNECTION.
12. INSTALL 3" VENT PIPE IN CEILING ALONG BACK OF TENANT SPACE TO ALLOW FOR FUTURE TENANT CONNECTIONS.
13. 6" FIRE SERVICE TO MAIN. REFER TO CIVIL DRAWINGS FOR CONTINUATION. FIRE SPRINKLER CONTRACTOR TO CONFIRM SERVICE SIZE ONCE CALCULATIONS ARE PERFORMED.

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PLUMBING PLAN

P1

ELECTRICAL SPECIFICATIONS

PART I – GENERAL

A. GENERAL
1. FURNISH AND INSTALL A COMPLETELY WIRED AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO, THESE MAJOR ITEMS.
   A. LIGHTING FIXTURES AS INDICATED AND SPECIFIED ON THE PLANS.
   B. ELECTRICAL PANELS, SERVICE, CONDUIT, WIRING, ETC., FOR ALL OUTLETS AND EQUIPMENT.
   C. TELEPHONE, TELEVISION, AND FIRE ALARM. OUTLETS AND CONDUIT AS INDICATED.
2. OBTAIN AND REVIEW ALL OTHER DRAWINGS INCLUDING REFLECTED CEILING PLAN, INTERIOR AND EXTERIOR ELEVATIONS, FURNITURE PLANS AND ALL MILL WORK DRAWINGS. COORDINATE INSTALLATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT PRIOR TO ROUGH-IN.
3. OBTAIN SUBMITTAL AND SHOP DRAWINGS FROM OTHER TRADES AND EQUIPMENT TO COORDINATE INSTALLATION ACCORDINGLY.
4. INSTALLATION SHALL COMPLY WITH ALL CURRENT APPLICABLE CODES AND GOVERNING AGENCIES HAVING JURISDICTION.
5. FIRE ALARM SYSTEM, IF REQUIRED PER IBC, SHALL BE DESIGN-BUILD BY OWNER'S/GC'S FIRE ALARM CONTRACTOR. DESIGN SHALL BE IN ACCORDANCE WITH NFPA 72. FIRE ALARM CONTRACTOR SHALL SUBMIT STAMPED DRAWINGS TO AHJ FOR REVIEW AND APPROVAL. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR TESTING AND VERIFYING THAT THE AUDIBILITY OF THE FIRE ALARM SYSTEM MEETS A MINIMUM OF 15 DBA ABOVE AMBIENT NOISE LEVELS. ADD HORNS WHERE REQUIRED TO MAINTAIN MINIMUM LEVELS.
6. PROVIDE FIRE STOP ON ALL PIPING THAT PENETRATES RATED WALLS. METHOD OF FIRE STOP SHALL MEET WALL RATING. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF FIRE RATED WALLS. THIS CONTRACTOR SHALL PROVIDE FIRE RATED ENCLOSURES AROUND ALL ROUGH-IN BOXES, PANELS, ETC. THAT ARE LOCATED IN FIRE RATED WALLS AND SHALL FIRE CAULK ALL OPENINGS IN RATED ASSEMBLIES.

B. RELATED WORK BY OTHERS
1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, TRENCH, AND BACKFILL FOR ELECTRICAL SERVICE ENTRANCE FROM THE MAIN SERVICE TO UTILITY POINT OF ELECTRICAL SERVICE. ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE WITH SERVING UTILITY COMPANY.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, TRENCH, AND BACKFILL FOR PRIMARY PHONE AND CATV SERVICE FROM THE TELEPHONE TERMINAL BOARD OR CABINET TO THE PHONE COMPANY AND CATV COMPANY POINT OF SERVICE COORDINATE WITH LOCAL UTILITY COMPANIES.

C. CODES, REGULATIONS, AND STANDARDS
1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ORDINANCES, WITH THE REGULATIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND WITH THE REQUIREMENTS OF THE POWER, TELEPHONE, AND CATV COMPANIES FURNISHING SERVICES TO THIS INSTALLATION.
2. THE LATEST EDITIONS OF THE FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS, AND CODES ARE MINIMUM REQUIREMENTS:
   A. THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS.
   B. THE NATIONAL ELECTRICAL CODE, INCLUDING LOCAL AMENDMENTS.
   C. UNDERWRITER LABORATORIES INCORPORATED STANDARDS.
   D. AMERICAN NATIONAL STANDARDS INSTITUTE.
   E. INTERNATIONAL BUILDING CODE.

D. INSPECTION OF SITE
1. PRIOR TO SUBMITTING A BID FOR ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED CONSTRUCTION AND SHALL THOROUGHLY ACQUAINT HIMSELF WITH EXISTING UTILITIES, AND WORKING CONDITIONS TO BE ENCOUNTERED, ETC. ALLOWANCE WILL NOT BE MADE FOR NONCOMPLIANCE WITH THIS CONDITION AFTER BIDDING.
2. ELECTRICAL INSTALLATION SHALL MEET THE EXISTING CONDITIONS.

E. STORAGE AND HANDLING OF MATERIAL
1. DELIVER MATERIALS AND EQUIPMENT TO THE PROJECT IN THE MANUFACTURER'S ORIGINAL, UNOPENED, LABELED CONTAINERS. PROTECT AGAINST MOISTURE, TAMPERING, OR DAMAGE FROM IMPROPER HANDLING OR STORAGE. CONTRACTOR SHALL PROTECT AND BE RESPONSIBLE FOR ANY DAMAGE TO WORK OR MATERIALS UNTIL FINAL ACCEPTANCE BY THE OWNER, AND SHALL MAKE GOOD WITHOUT COST TO THE OWNER, ANY DAMAGE OR LOSS THAT MAY OCCUR DURING THIS PERIOD.
2. ARRANGE FOR TIMELY DELIVERY OF MATERIALS AND EQUIPMENT TO THE JOB SITE IN ORDER TO MINIMIZE THE LENGTH OF TIME BETWEEN DELIVERY AND INSTALLATION.
3. COVER AND PROTECT ANY MATERIAL WHICH MAY BE AFFECTED BY THE WEATHER WHILE IN TRANSIT OR STORED AT THE PROJECT SITE. ANY MATERIAL FOUND DEFECTIVE OR NOT INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS MAY BE REJECTED BY THE ENGINEER.

F. CLEANUP
1. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS, OR RUBBISH CAUSED BY EMPLOYEES OR WORK UNDER THIS DIVISION OF THE SPECIFICATIONS. AT THE COMPLETION OF THE WORK REMOVE ALL SURPLUS MATERIALS, TOOLS, ETC., AND LEAVE THE PREMISES BROOM-CLEAN.

G. EXCAVATION, CUTTING, AND FITTING
1. PERFORM ALL EXCAVATION AND BACK FILLING REQUIRED FOR WORK PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS. USE EXCAVATED MATERIALS FOR BACKFILL UNLESS OFF SITE MATERIALS ARE DEEMED NECESSARY.
2. PERFORM THE EXCAVATION, CUTTING, FITTING, REPAIRING, AND FINISHING OF THE WORK NECESSARY FOR THE INSTALLATION OF THE EQUIPMENT OF THIS SECTION. HOWEVER, NO CUTTING OF THE WORK OF OTHER TRADES OR OF ANY STRUCTURAL MEMBERS SHALL BE DONE WITHOUT THE CONSENT OF THE ARCHITECT.

H. DRAWINGS
1. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE ELECTRICAL WORK DATA PRESENTED ON THESE DRAWINGS ARE AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. IF DISCREPANCIES ARE NOT REPORTED, THE CONTRACTOR SHALL BID THE GREATER QUANTITY OR BETTER QUALITY, AND APPROPRIATE ADJUSTMENTS WILL BE MADE AFTER CONTRACT AWARD. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE AND CONFIRM MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, RADIATION, ETC. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS, USE ACTUAL BUILDING DIMENSIONS.

I. COOPERATION WITH OTHER CONTRACTORS
1. COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF THE ELECTRICAL OUTLETS AND EQUIPMENT WILL BE PROPERLY COORDINATED. CONDUIT, LIGHTING FIXTURES, AND OTHER EQUIPMENT LOCATIONS SHALL BE VERIFIED WITH OTHER TRADES TO AVOID CONFLICT WITH THE PIPING, DUCTWORK, STEEL, BEAMS, OR OTHER OBSTRUCTIONS.
2. CAREFULLY VERIFY THE LOCATIONS OF THE OUTLET BOXES AND DETERMINE THAT THEY HAVE NOT BEEN DISTURBED DURING THE INSTALLATION OF MATERIALS OF OTHER TRADES.
3. COORDINATE THE LOCATION OF THE TRENCHES AND CONDUITS FOR ELECTRICAL AND TELEPHONE UTILITY SERVICES WITH THE GENERAL CONTRACTOR.
4. COORDINATE HVAC AND PLUMBING EQUIPMENT CONNECTION REQUIREMENTS WITH HVAC AND PLUMBING CONTRACTORS.

J. RECORD DRAWINGS
1. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN A SET OF DRAWINGS AT THE JOB SITE FOR THE EXCLUSIVE PURPOSE OF MAINTAINING A RECORD OF ALL WORK INSTALLED AND TO SHOW ANY DEVIATIONS FROM THE WORK INDICATED ON THE DRAWINGS.
2. AT THE COMPLETION OF THE PROJECT, ONE SET OF REPRODUCIBLE DRAWINGS, SHOWING ALL RECORD CONDITIONS, SHALL BE DELIVERED TO THE OWNER FOR ACCEPTANCE PRIOR TO FINAL PAYMENT.

PART II – PRODUCTS AND EXECUTION

A. MATERIALS
1. ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITER'S LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.

B. SHOP DRAWINGS AND APPROVALS
1. THE ITEMS SPECIFIED HEREIN AND ON DRAWINGS ARE USED AS A STANDARD OF QUALITY. ANY MATERIALS OF EQUAL QUALITY AND AESTHETIC VALUE WILL BE GIVEN CONSIDERATION AS A SUBSTITUTE FOR THE MATERIALS SPECIFIED. NO APPROVAL WILL BE GIVEN TO A SPECIFIC CATALOG NUMBER, MODEL, OR TYPE OF EQUIPMENT, PRIOR TO BIDDING. AFTER BIDDING, THE DECISION OF THE ARCHITECT AND/OR ENGINEER DETERMINING EQUAL MATERIALS WILL BE FINAL.
2. THE CONTRACTOR SHALL SUBMIT (3) IDENTICAL BOUND SETS OF SHOP DRAWINGS ON THE FOLLOWING ITEMS TO THE G.C.:
   A. LIGHTING FIXTURE CUTS AND PERFORMANCE DATA.
   B. OUTLINE DRAWINGS AND DATA SHEETS OF EACH PANELBOARD, LOAD CENTERS, AND DISTRIBUTION PANELS.
   C. OUTLINE DRAWINGS OF ALL SWITCH GEAR COMPONENTS.
   D. WIRING DEVICES AND COVERPLATES.
   E. ALL CIRCUIT BREAKERS INSTALLED IN PANELBOARDS, LOAD CENTERS, AND DISTRIBUTION PANELS.

C. SYSTEM GROUNDING
1. GROUNDING SHALL COMPLY WITH REQUIREMENTS OF ARTICLE 250. ALL EXPOSED NONCURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, METALLIC RACEWAY SYSTEMS, METALLIC CABLE ARMOR, GROUNDING CONDUCTOR OF NONMETALLIC SHEATHED CABLES, GROUNDING CONDUCTOR IN NONMETALLIC RACEWAYS, AND GROUNDED CONDUCTORS OF THE WIRING SYSTEM SHALL BE GROUNDED.
2. GROUNDING CONDUCTOR (NEUTRAL) OF THE WIRING SYSTEM SHALL BE CONNECTED TO THE SYSTEM GROUNDING CONDUCTOR AT A SINGLE PLACE IN EACH SYSTEM BY REMOVABLE BONDING JUMPERS, SIZED ACCORDING TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL CODE. THE GROUNDED CONDUCTOR (NEUTRAL) TO THE GROUNDING CONDUCTOR CONNECTION SHALL BE LOCATED IN THE ENCLOSURE FOR THE SYSTEM'S OVERCURRENT PROTECTION OR WHERE OTHERWISE INDICATED ON THE PLANS OR SPECIFICATIONS.
3. A GROUND BUS SEPARATE FROM THE NEUTRAL BUS SHALL BE PROVIDED IN ALL DISTRIBUTION PANELS AND PANELBOARDS. PROPER TORQUE ON GROUND BUS SHALL BE VERIFIED, PER MANUFACTURER'S RECOMMENDATIONS, PRIOR TO ENERGIZING EQUIPMENT.
4. GROUND BUSES AND NEUTRAL BUSES IN ALL DISTRIBUTION PANELS, LOAD CENTERS, PANELBOARDS, AND THOSE PROVIDED IN ANY EQUIPMENT SHALL BE ISOLATED EXCEPT WHERE REQUIRED TO BE CONNECTED AS SPECIFIED ABOVE FOR THE SERVICE ENTRANCE
5. WHEN INDICATED ON THE DRAWINGS, EQUIPMENT GROUNDING CONDUCTORS SHALL BE EXTENDED FROM THE GROUND BUS IN THE DISTRIBUTION EQUIPMENT TO THE RECEPTACLE, FIXTURE OR DEVICE LUGS WHERE THEY ARE PROVIDED. WHERE LUGS ARE NOT PROVIDED, EQUIPMENT GROUNDING CONDUCTORS SHALL BE CONNECTED TO EQUIPMENT ENCLOSURES. THE CONNECTIONS SHALL BE ARRANGED SUCH THAT REMOVAL OF THE RECEPTACLE, EQUIPMENT GROUND CONDUCTORS, OR GROUND JUMPERS FROM GROUND BUSING SHALL NOT AFFECT THE GROUND SYSTEM.
6. RACEWAYS MAY NOT BE USED AS A GROUNDING CONDUCTOR FOR POWER AND LIGHTING CIRCUITS. ALL CONDUIT SHALL HAVE SEPARATE CODE SIZED GREEN GROUND WIRE INSTALLED IN THE CONDUIT TO INSURE A CONTINUOUS GROUNDING PATH.
7. IN INACCESSIBLE LOCATIONS, MAKE CONNECTIONS BY EXOTHERMIC WELD PROCESS.
8. IN ACCESSIBLE LOCATIONS, CONNECTIONS SHALL BE MADE WITH BOLTED THROUGH, APPROVED SOLDERLESS BRONZE GROUNDING DEVICES.

D. WIRE
1. CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE. UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE TYPE XHHW OR SE FOR FEEDERS OR BRANCH CIRCUITS LARGER THAN 4 AWG, TYPE THHN/THWN INSULATION FOR FEEDERS AND BRANCH CIRCUITS 4 AWG AND SMALLER. ALL BRANCH CIRCUIT WIRING SHALL BE COPPER.
   A. ALUMINUM CONDUCTORS MAY BE UTILIZED FOR SERVICE ENTRANCE AND PANEL FEEDERS. CONDUCTORS SHALL BE ALUMINUM ALLOW AA-8000 SERIES.
2. THE WIRES SHALL BE MARKED WITH COLOR TO SIMPLIFY CIRCUIT IDENTIFICATION. UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES GROUND WIRES SHALL BE GREEN, NEUTRAL WIRES SHALL BE 120V-WHITE, AND LIVE WIRES 208Y/120V AND 120/240 SHALL BE BLACK (PHASE A), RED (PHASE B), AND BLUE (PHASE C). CIRCUIT SHALL BE LABELED IN EACH J-BOX.
   A. ALL CONDUCTORS SHALL BE RATED 600 VOLT.
3. SPLICES IN EXTERIOR PULL BOXES AND MANHOLES SHALL BE WEATHERPROOF USING "SCOTCHCAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS OF CONDUITS AND DUCTS WITH "DUCTSEAL" OR APPROVED EQUAL.
4. PROVIDE SOLID CONDUCTOR FOR 12 AWG AND SMALLER.
5. NO WIRE SHALL BE INSTALLED IN THE CONDUIT SYSTEM UNTIL THE CONDUIT SYSTEM IS COMPLETE. USE MINERALAC NO. 100 OR EQUIVALENT AS A LUBRICANT TO FACILITATE THE INSTALLATION OF THE CONDUCTORS IN THE CONDUIT SYSTEM.
6. MC CABLE WITH COPPER CONDUCTORS AND GROUND WIRE MAY BE USED WHERE PERMITTED.

E. CONDUIT
1. MC CABLE MAY BE USED AS ALLOWED BY THE NEC.
2. WHERE CONDUIT ENTERS OUTLET BOXES, FIXTURES OR CABINETS, FIRMLY FASTEN WITH STEEL SET SCREW, COMPRESSION CONNECTORS, OR DOUBLE LOCKNUTS FOR GRC. ALL CONNECTIONS SHALL HAVE BUSHINGS OR INSULATED THROAT CONNECTORS. FIRMLY FASTEN CONDUIT TO THE BUILDING CONSTRUCTION. RUN EXPOSED CONDUIT PARALLEL TO THE BUILDING LINES, SUPPORTED BY APPROPRIATE HANGERS (UNISTRUT, T & B OR APPLETON, OR EQUAL).
3. CONDUIT PENETRATION THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT.
4. CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE STRUCTURE.

F. OUTLET, PULL, AND JUNCTION BOXES
1. EACH SWITCH, LIGHT, RECEPTACLE OR OTHER OUTLET, SHALL BE PROVIDED WITH A CODE SIZED, STEEL OUTLET BOX. JUNCTION AND PULL BOXES SHALL BE METAL AND CODE SIZED.
2. BOXES INSTALLED IN POURED CEMENT FLOORS SHALL BE FLUSH TYPE CAST IRON OR STEEL WITH WATERTIGHT GASKETED COVERS. WHERE BOXES ARE INSTALLED IN FLOORS WITH TILE OR CARPET FLOOR COVERING, COVERS SHALL BE OF THE RECESSED TYPE TO ACCOMMODATE THE FLOOR COVERING.
3. BOXES INSTALLED FOR THE ALARM, COMPUTER, AND SECURITY SYSTEM SHALL BE PROVIDED WITH APPROPRIATE COVER PLATES.
4. BOXES FOR TELEPHONE, COMPUTER, T.V., FIRE ALARM, SECURITY, AND SIMILAR SYSTEMS SHALL BE MINIMUM 2-1/8" DEEP.

G WIRING DEVICES
1. WALL SWITCHES SHALL BE SPECIFICATION GRADE AC SILENT TYPE SWITCHES, 20A 120/277 VOLT.
2. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX TYPE, NEMA5-20R, 20 AMPERE, 120VOLT GROUNDED TYPE. SPECIAL APPLICATION RECEPTACLES SHALL BE INDICATED ON PLANS. MOUNT WITH THE GROUND DOWN.
3. DEVICE PLATES SHALL BE EQUAL TO SIERRA SMOOTH-LINE PLASTIC WALL PLATES. COLOR SHALL BE WHITE, UNLESS OTHERWISE NOTED.
4. RECEPTACLES IN OUTDOOR AND WET LOCATIONS SHALL BE INSTALLED WITH A HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED AND U.L. LISTED SUITABLE FOR WET LOCATIONS WHILE IN USE, EQUAL TO TAYMAC SPECIFICATION GRADE.

H. PANEL BOARDS
1. CIRCUIT BREAKER TYPE AS INDICATED ON DRAWINGS. UNLESS INDICATED OTHERWISE, ALL PANELS SHALL HAVE PANEL HAVE PANEL BOARD TYPE CONSTRUCTION WITH BOLT-ON CIRCUIT BREAKERS FOR 3ø PANELS
2. MANUFACTURERS SHALL BE GENERAL ELECTRIC, SQUARE D, SEIMENS, CUTLER-HAMMER WITH VOLTAGE, SIZES, AND RATINGS AS INDICATED ON DRAWINGS.
3. THE CIRCUIT BREAKERS SHALL BE OPERABLE IN ANY POSITION AND BE REMOVABLE FROM THE FRONT OF THE PANEL BOARD WITHOUT DISTURBING THE ADJACENT UNITS. BRANCH BREAKERS SHALL BE OF SUCH DESIGN THAT COMBINATION OF SINGLE-POLE, DOUBLE-POLE, AND THREE-POLE BREAKERS CAN BE ASSEMBLED ON THE SAME PANEL. EACH BRANCH CIRCUIT SHALL BE CLEARLY NUMBERED. BRANCH AND MAN TERMINALS SHALL BE SOLDERLESS TYPE. HANDLE TIES TO FORM MULTI-POLE BREAKERS NOT ACCEPTABLE.

I. LIGHTING FIXTURES
1. PROVIDE ALL LIGHTING FIXTURES, WIRED AND CONNECTED. THE DRAWINGS INDICATE THE FIXTURES FOR EACH LOCATION. PROVIDE LAMPS FOR ALL FIXTURES. THE LAMPS SHALL BE BY THE SAME MANUFACTURER. VERIFY CEILING CONSTRUCTION BEFORE ORDERING RECESSED UNITS. PROVIDE PLASTER FRAMES AND HANGERS AS REQUIRED. CEILING CONSTRUCTION, ARCHITECTURAL ACCESSORIES, VOLTAGE, AND BALLASTS TO MEET THE EXISTING CEILING CONDITION.

J. TELEPHONE AND CABLE TELEVISION SYSTEMS
1. TELEPHONE WALL OUTLETS SHALL CONSIST OF STANDARD BOXES MOUNTED 18" ABOVE THE FLOOR UNLESS OTHERWISE INDICATED. PROVIDE A TERMINAL MOUNTING BOARD FOR THE INCOMING SERVICE CABLE.
2. CABLE TELEVISION OUTLETS SHALL CONSIST OF STANDARD BOXES MOUNTED 18" ABOVE THE FLOOR UNLESS OTHERWISE INDICATED. PROVIDE A TERMINAL MOUNTING BOARD FOR THE INCOMING SERVICE CABLE.

K. GUARANTEE
1. GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS SECTION OR WORKMANSHIP PERFORMED HEREUNDER, SHALL BE MADE GOOD AT NO EXPENSE TO THE OWNER.

L. FIRE SEALING NOTES
1. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL REQUIREMENTS.
2. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH-PENETRATION FIRESTOP SYSTEMS.
3. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS UNTIL EXAMINED BY INSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.
4. COMPATIBILITY: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER; WITH THE SUBSTRATES FORMING OPENINGS; AND WITH THE ITEMS, IF ANY, PENETRATING THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.
5. PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED.
6. PROVIDE SLEEVES THROUGH ALL FIRE-RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE STOP PUTTY WITH U.L. LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH FIRE RATED WALLS.
8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS, FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING FOR CONSTRUCTION.

SYMBOLS LEGEND

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE NECESSARILY USED ON THE DRAWINGS.

LIGHTING FIXTURES – SYMBOL/LETTER INDICATES LIGHT FIXTURE AS INDICATED ON FIXTURE SCHEDULE

- LED FIXTURE (SEE LIGHTING FIXTURE SCHEDULE)
- FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT
- TRACK LIGHT
- DOWNLIGHT FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT
- WALL MOUNTED FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT
- PENDANT MOUNTED FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT
- DOWNLIGHT FIXTURE
- WALL MOUNTED FIXTURE
- PENDANT MOUNTED FIXTURE
- WALL WASHER
- SINGLE FACE EXIT SIGN – UNIVERSAL MOUNTED
- SINGLE FACE EXIT SIGN W/ DIRECTIONAL ARROWS – UNIVERSAL MTD
- DOUBLE FACE EXIT SIGN W/ DIRECTIONAL ARROWS – UNIVERSAL MTD
- DUAL HEADED EMERGENCY UNIT
- COMBO DUAL HEADED EMERGENCY AND EXIT SIGN UNIT

LIGHTING CONTROLS

- S – SINGLE POLE SWITCH @ +48" UNLESS NOTED
- Sabc – SWITCH BANK @ +48" UNLESS NOTED. LOWER CASE LETTER INDICATES FIXTURE CONTROLLED.
- S3 – 3-WAY SWITCH @ +48" UNLESS NOTED
- S4 – 4-WAY SWITCH @ +48" UNLESS NOTED
- SD – DIMMER SWITCH – SIZE AS REQUIRED @ +48" UNLESS NOTED
- SM – MANUAL MOTOR STARTER
- SOS – WALL SWITCH WITH OCCUPANCY SENSOR. DIGITAL LOW VOLTAGE WALL SWITCH. SWITCH @ +48" UNLESS NOTED.
- SLVD – TWO BUTTON DIGITAL LOW VOLTAGE WALL SWITCH. PROVIDES ON/OFF/0-10V DIMMING. SWITCH @ +48" UNLESS NOTED. PROVIDE EXTRA CONTROL CABLES NEEDED TO FIXTURE CONTROLLED.
- (OS) – LIGHTING CONTROLS CEILING MOUNT OCCUPANCY SENSOR
- (PP) – LIGHTING CONTROLS POWER PACK
- PC – PHOTOCELL
- TC – TIMECLOCK

POWER DISTRIBUTION

- SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD
- 277/480V, 3 PHASE, 4 WIRE PANELBOARD, UNO
- 120/208V, 3 PHASE, 4 WIRE PANELBOARD, UNO
- 120/240V, 1 PHASE, 3 WIRE PANELBOARD, UNO
- T – TRANSFORMER

POWER DEVICES

- SPECIAL HEAVY DUTY RECEPTACLE – SIZE AS NOTED. @ +18" UNLESS NOTED
- 1/2 SWITCHED RECEPTACLE @ +18" UNLESS NOTED
- FIRE RATED POKE THRU WITH TYPE INDICATED
- FLUSH FLOOR BOX WITH TYPE INDICATED
- SINGLE RECEPTACLE @ +18" UNLESS NOTED
- DUPLEX RECEPTACLE @ +18" UNLESS NOTED
- DOUBLE DUPLEX RECEPTACLE @ +18" UNLESS NOTED
- DUPLEX RECEPTACLE INSTALLED ABOVE COUNTERTOP
- GFCI – GFCI-RATED DUPLEX RECEPTACLE
- AF – ARC FAULT RATED DUPLEX RECEPTACLE
- TR – TAMPER RESISTANT RATED DUPLEX RECEPTACLE
- WP – DUPLEX RECEPTACLE WITH WEATHERPROOF COVERPLATE @ 18" UNLESS NOTED
- J – JUNCTION BOX
- DISCONNECT SWITCH – SIZE AND TYPE NOTED

AUXILIARY SYSTEMS

- EF 1 – MECHANICAL EQUIP. CONNECTION, SEE SCHED. ON MECH. PLAN
- TELEPHONE OUTLET@ +18" UNLESS NOTED
- DATA OUTLET @ +18" UNLESS NOTED
- COMBINATION TELEPHONE/DATA OUTLET @ +18" UNLESS NOTED
- TVH – TELEVISION OUTLET @ +60" UNLESS NOTED
- SMOKE DETECTOR
- HEAT DETECTOR
- DUCT SMOKE DETECTOR
- RT – REMOTE TEST STATION WITH INDICATING LIGHT. MOUNT AT 48" AFF UNO.
- AUXILIARY SYSTEM TERMINAL CABINET
- WEATHERPROOF NOTIFICATION HORN/STROBE DEVICE FOR WATERFLOW NOTIFICATION – INSTALL PER NFPA REQUIREMENTS

GENERAL

- CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING
- CONDUIT RUN BELOW FLOOR OR GRADE
- P1-3,5,7 – HOMERUN TO PANELBOARD, INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO ASSOCIATED NOTE FOR BRANCH CIRCUIT CONDUCTOR SIZES.
- INDICATES 1/2" CONDUIT CONCEALED IN CEILING OR WALL WITH (3) CONDUCTORS. (1) PHASE, (1) NEUTRAL AND (1) GROUND WIRE. ALL ARE #12 AWG UNLESS NOTED OTHERWISE.
- (E) OR ETR: DENOTES EXISTING ITEM/EQUIPMENT TO REMAIN

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REV#	DATE	DESCRIPTION
1	09/07/23	CITY COMMENTS

PERMIT SET: 08-11-2023

JSC PROJECT# 18-142

ELECTRICAL SPECIFICATIONS AND SYMBOLS

E1

GENERAL NOTES

A. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS.

B. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL LOCAL BUILDING CODES AND AMENDMENTS.

C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.

D. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.

E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.

F. ALL WIRING SHALL BE IN APPROVED RACEWAY.

G. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.

H. MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.

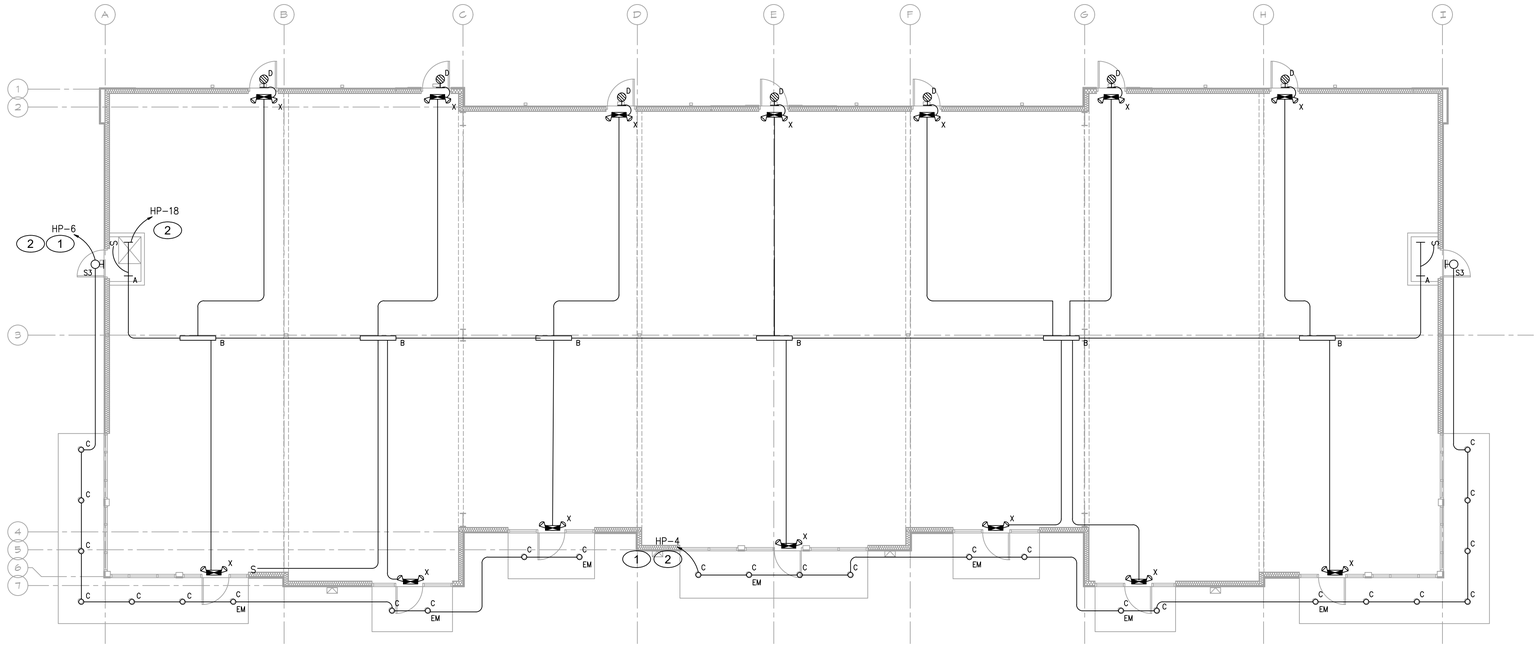
I. REFER TO LIGHTING FIXTURE SCHEDULE FOR LIGHT FIXTURE TYPES AND REQUIREMENTS.

J. LIGHT FIXTURES SHOWN WITH EM ARE EMERGENCY FIXTURES.

K. CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO THE INDICATED CIRCUIT WITH A SEPARATE AND UN-SWITCHED CONDUCTOR BYPASSING ALL CONTROLS AND CONTACTORS. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER INSTALLATION AND TESTING.

(#) KEYED PLAN NOTES

1. CIRCUIT VIA TIMECLOCK/PHOTOCELL.
2. (1) 3/4" -2 #8 & 1 #10 GND.



LIGHTING PLAN - MAIN LEVEL

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

1

NORTH

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ELECTRICAL LIGHTING PLAN

E2

GENERAL NOTES

A. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS.

B. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL LOCAL BUILDING CODES AND AMENDMENTS.

C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.

D. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.

E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.

F. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT SUBSTITUTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

G. ALL POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR. ALL CONTROL WIRING SHALL BE ROUTED BY THE ELECTRICAL CONTRACTOR WITH FINAL CONTROL DEVICE (T-STATS) LANDINGS BY THE MECHANICAL CONTRACTOR.

H. ALL WIRING SHALL BE IN APPROVED RACEWAY.

I. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.

J. MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.

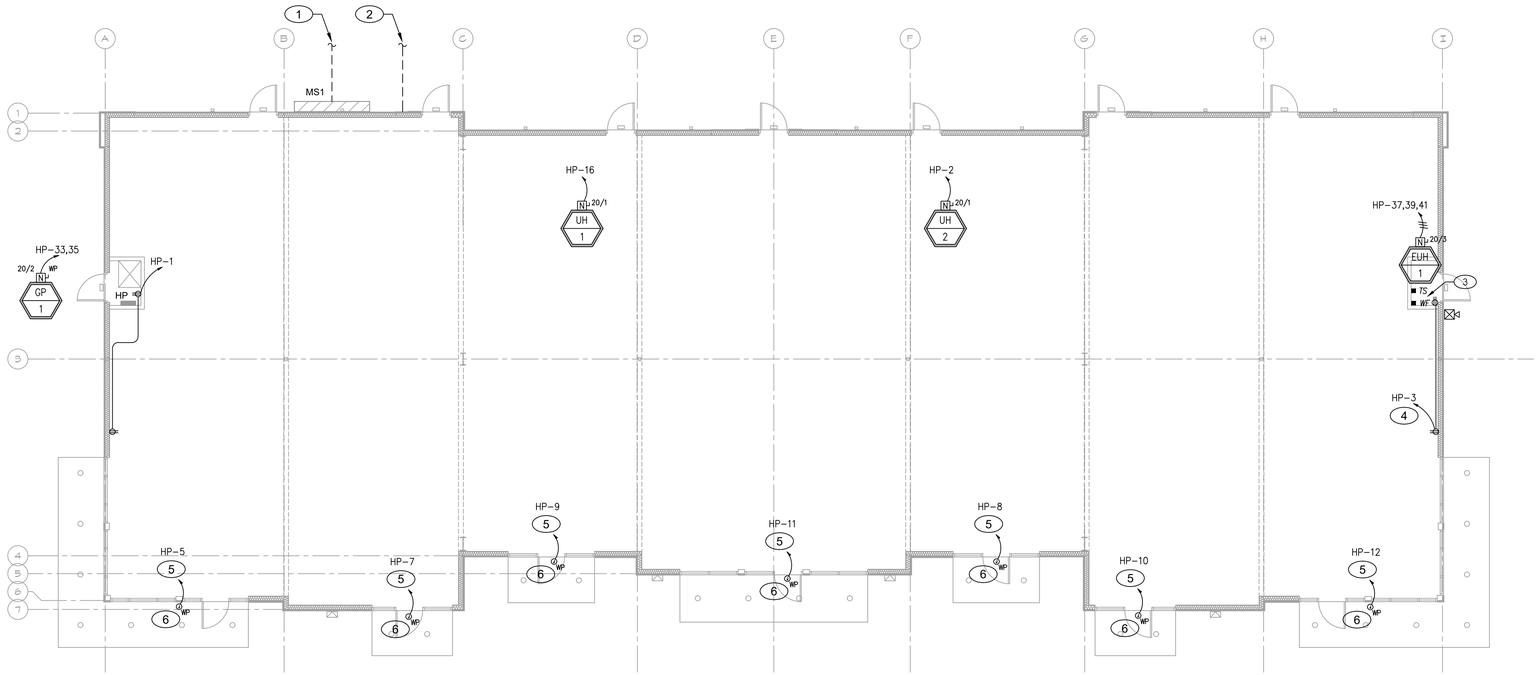
K. FIRE ALARM, AUDIO/VIDEO AND SURVEILLANCE SYSTEMS BY OTHERS.

L. ALL PORTIONS OF WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND NATIONAL CODES, ORDINANCES, AND STANDARDS.

M. VERIFY ALL EQUIPMENT LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.

(#) KEYED PLAN NOTES

1. CONDUIT AND FEEDERS FROM UTILITY TRANSFORMER TO BUILDING ELECTRICAL SERVICE FOR 'MS1'. COORDINATE ROUTE OF TRENCHING WITH CIVIL DRAWINGS PRIOR TO BID. REFER TO SHEET E4 FOR ADDITIONAL INFORMATION.
2. PROVIDE 2"C TO PROPERTY LINE FOR BUILDING TELEPHONE SERVICES. TERMINATE AT LOCATION DIRECTED BY LOCAL SERVICE PROVIDER.
3. COORDINATE QUANTITY OF TAMPER/FLOW SWITCHES WITH FIRE PROTECTION CONTRACTOR.
4. (1) 3/4" -2 #8 & 1 #10 GND.
5. CIRCUIT VIA TIMECLOCK/PHOTOCELL.
6. PROVIDE JBOX FOR TENANT SIGNAGE. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS.



POWER PLAN - MAIN LEVEL

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

1

NORTH

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ELECTRICAL POWER PLAN

E3

TYP. PANELBOARD INSTALLATION 3

SCALE : NO SCALE

DRY TYPE TXFR. GROUNDING 4

SCALE : NO SCALE

GROUND BUS MOUNTING DETAIL 6

SCALE : NO SCALE

GROUNDING ELECTRODE SYSTEM 5

SCALE : NO SCALE

POLE BASE DETAIL 2

SCALE : NO SCALE

SITE LIGHTING PLAN 1

SCALE : 1/32" = 1'-0"

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ELECTRICAL SITE LIGHTING AND DETAILS

E4

ELECTRICAL LIGHTING SCHEDULE (OR EQUAL. VERIFY ALL SELECTIONS AND FINISHES WITH OWNER OR ARCHITECT PRIOR TO ORDERING).

FIXTURE TYPE	MANUFACTURER NAME	MANUFACTURER CATALOG NUMBER	VOLT AMPS	MOUNTING	LAMP TYPE	REMARKS	VOLT	REMARKS
A	WILLIAMS	76-4-L53/840-WG-7611-DR-120	36	SURFACE	36 WATT, 4000K, 5,300 LUMEN LED	4'-0" LONG LED STRIP FIXTURE.	120	1
B	WILLIAMS	77 SERIES	64	PENDANT	TWO (2) 32 WATT 48" T8 LINEAR FLUORESCENT.	4'-0" LONG SPECIFICATION-GRADE STRIP FIXTURE. CHAIN MOUNT FROM CEILING AT 8-6" A.F.F. ALL PARTS PAINTED WHITE AFTER FABRICATION. ELECTRONIC BALLAST.	120	1
C	WILLIAMS	H60 SERIES	72	RECESSED	L64/840 LUMEN PACKAGE, 80 CRI, 72 WATTS	6" ROUND APERTURE RECESSED LED DOWNLIGHT. SELF-FLANGED, SEMI-SPECULAR LOW IRIDESCENT ALUMINUM REFLECTOR. MEDIUM DISTRIBUTION.	120	1,2
D	DUAL-LITE	PG SERIES	5	WALL	ONE (1) 5 WATT LED ARRAY.	EMERGENCY LIGHT, WET LOCATION, LED, DIE-CAST ALUMINUM WET LOCATION LISTED EMERGENCY LIGHTING UNIT FOR INDOOR/OUTDOOR INSTALLATION FEATURING LONG-LIFE, HIGH-OUTPUT LEDS. FINISH DARK BRONZE. MAINTENANCE-FREE NICKEL-CADMIUM BATTERY FOR 90 MINUTE OPERATION OF LAMPS. FULLY AUTOMATIC, SOLID-STATE CHARGER WITH TEST SWITCH AND AC-ON LIGHT. PROVIDE BATTERY HEATER FOR COLD TEMPERATURE OPERATION.	120	1
X	DUAL-LITE	LT SERIES	5	WALL	TOTAL POWER CONSUMPTION: 5.25 WATTS. EMERGENCY: TWO (2) 5 WATT MR-16 HALOGEN. EXIT: FOUR (4) HIGH-OUTPUT LEDS.	COMBINATION EMERGENCY LIGHTING UNIT / EXIT LIGHT. UV-STABLE THERMOPLASTIC HOUSING, FINISH WHITE. ADJUSTABLE EYEBALL STYLE LIGHTING HEADS WITH GLASS LENS FOR EMERGENCY LIGHT. EXIT SIGN TO HAVE RED LETTERS WITH DIRECTIONAL ARROWS AS INDICATED ON THE PLANS. MAINTENANCE-FREE NICKEL-CADMIUM BATTERY FOR 90 MINUTE OPERATION OF LAMPS AND EXIT SIGN. FULLY AUTOMATIC, SOLID-STATE CHARGER WITH TEST SWITCH AND AC-ON LIGHT.	120	1
S1	WILLIAMS	VWVP-L60-730-TFT-CGL-CD-120	70	WALL	558 WATT, 4000K, 70 CRI LED	WALL ARM MOUNT AREA LED LIGHT. EXTRUDED ALUMINUM DRIVER ENCLOSURE THERMALLY ISOLATED FROM LED SQUARES. DIE CAST ALUMINUM END CAPS ENCLOSE HOUSING AND DIE-CAST ALUMINUM HEAT SINKS. IP66 RATED. HIGH-EFFICIENCY, INJECTION MOLDED ACCULED OPTICS. LOW TEMP STARTING BALLAST. STANDARD POWDER COAT FINISH – COORDINATE EXACT COLOR WITH ARCHITECT.	120	1
S2	EATON MCGRAW EDISON	GLEON-AF-01-LED-E1-SL4-HSS	60	POLE	279 WATT, 4000K, 70 CRI LED	POLE MOUNT AREA LED LIGHT. EXTRUDED ALUMINUM DRIVER ENCLOSURE THERMALLY ISOLATED FROM LED SQUARES. DIE CAST ALUMINUM END CAPS ENCLOSE HOUSING AND DIE-CAST ALUMINUM HEAT SINKS. IP66 RATED. HIGH-EFFICIENCY, INJECTION MOLDED ACCULED OPTICS. LOW TEMP STARTING BALLAST. 12" EXTRUDED ALUMINUM MOUNTING ARM. STANDARD POWDER COAT FINISH – COORDINATE EXACT COLOR WITH ARCHITECT. HEIGHT OF FIXTURE AND POLE TO BE NOT GRETER THAN 10'-0".	120	1,3
S3	WILLIAMS	WAVR2-1-26Q-G24Q3-RC-0-120	26	WALL	26 WATT, CFL	ROUND WALL SCONCE – COORDINATE EXACT COLOR WITH ARCHITECT.	120	1

REMARKS:
1. FURNISH WITH AND INSTALL ALL NECESSARY HARDWARE AND MOUNTING BRACKETS.
2. WHERE FIXTURE IS LABELED "EM", PROVIDE WITH 90 MINUTE EMERGENCY BALLAST.
3. POLE SHALL BE 4" SHAFT, 0.120" WALL THICKNESS, WITH HAND HOLE, GROUND LUG AND FULL BASE COVER.

GENERAL NOTES (APPLICABLE TO ALL FIXTURES):
1) ALL FIXTURES UTILIZING LINEAR FLUORESCENT LAMPS SHALL COMPLY WITH NEC 410.130(G) REQUIREMENTS FOR DISCONNECTING MEANS. CONTRACTOR SHALL SUPPLY SAME IF NOT STANDARD ON FIXTURE.
2) ALL BALLASTS FOR FLUORESCENT FIXTURES SHALL BE ELECTRONIC PROGRAMMED START.

PANEL: HP
LOCATION: ELECTRICAL ROOM
SHEET/ 1 LINE: E3/ E5
AIC RATING: 18,000
VOLTAGE: 208/120V 3PH, 4W
BUS: 100 AMPS
MAIN: M.L.O.
MOUNTING: SURFACE
CIRCUIT CODES: 1=(CONTINUOUS LOAD) 2=(NON-CONTINUOUS LOAD) 3=(RECEPTACLES) 4=(KITCHEN EQUIPMENT)

CKT NO	CB CODE	CB TRIP	CB POLE	LOAD DESIGNATION DESCRIPTION	MISC	REC	LITE	LOAD VA	PHASES A	PHASES B	PHASES C	LOAD VA	LITE	REC	MISC	LOAD DESIGNATION DESCRIPTION	CB POLE	CB TRIP	CKT CODE	CKT NO
1	3	20	1	GENERAL OUTLETS				360	700	//////	//////	340				OUTDOOR POLE/FLOOD LIGHTS*	1	20	1	2
3	3	20	1	GENERAL OUTLETS				360	//////	1538	//////	1178				OUTDOOR FLOOD/DOWNLIGHTS *	1	20	1	4
5	2	20	1	OUTDOOR TENANT SIGN *				1000	//////	//////	1890	890				OUTDOOR FLOOD/DOWNLIGHTS *	1	20	1	6
7	1	20	1	OUTDOOR TENANT SIGN *				1000	2000	//////	//////	1000				OUTDOOR TENANT SIGN *	1	20	1	8
9	1	20	1	OUTDOOR TENANT SIGN *				1000	//////	2000	//////	1000				OUTDOOR TENANT SIGN *	1	20	1	10
11	1	20	1	OUTDOOR TENANT SIGN *				1000	//////	//////	2000	1000				OUTDOOR TENANT SIGN *	1	20	1	12
13	2			SPACE					288	//////	//////	288				UH-2	1	20	2	14
15	2			SPACE					//////	288	//////	288				UH-1	1	20	2	16
17	2			SPACE					//////	//////	1417	1417				INDOOR LIGHTS	1	20	1	18
19	2			SPACE					0	//////	//////					SPARE	1	20	2	20
21	2			SPACE					//////	0	//////					SPARE	1	20	2	22
23	2			SPACE					//////	//////	0					SPARE	1	20	2	24
25	2			SPACE					0	//////	//////					SPARE	1	20	2	26
27	2			SPACE					//////	0	//////					SPACE			2	28
29	2			SPACE					//////	//////	0					SPACE			2	30
31	2			SPACE					0	//////	//////					SPACE			2	32
33	2	20		GP-1				1560	//////	1560	//////					SPACE			2	34
35	2		2	/				1560	//////	//////	1560					SPACE			2	36
37	2	20		EUH-1				1000	1000	//////	//////					SPACE			2	38
39	2			/				1000	//////	1000	//////					SPACE			2	40
41	2		3	/				1000	//////	//////	1000					SPACE			2	42
								TOTAL	3988	6386	7867									

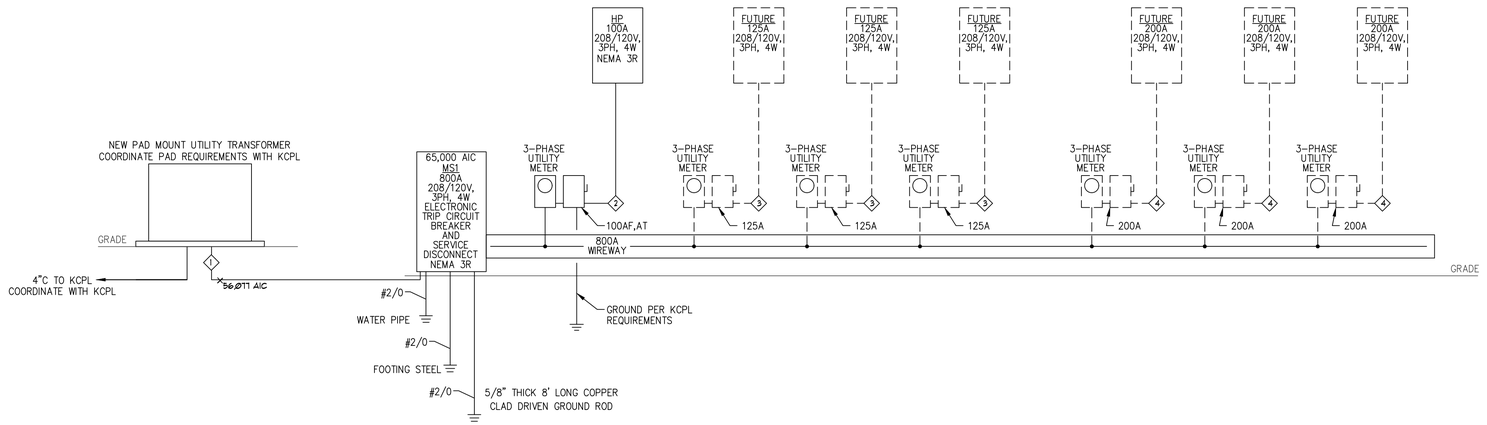
CONNECTED KVA	18.2
CONNECTED KVA (CODE 1)	9.8
CONNECTED KVA (CODE 2)	7.7
CONNECTED KVA (CODE 3)	0.7
CONNECTED KVA (CODE 4)	0.0
FEEDER DEMAND KVA	20.7
FEEDER DEMAND AMPS	57.4

* CIRCUIT VIA TIMECLOCK/PHOTOCELL TO BE PROVIDED AS PART OF THIS BID

JOB NAME: DOUGLAS CORNER
ISSUE DATE: 10/16/2018

PANEL SCHEDULE
SCALE : NO SCALE

2



ELECTRICAL SINGLE LINE DIAGRAM
SCALE : NO SCALE

1

FEEDER SCHEDULE

FEEDER NUMBER	CONDUIT AND CONDUCTOR SIZES
1	(4) 4" W/4 #250MCM AL & 1 #3/0 AL GND EACH
2	(1) 1 1/4" W/4 #3 & 1 #8 GND
3	FUTURE 125A FEEDER
4	FUTURE 200A FEEDER

THE DESIGN PROFESSIONAL HAS PERFORMED ALL THE REQUIRED VOLTAGE DROP CALCULATIONS FOR ALL BRANCH CIRCUITS AND FEEDERS PER THE NATIONAL ELECTRICAL CODE, ARTICLE 210.19(A)(1) FPN NO. 4.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL THE REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATING INDICATED FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.

EQUIPMENT FAULT CURRENT RATING SCHEDULE

EQUIPMENT	SCA **	SCCR	NOTES
SERVICE DISC.	50,559	65,000	1,2
PANELBOARD HP	14,053	18,000	1,2

NOTES:
1. RATING BASED ON AN ASSUMED FAULT AT UTILITY CO. TRANSFORMER OF 56,077 AIC.
2. EQUIPMENT MAY BE SERIES RATED.
** CALCULATIONS PERFORMED USING BUSSMANN POINT-TO-POINT METHOD.

STATE OF MISSOURI
JUSTIN R. SMOTHERS
NUMBER PE-2012003568
PROFESSIONAL ENGINEER
09-07-2023

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JSC ENGINEERS

DOUGLAS CORNER
LOT 1B, LEES SUMMIT, MISSOURI 64086

REV#	DATE	DESCRIPTION
1	09/07/23	CITY COMMENTS

PERMIT SET: 08-11-2023
JSC PROJECT# 18-142

ELECTRICAL SCHEDULES AND SINGLE LINE DIAGRAM

E5