

# TACO BELL

## MODERN EXPLORER T52



TACO  
BELL™

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

### PROJECT GENERAL NOTES

- A. ALL WORK SHALL CONFORM TO THE 2015 EDITION OF THE MICHIGAN BUILDING CODE, AND ALL OTHER APPLICABLE CODES, STANDARDS, AND REGULATIONS OF THE CITY OF LINCOLN PARK, MI.
- B. IT IS INTENDED THAT A COMPLETE OCCUPIABLE BUILDING PROJECT IS PROVIDED.
- C. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (A.I.A. A201 LATEST EDITION) ARE A PART OF THESE CONTRACT DOCUMENTS. A COPY IS ON FILE AT THE ARCHITECT'S OFFICE.
- D. DRAWINGS ARE BASED ON A SURVEY, DATED 08.18.17 PREPARED BY ATWELL AND IS INCLUDED IN THESE DOCUMENTS.
- E. THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A GEOTECHNICAL INVESTIGATION DATED JANUARY 31, 2018 BY INTERTEK-PSI. THE REPORT IS PART OF THESE CONTRACT DOCUMENTS, AND THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT ITS RECOMMENDATIONS, THOUGH SOME MAY NOT BE SPECIFICALLY DETAILED ON THE PLANS.
- F. DO NOT SCALE THESE DRAWINGS. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD. ANY DISCREPANCIES IN THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO STARTING WORK.
- G. ALL PROPOSED SUBSTITUTIONS SHALL BE APPROVED BY THE YUM BRANDS CONSTRUCTION MANAGER, IN WRITING, PRIOR TO INSTALLATION.
- H. RETAIN THE PROJECT GEOTECHNICAL ENGINEER TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING (INCLUDING UTILITY TRENCHES) AND FOUNDATION PHASE OF CONSTRUCTION AS RECOMMENDED IN THE GEOTECHNICAL REPORT. ALL TESTING AND INSPECTION REPORTS, INCLUDING FINAL SUMMATION LETTER, SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND OWNER. G.C. SHALL CERTIFY PAD ELEVATION PRIOR TO START OF FOUNDATION WORK.
- I. SUBMIT PAY FEES AND OBTAIN ALL PERMITS ASSOCIATED WITH THE PROJECT EXCEPT GENERAL BUILDING PERMIT. THIS INCLUDES, BUT IS NOT LIMITED TO ELECTRICAL, MECHANICAL, PLUMBING, FIRE SPRINKLER, HOOD ANSUL, OR OTHER RELATED FIRE PERMITS, ENCROACHMENT PERMIT, ETC. YUM BRANDS WILL PAY FOR "CONNECTION FEES" ASSOCIATED WITH UTILITY PERMITS. PAY FOR TEMPORARY FACILITIES FEES AS REQUIRED TO COMPLETE THE WORK IN A TIMELY MANNER.
- J. PROVIDE EACH SUBCONTRACTOR WITH A COMPLETE AGENCY-PERMITTED DRAWING SET AT TIME OF CONSTRUCTION.
- K. ALL ABBREVIATIONS INCLUDED FOLLOW INDUSTRY STANDARDS. CONTACT ARCHITECT IF ANY ABBREVIATIONS ARE NOT CLEAR.
- L. GC SHALL SUPPLY AND INSTALL ALL ASPECTS OF THE PROJECT DESCRIBED IN THIS DRAWING SET UNLESS OTHERWISE NOTED. SEE SCOPE OF WORK FOR EXCEPTIONS.
- M. GRAPHIC AND WRITTEN INFORMATION ON DRAWINGS SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION.

### REFERENCE SYMBOLS

NAME

1  
AX.X  
4

2

3

ROOM NAME

SHEET NUMBER

ELEVATION NUMBER

CEILING HEIGHT

BLDG. SECTION LETTER

BLDG. SECTION SHEET

DETAIL NUMBER

DIRECTION OF DETAIL

DETAIL SHEET

REVISION NUMBER

BLDG. HEIGHT REFERENCE POINT

8'-4"

0'-0" ELEV

X  
AX.X

X

X

X

X-000

XX

X

X

XXX|000

GREEN

DETAIL NUMBER

DETAIL SHEET

DOOR NUMBER

WINDOW NUMBER / DECOR ITEM NUMBER

EXTERIOR WALL FINISH NUMBER

KEY NOTE

EQUIPMENT NUMBER

ROOM FINISH NUMBER

INTERIOR ELEVATION DESIGNATION

SHEAR WALL TYPE (STRUCTURAL)

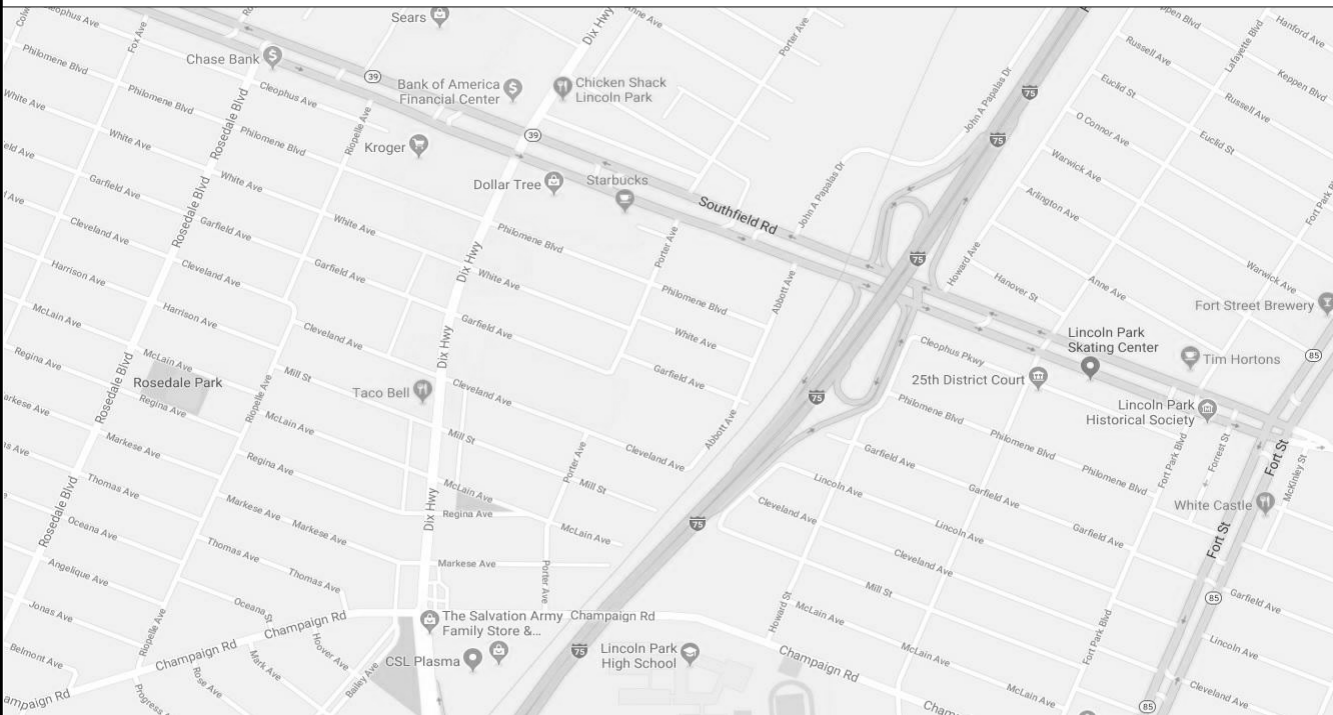
EQUIPMENT / FIXTURE NUMBER (M.E.P.)

INDICATES SUSTAINABLE DESIGN

SIGN. SEE ELEVATIONS

REFER TO STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL SHEETS FOR SPECIFIC SYMBOLS

### VICINITY MAP



### PROJECT SUMMARY

LEGAL JURISDICTION: CITY OF LINCOLN PARK  
BUILDING CODE: 2015 MICHIGAN BUILDING CODE  
MECHANICAL CODE: 2015 MICHIGAN MECHANICAL CODE  
PLUMBING CODE: 2015 MICHIGAN PLUMBING CODE  
ELECTRICAL CODE: 2014 NATIONAL ELECTRIC CODE  
FIRE CODE: 2012 INTERNATIONAL FIRE CODE  
ENERGY CODE: 2015 COMMERICAL MICHIGAN UNIFORM ENERGY CODE  
HEALTH CODE: 2009 MICHIGAN MODIFIED FDA FOOD CODE  
ACCESSIBILITY: ICC ANSI A117.1 & 2015 MICHIGAN BUILDING CODE  
BUILDING AREA: 1,913 S.F.  
SEATING: 60 (52 INTERIOR, 8 EXTERIOR)  
OCCUPANCY: A2  
TYPE CONSTRUCTION: TYPE VB  
# PHONE LINES: 25 PAIR CABLE IN 2" CONDUIT  
ELECTRIC SERVICE: 600 AMPS / 3 PHASE / 120-208 VOLT  
GAS: 839,000 BTUH

### DESIGN CRITERIA

WIND SPEED: 115 M.P.H. 3SGVLT / EXPOSURE B  
SEISMIC DESIGN CATEGORY: C  
ROOF LIVE LOAD: 20 P.S.F.

### LEGAL DESCRIPTION

REFER TO CIVIL DRAWINGS

### PROJECT DIRECTORY

#### OWNER

YUM! BRANDS, INC.  
1 GLEN BELLWAY  
IRVINE, CA 92618  
CONTACT: STEVE PULCHEON  
PHONE: 951.315.3462

#### ARCHITECT

GPD GROUP, PROFESSIONAL CORPORATION  
520 SOUTH MAIN STREET, SUITE 2531  
AKRON, OH 44311  
CONTACT: ELLEN SELLE  
PHONE: 330.572.2100

#### CONSTRUCTION MANAGER

YUM! BRANDS, INC.  
1 GLEN BELLWAY  
IRVINE, CA 92618  
CONTACT: STEVE PULCHEON  
PHONE: 951.315.3462

#### STRUCTURAL ENGINEER

GPD GROUP, PROFESSIONAL CORPORATION  
520 SOUTH MAIN STREET, SUITE 2531  
AKRON, OH 44311  
CONTACT: ELLEN SELLE  
PHONE: 330.572.2100

#### CIVIL ENGINEER

GPD GROUP, PROFESSIONAL CORPORATION  
520 SOUTH MAIN STREET, SUITE 2531  
AKRON, OH 44311  
CONTACT: ELLEN SELLE  
PHONE: 330.572.2100

#### MECH. / ELEC. ENGINEER

GPD GROUP, PROFESSIONAL CORPORATION  
520 SOUTH MAIN STREET, SUITE 2531  
AKRON, OH 44311  
CONTACT: ELLEN SELLE  
PHONE: 330.572.2100

#### GEOTECHNICAL ENGINEER

INTERTEK-PSI  
37483 INTERCHANGE DRIVE  
FARMINGTON HILLS, MI 48335  
CONTACT: KEVIN DUBNICKI, P.E.  
PHONE: 248.957.9911

#### LANDSCAPE ARCHITECT

GPD GROUP, PROFESSIONAL CORPORATION  
520 SOUTH MAIN STREET, SUITE 2531  
AKRON, OH 44311  
CONTACT: ELLEN SELLE  
PHONE: 330.572.2100

### UTILITY CONTACTS

#### SEWER

CITY OF LINCOLN PARK  
1355 SOUTHFIELD ROAD, LINCOLN PARK, MI 48146  
CONTACT: JOHN MEYERS  
PHONE: 313.643.0883

#### TELEPHONE

AT&T  
CONTACT: DAVID HARDAWAY  
PHONE: 313.240.5541

#### WATER

CITY OF LINCOLN PARK  
1355 SOUTHFIELD ROAD, LINCOLN PARK, MI 48146  
CONTACT: JOHN MEYERS  
PHONE: 313.643.0883

#### ROADS

WAYNE COUNTY DEPT. OF PUBLIC SERVICES  
ENGINEERING DIVISION  
CONTACT: ALI ALJAWAD  
PHONE: 734.595.6504 X 2079

#### GAS

DTE ENERGY  
CONTACT: PAMULA WOODSIDE  
PRINCIPAL ACCOUNT MANAGER  
PHONE: 313.235.1555

#### TRASH

REPUBLIC SERVICES  
CONTACT: TANISHA  
SALES REP.  
PHONE: 248.333.8623

#### ELECTRIC

DTE ENERGY  
CONTACT: PAMULA WOODSIDE  
PRINCIPAL ACCOUNT MANAGER  
PHONE: 313.235.1555

#### HEALTH

WAYNE COUNTY HEALTH, VETERANS & COMMUNITY WELL.  
33030 VAN BORN  
WAYNE, MI 48184  
CONTACT: PHYLLIS FICZYCZ  
PHONE: 734.727.7400

### SHEET INDEX

- 1 - TITLE  
T1.0 TITLE SHEET  
T2.0 LIFE SAFETY PLAN  
G1.0 YUM GREEN CHECKLIST  
G2.0 TRASH ENCLOSURE DETAILS
- 2 - CIVIL  
- SEE SHEET T-001 FOR CIVIL DRAWING INDEX
- 3 - STRUCTURAL  
S1.0 FOUNDATION PLAN  
S2.0 WALL FRAMING PLAN  
S3.0 ROOF FRAMING PLAN  
S4.0 STRUCTURAL DETAILS FOUNDATION  
S4.1 STRUCTURAL DETAILS FRAMING  
S4.2 STRUCTURAL DETAILS ROOF  
S4.3 STRUCTURAL DETAILS TACO BELL TOWER  
S4.4 STRUCTURAL SECTIONS  
S4.5 STRUCTURAL SECTIONS  
S4.6 PRIVACY WALL SECTIONS AND DETAILS  
S5.0 CANOPY/AWNING BLOCKING ELEVATIONS

- 4 - ARCHITECTURE  
A1.0 FLOOR PLAN  
A1.1 DOOR AND WINDOW ELEVATIONS & SCHEDULES  
A2.0 EQUIPMENT/ SEATING PLAN  
A2.1 EQUIPMENT SCHEDULE  
A3.0 ROOF PLAN  
A4.0 EXTERIOR ELEVATIONS  
A4.1 EXTERIOR ELEVATIONS  
A5.0 BUILDING SECTIONS  
A5.1 BUILDING SECTIONS  
A5.2 WALL SECTIONS  
A5.3 WALL SECTIONS  
A5.4 WALL SECTIONS  
A6.0 CONSTRUCTION PLAN DETAILS  
A6.1 CONSTRUCTION DETAILS WALL  
A6.2 CONSTRUCTION DETAILS ROOF  
A6.3 CONSTRUCTION DETAILS DOOR  
A6.4 CONSTRUCTION DETAILS WINDOW  
A6.5 FINISH DETAILS  
A6.6 MISCELLANEOUS  
A7.0 FLOOR FINISH PLAN  
A7.1 REFLECTED CEILING PLAN  
A7.2 FINISH LEGEND AND SCHEDULE  
A8.0 INTERIOR ELEVATIONS DINING ROOM  
A8.1 INTERIOR ELEVATIONS DINING ROOM  
A8.2 INTERIOR ELEV. ENLARGED RESTROOMS  
A8.3 INTERIOR ELEVATIONS KITCHEN  
A8.4 KITCHEN DETAILS

- 5 - ACCESSIBILITY  
ADA1.0 ACCESSIBILITY REQUIREMENTS  
ADA1.1 ACCESSIBILITY REQUIREMENTS

#### 6 - MECHANICAL

- M1.0 MECHANICAL SCHEDULES AND NOTES  
M2.0 DUCT AND DIFFUSER PLAN  
M2.1 MECHANICAL ROOF PLAN  
M3.0 HOOD DRAWINGS PLANS AND SECTIONS  
M4.0 MECHANICAL AND HOOD DETAILS

#### 7 - PLUMBING

- P1.0 PLUMBING SCHEDULES AND NOTES  
P2.0 WASTE AND VENT PLAN  
P3.0 WATER AND GAS PLAN  
P4.0 PLUMBING ROUGH-IN PLAN  
P5.0 RISER DIAGRAMS  
P6.0 PLUMBING DETAILS

#### 8 - ELECTRICAL

- E1.0 SITE ELECTRICAL PLAN  
E2.0 ELECTRICAL ONE LINE DIAGRAMS AND LEGEND  
E2.1 ELECTRICAL SCHEDULES  
E2.2 ELECTRICAL SCHEDULES  
E3.0 ELECTRICAL POWER PLAN  
E3.1 ENLARGED POWER PLAN AND DETAILS  
E3.2 ELECTRICAL POWER ROOF PLAN  
E3.3 ELECTRICAL DIMENSIONS PLAN  
E4.0 LIGHTING PLAN AND DETAILS  
E5.0 COMMUNICATIONS PLAN  
E6.0 ELECTRICAL DETAILS - TBCCB  
E6.1 ELECTRICAL DETAILS - TBCCB  
E6.2 ELECTRICAL DETAILS - TBCCB  
E7.0 ELECTRICAL DETAILS

#### 9 - SCOPE OF WORK

- SW1.0 SCOPE OF WORK MATRIX



09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: XX.XX.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

### TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52

OPEN KITCHEN  
MODERN EXPLORER

### TITLE SHEET

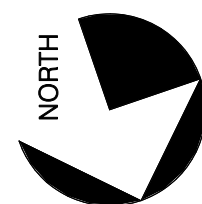
T1.0

PLOT DATE: 9/13/2018 4:04:59 PM

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

# T2.0

PLOT DATE: 9/13/2018 4:05:20 PM



**A**

**FE** FIRE EXTINGUISHER LOCATION.



## C

N.T.S.





# G1.0

PLOT DATE: 9/13/2018 4:04:58 PM

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

2306 DIX HIGHWAY  
LINCOLN PARK, MI 4814

T40

## KLIM OBT

# G1.0

PLOT DATE: 9/13/2018 4:04:58 PM

**CHECK LIST NUMBER EXPLANATION:**

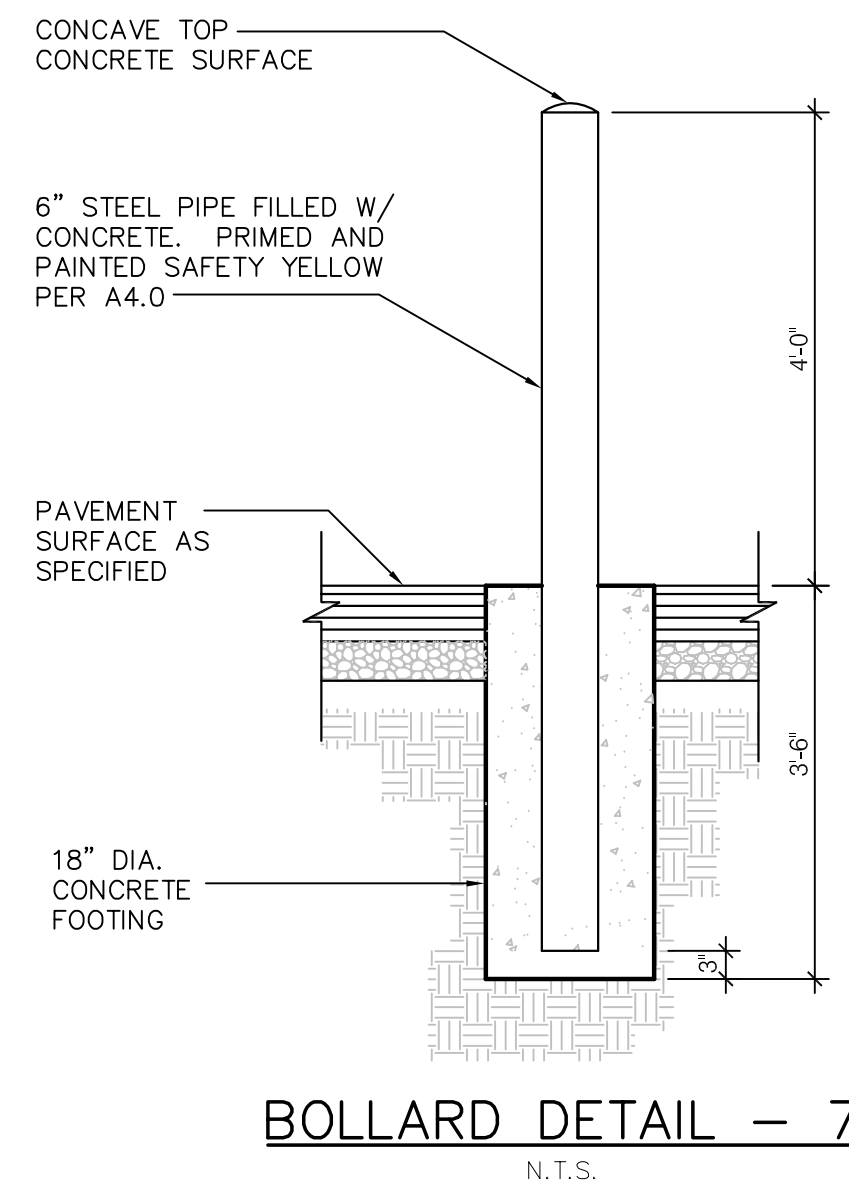
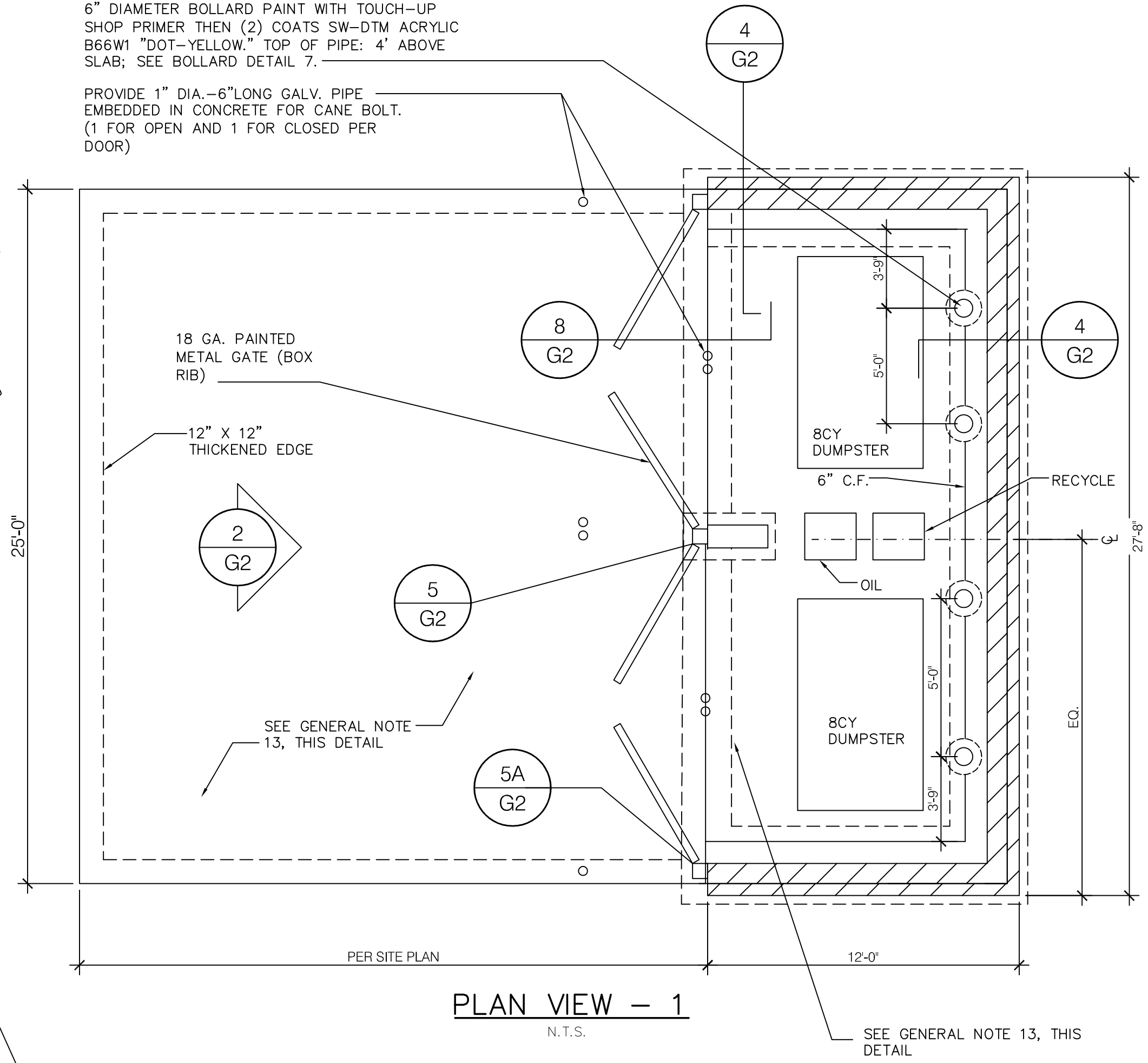
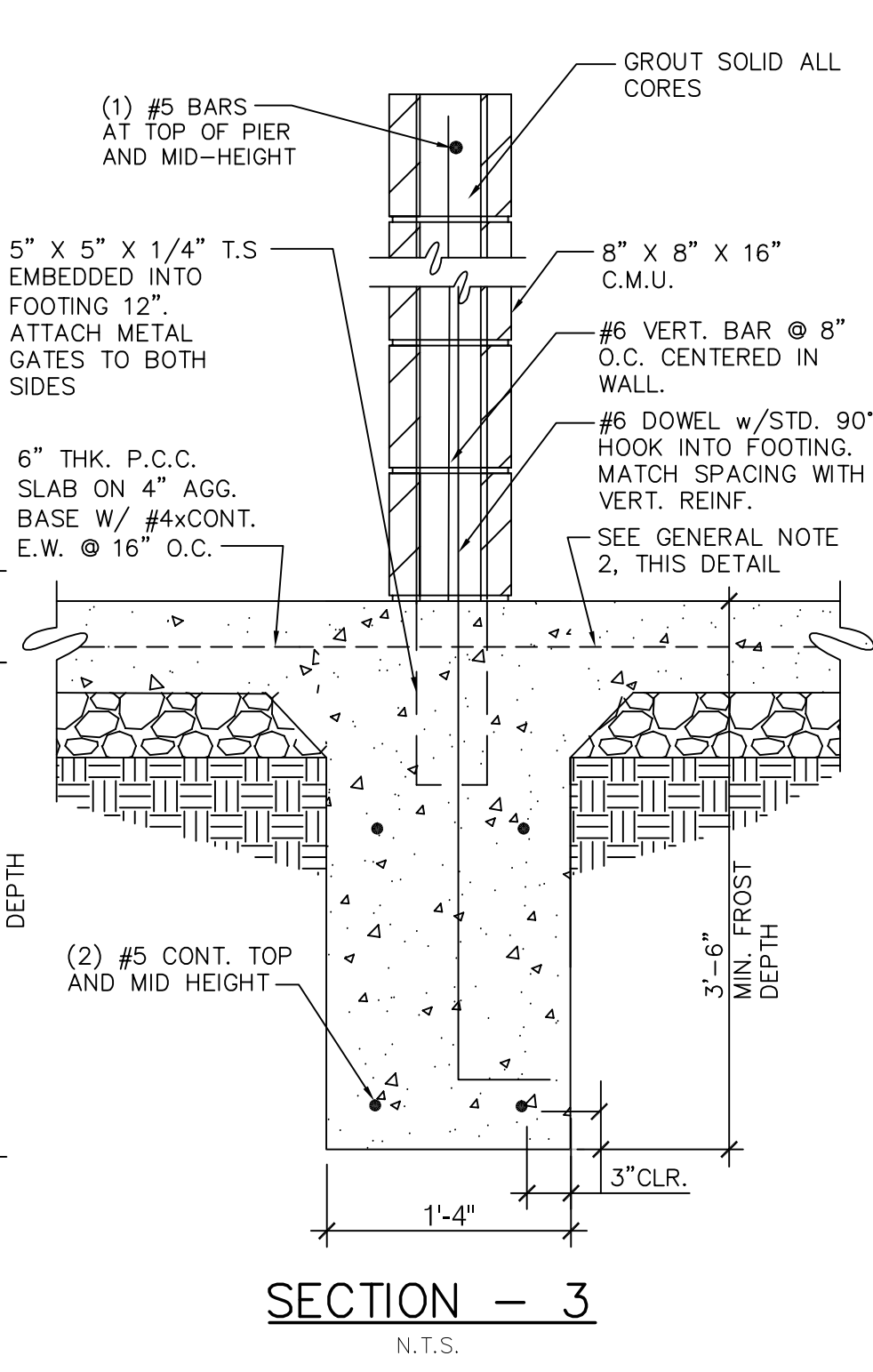
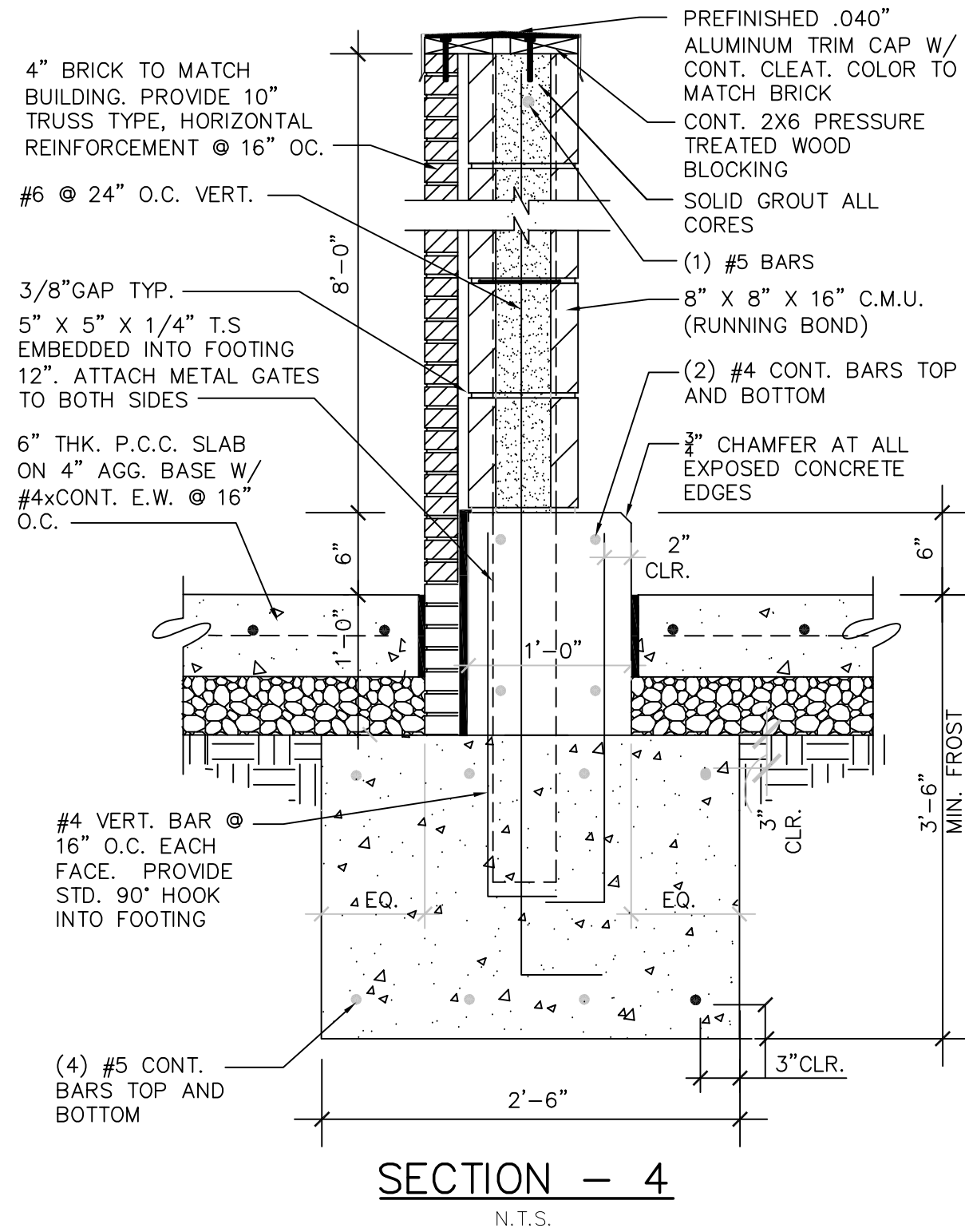
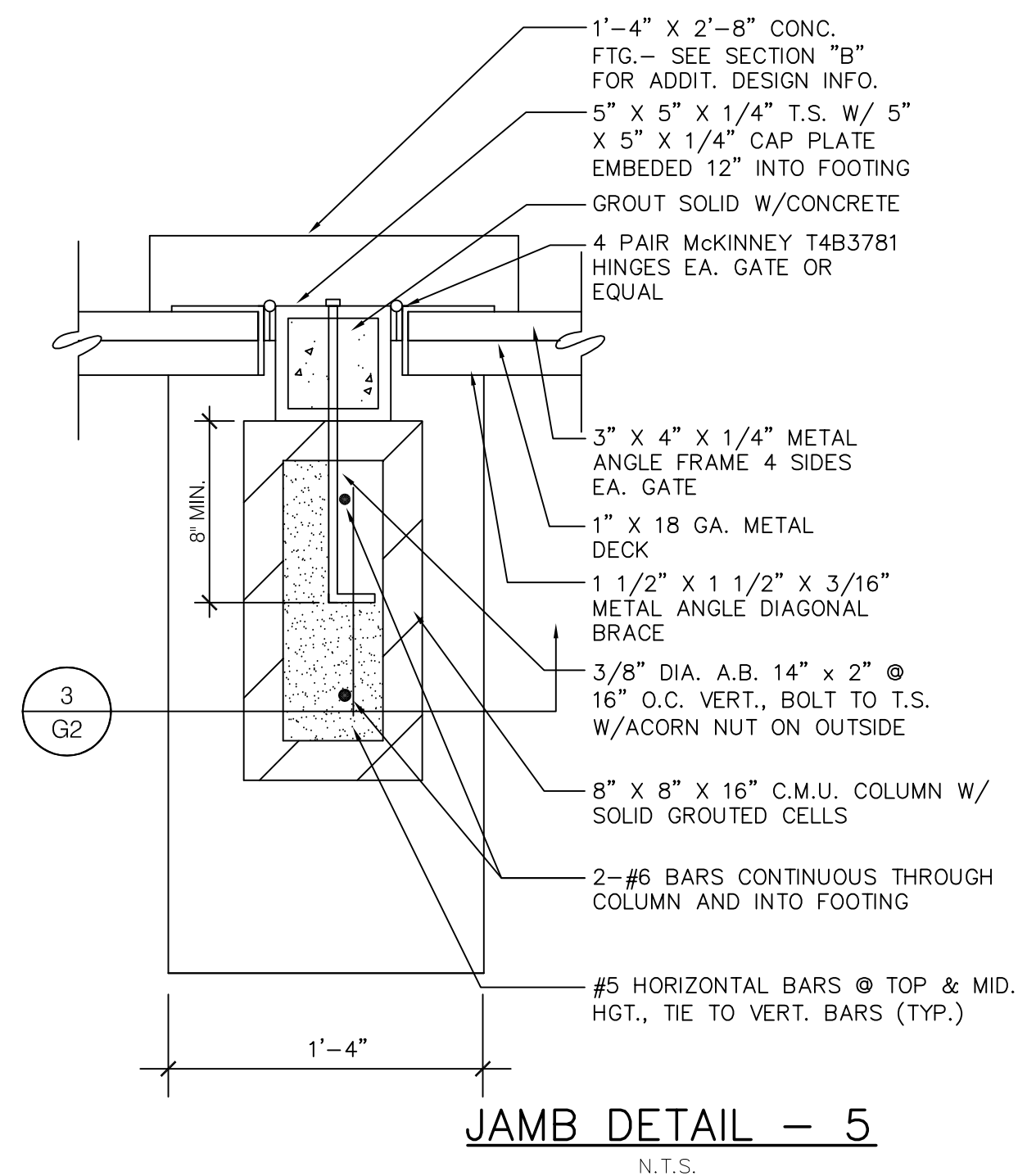
The checklist numbers below align with the credit numbers in the YUM Blueline system website. For further detail go to the following web address. Note: Follow the "Required" and "Optional" designation on this sheet rather than the ones on the YUMBlueline website. The system has been setup so that if you do the "Required" items on this list your restaurant will meet the YUMBlueline requirements.

1. Go to the reference version of the YUM Blueline websiteat: " [www.yumblueline.com](http://www.yumblueline.com)"
2. In the "User" section choose "**General**" from the pull down menu
3. In the "Password" section type in " **J212j\*kla!**"

**P** = Indicates that scope is already in the prototype drawings

**\*** = Indicates "optional" item

	FEASIBILITY	DESIGN	CONSTRUCTION	COMMISSIONING
1.3 C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4 L	<input checked="" type="checkbox"/>			
1.5 P	<input checked="" type="checkbox"/>			
2.2 P	<input checked="" type="checkbox"/>			
3.0 B		<input type="checkbox"/>	<input type="checkbox"/>	
5.1 P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
7.2 V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.0 C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.2 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1 U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13.1 F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.3 I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16.2 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17.2 S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.1 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.1 U	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.2 S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20.0 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21.0 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
23.1 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
24.1 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
25.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28.1 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28.3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
33.1 F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
36.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



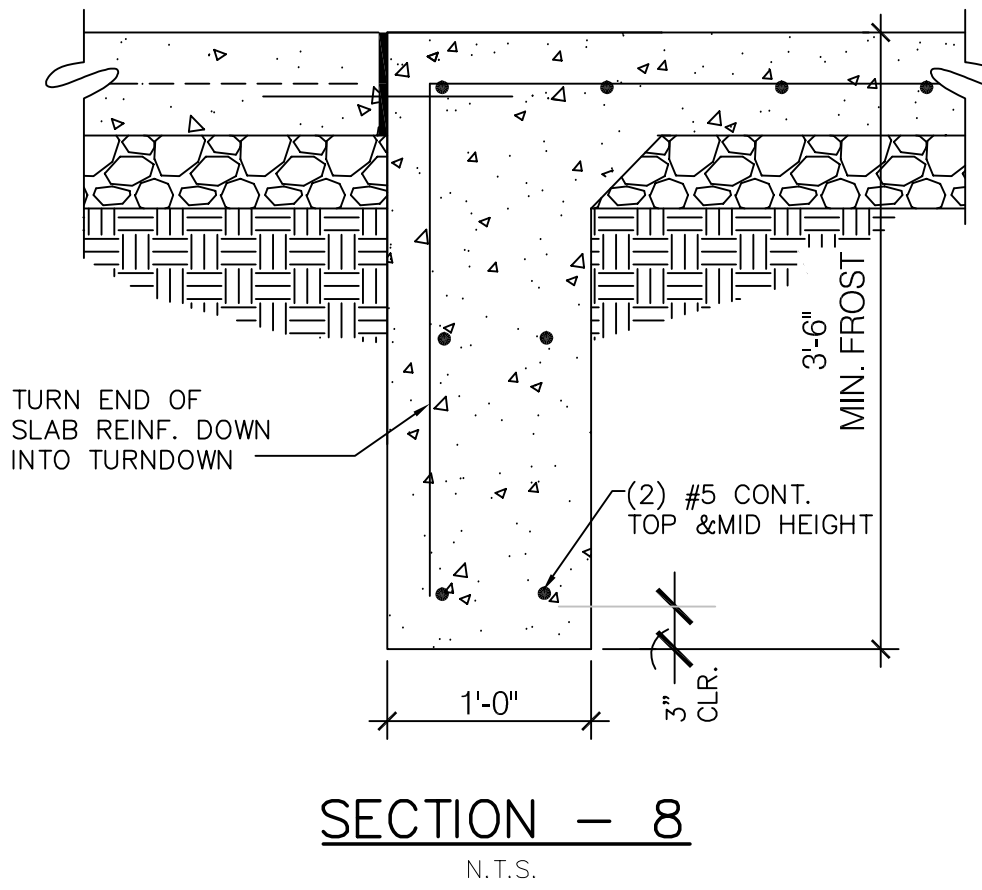
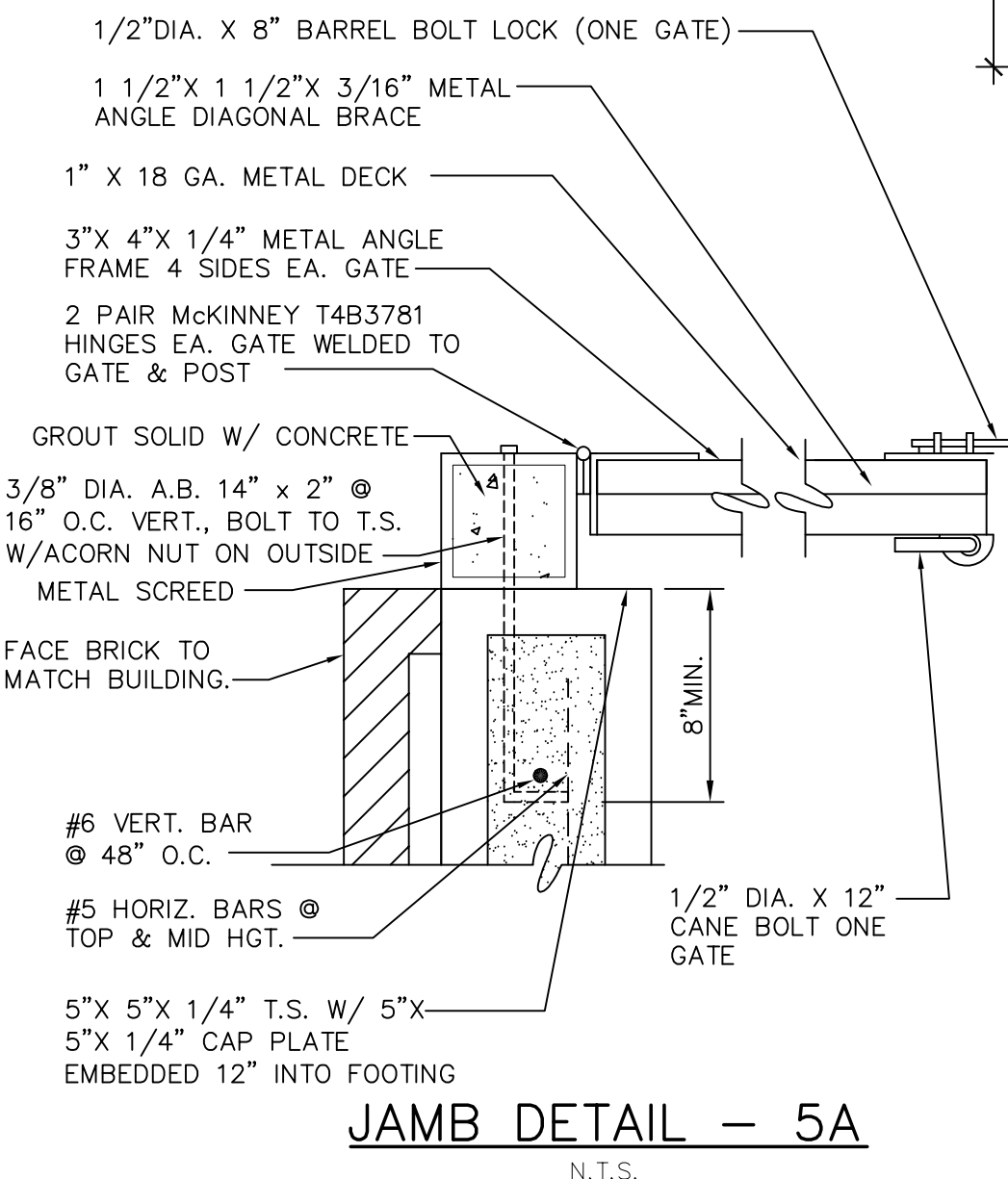
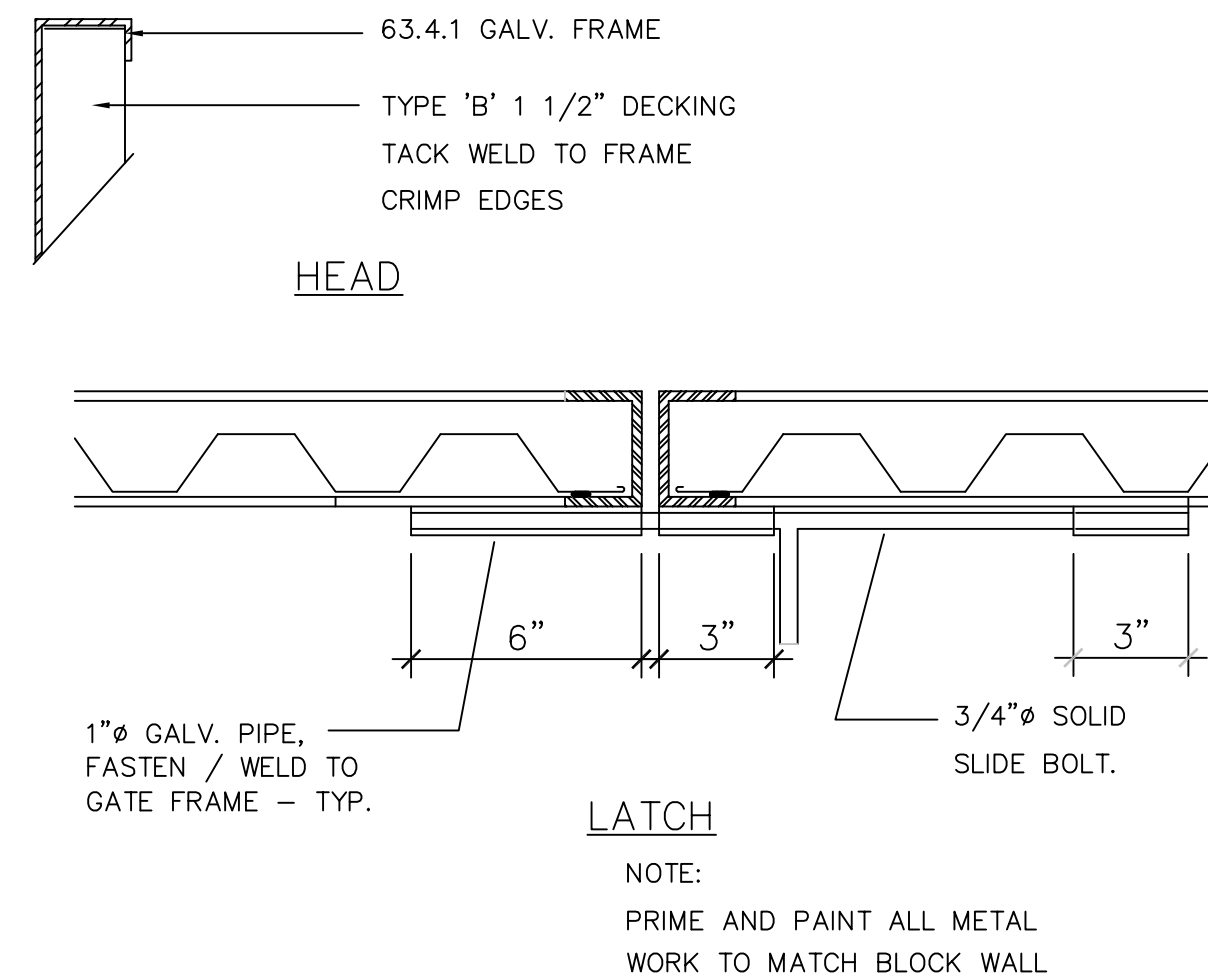
GATE NOTES:

(2) EQUAL ( $\pm 6'-0"$ ) WIDE x 6'-0" HIGH MTL. GATES, TYPE 'B' 1 1/2" DECKING, 22GA. W/ T.S. 5 X 5 X .1875 BAR CROSS BRACING WELD AND GRIND SMOOTH ALL CONNECTIONS, TYP. PRIME AND PAINT COLOR TO MATCH PLASTER.

GATE HARDWARE:

ALL HARDWARE AND ACCESSORIES SHALL BE HEAVY GALVINIZED.

GATE STOP - MUSHROOM TYPE OR FLUSH PLATE WITH ANCHORS SET IN CONCRETE TO ENGAGE THE CENTER DROP ROD OR PLUNGER BAR.



NOTES:

1. LOCATION SHALL BE APPROVED BY THE PUBLIC WORKS DEPARTMENT.
2. AREAS SHALL BE ACCESSIBLE FOR DELIVERY AND COLLECTION.
3. GATES SHALL BE CORRUGATED METAL DOORS AND MUST BE APPROVED BY PUBLIC WORKS DEPARTMENT PRIOR TO INSTALLATION.
4. GATE LATCHES SHALL BE OF THE PLUNGER BAR TYPE OR EQUIVALENT AS APPROVED BY THE PUBLIC WORKS DEPARTMENT.
5. SEE ATTACHED SPECIFICATIONS, NOTES AND PROCEDURES.

TRASH ENCLOSURE DETAIL MATERIAL SPECIFICATIONS:












1. CONCRETE BLOCK: 6" MINIMUM IN SIZE. ASTM C90.
2. REINFORCING STEEL: ASTM 615. GRADE 60.
3. ACCEPTABLE SOIL TYPES:
  - A. MIN. ALLOWABLE BEARING: 2000 LBS/SQ. FT
  - B. MIN. LATERAL BEARING: 100 LBS/SQ. FT./FT.
  - C. MAX EXPANSION INDEX: 20
4. CONCRETE: 4000 LBS/SQ. IN. IN 28 DAYS.
5. MORTAR: 1: 1/4:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND BY VOLUME). MIXED TO PLASTIC CONSISTENCY. REFER TO UBC TABLE 24-A FOR OTHER TYPES OF CEMENT.
6. GROUT: 1:1/10:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND BY VOLUME).MIX TO FLOW WITHOUT SEGREGATION. GROUT MAY CONTAIN 2 PARTS PEA GRAVEL (3/8" MAX. SIZE).
7. MINIMUM COMPRESSIVE STRENGTH: 2000 LBS/SQ. IN. REFER TO UBC TABLE 24-B FOR OTHER TYPES OF CEMENT.

**GENERAL NOTES:**

1. THIS DESIGN IS FOR AVERAGE CONDITIONS AND MAY NOT BE SUITABLE FOR ALL CASES. IT IS RECOMMENDED THAT A LICENSED CIVIL OR STRUCTURAL ENGINEER BE CONSULTED.
2. FOOTINGS SHALL EXTEND 3'-6" MINIMUM BELOW FINISH GRADE AND SHALL BE IN NATURAL SOIL OR CERTIFIED FILL.
3. BLOCKS TO BE STAGGERED (RUNNING BOND).
4. ALL CELLS CONTAINING REINFORCING STEEL SHALL BE GROUTED.
5. APPROVED GROUT STOPS ARE REQUIRED BELOW HORIZONTAL STEEL IN PARTIALLY GROUTED WALLS. BAGS, NEWSPAPERS, ETC. ARE NOT APPROVED GROUT STOPS.
6. INITIAL BED JOINT SHALL BE 1/4" MIN. 1" MAX. SUBSEQUENT BED JOINTS SHALL BE 1/4" - MIN., 3/8" MAX.
7. VERTICAL CONTINUITY OF CELLS SHALL BE UNOBSTRUCTED. MORTAR JOINTS SHALL NOT EXCEED 3/4" FOR 6" AND LARGER BLOCK. MORTAR DROPPINGS OR OTHER FOREIGN MATTER ARE NOT PERMITTED IN CELLS AND MUST BE REMOVED.
8. EXPANSION JOINTS REQUIRED AT 60'-0" MAX. INTERVALS.
9. REQUIRED BAR LAPS:
  - A. VERTICAL STEEL : 30 BAR DIAMETERS.
  - B. HORIZONTAL STEEL: 40 BAR DIAMETERS.
  - C. WIRE JOINT REINFORCEMENT IN THE MORTARED BED JOINT: 75 WIRE DIAMETERS OR IN ALTERNATE BED JOINTS OF RUNNING BOND. 54 DIAMETERS PLUS TWICE THE BED JOINT SPACING.
  - D. HORIZONTAL STEEL WIRE JOINT REINFORCEMENT IS REQUIRED OR UTILIZED IT SHALL BE EQUIVALENT TO TWO 3/16" DIAMETER BARS CONNECTED AT 16" INTERVALS BY NO. 9 GAUGE WELDED WIRE.
11. FOR PIPES AND CONDUIT EMBEDDED IN MASONRY, REFER TO SEC. 24-07(g). UBC.
13. 3" MIN. COVER REQUIRED FOR REINFORCEMENT IN CONCRETE WHICH IS CAST AGAINST EARTH.
18. 8" THICK CONCRETE SLAB OVER 6" THICK CRUSHED AGGREGATE. 12"x12" THICKENED EDGE FOR APPROACH SLAB. #4 REBAR @ 2'-0" O.C. EACH WAY.

**INSPECTION PROCEDURES:**

1. FOUNDATION: AFTER TRENCHES ARE DUG, STEEL IS TIED IN PLACE AND BEFORE ANY CONCRETE IS POURED.
2. PREGROUT: AFTER ALL BLOCKS (EXCEPT CAP) ARE IN PLACE, VERTICAL AND HORIZONTAL STEEL IS IN PLACE, GROUT STOPS (FOR PARTIALLY GROUTED MASONRY) ARE IN PLACE. AND PRIOR TO GROUTING.
3. FINAL: AFTER GROUT IS IN PLACE AND PRIOR TO PLACEMENT OF CAP.

	CITY COMMENTS	04.24.18
	ISSUED FOR PERMIT	04.24.18
	ISSUED FOR BID	06.20.18
		
		
		
		
		
		
		
		

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



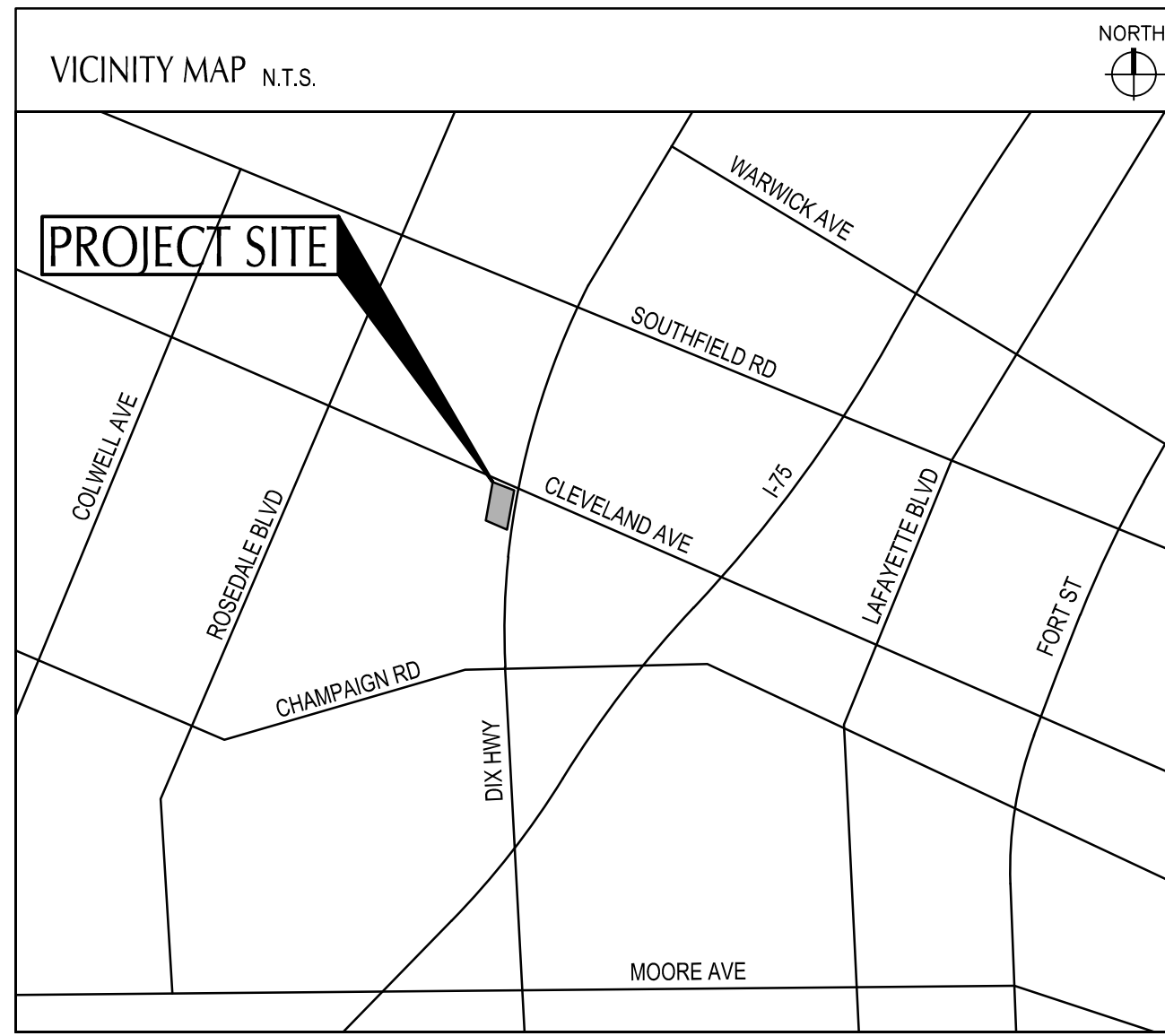
# TRASH ENCLOSURE DETAILS

## G2.0

# IMPROVEMENT PLANS

# TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146  
NOVEMBER, 2017



## WAYNE COUNTY DPS GENERAL NOTES

1. ALL WORK WITHIN THE WAYNE COUNTY ROAD RIGHT-OF-WAY (ROW) AND DRAIN EASEMENT SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD AND GENERAL SPECIFICATIONS, INCLUDING SOIL EROSION AND SEDIMENT CONTROL OF THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES, AND MDOT 2012 SPECIFICATIONS FOR CONSTRUCTION.
2. THESE PLANS ARE NOT VALID WITHOUT ATTACHMENT OF THE WAYNE COUNTY PERMIT SPECIFICATIONS FOR CONSTRUCTION WITHIN THE ROAD ROW, PARKS, DRAIN EASEMENT OR SANITARY SEWER UNDER JURISDICTION OF THE WAYNE COUNTY (07/01/93) REVISED 12/15/2004
3. CONTRACTOR SHALL CONTACT MISS DIG AT 811 TO IDENTIFY AND FLAG / MARK THE LOCATIONS OF ALL UNDERGROUND UTILITIES AT THE PROPOSED CONSTRUCTION AREAS PRIOR TO START OF CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES, AND RESOLVE ANY CONFLICT BETWEEN THE PROPOSED WORK AND THE EXISTING UNDERGROUND OR ABOVEGROUND UTILITIES.
4. CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE AND 3 FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES. ANY PROPOSED UTILITY PERMITTED TO CROSS UNDER THE ROAD OR DRAIN, MUST BE PLACED A MINIMUM OF 7 FEET BELOW THE LOWEST POINT OF THE ROAD, OR 6 FEET BELOW THE DRAIN BOTTOM. OVERHEAD WIRES/CABLES MUST BE INSTALLED 18 FEET MINIMUM ABOVE THE ROAD CENTERLINE. TO RELOCATE ANY UTILITY WITHIN THE ROAD ROW, THE CONTRACTOR SHALL COORDINATE THE RELOCATION WITH THE UTILITY COMPANY AND AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
5. ALL SURVEY MONUMENTS / CORNERS AND BENCHES MARKS LOCATED WITHIN THE CONSTRUCTION AREA MUST BE PRESERVED IN ACCORDANCE WITH PUBLIC ACT 74 AS AMENDED (INCLUDING ACT 34, P.A. 2000) AND AS PER WAYNE COUNTY PERMIT RULE 1.5. THE PERMIT HOLDER AND CONTRACTOR SHALL COORDINATE THE WORK WITH A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF MICHIGAN DURING CONSTRUCTION ACTIVITIES FOR THE PURPOSE OF WITNESSING, PRESERVING OR REPLACING SURVEY MONUMENTS AND MONUMENT BOXES.
6. EXPOSURE OF ANY UTILITIES UNDER THE PAVEMENT WILL NOT BE PERMITTED, UNLESS APPROVED BY THE WAYNE COUNTY ENGINEER. PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PERFORMED PER APPLICABLE WAYNE COUNTY STANDARD DETAILS AN AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
7. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITHIN THE WAYNE COUNTY ROAD ROW AND DRAIN EASEMENT WITH 3" TOPSOIL. THM SEED MIX AND MULCH. SLOPES STEEPER THAN 1 ON 3 SHALL BE RESTORED BY PLACING SO 2" TOPSOIL.
8. ALL BACKFILL UNDER OR WITHIN 3 FEET OF THE PROPOSED OR EXISTING PAVEMENT, CURB OR SIDEWALK SHALL CONFORM TO THE WAYNE COUNTY TRENCH "B" BACKFILL REQUIREMENTS. TRENCH "A" BACKFILL MAY BE USED WITHIN THE ROAD ROW AREAS UNDER CONDITIONS OTHER THAN THOSE SPECIFIED FOR TRENCH "B".
9. CONTRACTOR IS RESPONSIBLE FOR RESTORING OR REPLACING ALL DISTURBED LANDSCAPED AREAS, SPRINKLER SYSTEMS, FENCES, SIGNS, MAIL BOXES, ETC. WITHIN THE WAYNE COUNTY ROAD ROW AND / OR AS DIRECTED BY THE COUNTY ENGINEER.
10. CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES. OTHERWISE, DETOURING TRAFFIC MUST BE PER APPROVED PLANS. ALL SIGNING AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF M.M.U.T.C.D.
11. MAINTAIN A SAFE AND ADEQUATE TRAVEL ROUTE FOR PEDESTRIANS AT ALL TIMES THROUGHOUT THE PROJECT DURATION.
12. TUNNELING, BORING AND JACKING OPERATIONS SHALL BE IN ACCORDANCE WITH THE WAYNE COUNTY SPECIFICATIONS AND DETAILS. BORE PITS SHALL BE PLACED AT MINIMUM 10 FEET FROM THE BACK OF CURB OR EDGE OF PAVEMENT.
13. REMOVE ALL ABANDONED CONDUITS FROM THE COUNTY ROADS ROW OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
14. CONTRACTOR SHALL PROVIDE COLD WEATHER PROTECTION FOR ALL PROPOSED CONCRETE WORK (PAVEMENTS, SIDEWALKS, DRIVE APPROACHES, ETC.) AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
15. OVERNIGHT VEHICLE PARKING AND STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENTS ARE NOT PERMITTED WITHIN THE WAYNE COUNTY ROADS RIGHT-OF-WAY.
16. CONTRACTOR SHOULD OBTAIN SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM THE WAYNE COUNTY DPS-ESG. CONTACT SOIL EROSION OFFICE AT (734) 526-3936.
17. CONSTRUCT THE PROPOSED STORM WATER MANAGEMENT SYSTEM IN ACCORDANCE WITH THE CURRENT WAYNE COUNTY STORM WATER MANAGEMENT PROGRAM.
18. CONTRACTOR SHALL NOTIFY THE WAYNE COUNTY TRAFFIC SIGNAL SHOP AT (734) 955-2154 AT LEAST 72 HOURS PRIOR TO START OF WORK AT OR NEAR ANY SIGNALIZED INTERSECTIONS.
19. CONTRACTOR SHALL NOTIFY WAYNE COUNTY 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION. CONTACT THE PERMIT OFFICE AT (734) 595-6504 EXTENSION 2009.

## INDEX OF DRAWINGS

TITLE SHEET	TS-001
ALTA	---
GENERAL NOTES	C-001
CITY GENERAL NOTES	C-002
DEMOLITION PLAN	C-101
SITE PLAN	C-111
DRIVE APPROACH CROSS SECTION AND DETAILS	C-112
DRIVE APPROACH CROSS SECTION AND DETAILS	C-113
GRADING PLAN	C-121
SWPPP NOTES	C-131
SWPPP PLAN	C-132
SWPP PLAN NOTES AND DETAILS	C-133
SWPP PLAN DETAILS	C-134
UTILITY PLAN	C-141
DRAINAGE MAPS	C-142
UTILITY PROFILES AND DESIGN CALCULATIONS	C-143
CONTROL STRUCTURE AND STORMCEPTOR DETAILS	C-144
STORMTECH DETAILS	C-145
STORMTECH DETAILS	C-146
STORMWATER EXHIBITS	C-147
SITE DETAILS	C-501
SITE DETAILS	C-502
SITE DETAILS	C-503
SITE DETAILS	C-504
LANDSCAPE NOTES	L-001
LANDSCAPE PLAN	L-101
IRRIGATION PLAN	L-111
IRRIGATION DETAILS	L-112
LANDSCAPE DETAILS	L-501

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

[illegible]

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



EXPLORER LITE  
LARGE50

# TITLE SHEET

***TS-001***



SCHEDULE B – SECTION II EXCEPTIONS PER ALTA  
COMMITMENT FOR TITLE INSURANCE, ISSUED BY:  
CHICAGO TITLE INSURANCE COMPANY  
ORDER NO. 821028449NTS REVISION 1  
EFFECTIVE DATE: JANUARY 10, 2018

3. COVENANTS, CONDITIONS AND RESTRICTIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT

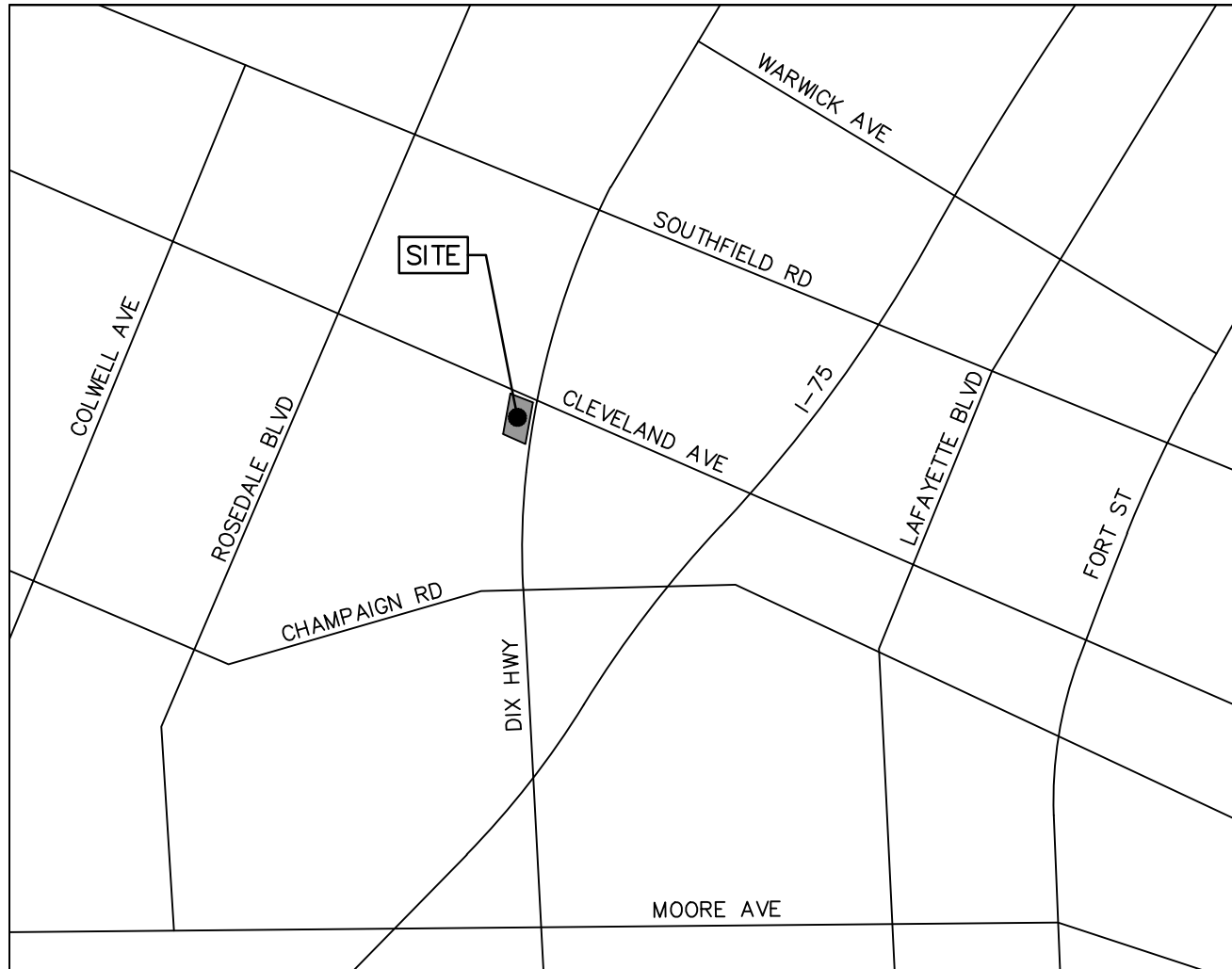
RECORDING NO: LIBER 5855, PAGE 274  
RESPONSE: COVERS SUBJECT PROPERTY

④ 4. ANY EASEMENTS OR RIGHTS OF WAY FOR EXISTING UTILITIES OR OTHER RIGHTS OF WAY OVER THOSE PORTIONS OF SAID LAND LYING WITHIN THE PUBLIC RIGHT OF WAY ABANDONED BY RESOLUTION OR ORDINANCE

RECORDING NO: LIBER 25787, PAGE 777  
RESPONSE: AS SHOWN HEREON

# ALTA/NSPS LAND TITLE SURVEY

PART OF P.C. 48–86 AND 95  
CITY OF LINCOLN PARK, WAYNE COUNTY,  
STATE OF MICHIGAN



LOCATION MAP



## GENERAL NOTES

1. BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FEET, NAD83.
2. VERTICAL DATUM IS NAVD88.
3. THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER THE FEMA FIRM MAP NUMBER 26163C0264E, EFFECTIVE FEBRUARY 2, 2012.
4. THE SURVEYED PROPERTY CONTAINS 24,760 SQUARE FEET, OR 0.57 ACRES OF LAND, MORE OR LESS.
5. EXISTING PARKING SPACES:  
TRADITIONAL SPACES: 23  
HANDICAPPED ACCESSIBLE SPACES: 2  
TOTAL SPACES: 25
6. WATER MAIN, STORM SEWER, AND SANITARY SEWER UTILITY STRUCTURES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UTILITY AND AS-BUILT MAPS HAVE BEEN REQUESTED AND SOME MAPS HAVE BEEN RECEIVED AT DATE OF THIS SURVEY. FRANCHISE UTILITY MAPS HAVE BEEN REQUESTED FROM THE APPROPRIATE FRANCHISE COMPANY, BUT NOT ALL MAPS HAVE BEEN RECEIVED AT DATE OF SURVEY. FRANCHISE UTILITY STRUCTURES HAVE BEEN FIELD LOCATED WHERE VISIBLE.  
  
NOTE: THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED.  
  
NOTE TO THE CLIENT, INSURER, AND LENDER – WITH REGARD TO TABLE A, ITEM 11, SOURCE INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES PURSUANT TO SECTION 5.E.IV. TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAT OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND/OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY.
7. NO FIELD DELINEATED WETLANDS WERE OBSERVED AT THE DATE OF THE FIELD WORK.
8. ZONING REPORT OR LETTER WAS NOT PROVIDED BY THE CLIENT AT THE DATE OF SURVEY.
9. NO PARTY WALLS WERE DESIGNATED BY THE CLIENT OR OBSERVED AT THE DATE OF THE FIELD WORK.

## CERTIFICATION:

- TACO BELL CORP., A CALIFORNIA CORPORATION, AND ITS AFFILIATES
- TACO BELL OF AMERICA, LLC, A DELAWARE LIMITED LIABILITY COMPANY AND ITS AFFILIATES
- CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(a), 6(b), 7(a), 7(b)(1), 8, 9, 10(a), 10(b), 11, 13, 18, 19, 20, AND 21 OF TABLE A THEREOF. FIELD WORK WAS COMPLETED ON 02/24/2017.

DATE OF PLAT OR MAP: JUNE 14, 2018

-----  
MICHAEL D. EMBREE  
REGISTERED PROFESSIONAL SURVEYOR NO. 56860  
MEMBREE@ATWELL-GROUP.COM  
TWO TOWNE SQUARE, SUITE 700  
SOUTHFIELD, MICHIGAN 48076  
248.447.2000

06/14/2018  
DATE

EXHIBIT "A" – LEGAL DESCRIPTION PER ALTA  
COMMITMENT FOR TITLE INSURANCE, ISSUED BY:  
CHICAGO TITLE INSURANCE COMPANY  
ORDER NO. 821028449NTS REVISION 1  
EFFECTIVE DATE: JANUARY 10, 2018

FOR APN/PARCEL ID(S): 45–010–07–1633–302

SITUATED IN THE CITY OF LINCOLN PARK, COUNTY OF WAYNE, STATE OF MICHIGAN

PARCEL A: LOTS 1633, 1634, 1635, 1636, 1637, 1638, AND 1639, EXCEPT THE EAST 7 FEET OF EACH LOT, LINCOLNSHIRE NO. 3, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 49 OF PLATS, PAGE 86, WAYNE COUNTY RECORDS. ALSO, 1/2 OF THE VACATED ALLEY ADJACENT AT THE REAR THEREOF.

PARCEL B: LOTS 1640, 1641, 1642, 1643, AND 1644, EXCEPT THE EAST 7 FEET OF EACH LOT, LINCOLNSHIRE NO. 3, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 49 OF PLATS, PAGE 86, WAYNE COUNTY RECORDS. ALSO, 1/2 OF THE VACATED ALLEY ADJACENT AT THE REAR THEREOF.

PARCEL C: THE 1/2 OF THE VACATED ALLEY LYING ADJACENT TO THE EAST LINE OF LOT 1632, LINCOLNSHIRE NO. 3, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 49 OF PLATS, PAGE 86, WAYNE COUNTY RECORDS.

PARCEL D: THE 1/2 OF THE VACATED ALLEY LYING ADJACENT TO THE EAST LINE OF LOT 1645, LINCOLNSHIRE NO. 3, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 49 OF PLATS, PAGE 86, WAYNE COUNTY RECORDS.

ATWELL, LLC  
TWO TOWNE SQUARE, SUITE 700  
SOUTHFIELD, MI 48076  
248–447–2000



PARCEL ADDRESS: 2306 DIX HIGHWAY, LINCOLN PARK, MICHIGAN

PARCEL AREA: 24,760 S.F.

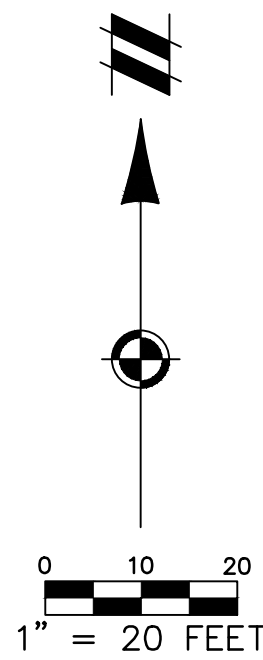
ENTITY NUMBER:

SITE NUMBER:

SCALE: NONE      DRAWN BY: JR      SHEET: 1 OF 3  
DATE: 08/18/2017      CHECKED BY: ME      GPD JOB NO.: 17000556  
REV: 06/14/2018 & 07/30/2018







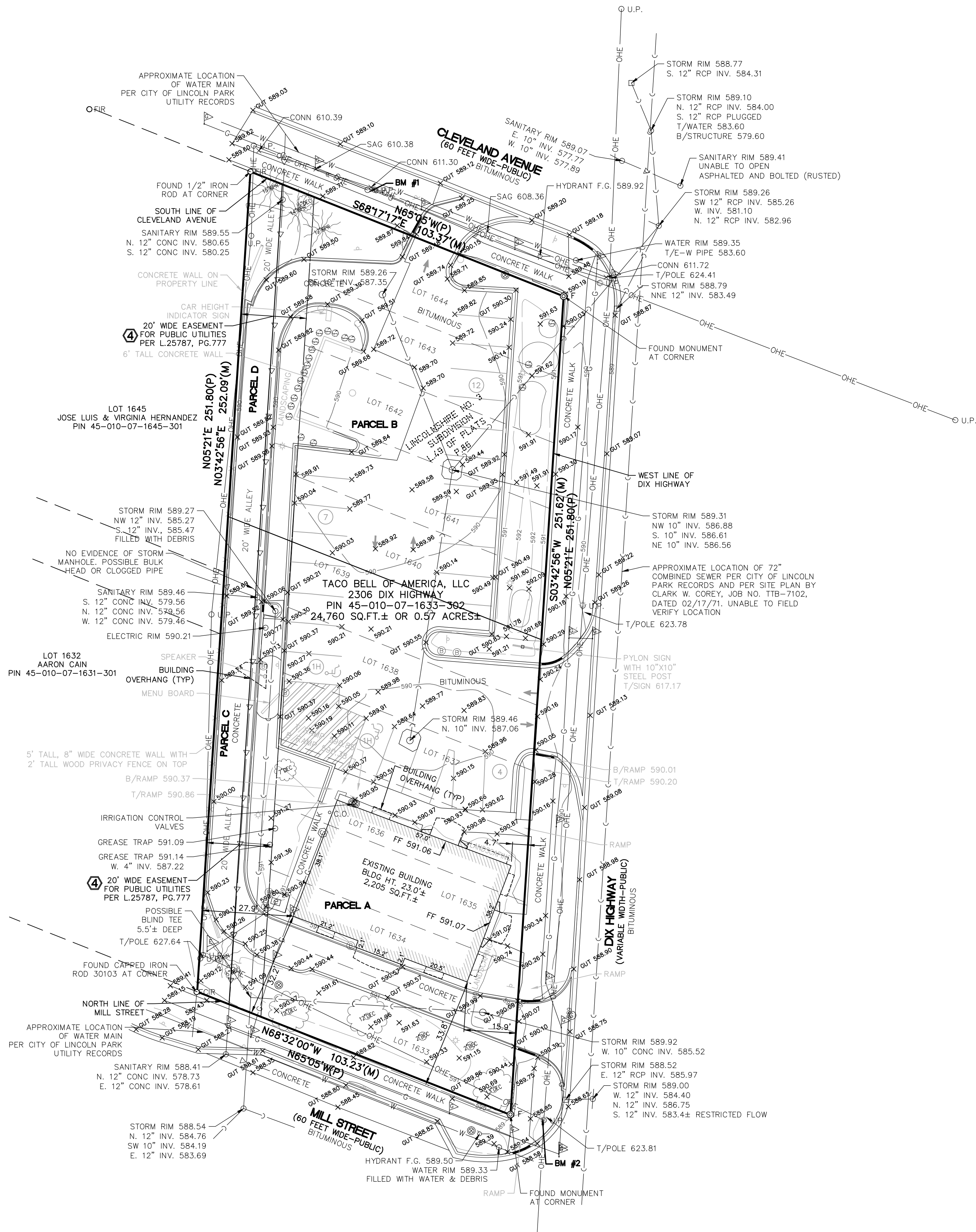
### BASIS OF BEARING:

BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM,  
SOUTH ZONE, INTERNATIONAL FEET, GROUND DISTANCES, NAD83

### BENCHMARKS:

1. MAG NAIL IN WESTERLY FACE OF UTILITY POLE  
N 275958.92 E 13440465.15 EL: 590.14 (NAVD88)
2. MAG NAIL IN NORTHERLY FACE OF UTILITY POLE  
N 275674.75 E 13440518.32 EL: 589.70 (NAVD88)

NGS PID NE1011  
EL: 591.23 (NAVD88)



### LEGEND:

○ F.C.I.R.	FOUND CAPPED IRON ROD
○ F.I.R.	FOUND IRON ROD
⊙ F.	FOUND MONUMENT
○ C.O.	EXISTING CLEANOUT
⊙	EXISTING BOLLARD
⊙	EXISTING SIGN
⊙	EXISTING TREE
⊙	EXISTING MANHOLE/CATCH BASIN
⊙	EXISTING WATER VALVE
⊙	EXISTING HYDRANT WITH SHUTOFF
⊙	EXISTING GUY WIRE
⊙	EXISTING UTILITY POLE
⊙	EXISTING ELECTRIC TRANSFORMER
⊙	EXISTING LIGHT POLE
⊙	EXISTING GAS METER
⊙	EXISTING SHRUB
⊙	EXISTING GROUND ELEVATION
⊙	WIRE SAG ELEVATION
⊙	WIRE POINT OF ATTACHMENT ELEVATION
⊙	EXISTING UNDERGROUND GAS MARKER
⊙	EXISTING UNDERGROUND ELECTRIC MARKER
⊙	BOUNDARY LINE
⊙	BOUNDARY ADJACENT LINE
⊙	OVERHEAD ELECTRIC LINE
⊙	UNDERGROUND ELECTRIC LINE
⊙	UNDERGROUND STORM LINE
⊙	UNDERGROUND SANITARY LINE
⊙	UNDERGROUND GAS LINE
⊙	EXISTING FENCE
⊙	EXISTING CURB WITH DUBDOWN
⊙	EXISTING GROUND CONTOUR
⊙	EXISTING BUILDING
⊙	MEASURED
⊙	PLATTED

ATWELL, LLC  
TWO TOWNE SQUARE, SUITE 700  
SOUTHFIELD, MI 48076  
248-447-2000



PARCEL ADDRESS: 2306 DIX HIGHWAY, LINCOLN PARK, MICHIGAN

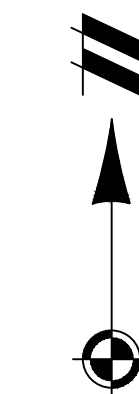
PARCEL AREA: 24,760 S.F.

ENTITY NUMBER:

SITE NUMBER:

SCALE: NONE DRAWN BY: JR SHEET: 2 OF 3  
DATE: 08/18/2017 CHECKED BY: ME GPD JOB NO.: 17000556  
REV: 06/14/2018 & 07/30/2018





0 5 10  
1" = 10 FEET

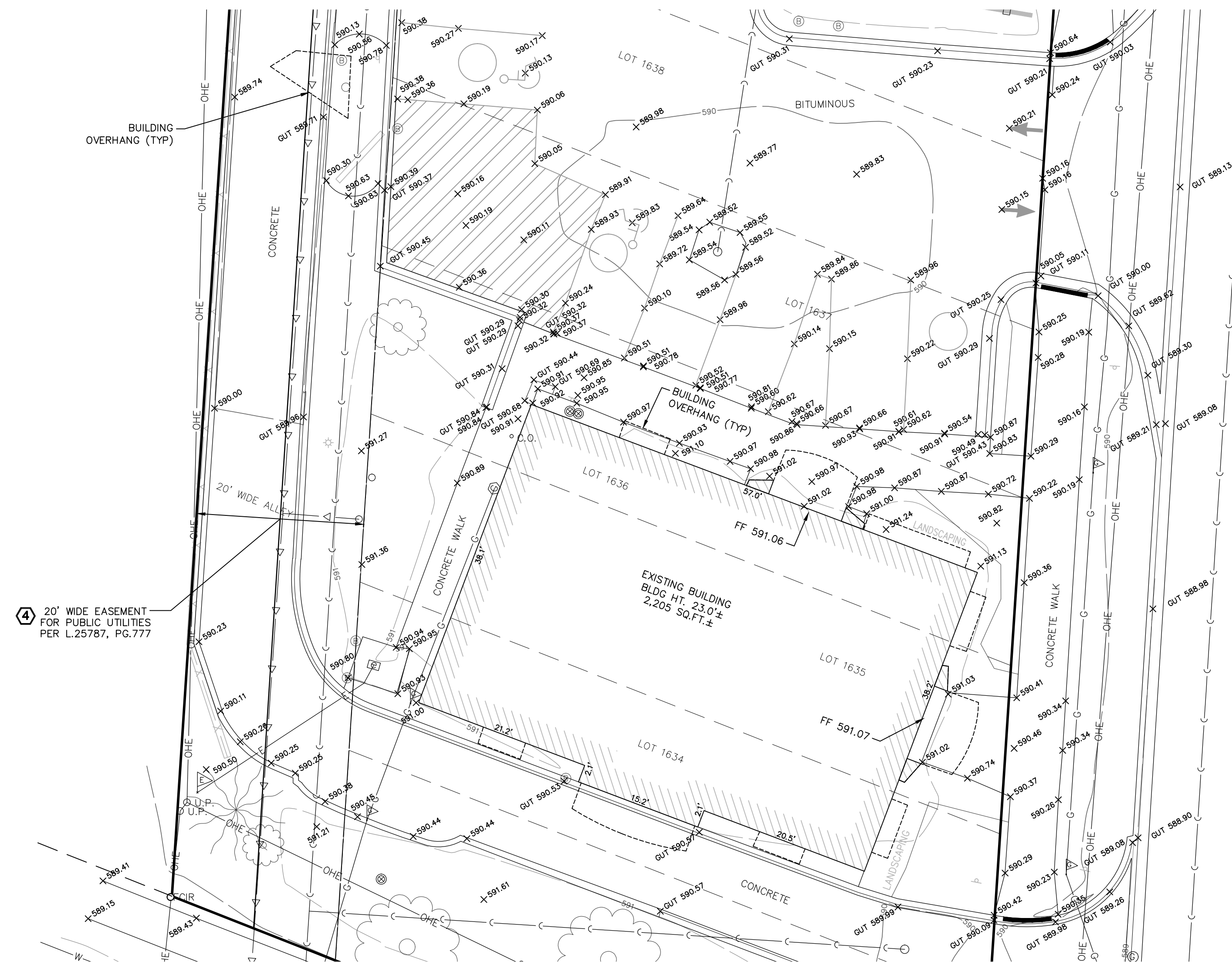
BASIS OF BEARING:

BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM,  
SOUTH ZONE, INTERNATIONAL FEET, GROUND DISTANCES, NAD83

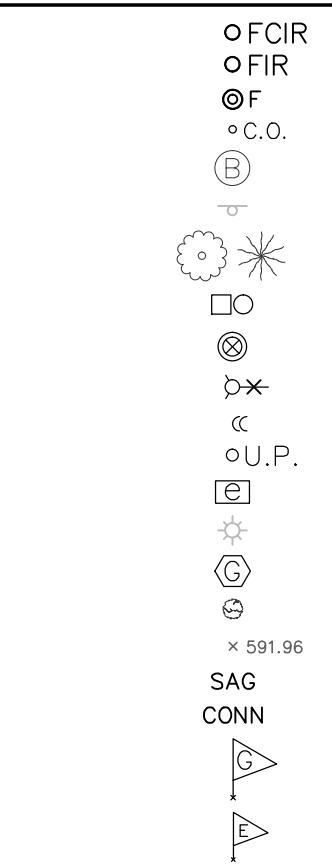
BENCHMARKS:

1. MAG NAIL IN WESTERLY FACE OF UTILITY POLE  
N 275958.92 E 13440465.15 EL: 590.14 (NAVD88)
2. MAG NAIL IN NORTHERLY FACE OF UTILITY POLE  
N 275674.75 E 13440518.32 EL: 589.70 (NAVD88)

NGS PID NE1011  
EL: 591.23 (NAVD88)



LEGEND:



FOUND CAPPED IRON ROD  
FOUND IRON ROD  
FOUND MONUMENT  
EXISTING CLEANOUT  
EXISTING BOLLARD  
EXISTING SIGN  
EXISTING TREE  
EXISTING MANHOLE/CATCH BASIN  
EXISTING WATER VALVE  
EXISTING HYDRANT WITH SHUTOFF  
EXISTING GUY WIRE  
EXISTING UTILITY POLE  
EXISTING ELECTRIC TRANSFORMER  
EXISTING LIGHT POLE  
EXISTING GAS METER  
EXISTING SHRUB  
EXISTING GROUND ELEVATION  
WIRE SAG ELEVATION  
WIRE POINT OF ATTACHMENT ELEVATION  
EXISTING UNDERGROUND GAS MARKER  
EXISTING UNDERGROUND ELECTRIC MARKER  
BOUNDARY LINE  
BOUNDARY ADJACENT LINE  
OVERHEAD ELECTRIC LINE  
UNDERGROUND ELECTRIC LINE  
UNDERGROUND STORM LINE  
UNDERGROUND SANITARY LINE  
UNDERGROUND GAS LINE  
EXISTING FENCE  
EXISTING CURB WITH DUBDOWN  
EXISTING GROUND CONTOUR  
EXISTING BUILDING

ATWELL, LLC  
TWO TOWNE SQUARE, SUITE 700  
SOUTHFIELD, MI 48076  
248-447-2000



PARCEL ADDRESS: 2306 DIX HIGHWAY, LINCOLN PARK, MICHIGAN

PARCEL AREA: 24,760 S.F.

ENTITY NUMBER:

SITE NUMBER:

SCALE: NONE                      DRAWN BY: JR                      SHEET: 3 OF 3  
DATE: 08/18/2017                      CHECKED BY: ME                      GPD JOB NO.: 17000556  
REV: 06/14/2018 & 07/30/2018





DEMOLITION NOTES	GENERAL PLAN NOTES	GRADING PLAN NOTES	UTILITY NOTES (CONTINUED)	GENERAL LEGEND	
<div>1. DEMOLITION INCLUDES THE FOLLOWING: 1.A. TRANSFER BENCHMARK CONTROL TO NEW LOCATIONS OUTSIDE THE DISTURBED AREA PRIOR TO COMMENCING DEMOLITION OPERATIONS (WHEN APPLICABLE). 1.B. DEMOLITION AND REMOVAL OF SITE IMPROVEMENTS. 1.C. DISCONNECTING, CAPPING OR SEALING, AND ABANDONING/REMOVING SITE UTILITIES IN PLACE (WHICHEVER IS APPLICABLE).  2. REMOVE AND LEGALLY DISPOSE OF ITEMS EXCEPT THOSE INDICATED TO BE REINSTALLED, SALVAGED, OR TO REMAIN.  3. REMOVE, REINSTALL, AND RELOCATE: REMOVE ITEMS INDICATED; CLEAN, SERVICE, AND OTHERWISE PREPARE THEM FOR REUSE; STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN LOCATIONS INDICATED.  4. EXISTING TO REMAIN: PROTECT ITEMS INDICATED TO REMAIN AGAINST DAMAGE AND SOILING THROUGHOUT CONSTRUCTION. WHEN PERMITTED BY THE ENGINEER, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION THROUGHOUT CONSTRUCTION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.  5. CONTRACTOR SHALL SCHEDULE DEMOLITION ACTIVITIES WITH THE CONSTRUCTION/PROJECT MANAGER INCLUDING THE FOLLOWING: 5.A. DETAILED SEQUENCE OF DEMOLITION AND REMOVAL WORK, WITH STARTING AND ENDING DATES FOR EACH ACTIVITY. 5.B. DATES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES. 5.C. IDENTIFY AND ACCURATELY LOCATE UTILITIES AND OTHER SUBSURFACE STRUCTURAL, ELECTRICAL, OR MECHANICAL CONDITIONS.  6. REGULATORY REQUIREMENTS: COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE STARTING DEMOLITION. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.  7. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE WILL NOT BE PERMITTED.  8. OBTAIN APPROVED BORROW SOIL MATERIALS OFF-SITE WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE ON-SITE.  9. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE THROUGHOUT CONSTRUCTION OPERATIONS. 9.A. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR OPERATING FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY ENGINEER AND AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO OWNER AND TO GOVERNING AUTHORITIES.  10. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING.  11. UTILITY REQUIREMENTS: LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES SERVING THE SITE. 11.A. ARRANGE TO SHUT OFF AND CAP UTILITIES WITH UTILITY COMPANIES AND FOLLOW THEIR RESPECTIVE UTILITY KILL AND CAP POLICIES.  12. CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA. 12.A. ERECT TEMPORARY PROTECTION, BARRICADES AS PER LOCAL GOVERNING AUTHORITIES. 12.B. PROTECT EXISTING SITE IMPROVEMENTS AND APPURTENANCES TO REMAIN.  13. EXPLOSIVES: USE OF EXPLOSIVES WILL NOT BE PERMITTED.  14. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.  15. CLEAN ADJACENT BUILDINGS AND IMPROVEMENT OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.  16. DAMAGES: PROMPTLY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY DEMOLITION OPERATIONS AT THE CONTRACTORS COST.  17. GENERAL: PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE.  18. BURNING: DO NOT BURN DEMOLISHED MATERIALS.  19. ASBESTOS: IT IS NOT EXPECTED THAT ASBESTOS WILL BE ENCOUNTERED IN THE COURSE OF THIS CONTRACT. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE ENGINEER AND THE OWNER.  20. SURVEY THE CONDITION OF THE BUILDING TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN A STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF THE STRUCTURE OR ADJACENT STRUCTURES THROUGHOUT CONSTRUCTION.  21. BUILDING PAD DEMOLITION: DEMOLISH BUILDING PAD COMPLETELY AND REMOVE FROM THE SITE. USE METHODS REQUIRED TO COMPLETE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS: 21.A. DISPOSE OF DEMOLISHED ITEMS AND MATERIALS PROMPTLY. 21.B. DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS. 21.C. BREAK UP AND REMOVE CONCRETE SLABS ON GRADE.  22. BELOW-GRADE DEMOLITION: DEMOLISH FOUNDATION WALLS AND OTHER BELOW-GRADE DEMOLITION, AS FOLLOWS: 22.A. COMPLETELY REMOVE BELOW-GRADE DEMOLITION, INCLUDING FOUNDATION WALLS FOOTINGS, AND BELOW GRADE CONCRETE SLABS.  23. FILLING BELOW-GRADE AREAS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF BUILDINGS AND PAVEMENTS WITH SOIL MATERIALS ACCORDING TO REQUIREMENTS PER SOILS REPORT. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO FILLING ANY AREAS. CONTRACTOR SHALL CONTACT ENGINEER TO OBSERVE FILL PROCEDURES.  24. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. 24.A. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNING REGULATIONS.  25. CONTRACTOR TO SAWCUT EXISTING PAVEMENT TO REMAIN PRIOR TO CURB, GUTTER, PAVEMENT, ETC REMOVAL.</div>	<div>1. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.  2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION/PROJECT MANAGER OF ANY DISCREPANCY BETWEEN SOILS REPORT AND PLANS, ETC.  3. THE A.L.T.A. SURVEY BY ATWELL LCC, DATED 07/24/2017 SHALL BE CONSIDERED A PART OF THESE PLANS. THE G.C. IS RESPONSIBLE FOR LOCATING IMPROVEMENTS PER THESE PLANS.  4. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THE PLAN ARE BASED ON FIELD SURVEYS AND CITY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.  5. ALL DIMENSIONS, GRADES, AND UTILITY LOCATIONS SHOWN ON THESE PLANS WERE BASED ON A.L.T.A. SURVEY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION/PROJECT MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.  6. ALL WORK WITHIN THE RIGHTS OF WAY SHALL BE IN ACCORDANCE WITH THE GOVERNING JURISDICTION AND SPECIFICATIONS.  7. CONTRACTOR SHALL COORDINATE ANY MAINTENANCE OF TRAFFIC WITH THE OWNER'S REPRESENTATIVE AND THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.  8. CONTRACTOR SHALL AT ALL TIMES ENSURE THAT SWPP MEASURES PROTECTING EXISTING DRAINAGE FACILITIES BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY PHASE OF THE SITE CONSTRUCTION OR LAND ALTERATION. (SEE SHEET C-131 TO C-134).  9. UPON COMPLETION OF PROJECT, CONTRACTOR SHALL CLEAN THE PAVED AREAS PRIOR TO REMOVAL OF TEMPORARY SEDIMENT CONTROLS, AS DIRECTED BY THE CITY AND/OR CONSTRUCTION/PROJECT MANAGER. IF POWER WASHING IS USED, NO SEDIMENT LADEN WATER SHALL BE WASHED INTO THE STORM SYSTEM. ALL SEDIMENT LADEN MATERIAL ON PAVEMENT OR WITHIN THE STORM SYSTEM SHALL BE COLLECTED AND REMOVED FROM THE SITE AT CONTRACTOR'S EXPENSE.  10. THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL EXPLORATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLAN AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING AS REQUIRED ABOVE, OF SUCH DIFFERING CONDITIONS.  11. THESE PROJECT CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE A CONTRACTUAL RELATIONSHIP BETWEEN THE ENGINEER AND THE CONTRACTOR OR THE ENGINEER AND THE SUBCONTRACTOR.  12. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION OR SAFETY MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES UTILIZED IN CONSTRUCTION BY THE CONTRACTOR OR SUBCONTRACTORS.  13. THE CONTRACTOR SHALL RUN AN INDEPENDENT VERTICAL CONTROL TRAVERSE TO CHECK BENCHMARKS AND A HORIZONTAL CONTROL TRAVERSE THROUGH THE REFERENCED PROJECT CONTROL DATUM TO CONFIRM GEOMETRIC DATA. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.</div> <div><div>1. ALL DIMENSIONS AND RADII ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED.  2. ALL EXTERIOR SITE SPECIFIC PORTLAND CONCRETE CEMENT (I.E. SIDEWALK, PAVEMENT OR CURBING) SHALL MEET THE LATEST EDITION OF THE STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS USED, MIXING, TRANSPORTATION, PLACEMENT AND CURING. THE MINIMUM STRENGTH FOR PCC ALLOWED IS 4000 PSI AT 28 DAY STRENGTH. AIR ENTRAINMENT SHALL BE IN ACCORDANCE WITH DOT SPECIFICATIONS FOR EXTERIOR CONCRETE. (CONTRACTOR SHALL REFER TO DETAILS WITHIN THIS DRAWING SET FOR ANY VARIATIONS TO THIS SPECIFICATION).  3. ALL EXTERIOR CURB SHALL HAVE EXPANSION JOINTS AT 10'-0" O.C. AND CONTROL JOINTS AT 10'-0" O.C. (UNLESS OTHERWISE SPECIFIED ON THE DETAIL SHEETS) ALL EXTERIOR WALK SHALL HAVE EXPANSION JOINTS AT 20'-0" O.C. AND CONTROL JOINTS @ 5'-0" MAX. O.C. (UNLESS OTHERWISE SPECIFIED ON THE DETAIL SHEETS).  4. ALL CONCRETE SHALL HAVE A MEDIUM TRANSVERSE FINISH.</div><div><div>I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.  SIGNATURE: _____  MICHIGAN P.E. LICENSE NO.: _____  CERTIFICATION DATE: _____</div><div>PLAN REPRODUCTION WARNING THE PLANS HAVE BEEN CREATED ON ANSI D (22"x34") SHEETS, REFER TO GRAPHIC SCALE.</div></div></div>	<div>1. BEFORE STARTING GRADING OPERATIONS, SEE SHEET C-131 THROUGH C-134, STORMWATER POLLUTION PREVENTION PLAN NOTES AND DETAILS (SWPP).  2. BEFORE STARTING GRADING OPERATIONS, SEE LANDSCAPE PLAN L-101 AND SOILS REPORT FOR TREATMENT OF EXISTING GRADE.  3. PRIOR TO SITE CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL ALL SWPP MEASURES TO PROTECT EXISTING DRAINAGE FACILITIES. CONTRACTOR SHALL PREVENT SILTATION FROM LEAVING THE SITE AT ALL TIMES.  4. STRIP BUILDING AND PAVEMENT AREAS OF ALL ORGANIC TOPSOILS. STOCKPILE SUITABLE TOPSOILS FOR RESPREADING ONTO LANDSCAPE AREAS. ALL EXCESS EXCAVATED MATERIALS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE. SEE GEOTECHNICAL REPORT FOR STRIPPING AND TOPSOIL REQUIREMENTS.  5. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT BY PROFESSIONAL SERVICE INDUSTRIES, INC., DATED JANUARY 31, 2018 AND REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. UNLESS OTHERWISE SPECIFIED IN THE PLANS, SPECIFICATIONS, OR SOILS REPORT THE SITE GRADING, EXCAVATION, AND EMBANKMENT SHALL BE IN ACCORDANCE WITH THE STATE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.  6. AT A MINIMUM ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY PER A.S.T.M. TEST D-698. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 2% BELOW OPTIMUM. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND RETAIN A QUALIFIED SOILS ENGINEER REGISTERED WITHIN THE STATE TO ENSURE COMPLIANCE WITH THE GEOTECHNICAL REPORT. MAKE GEOTECHNICAL RECOMMENDATIONS BASED ON FIELD CONDITIONS, AND ENSURE THAT ALL SHORING AND DEWATERING MEANS AND METHODS WILL NOT COMPROMISE THE STABILITY OF EXISTING OR PROPOSED FOOTINGS/FOUNDATIONS. THE REQUIREMENT TO HIRE AN INDEPENDENT GEOTECHNICAL ENGINEER MAY BE WAIVED IF AN OWNER HIRED GEOTECHNICAL ENGINEER IS ONSITE. THE OWNER RESERVES THE RIGHT TO REQUEST COMPACTION REPORTS PREPARED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT. NOTIFY PROJECT CONSTRUCTION MANAGER IF ANY UNSUITABLE SOILS ARE FOUND.  7. FOLLOWING GRADING OF SUBSOIL TO SUBGRADE ELEVATIONS THE CONTRACTOR SHALL PLACE TOPSOIL TO A 6" DEPTH IN ALL DISTURBED AREAS WHICH ARE NOT TO BE PAVED. SMOOTHLY FINISH GRADE TO MEET SURROUNDING LAWN AREAS AND ENSURE POSITIVE DRAINAGE. STOCKPILED TOPSOIL SHALL BE SCREENED PRIOR TO RESPREADING. TOPSOIL SHALL BE FREE OF SUBSOIL, DEBRIS, BRUSH AND STONES LARGER THAN 1" IN ANY DIMENSION. ROCK HOUNDING IN PLACE WILL NOT BE PERMITTED</div>			

[illegible]

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



## GENERAL NOTES

***C-001***



CITY OF LINCOLN PARK STANDARD GENERAL NOTES

1. All workmanship and materials shall be in accordance with the current standards and specifications of the City of Lincoln Park.
2. The contractor and his subcontractors shall attend a pre-construction meeting at a time and place arranged by the engineer in which various utility companies and governmental agency representatives will be present.
3. After a pre-construction meeting is held, the contractor shall notify Hennessey Engineers, Inc. a minimum of 3 working days prior to the start of construction.
4. Contractor shall notify Miss Dig for existing utility stake out 72 hours in advance of construction. The project will be billed for excessive stakeouts.
5. Locations and elevations of existing underground utilities as shown on the plans are approximate. No guarantee is either expressed or implied as to the completeness or accuracy thereof. The contractor shall be exclusively responsible for determining and verifying the location, depth, and elevation of existing utilities, and proposed utilities crossing the construction area prior to start of construction. Contractor shall notify engineer if any conflicts are apparent or if locations and depth differ significantly from the plans.
6. All elevations refer to current N.G.V.D. datum.
7. All properties or facilities in the surrounding areas, public or private, destroyed or otherwise damaged by the contractors operations shall be replaced or repaired to the satisfaction of the authority having jurisdiction of the property or facility by the contractor at his own expense.
8. Contractor shall provide and maintain all necessary barricades and traffic control devices required by the current standards and specifications of the City of Lincoln Park, other agencies having jurisdiction, and the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).
9. All required soil erosion and sedimentation control measures must be in place prior to starting construction, including stripping and grubbing.
10. All trenches under or within three feet of existing or proposed pavement, curb, sidewalks, and driveways shall be backfilled with 21A crushed limestone (Trench B) and compacted in one foot layers to a minimum 95 percent maximum unit weight.
11. All trenches within or parallel and adjacent to right-of-way, except where 21A crushed limestone (Trench B) backfill is required, shall be backfilled with suitable excavated material (excluding blue clay) compacted in one foot layers to a minimum of 90 percent maximum unit weight. This trench shall be designated Trench "A".
12. Four inches of compacted approved bedding shall be placed under all utilities and to one foot above the top of the pipe.
13. A recording detector tape, approved by the engineer, shall be installed two feet above the top of all non-metal sewer and water lines.
14. All public improvements and private improvements shall be field staked under the supervision of a professional engineer or land surveyor licensed to practice in the State of Michigan. If Hennessey engineers, Inc. is not performing the field staking, a copy of the surveying cut sheet must be sent to Hennessey Engineers, Inc., one (1) working day prior to any construction starting.
15. All work within Wayne County and State of Michigan right-of-way shall be in accordance with their specifications. A copy of the required permit(s) must be on file with Hennessey Engineers and the City of Lincoln Park prior to any construction starting.
16. All disturbed lawn areas shall be restored with 3 inches of topsoil and Class "A" sod. The Contractor will be responsible for watering and maintaining the sod until it is firmly knitted in place and in a vigorous growing condition. Areas designated by the City Engineer as non-lawn areas, but grass areas, shall have placed 3 inches of topsoil, a chemical fertilizer, a Michigan Department of Environmental Quality roadside mixture of seed sowed, and a mulch applied in accordance with City of Lincoln Park Standard Specifications.
17. For isolated road cuts, all trenches shall be backfilled with "K-Krete" or an approved equal flowable fill. This shall be designated as Trench "C".

STANDARD STORM SEWER NOTES

1. All construction shall conform to current City of Lincoln Park Standard Specifications for Storm Sewer and any other agency having jurisdiction of the construction area.
2. All road catchbasins and inlets shall have underdrains as shown on the City of Lincoln Park Standard Storm Sewer Details. All parking lot catchbasins and inlets shall have underdrains as shown on the City of Lincoln Park Standard Storm Sewer Details.
3. All storm sewer shall be placed on approved bedding as shown on the City of Lincoln Park Standard Storm Sewer Details.
4. Contractor shall compact all trenches and excavated areas in one-foot lifts by vibratory means during backfilling operations to the required percent per the City of Lincoln Park Standards.
5. For isolated road cuts, all trenches shall be backfilled with "K-Krete" or an approved equal flowable fill. This shall be designated as Trench "C".

STANDARD SANITARY SEWER NOTES

1. All construction shall conform to current City of Lincoln Park Standard and General Specifications for Sanitary Sewer and other agencies having jurisdiction over the construction area.
2. All sanitary sewer wye openings shall contain factory installed premium joints.
3. No connection receiving stormwater, surface water, or groundwater shall be made to the public sanitary sewers or the building service lead.
4. Infiltration for any section of sewer between manholes shall not exceed 100 gallons per inch diameter, per mile, per 24 hours.
5. Each wye or end of building lead to be capped shall have a cap with the same type of material as the lead and shall have a solvent weld joint. Cleanouts shall have J.R. Smith # 4240U4 or approved equal covers with 24"x24" x6" thick concrete pad surround. See detail on sheet S.D.1.
6. Sanitary sewer leads shall be installed to a minimum of 1 foot past the right-of-way or easement line as shown on these plans. Risers are required where a sanitary sewer is over 10' in depth. Risers shall be installed to a depth of 10 feet.
7. A bulkhead shall be installed at each outlet to an existing system and shall not be removed until the new sewer system has been accepted by the City of Lincoln Park.
8. All sewers shall be subjected to an air filtration, or exfiltration test or a combination of same prior to acceptance. All sewers over 24 inch diameter shall be subjected to infiltration tests. All sewers of 24 inch diameter of smaller, where the groundwater level above the top of the sewer is over 2 feet, shall be subjected to infiltration tests. All sewers of 24" diameter or less, where the groundwater level above the top of the sewer is 2 feet or less, shall be subjected to air tests or exfiltration tests.
9. All sewers shall be televised by the contractor, at no additional cost to the City of Lincoln Park, with test results approved and the city provided a copy of the video tape of the sewer prior to placing the sewer in service.
10. Manhole casting shall be watertight, bolt down type with an approved external chimney seal.
11. Contractor shall notify Wayne County and the City of Lincoln Park Water/Sewer Department at least 48 hours two (2) working days prior to start of construction.
12. Differential excavation around the existing manhole shall not exceed 6 feet.
13. All stubs shall have a water and air-tight bulkhead approved by the city.
14. Wherever existing manholes or sewer pipe are to be tapped, core manhole with a coring machine and install a rubber boot with stainless steel bands. Use Kor-N-Seal with Korband external contraction bands or approved equal.
15. All manhole steps shall be placed toward the property lines unless otherwise noted.
16. No footing drains or downspouts shall be connected to the building sewer.
17. Deflection Tests:
- a. Deflection tests shall be performed on all flexible pipe. The test shall be conducted after the final backfill has been in place at least 30 days.
- b. No pipe shall exceed a deflection of 5%
- c. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices.
18. Contractor shall compact all trenches and excavated area in one-foot lifts by vibratory means during backfilling operations to the required percent per the City of Lincoln Park Standards
19. For isolated road cuts, all trenches shall be backfilled with "K-Krete" or an approved equal flowable fill. This shall be designated as Trench "C".

CITY OF LINCOLN PARK STANDARD WATERMAIN NOTES

1. All construction shall conform to current City of Lincoln Park Detailed Specifications for watermain and any other agency having jurisdiction of the construction area.
2. Slip-on joints may be used except at tees, bends, and hydrants, where mechanical joints will be used.
3. All watermain shall be placed on approved bedding as shown on the City of Lincoln Park Standard Watermain Details.
4. All watermains shall be installed a minimum of 6 feet below proposed finished grade. Seven (7) foot minimums when in County Right-of-Way. When a watermain must dip to pass under a storm sewer or sanitary sewer, the sections which are deeper than normal shall have a minimum of 18" clearance between utilities and be in accordance with the standard detail.
5. No pipe shall be deflected more than 3 degrees. Where deflections greater than 3 degrees are required, bends, vertical or horizontal, will be required in accordance with the details.
6. A thrust block is required on the opposite side of each hydrant, tee, cap and bend.
7. Connections to existing watermains shall not be made until after hydrostatic/bacteriological tests have been successfully completed and reviewed by the Engineer.
8. The watermain shall be pressure tested at 150 psi for 2 hours with an allowable leakage of 1 gallon per inch diameter per mile of pipe in the 2 hour period. Test sections shall not exceed 1,000 feet. Testing against valves is not allowed.
9. Fire hydrants shall be Mueller Centurion or East Jordan Iron Works 6-BR equipped with 2-4" pumper nozzles in commercial, industrial, and residential areas. One of the pumper nozzles, shall be a "Fire Flow"™ nozzle, Model 4550, manufactured by RLS Group, Inc. or approved equal and the other nozzle shall be Detroit Standard Threads. On the non-extendable dead-end waterlines, the fire hydrant shall be East Jordan Iron Works 5-BR. Opening shall be in a counter-clockwise direction. Threads shall be Detroit Standard Threads with 1-1/8 pentagonal nut.
10. All hydrants shall be properly orientated and approved by the Fire Department prior to the pressure test.
11. All hydrants not in service shall be covered with black plastic until such time as they are put in service or removed.
12. All gate valves shall be right hand open E.J.I.W. Resilient Wedge.
13. Water gatewells shall not be located in driveways, sidewalks or streets.
14. Gate valves and curb stops shall only be operated by City of Lincoln Park Water/Sewer Department personnel except in an emergency.
15. Contractor shall compact all trenches and excavated areas in one-foot lifts by vibratory means during the backfilling operations to the required percent per the City of Lincoln Park Standards.
16. The City of Detroit Water and Sewer Department, the City of Lincoln Park, and Hennessey Engineers, Inc. shall be notified at least 72 hours (three (3) working days) prior to any watermain construction.
17. All saddles for water services shall be bronze with double or stainless steel straps.
18. For isolated road cuts, all trenches shall be backfilled with "K-Krete" or an approved equal flowable fill. This shall be designated as Trench "C".

STANDARD PAVING AND PAVEMENT REPLACEMENT NOTES

1. All construction shall conform to current City of Lincoln Park Standards and General Specifications for Paving and any other agency having jurisdiction over the construction area.
2. Compaction of all pavement subbase shall be to a minimum of 95% maximum unit weight prior to placement of pavement. No paving shall take place prior to the successful testing of the compaction of the backfill and/or subbase.
3. All fill required to meet final subgrade elevations shall be select material approved by the City Engineer free from organic material or extraneous matter, and shall be placed in layers not exceeding 6 inches and compacted to a minimum of 95% of its maximum unit weight. The subgrade must be proof rolled prior to the placement on pavement base.
4. All radii at intersections are to be 25 feet unless otherwise noted.
5. The contractor shall submit, prior to the pre-construction meeting, a concrete and bituminous mix design from the supplier and a 21A crushed limestone sample for approval by the city engineer.
6. New pavement shall be as described in the plans and specifications.
7. All curb and gutter, new or replacement, shall be placed on a minimum of 4 inch 21A crushed limestone base. The base shall be placed one foot behind the back of curb.
8. Existing concrete pavement and curb sections shall be saw cut the full depth of the pavement prior to their removal.
9. Any excavation necessary to install replacement pavement at the proposed grades shall be performed by the contractor.
10. If the pavement is being replaced, the minimum thickness of replacement concrete allowed for roadways is 8 inches, and the minimum thickness of asphalt pavement for roadways is 5 inches.
11. If the drive approach or sidewalk located in the approach is being replaced, the minimum thickness of replacement concrete is 6 inches. No asphalt drive approaches are allowed. If the sidewalk is located outside the approach, the minimum thickness of concrete allowed is 4 inches. New driveway pavement shall be a minimum of 6" thick concrete with thickened edges unless otherwise noted.
12. All replacement pavement for roadways be placed on 21A crushed limestone per the City of Lincoln Park standard specifications.
13. If an asphalt cap is required to match the existing pavement, the thickness of the existing asphalt shall be matched. This cap shall be placed on a minimum of 8 inches of replacement concrete.
14. Before placing the replacement pavement, the contractor shall install 1/2" diameter hook bolts with Philip Red Heads into the existing pavement. These bolts shall be install at 40 inches on center.
15. 21A crushed limestone, compacted in place to a minimum of 95 percent maximum unit weight shall be placed where additional base is required to meet proposed pavement grades.
16. The contractor shall remove unsatisfactory subgrade as determined by the engineer and replace the unsatisfactory subgrade with 21A crushed limestone compacted to a minimum of 95 percent maximum unit weight.
17. All joints in concrete pavement areas, including curb and gutter, shall be sealed with a hot-poured, elastic-type compound, approved by the city engineer.
18. Contractor shall protect all trees and shall be responsible for replacing any trees damaged by his operations.
19. Surface restoration shall include replacement of existing sod between the sidewalk and curb. Three inches of topsoil shall be placed prior to placing Class "A" sod. Contractor shall keep the sodded area continuously moist until a good growth is indicated.
20. It shall be the responsibility of the paving contractor to adjust the top of all existing structures (sewers, manholes, catchbasins, inlets, gatewells, etc., except hydrants) within the street right-of-way or within 10 feet adjacent to the street right-of-way to the final grade as required by the City of Lincoln Park. All such adjustments will be incidental to the paving work.
21. The contractor shall install all required permanent pavement striping upon completion of the pavement replacement. This work shall be performed in accordance with the "Michigan Manual of Uniform Traffic Control Devices" (MMUTCD) and as directed by the Engineer.
22. All existing sidewalk that is cracked, uneven, and/or creates a trip hazard shall be removed and replaced as determined by the Engineer and Department of Public Services.

ENGINEERS, INC.

SN 1

SHEET

TITLE

STANDARD NOTES

CITY OF LINCOLN PARK

WAYNE COUNTY, MICHIGAN

APPROVED BY:

CHECKED BY:

DRAWN BY:

MP

DESIGNED BY:

SCALE:

NONE

DATE:

12-14-09

PROJECT NUMBER:

HENNESSEY

ENGINEERS, INC.

ENGINEERING THE FUTURE.

13500 REECK ROAD

SOUTHGATE, MI 48195

(734) 759-1600

FAX (734) 282-6566

WWW.HENGINEERS.COM

A1

CITY OF LINCOLN PARK STANDARD NOTES

N.T.S.

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

▲ ISSUED FOR CONST.	09.14.18
▲	
▲	
▲	
▲	
▲	
▲	
▲	
▲	
▲	
▲	
▲	
▲	
▲	
CONTRACT DATE:	10.03.17
BUILDING TYPE:	EXPLORER LITE LG
PLAN VERSION:	July 2017
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

CITY GENERAL NOTES

C-002

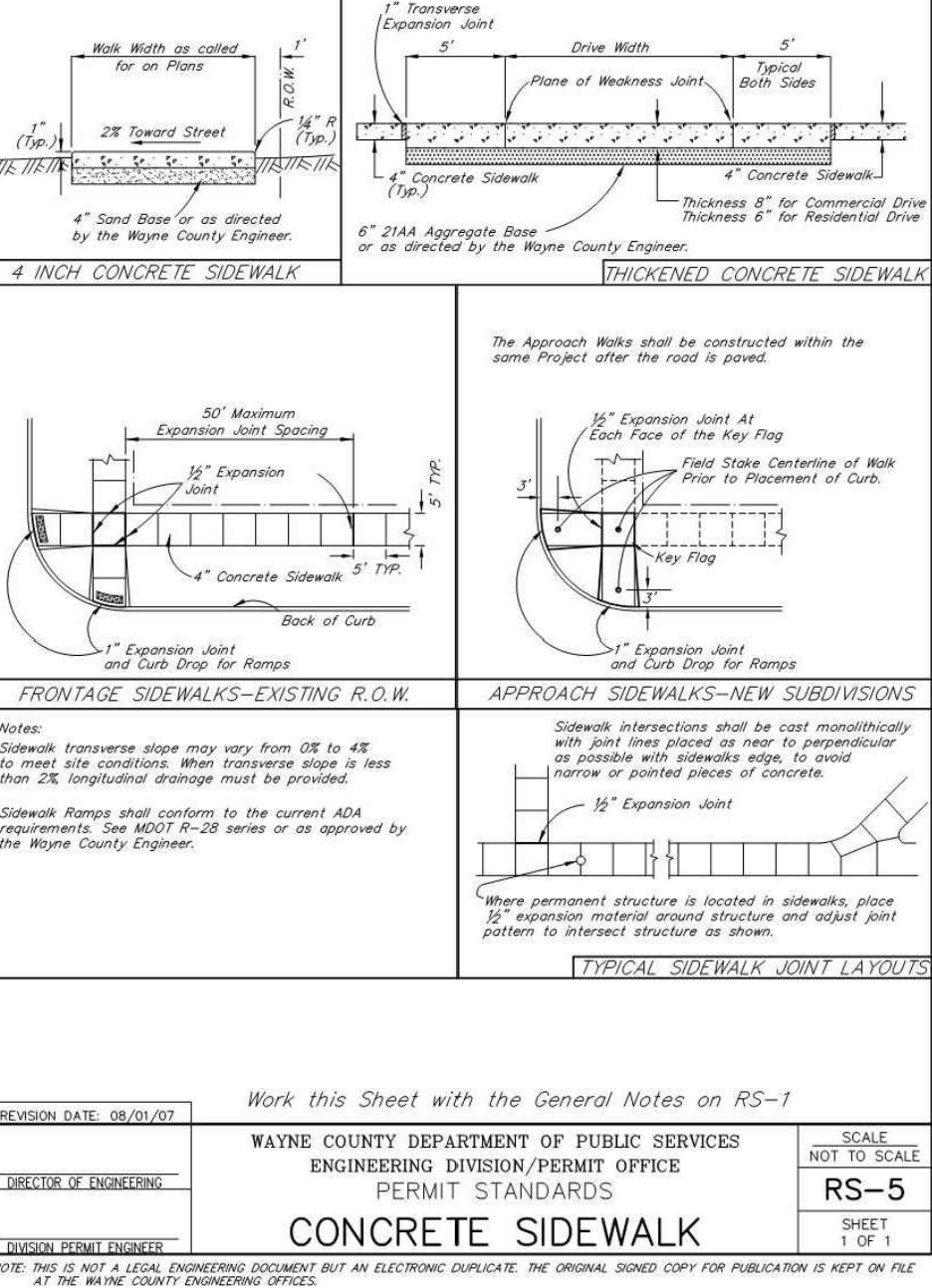
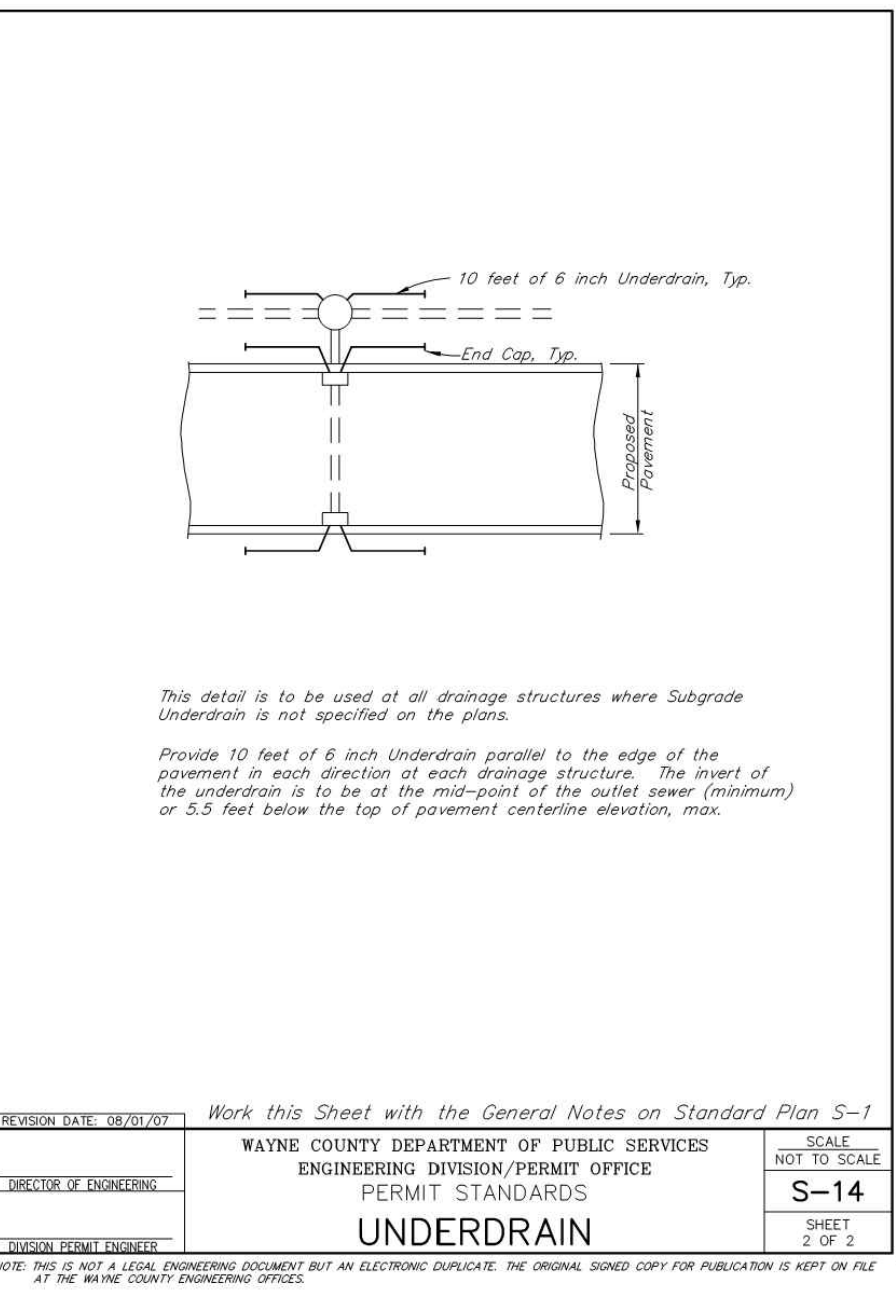
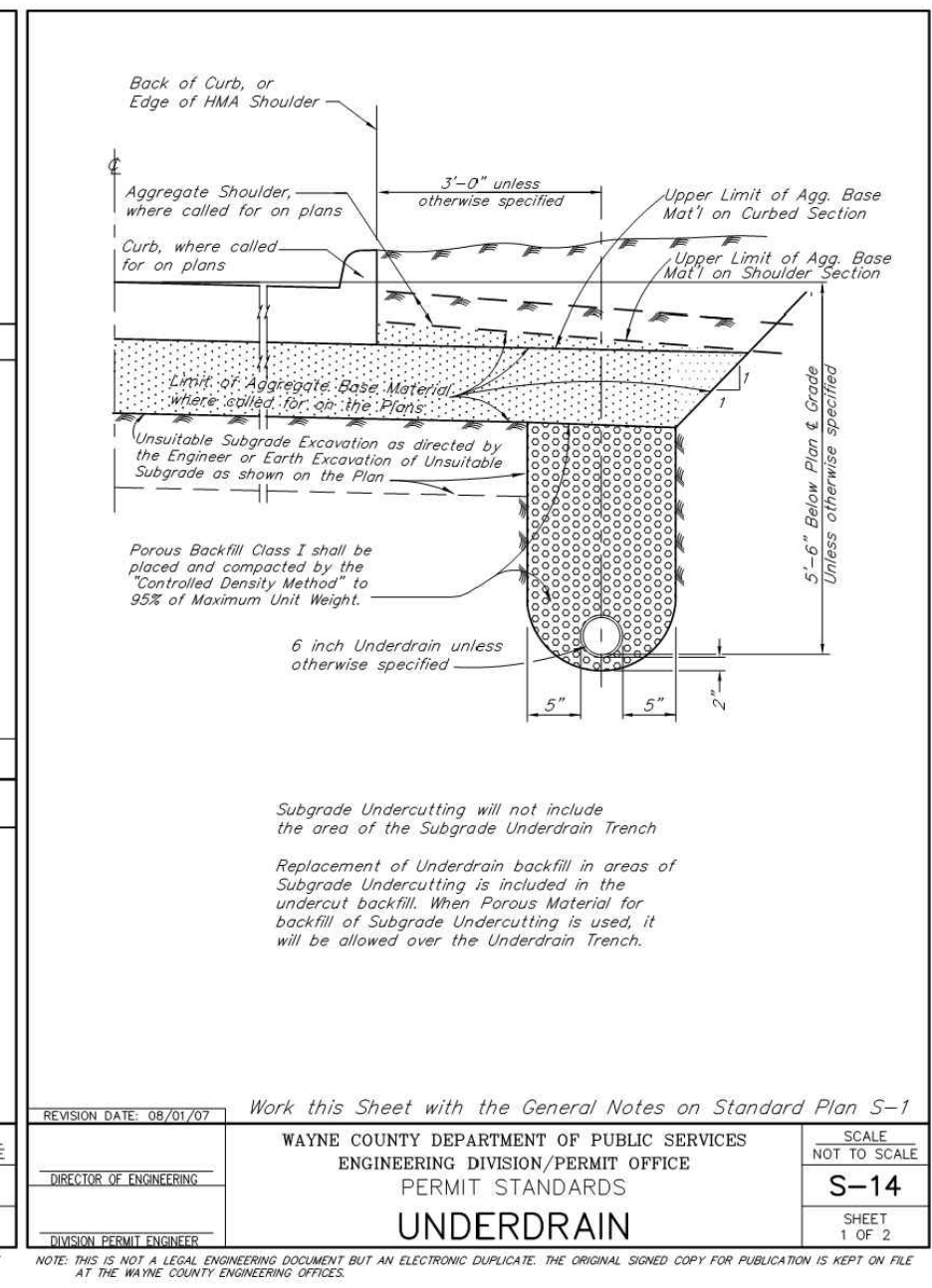
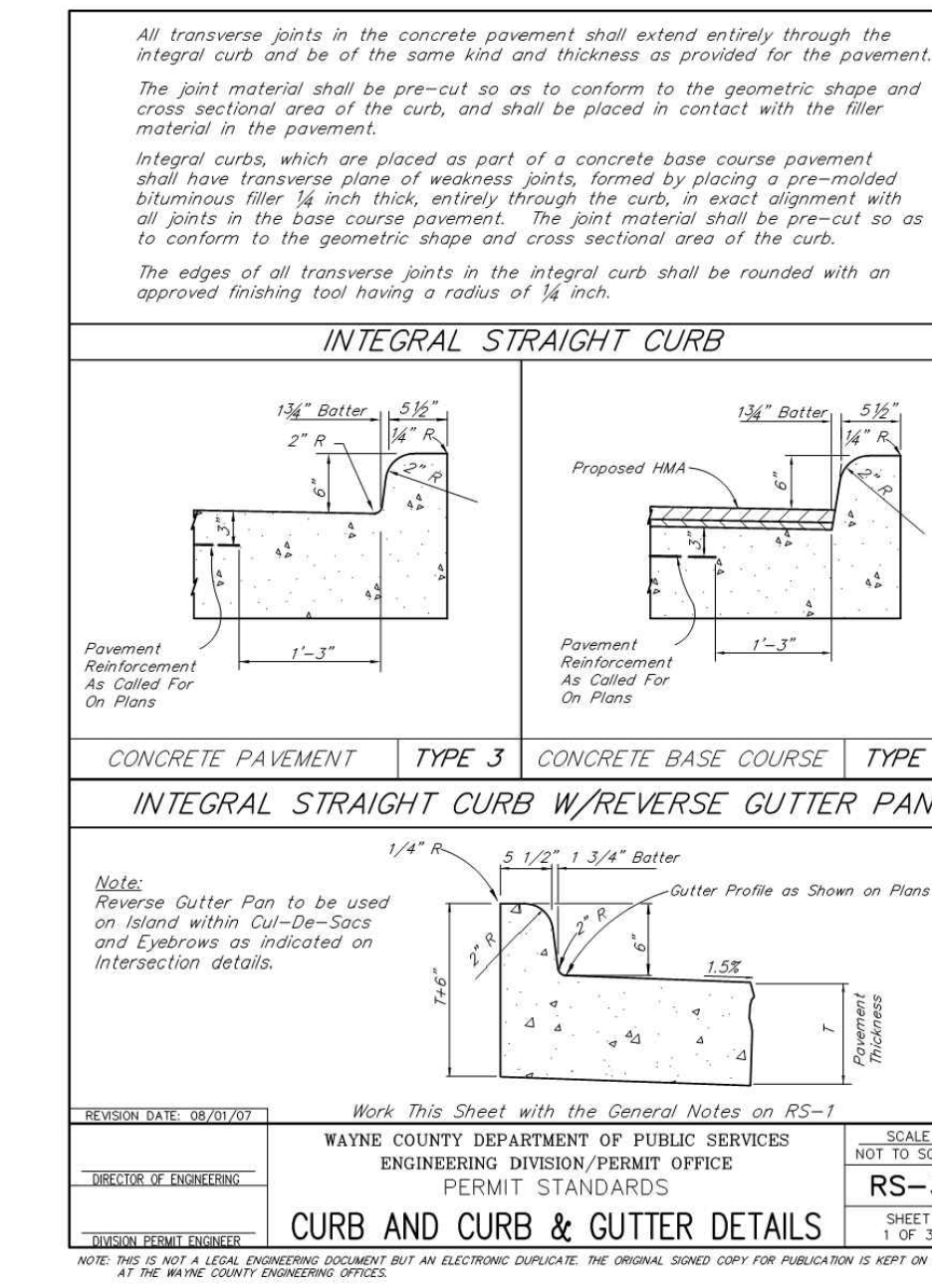
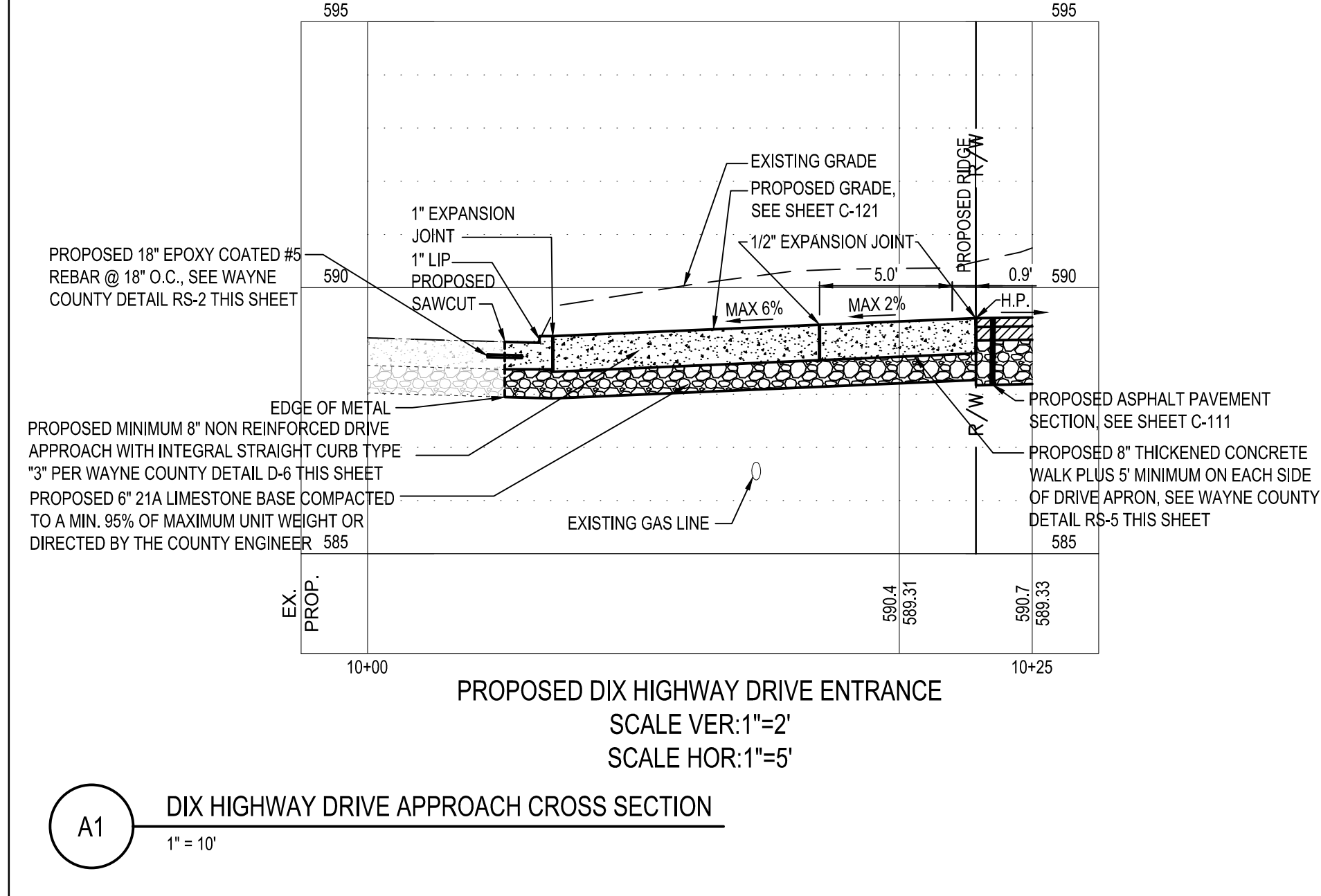
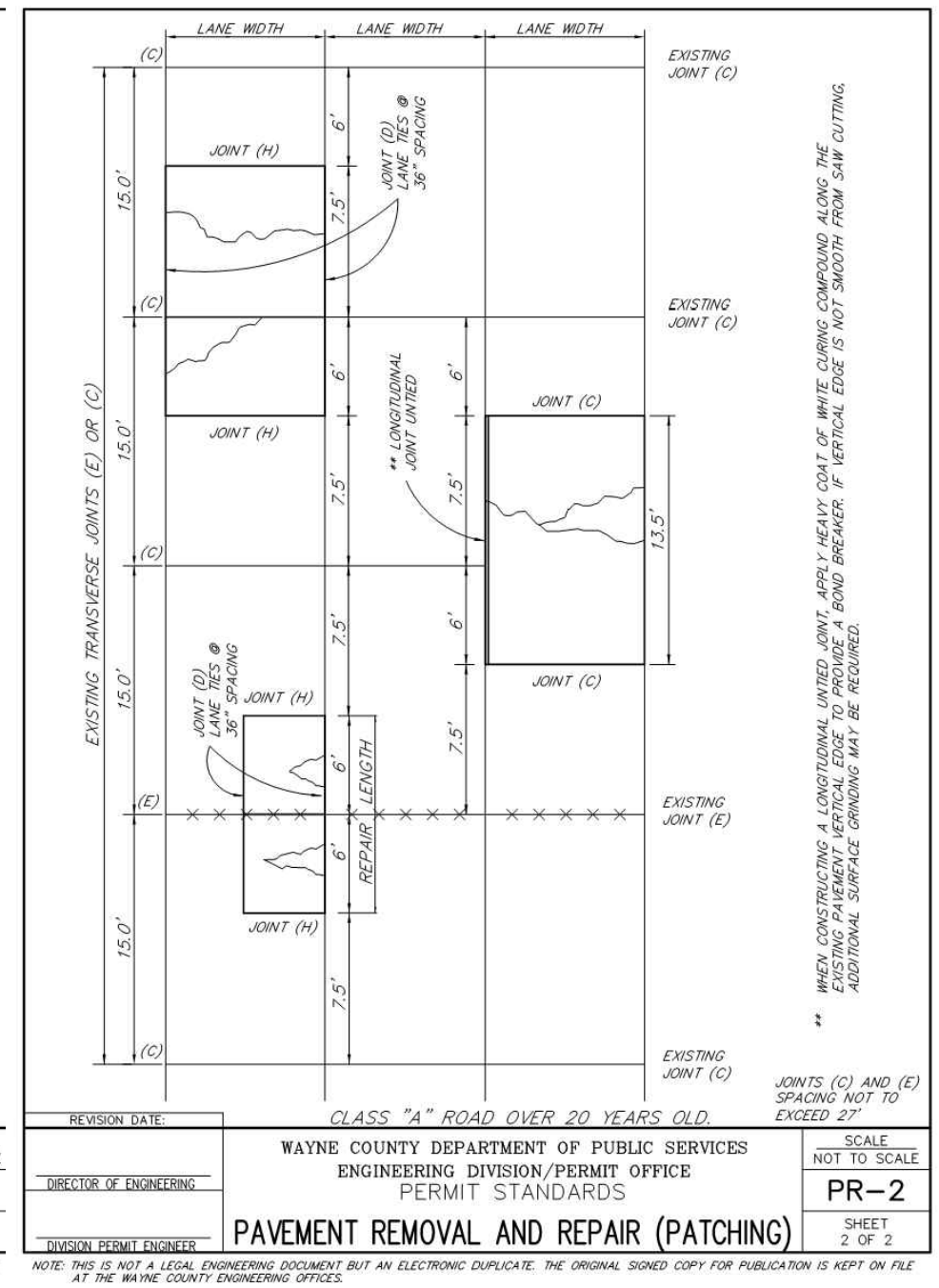
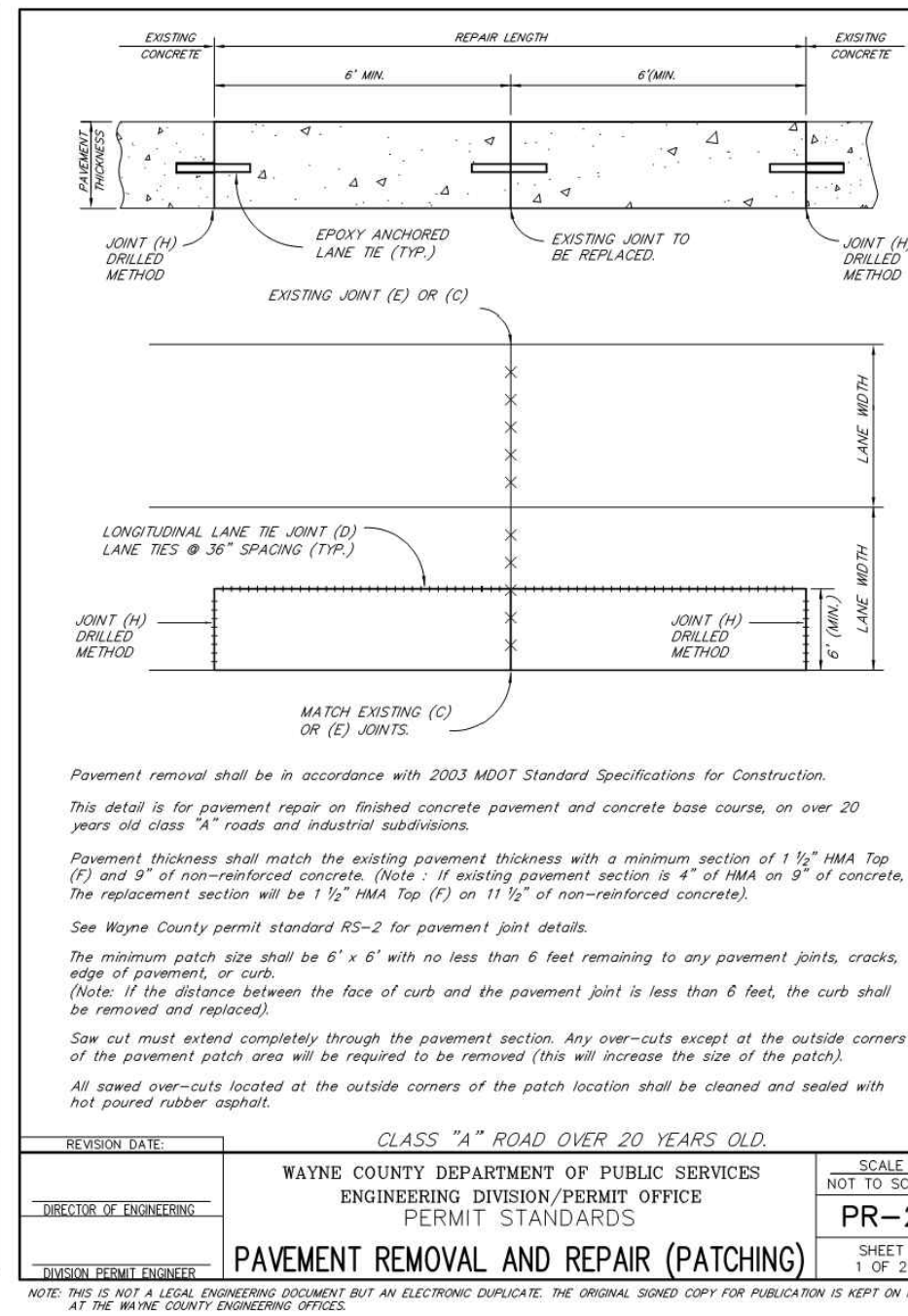
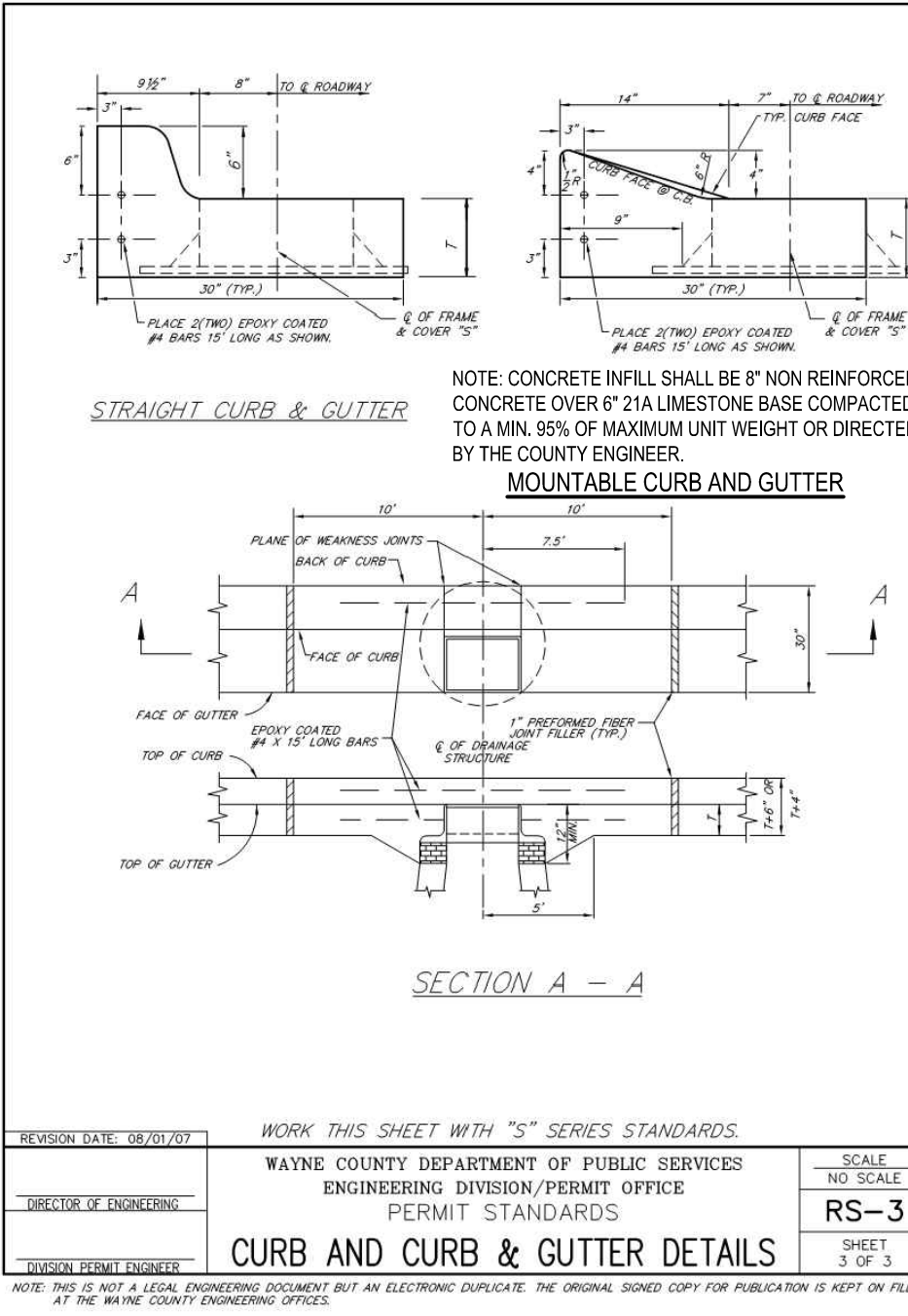
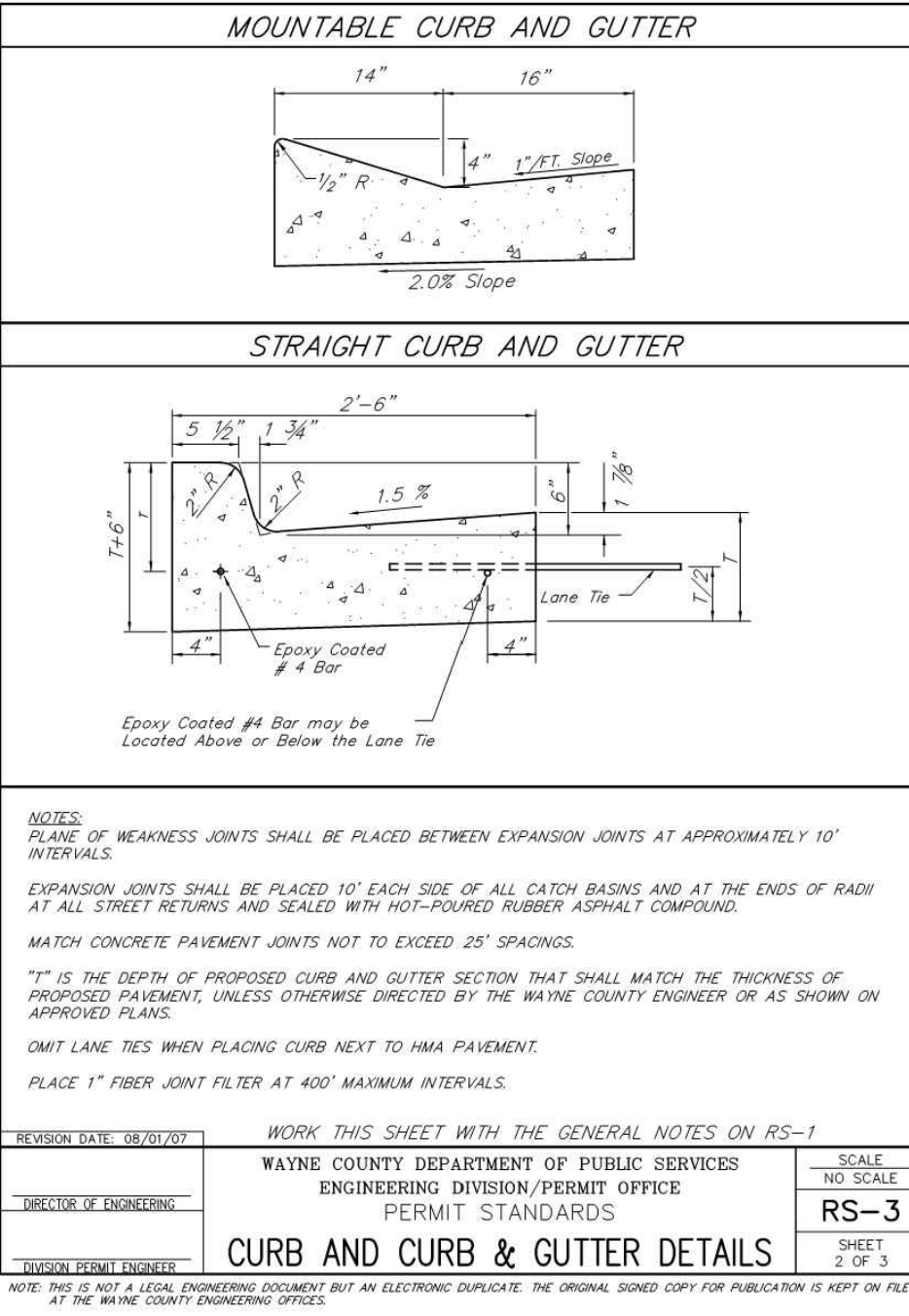
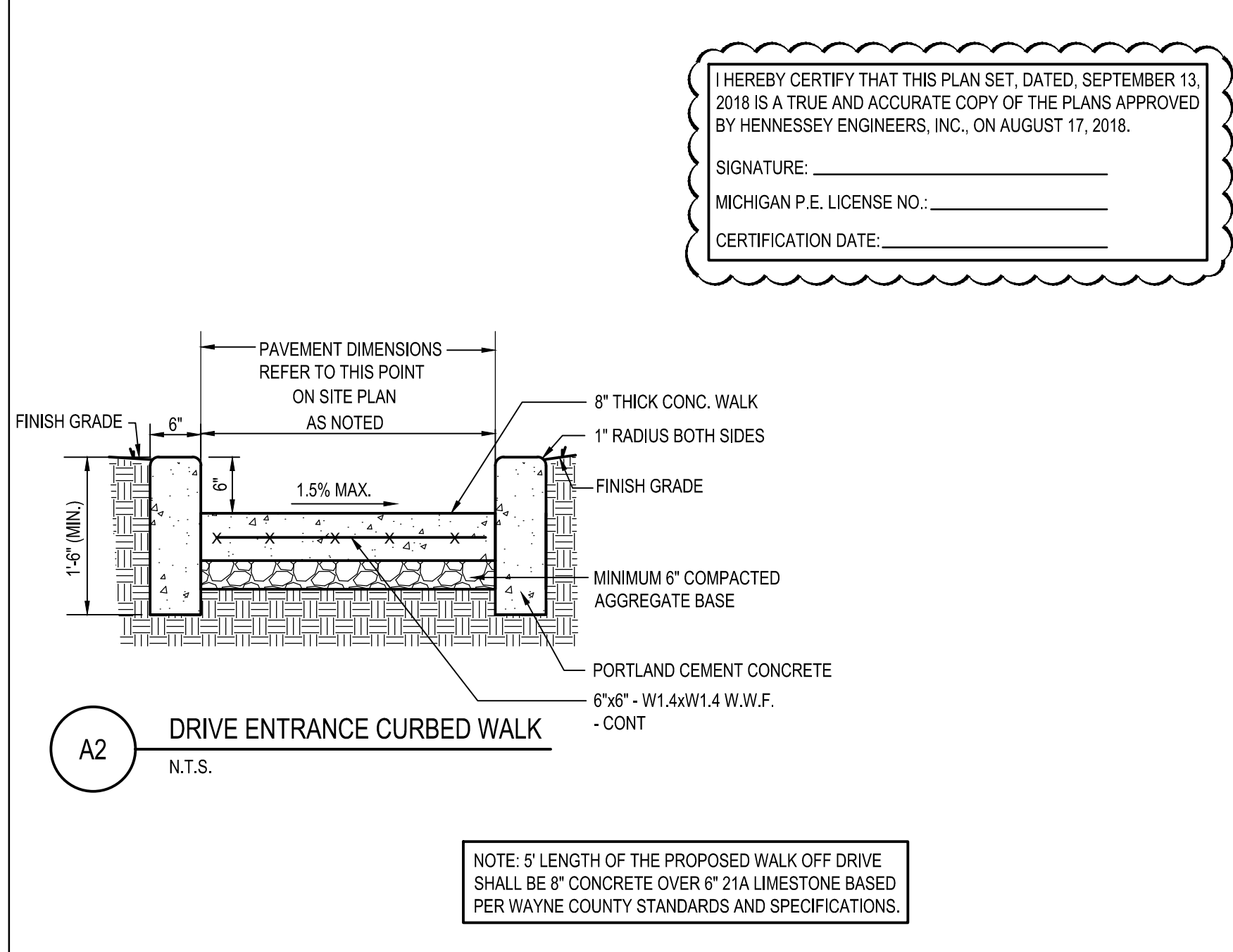
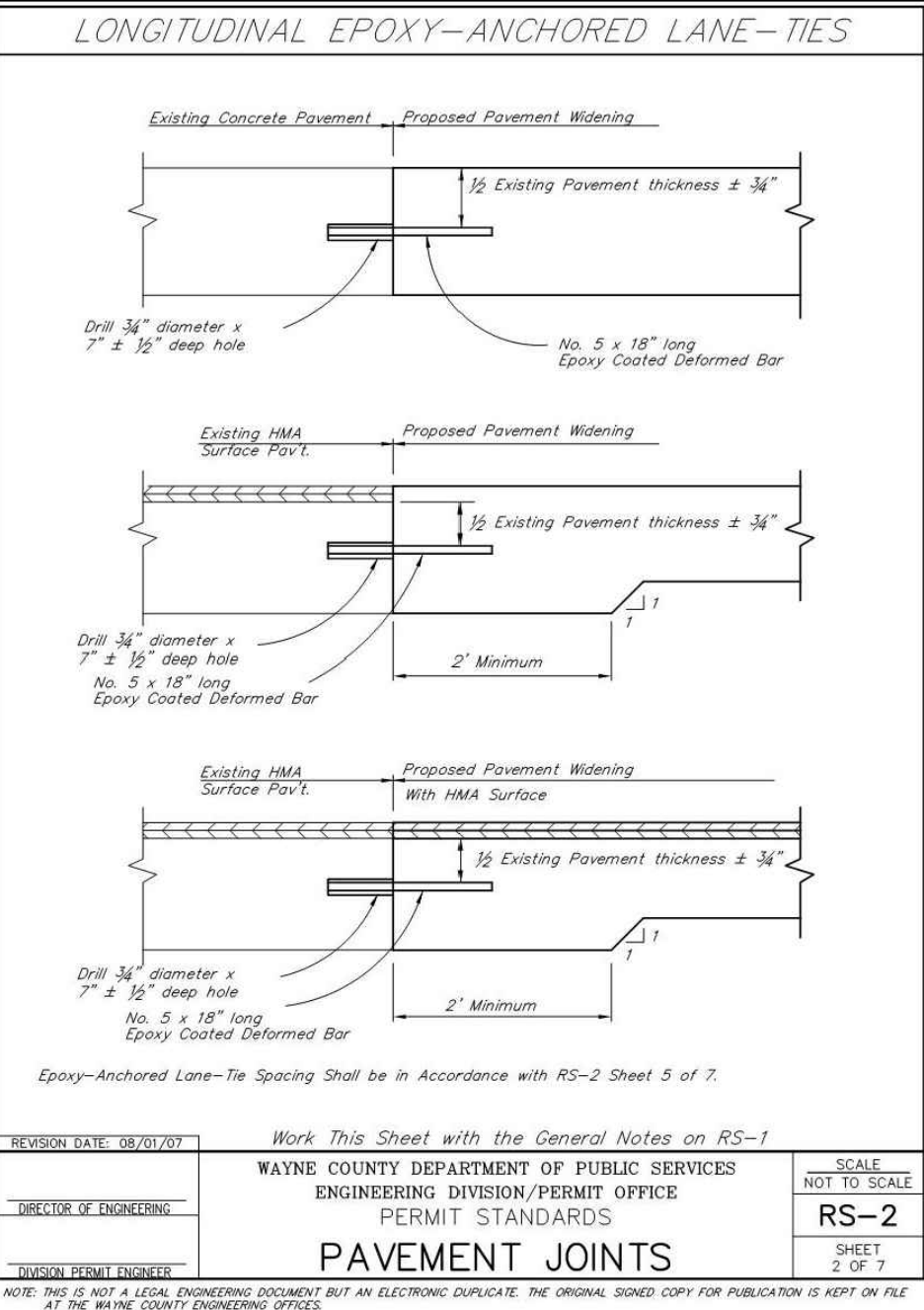
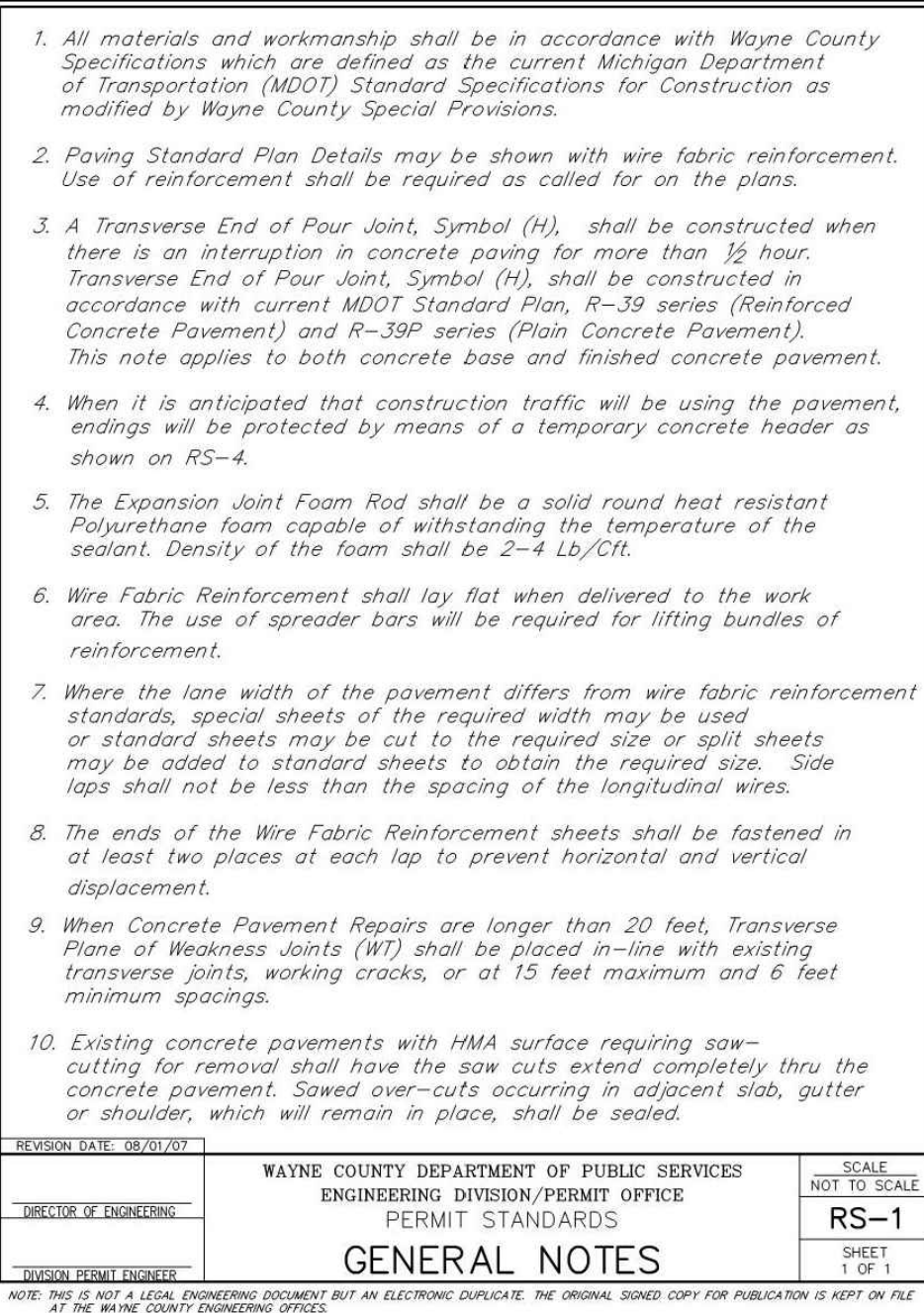
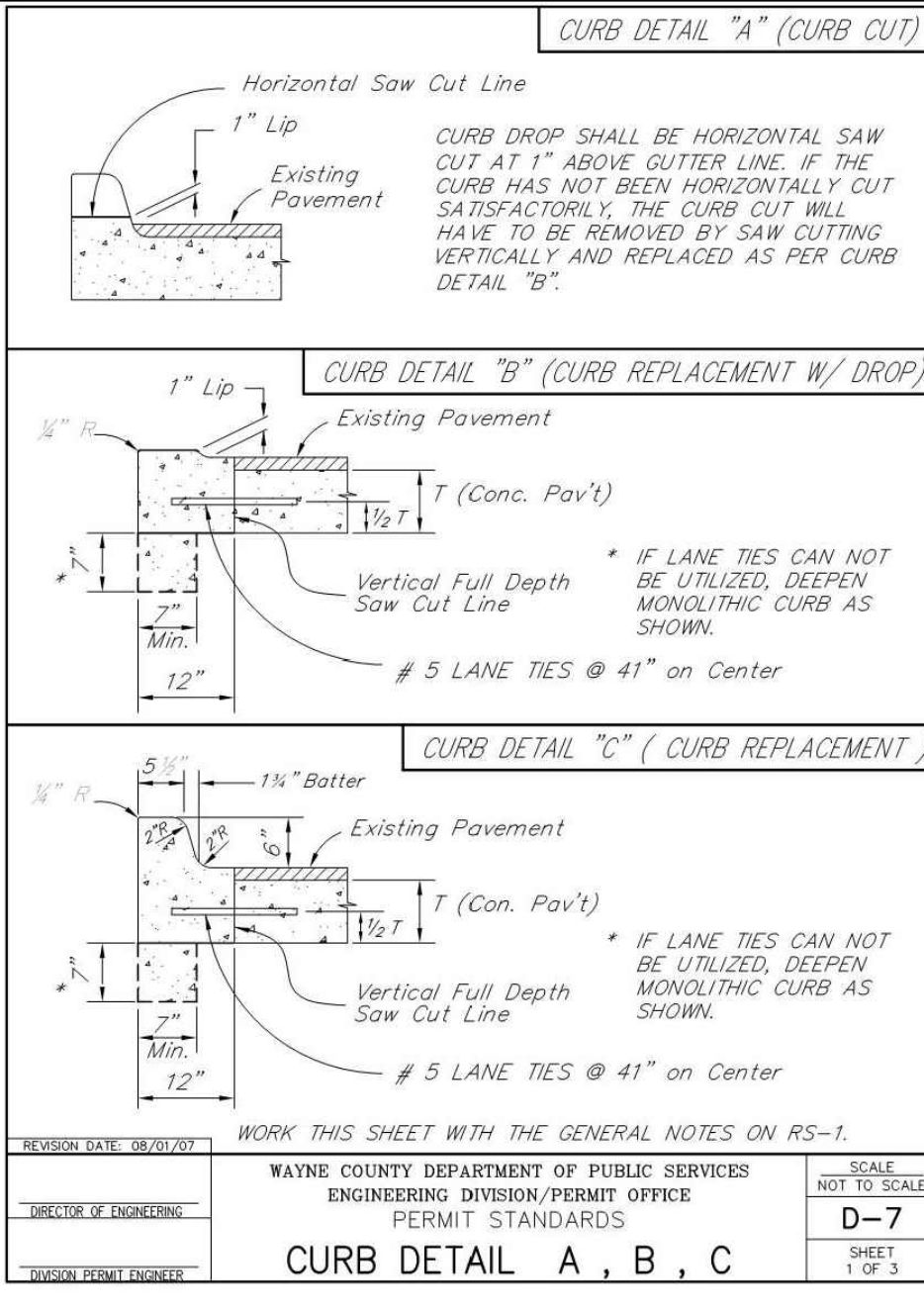
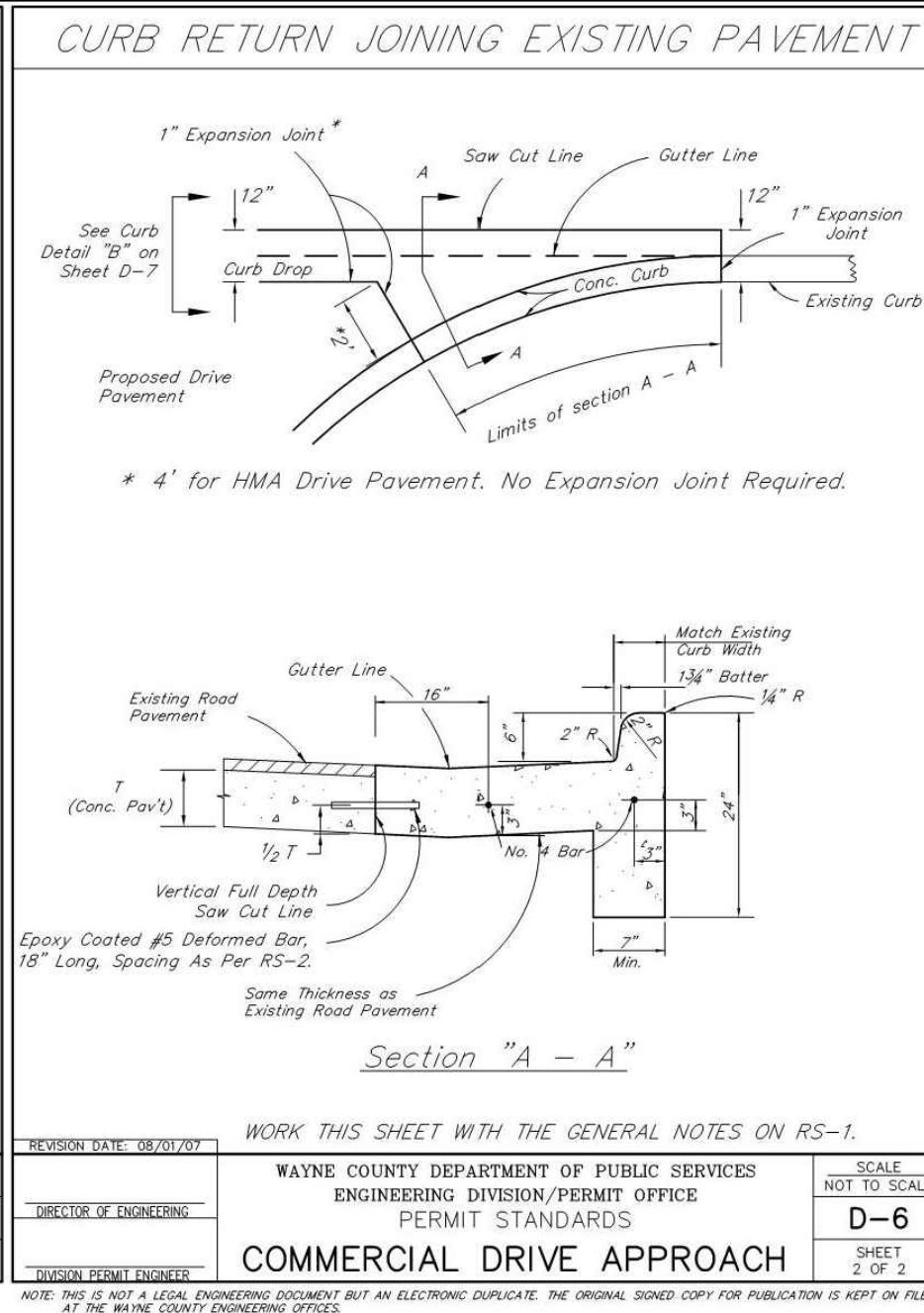
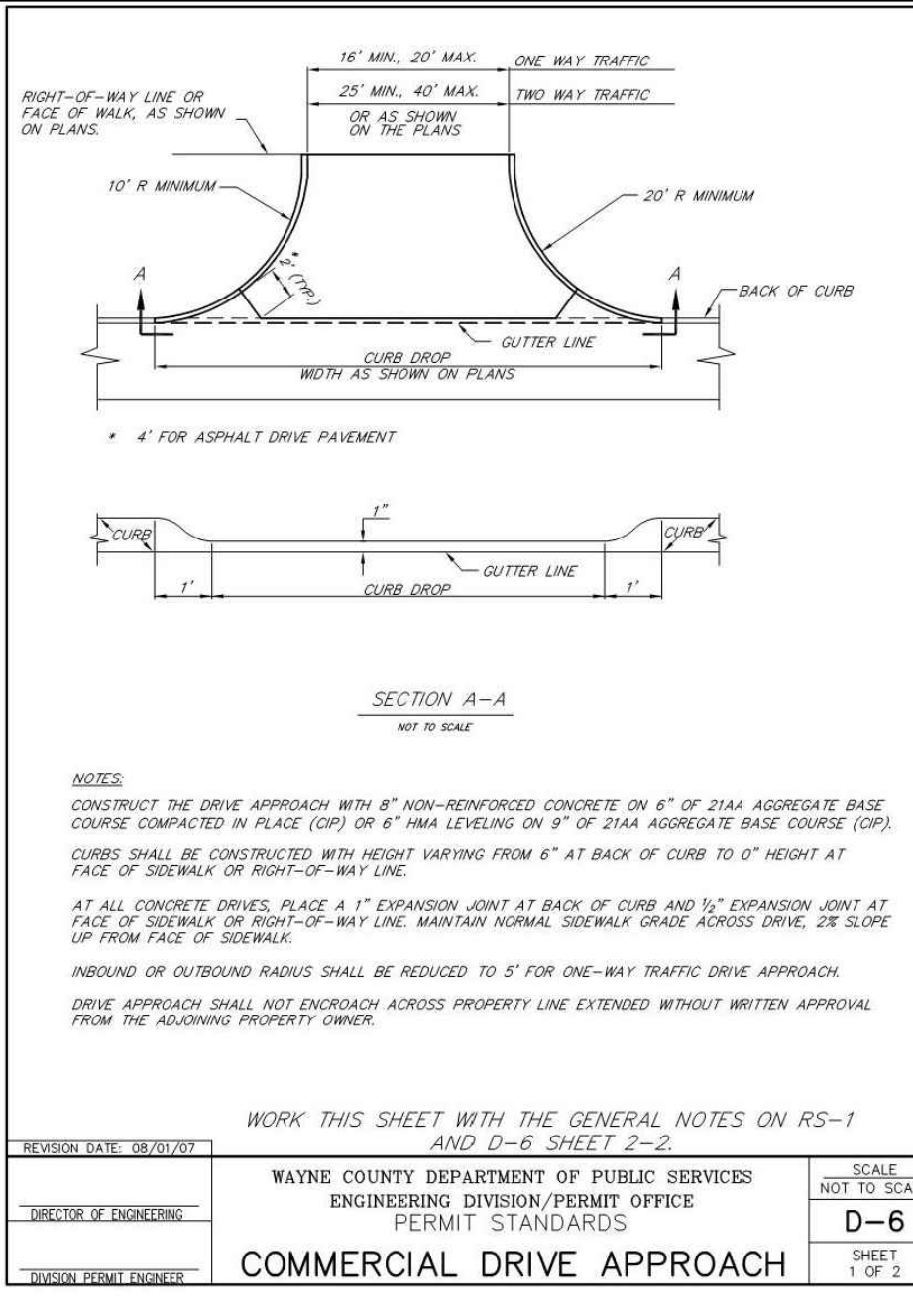
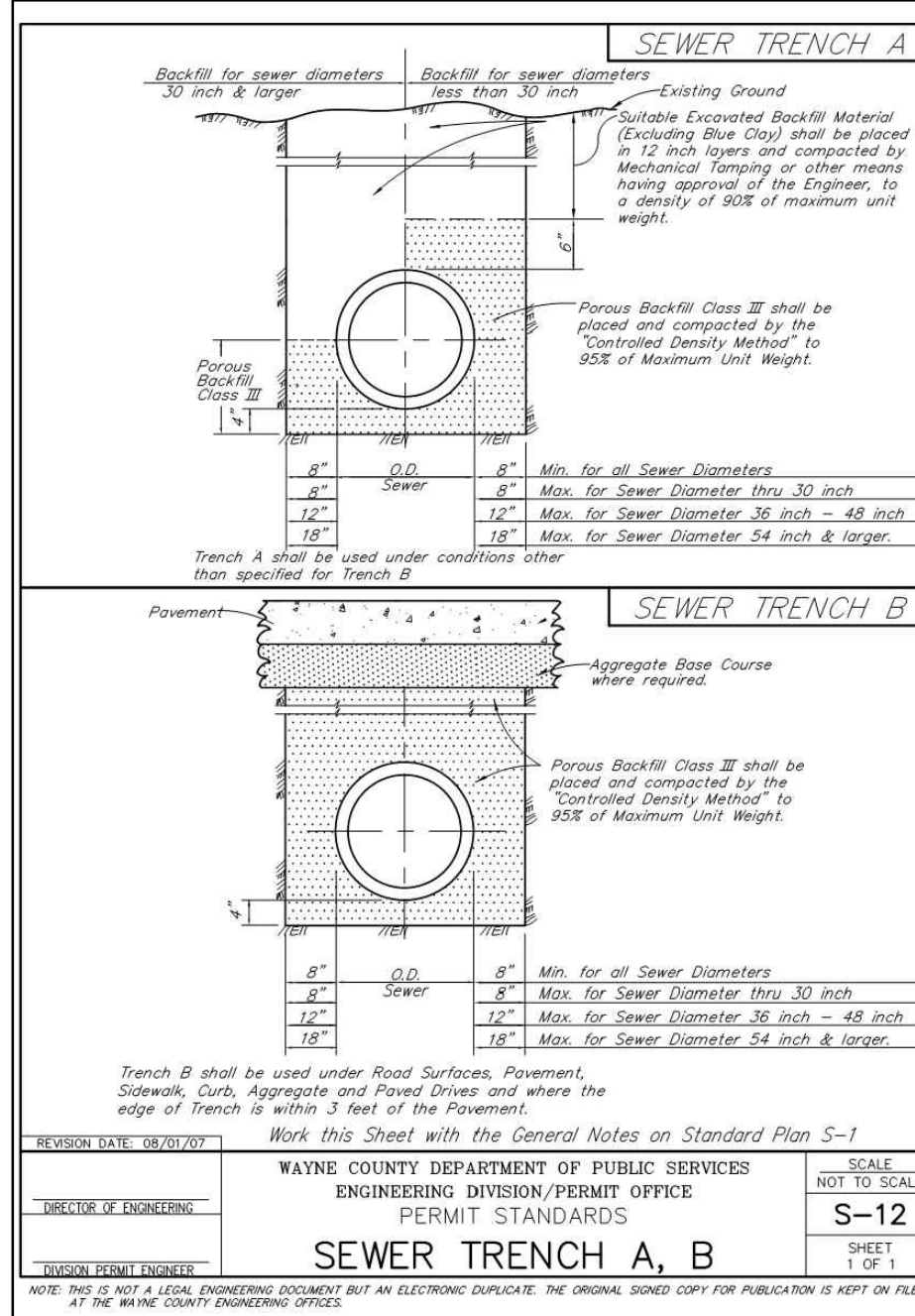












CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

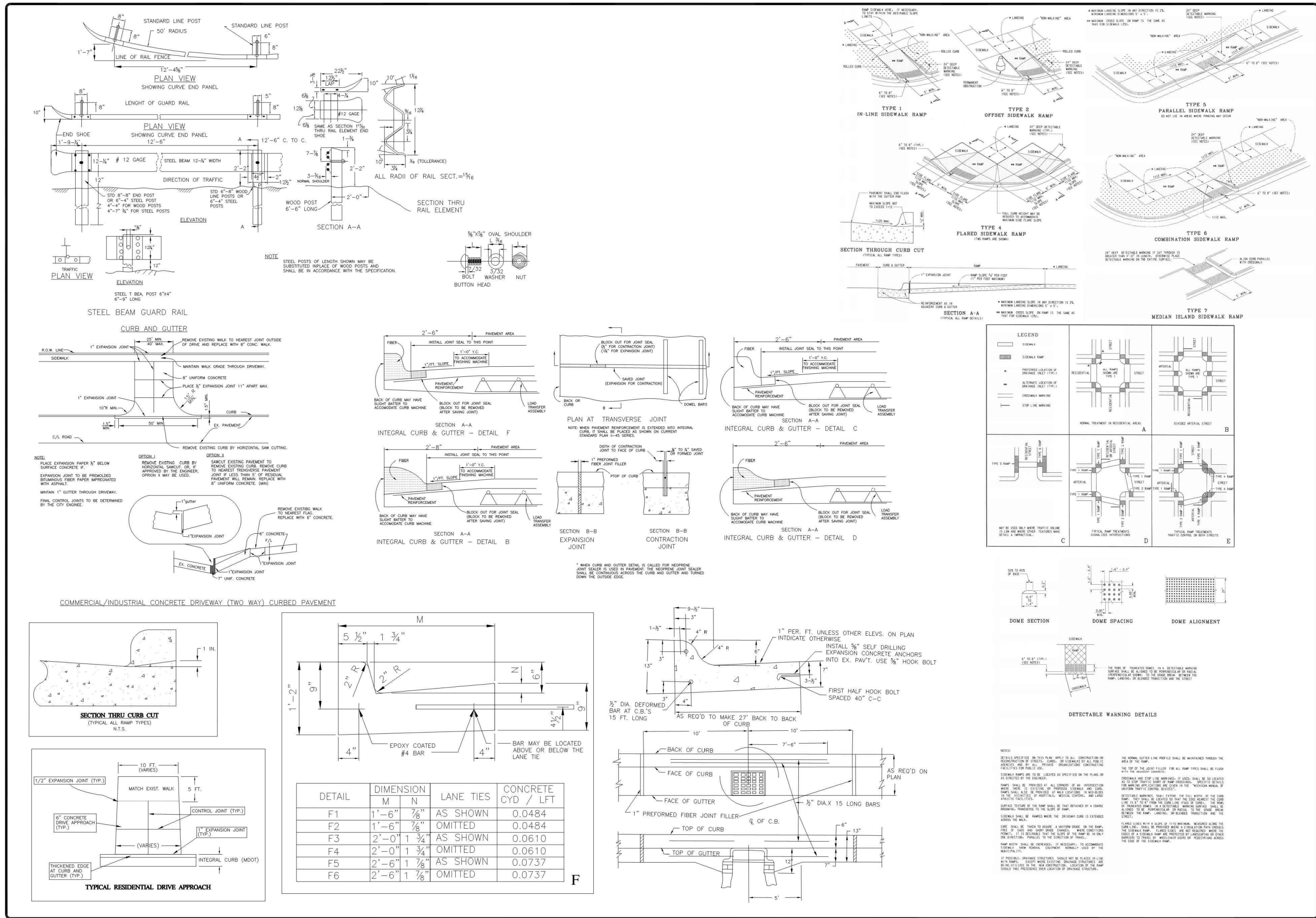
**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**EXPLOER LITE**  
LARGE50

**DRIVE APPROACH CROSS SECTION AND DETAILS**

**C-112**



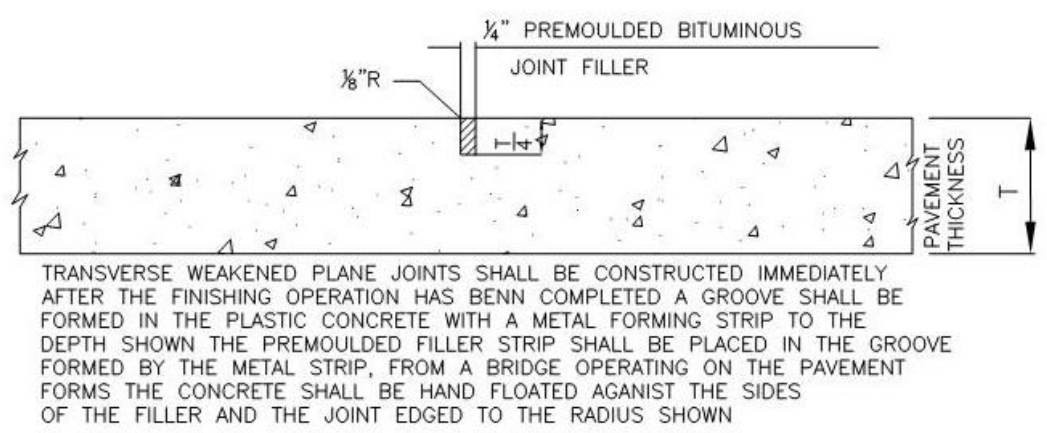
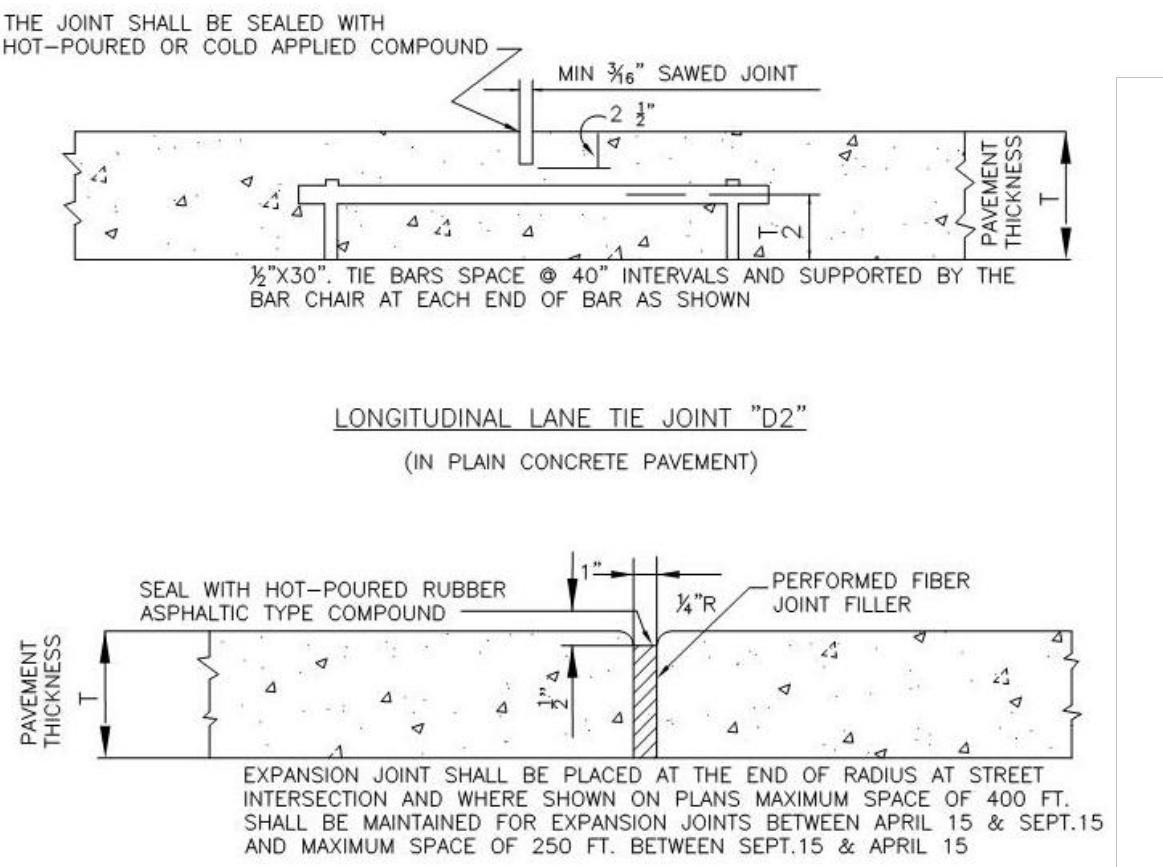
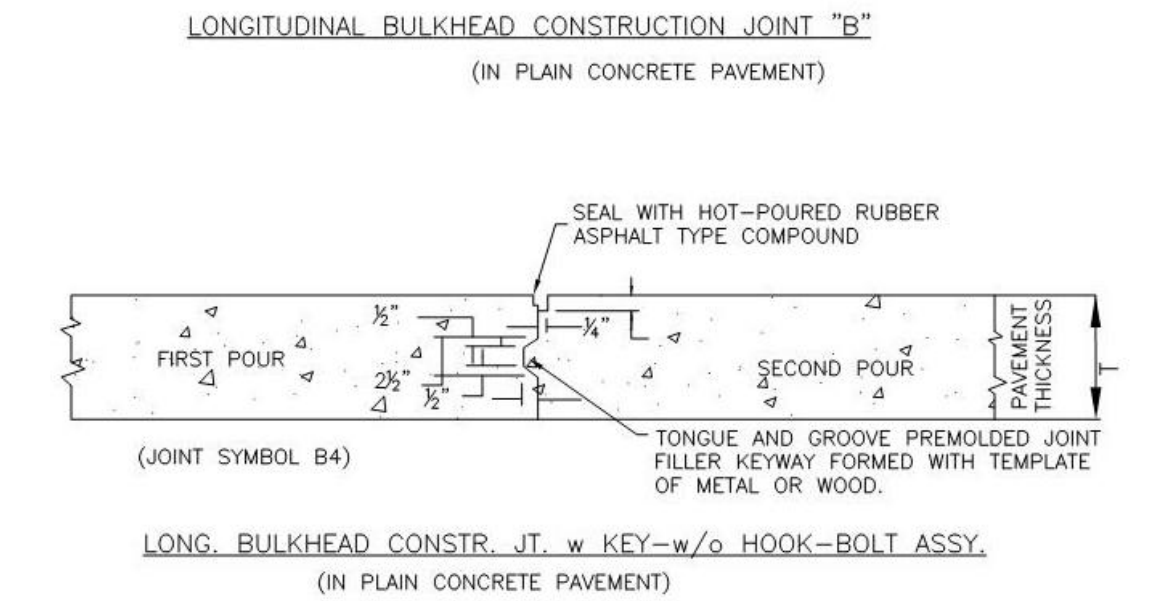
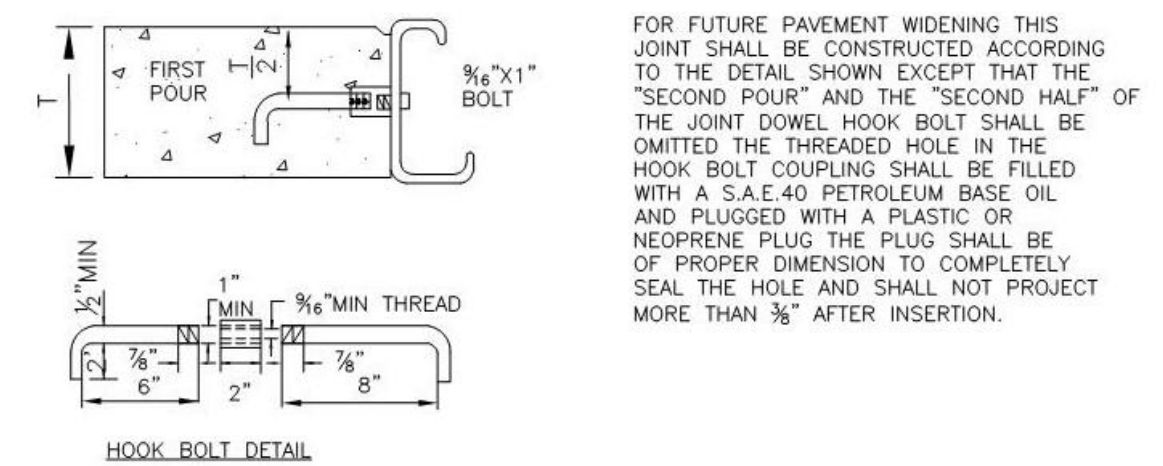
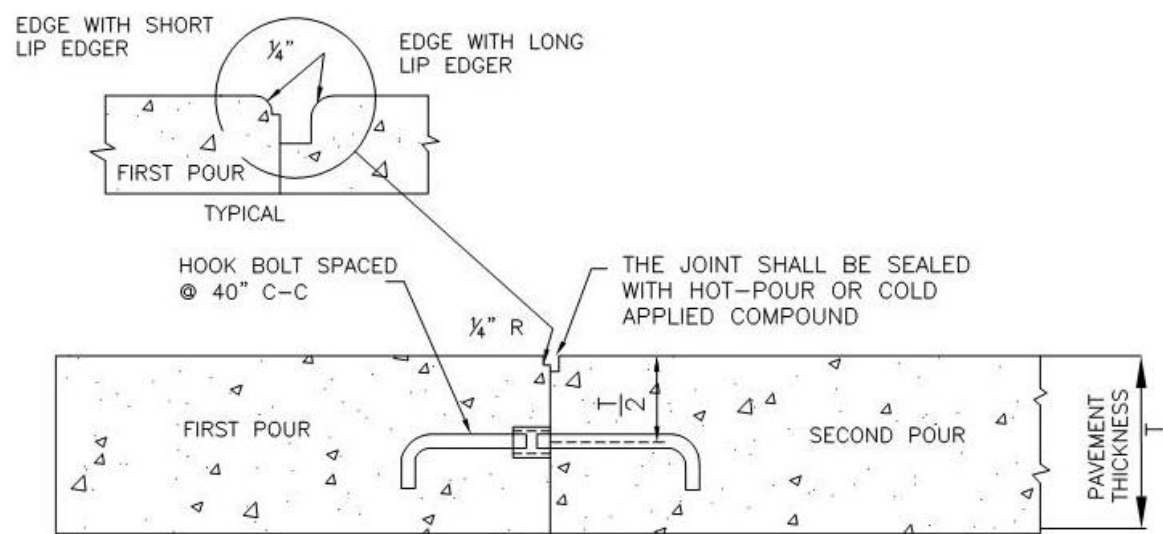


PROJECT NUMBER: 71043  
 DATE: 12/14/09  
 SCALE: NTS  
 REVISIONS: RSR  
 DRAWN BY: NKA  
 CHECKED BY:  
 APPROVED BY:  
 REVISIONS:

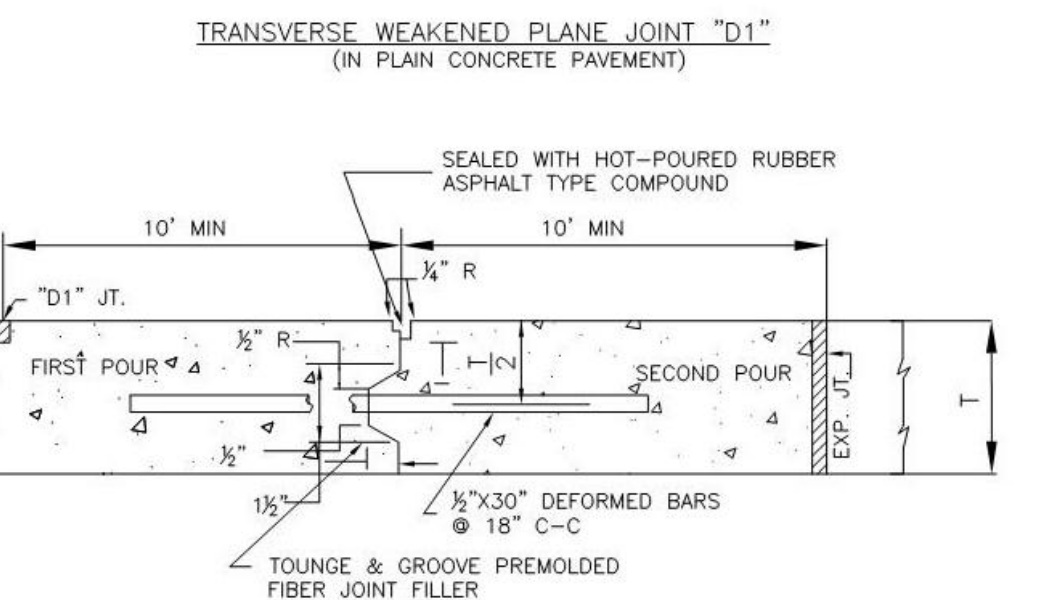
ENGINEERING THE FUTURE  
 SOUTHGATE, MI 48195  
 (734) 759-1600  
 FAX (734) 282-6566  
 WWW.HENGINEERS.COM

HENNESSEY ENGINEERS, INC.  
 PAVING DETAILS  
 CITY OF LINCOLN PARK  
 WAYNE COUNTY, MICHIGAN  
 SHEET PD 2

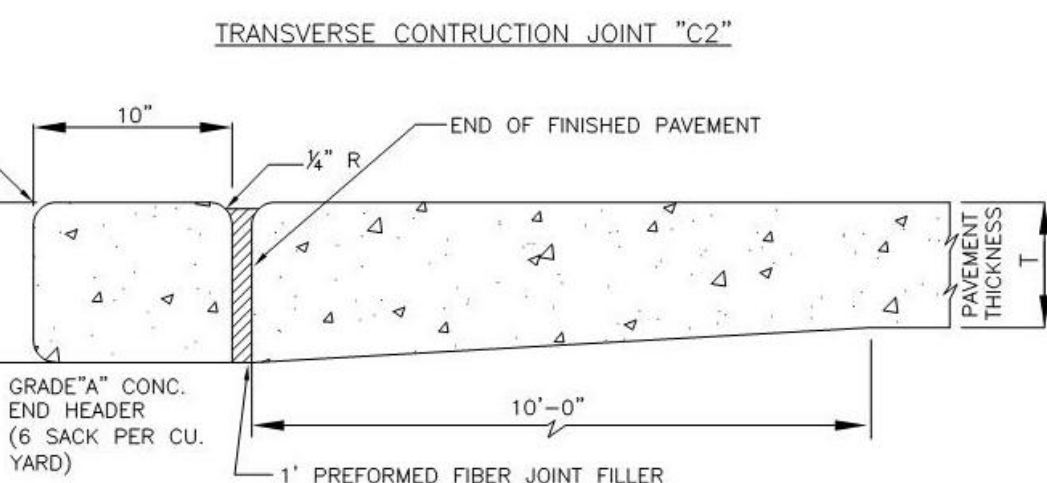
THE SEALING OF THIS JOINT WILL NOT BE REQUIRED WHEN IT IS USED IN BASE COURSE CONSTRUCTION.



TRANSVERSE WEAKENED PLANE JOINTS SHALL BE PLACED AT 20' INTERVALS BETWEEN TRANSVERSED EXPANSION JOINTS UNLESS OTHERWISE SHOWN ON PLANS.

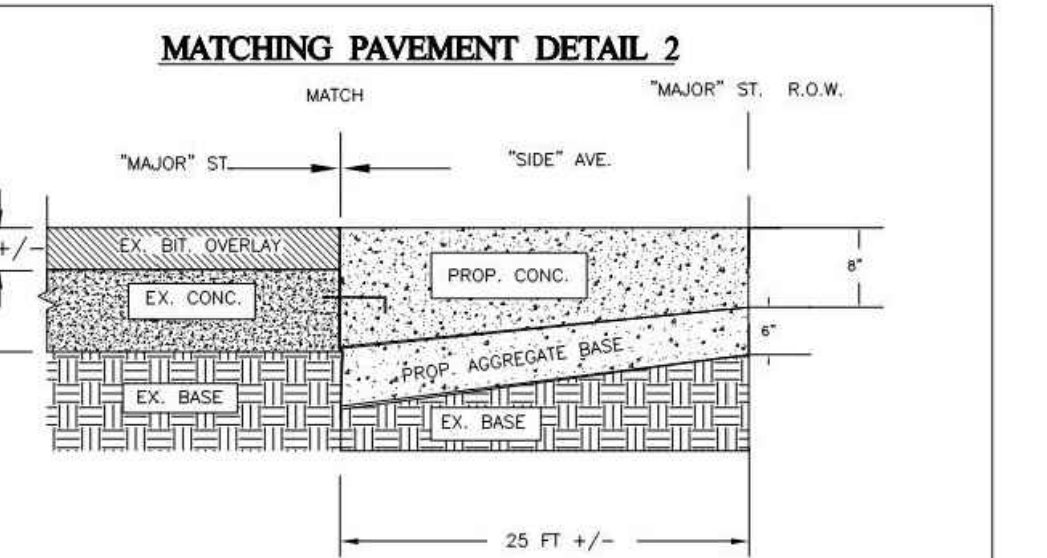


TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED AT THE ENDS OF ALL POURS AND WHERE PAVING OPERATIONS ARE DISCONTINUED FOR A PERIOD OF MORE THAN 20 MINUTES.

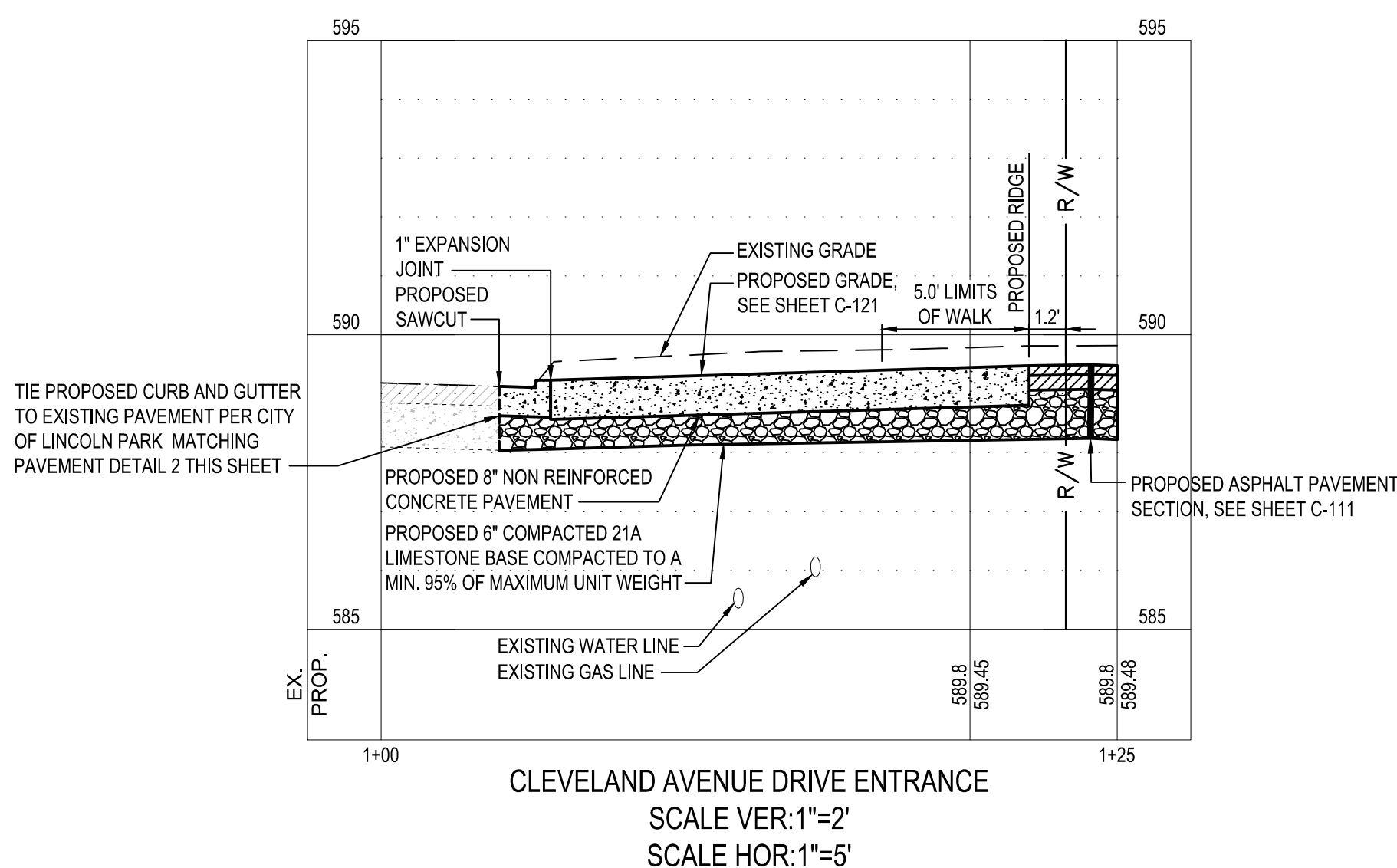


CONCRETE END HEADER SHALL BE PLACED AT ALL ENDS OF PAVEMENT UNLESS OTHERWISE INDICATED ON THE PLANS. END HEADER WILL BE MEASURED BY AREA IN SQUARE YARDS, AND WILL BE PAID FOR AT THE SAME UNIT PRICE BID PER SQUARE YARD AS FOR ADJACENT PAVEMENT.

CONCRETE END HEADER (IN PLAIN CONCRETE PAVEMENT)



NOTES:  
 1. MATCH THE EXISTING BASE DEPTH AND BEGIN THICKENING THE BASE AT THE MATCH POINT UP TO THE "MAJOR" ST. R.O.W.  
 2. THE PROPOSED PAVEMENT SHALL BE TIED INTO THE EXISTING PAVEMENT BY INSTALLING 1/2 INCH DIAMETER HOOK BOLTS WITH PHILIP RED HEADS AT 40" C/C OR TIE BAR.



B1 CLEVELAND AVENUE DRIVE APPROACH CROSS SECTION B-B  
 1"=10'

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_  
 MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
 CERTIFICATION DATE: \_\_\_\_\_

HENNESSEY ENGINEERS, INC.  
 ENGINEERING THE FUTURE  
 13500 REECK ROAD  
 SOUTHGATE, MI 48195  
 (734) 759-1600  
 FAX (734) 282-6566  
 WWW.HENGINEERS.COM

SHEET: PD 1, DATED 12/15/09  
 PD 2, DATED 12/14/09

GPD GROUP  
 Professional Corporation  
 520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax: 330.572.2102

ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17  
 BUILDING TYPE: EXPLORER LITE LG  
 PLAN VERSION: July 2017  
 SITE NUMBER: 283405/445231  
 STORE NUMBER: 2017088.46

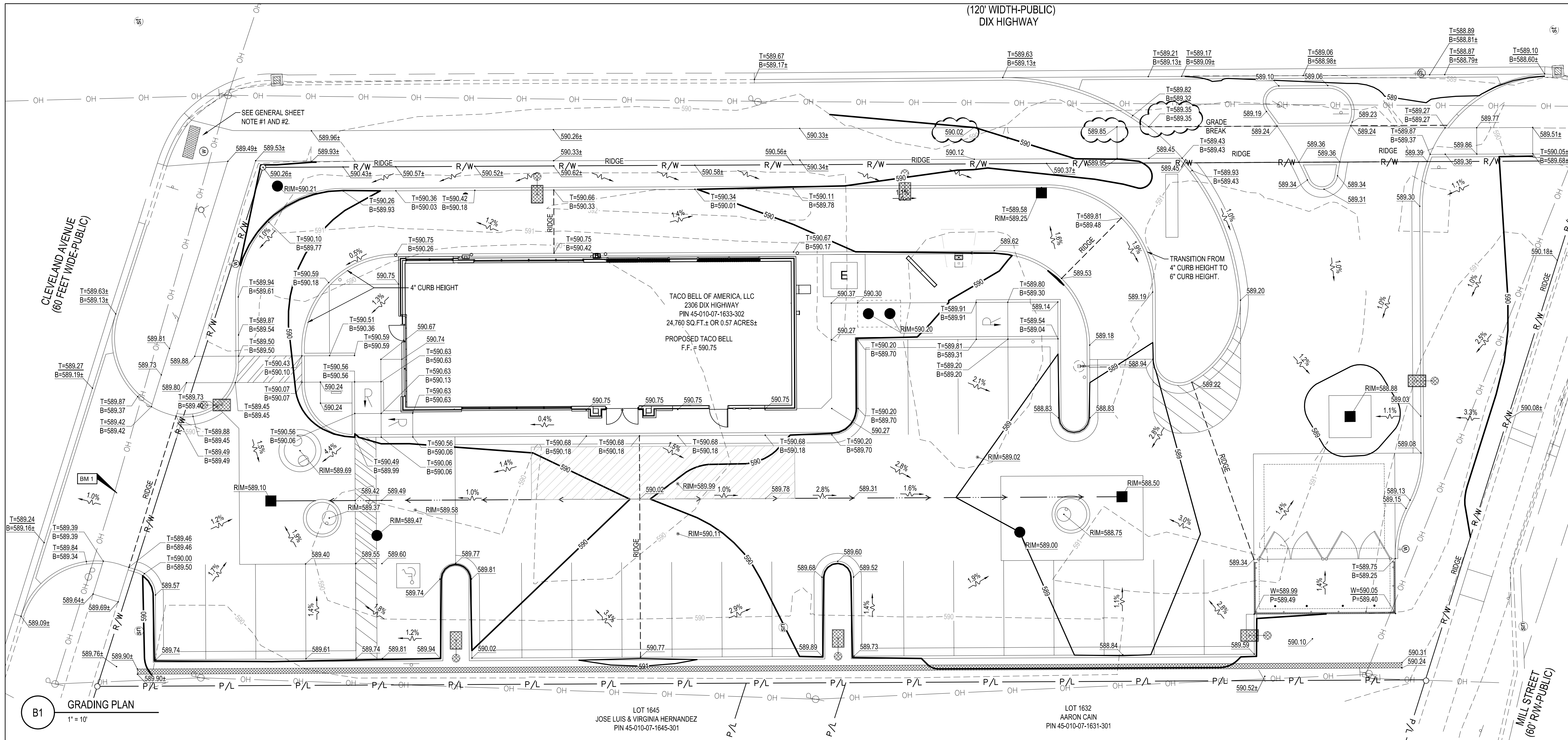
TACO BELL  
 2306 DIX HIGHWAY  
 LINCOLN PARK, MI 48146

TACO BELL  
 EXPLORER LITE  
 LARGE50

DRIVE APPROACH  
 CROSS SECTION  
 AND DETAILS

C-113

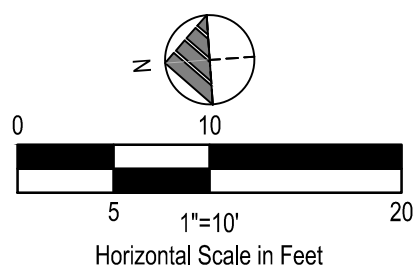




- GENERAL SHEET NOTES**
1. PROPOSED ADA CURB RAMP TO BE INSTALLED PER CITY OF LINCOLN PARK REQUIREMENTS AND CURRENT ADA REQUIREMENTS:
    - LONGITUDINAL SLOPE: 8.0% MAX.
    - CROSS SLOPE: 1.8% MAX.
  2. PROPOSED LANDING PER THE FOLLOWING REQUIREMENTS:
    - SLOPE IN ANY DIRECTION: 1.8% MAX.
    - LENGTH / WIDTH: PER CITY OF LINCOLN PARK STANDARDS
    - LANDING SHALL BE PROVIDED AT THE TOP OF THE PROPOSED RAMP.
  3. GRADES SHOWN ON PLAN AT CURB LINES REFER TO BOTTOM OF CURB ELEVATIONS.

**LEGEND**  
(SEE SHEET C-001 FOR GENERAL LEGEND)

0.00	PROPOSED CONTOUR
--- RIDGE ---	PROPOSED RIDGE
0.00.00±	EXISTING SPOT ELEVATION
0.00.00	PROPOSED ELEVATION @ FINISHED PAVEMENT ELEVATION
T=0.00.00	TOP OF CURB ELEVATION
B=0.00.00	BOTTOM OF CURB/FINISHED PAVEMENT ELEVATION
W=0.00.00	BACK OF WALL ELEVATION
P=0.00.00	FACE OF WALL/FINISHED PAVEMENT ELEVATION
TB=0.00.00	TOP OF BANK ELEVATION
0.00.0±	MATCH EXISTING ELEVATION
0.0%	PROPOSED DRAINAGE SLOPE & DIRECTION



I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_

NOTE: EMERGENCY OVERLAND OVERFLOW FROM UNDERGROUND DETENTION SYSTEM FLOWS TO APRONS AND OUT TO PUBLIC ROADS.

**Underground Utilities**



2 Working Days  
Before You Dig  
Call 800-362-2764 (Toll Free)  
Ohio Utilities Protection Service



Non-members  
Must Be Called Directly  
Call 800-925-0988 (Toll Free)  
Oil & Gas Producers Utility Protection Service

**BENCHMARKS:** SEE SHEET C-001 FOR LOCATIONS

BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FEET, NAD83.  
VERTICAL DATUM IS NAVD88.

BENCHMARK #1 - MAG NAIL IN WESTERLY FACE OF UTILITY POLE, N 275958.92, E 13440465.15.  
ELEVATION= 590.14 (NAVD88)

BENCHMARK #2 - MAG NAIL IN NORTHERLY FACE OF UTILITY POLE, N 275674.75, E 13440518.32.  
ELEVATION=589.70 (NAVD88)

ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



**EXPLORER LITE**  
LARGE50

**GRADING PLAN**

**C-121**

STORM WATER POLLUTION PREVENTION NOTES

1. ALL WORK SPECIFIED AS AN DEPARTMENT OF TRANSPORTATION ITEM SHALL BE GOVERNED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AS WELL AS THE CURRENT EDITION OF THE LOCAL JURISDICTION STORM WATER MANAGEMENT MANUAL, AND WAYNE COUNTY MANUAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POSSESS AND TO BE FAMILIAR WITH APPLICABLE SECTIONS.
2. THESE CONTRACT DRAWING SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST. IF UNFORESEEN STORM WATER POLLUTION IS ENCOUNTERED, ADDITIONAL STORM WATER POLLUTION PREVENTION (SWPP) MEASURES SHALL BE IMPLEMENTED TO MANAGE THE CURRENT SITE CONDITIONS WHICH MAY BE REQUESTED BY THE OWNER, COUNTY ENGINEER, PROJECT ENGINEER OR SOIL AND WATER CONSERVATION SERVICE REPRESENTATIVE AT ANYTIME. SUCH REQUESTS AND CHANGE IN SITE CONDITIONS SHALL BE IMPLEMENTED IMMEDIATELY AT CONTRACTOR'S EXPENSE.
3. ALL STORM WATER POLLUTION PREVENTION PRACTICES WILL BE INSTALLED BEFORE ANY OTHER EARTH MOVING OCCURS.
4. ALL STORM WATER POLLUTION PREVENTION ITEMS SHALL BE INSTALLED AS SHOWN OR NOTED IN THESE PLANS.
5. PLANT TEMPORARY SEEDING AND MULCHING IN ALL AREAS THAT SHALL BE INACTIVE FOR 14 DAYS OR MORE. ALL DISTURBED AND ERODED EARTH SHALL BE REGRADED AND SEEDED WITHIN 7 DAYS WITH SEEDING, AS DEFINED ON THE TEMPORARY SEEDING TABLE WITHIN THESE PLANS. TO ESTABLISH STABILITY AND PROVIDE SEDIMENT CONTROL. WHERE POSSIBLE, TEMPORARY SEEDING GROWTH SHALL NOT BE MOWED UNTIL IT HAS GONE TO SEED FOR 1 YEAR.
6. PERMANENT VEGETATION SHALL BE INSTALLED WITHIN 7 DAYS AT THE COMPLETION OF ANY GRADED AREAS, WEATHER PERMITTING.
7. PRIOR TO THE TIME THAT DRAINAGE DIVERTS TO INLETS, INLET SEDIMENT FILTERS SHALL BE INSTALLED AT ALL INLET STRUCTURES TO KEEP PIPING SYSTEMS FREE OF SILTATION.
8. SILT BARRIERS SHALL BE INSTALLED AROUND ALL EXISTING AND NEW STORM INLETS, CATCH BASINS, YARD DRAINS. INSTALL ROCK CHECK DAMS FOR HEADWALL INLETS FOR STORM WATER POLLUTION PREVENTION.
9. STORM WATER POLLUTION PREVENTION MEASURES SHALL BE INSTALLED AROUND ALL DIRT OR TOPSOIL STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS AS SHOWN ON THESE PLANS AND AS DIRECTED BY THE ENGINEER.
10. CONTRACTOR SHALL INSPECT ALL SWPP MEASURES DAILY AND LOGGED BY THE CONTRACTOR FOR INSPECTION. LOGGING SHALL BE WEEKLY AND AFTER EVERY ½" RAINFALL EVENT. REPAIR AS NECESSARY TO PREVENT EROSION. SILTATION SHALL BE REMOVED FROM AREAS WHERE FAILURES HAVE OCCURRED AND CORRECTIVE ACTION TAKEN WITHIN 24 HOURS TO MAINTAIN ALL SWPP.
11. SILT BARRIERS, CONSTRUCTION ENTRANCES, AND SILT PERIMETER CONTROLS SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF GRASS HAS BEEN OBTAINED AND/OR PAVING OPERATIONS ARE COMPLETE. CONTRACTOR SHALL KEEP SILT FROM ENTERING ANY STORM DRAINAGE SYSTEM. ONCE SITE HAS BEEN COMPLETELY STABILIZED, ANY SILT IN PIPES AND DRAINAGE SWALES SHALL BE REMOVED WITHIN 10 DAYS.
12. TEMPORARY SEDIMENTATION AND STORM WATER POLLUTION PREVENTION MEASURES MUST BE INSPECTED AND AFTER ½" RAIN EVENTS.
13. UTILITY COMPANIES MUST COMPLY WITH ALL STORM WATER POLLUTION PREVENTION MEASURES AS DEFINED ON THE STORM WATER POLLUTION PREVENTION PLANS, DETAILS AND NOTES.
14. ALL EXISTING WATER COURSES WITHIN THE PROJECT LIMITS SHALL BE TEMPORARILY PROTECTED DURING LAND CLEARING AND GRADING OPERATIONS. SOILS WITHIN 50 FEET OF SAID WATER COURSES SHALL BE STABILIZED WITHIN 2 DAYS OF THE INITIAL CLEARING / GRADING OPERATION AS SHOWN ON PLANS.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL SEDIMENTATION AND STORM WATER POLLUTION PREVENTION ITEMS AT ALL TIMES.
16. DUST CONTROL SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. IF POSSIBLE GRADING SHALL BE DONE BY PHASING. IF PHASING IS NOT AN OPTION, DUST SHALL BE CONTROLLED WITH WATER DURING EARTHWORK. AFTER EARTHWORK OPERATIONS, THE EXPOSED SOILS SHALL BE COVERED WITH STRAW OR MULCH UNTIL SEEDED. SEE DETAIL WITHIN THESE PLANS. OIL IS NOT TO BE USED AS A DUST SUPPRESSANT.
17. ANY DISCHARGE OF PETROLEUM OR PETROLEUM PRODUCTS OF LESS THAN 25 GALLONS ONTO A PERVIOUS SURFACE SHALL BE LEGALLY REMOVED AND PROPERLY TREATED OR PROPERLY DISPOSED OF, OR OTHERWISE REMEDIATED, SO THAT NO CONTAMINATION FROM THE DISCHARGE REMAINS ON-SITE.
18. IN THE EVENT OF A LARGE PETROLEUM SPILL (25 OR MORE GALLONS) CONTRACTOR MUST CONTACT THE MICHIGAN'S EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.
19. CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT FACILITY SHALL BE UTILIZED, IF CONDITIONS ARE SUCH THAT MUD IS COLLECTING ON VEHICLE TIRES. THE TIRES MUST BE CLEANED BEFORE THE VEHICLES ENTER THE PUBLIC ROADWAY. THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOW OF MUD ONTO THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE ROADWAY MUST BE REMOVED PROMPTLY.
20. IF NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
21. IF NECESSARY, ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN ANY ROAD RIGHT OF WAY DURING CONSTRUCTION.
22. CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING CONSTRUCTION FENCE, SIGNS, ETC. TO WARN AND KEEP PEOPLE OFF SITE FOR THE DURATION OF THE PROJECT.
23. IF ENCOUNTERED DURING SITE REDEVELOPMENT, ANY OIL/GAS WELLS OR MINE SHAFTS MUST BE PROPERLY ABANDONED, VAULTED AND VENTED IN ACCORDANCE WITH CURRENT REGULATIONS AND SPECIFICATIONS OF ALL GOVERNING AUTHORITIES
24. IF, FOR ANY REASON, THE PROJECT IS SUSPENDED, THE CONTRACTOR SHALL INSURE THAT ALL INSTALLED EROSION MEASURES ARE FUNCTIONING AND PROPERLY MAINTAINED DURING THIS PERIOD, AND THAT ALL BARE SOILS ARE SEEDED AND MULCHED WITH TEMPORARY SEED MIXTURE.
25. THE FOLLOWING STORM WATER POLLUTION PREVENTION AND SEDIMENT CONTROL MEASURES WHICH WILL BE USED ON THIS SITE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING :

a. SILT FENCE

b. SILT BARRIERS

c. CONSTRUCTION ENTRANCE

d. CONCRETE WASHOUT FACILITY

ADDITIONAL CONSTRUCTION SITE POLLUTION CONTROLS

1. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTES:

a) PREVENT SPILLS

b) USE PRODUCTS UP

c) FOLLOW LABEL DIRECTIONS FOR DISPOSAL

d) REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH

e) RECYCLE WASTES WHENEVER POSSIBLE

f) DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND

g) DON'T POUR DOWN THE SINK, DOOR DRAIN OR SEPTIC TANKS

h) DON'T BURY CHEMICALS OR CONTAINERS

i) DON'T BURN CHEMICALS OR CONTAINERS

j) DON'T MIX CHEMICALS TOGETHER
3. CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS USED ON-SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (CD&D) WASTE MUST BE DISPOSED OF AT THE MICHIGAN'S EPA APPROVED CD&D LAND FILL.
4. NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON-SITE, BY EXCEPTION, CLEAN FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN A WAY WHICH DOES NOT ENCR OACH UPON NATURAL WETLANDS, STREAMS OR PLAINS OR RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.
5. HANDLING CONSTRUCTION CHEMICALS : MIXING, PUMPING, TRANSFERRING OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
6. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS MAY APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND TANK OF 680 GALLONS OR MORE, ACCUMULATIVE ABOVE GROUND STORAGE OF 1330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. CONTAMINATED SOILS MUST BE DISPOSED OF IN ACCORDANCE WITH ITEM 8.
7. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FT. OF THE SUMP SHALL BE CUT AND PLUGGED. FOR SMALL PROJECTS, TRUCK CHUTES MAY BE RINSED AWAY FROM ANY WATER CONVEYANCES.
8. SPILL REPORTING REQUIREMENTS : SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LAND FILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO MICHIGAN'S EPA. SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO MICHIGAN'S EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO MICHIGAN'S EPA.
9. CONTAMINATED SOILS : IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LAND FILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION/DEMOLITION DEBRIS LAND FILL). NOTE THOSE STORM WATER RUNOFFS ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BE AUTHORIZED UNDER MICHIGAN'S EPA GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
10. OPEN BURNING : NO OPEN BURNING.
11. DUST CONTROL OR DUST SUPPRESSANTS SHALL BE USED TO PREVENT NUISANCE CONDITIONS. IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER, WHICH PREVENT A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.
12. OTHER AIR PERMITTING REQUIREMENTS : CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC MICHIGAN'S EPA AIR PERMITS FOR INSTALLATION AND OPERATION. OPERATORS MUST SEEK AUTHORIZATION FROM THE CORRESPONDING DISTRICT OF THE EPA. FOR DEMOLITION OF ALL COMMERCIAL SITES, A NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO MICHIGAN'S EPA TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.
13. PROCESS WASTE WATER/LEACHATE MANAGEMENT : EPA'S CONSTRUCTION GENERAL PERMIT ONLY ALLOWS THE DISCHARGE OF STORM WATER AND DOES NOT INCLUDE OTHER WASTE STREAMS/DISCHARGES SUCH AS VEHICLE AND/OR EQUIPMENT WASHING, ON-SITE SEPTIC LEACHATE CONCRETE WASH OUTS, WHICH ARE CONSIDERED PROCESS WASTEWATERS. ALL PROCESS WASTEWATERS MUST BE COLLECTED AND PROPERLY DISPOSED AT AN APPROVED DISPOSAL FACILITY. IN THE EVENT, LEACHATE OR SEPTAGE IS DISCHARGED, IT MUST BE ISOLATED FOR COLLECTION AND PROPER DISPOSAL AND CORRECTIVE ACTIONS TAKEN TO ELIMINATE THE SOURCE OF WASTE WATER.
14. A PERMIT TO INSTALL (PTI) IS REQUIRED PRIOR TO THE CONSTRUCTION OF ALL CENTRALIZED SANITARY SYSTEMS, INCLUDING SEWER EXTENSIONS, AND SEWERAGE SYSTEMS (EXCEPT THOSE SERVING ONE, TWO, AND THREE FAMILY DWELLINGS) AND POTABLE WATER LINES. PLANS MUST BE SUBMITTED AND APPROVED BY MICHIGAN'S EPA. ISSUANCE OF MICHIGAN'S EPA CONSTRUCTION GENERAL STORM WATER PERMIT DOES NOT AUTHORIZE THE INSTALLATION OF ANY SEWERAGE SYSTEM WHERE MICHIGAN'S EPA HAS NOT APPROVED A PTI.
15. PLEASE REFER TO THE LOCAL JURISDICTION STORM WATER MANAGEMENT MANUAL, CURRENT EDITION, FOR ADDITIONAL INFORMATION.
16. WASTES GENERATED BY CONSTRUCTION ACTIVITIES (I.E. CONSTRUCTION MATERIALS SUCH AS PAINTS, SOLVENTS, FUELS, CONCRETE, WOOD, ETC) MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS. HAZARDOUS AND TOXIC SUBSTANCES ARE USED ON VIRTUALLY ALL CONSTRUCTION SITES. GOOD MANAGEMENT OF THESE SUBSTANCES IS ALWAYS NEEDED.

CONSTRUCTION SEQUENCE

DURING PRECONSTRUCTION MEETING ALL EROSION & SEDIMENT CONTROL FACILITIES & PROCEDURES SHALL BE DISCUSSED.

1. INSTALL CONSTRUCTION ENTRANCE AS DETAILED ON PLANS. TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED AROUND PERIMETER OF CONSTRUCTION SITE. WHERE THERE IS EXISTING FENCE ALONG THE PERIMETER OF THE SITE, IT CAN BE UTILIZED. FENCING SHALL BE USED TO RESTRICT OUTSIDE TRAFFIC TO SITE.
2. DELIVER CONSTRUCTION TRAILER TO SITE AND INSTALL TEMPORARY POWER AND TELEPHONE, IF REQUIRED. TEMPORARY UTILITY SERVICES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. STAKE AND/OR FLAG LIMITS OF CLEARING.
4. CLEARING & GRUBBING, AS NECESSARY, FOR INSTALLATION OF PERIMETER CONTROLS. INSTALL SILT PERIMETER CONTROLS AS SHOWN ON PLANS. SILT PERIMETER CONTROLS SHALL BE INSTALLED LEVEL, ALONG THE CONTOURS, WITH ENDS TURNED UPSLOPE TO PREVENT CONCENTRATED FLOW AT THE SILT PERIMETER CONTROLS.
5. INSTALL TEMPORARY SILT INLET PROTECTION ON ALL EXISTING CATCH BASINS AND INLETS, AS DESIGNATED IN THE PLANS. REMOVAL OF SILT INLET PROTECTION FROM DESIGNATED INLETS CAN ONLY OCCUR WHEN A STRUCTURE IS REMOVED, AND AS REQUIRED BY THE PROGRESSION OF THE DEMOLITION AND CONSTRUCTION.
6. CLEARING & GRUBBING, AS NECESSARY, FOR INSTALLATION OF TEMPORARY SEDIMENT TRAP/BASIN. INSTALL TEMPORARY SEDIMENT TRAP/BASIN, IF REQUIRED, AS DETAILED IN THE PLANS. CONSTRUCT AND MAINTAIN TEMPORARY DIVERSION SWALE AND / OR DIVERSION BERM DURING FILLING & GRADING ACTIVITIES.
7. CLEARING & GRUBBING THE REMAINING SITE AS NECESSARY. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR REUSE, OR REMOVED TO AN APPROVED OFFSITE SPOIL AREA.
8. BEGIN FILLING & GRADING AS REQUIRED TO REACH SUBGRADE.
9. UTILIZE DUST CONTROL MEASURES AS REQUIRED TO MINIMIZE AIR-BORNE POLLUTION BY METHODS APPROVED BY THE AUTHORIZING EPA OFFICE.
10. ONCE PAVEMENT GRADES HAVE BEEN ESTABLISHED, AS DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL UTILIZE THESE AREAS FOR STRUCTURE CONSTRUCTION.
11. IN PROPOSED GRASS AREAS, REPLACE TOPSOIL, FINE GRADE AND SEED, AS REQUIRED. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEED AND MULCHING OR TEMPORARY SEEDING IMMEDIATELY UPON REACHING FINAL GRADE.
12. CONSTRUCT UNDERGROUND UTILITY WORK INCLUDING STORM DRAINAGE FACILITIES. UPON INSTALLATION OF STORM DRAINAGE CATCH BASINS, YARD DRAINS AND INLETS, INSTALL REQUIRED INLET PROTECTION.
13. DO NOT REPLACE ANY TOPSOIL, SEED OR INSTALL FINAL PAVEMENT PRIOR TO COMPLETION OF BUILDING SHELL. SHOULD SITEWORK BE COMPLETED PRIOR TO THIS DATE, MULCH DISTURBED AREAS TO BE PLANTED AND INSTALL STONE SUBBASE IN DISTURBED AREAS TO BE PAVED.
14. FOLLOWING COMPLETION OF BUILDING SHELL AND PAVEMENT INSTALLATION, BEGIN LANDSCAPE INSTALLATION.
15. COMPLETE SITEWORK, PAVEMENT MARKINGS AND FINAL CLEAN-UP. RESEED ANY AREAS THAT MAY REQUIRE ATTENTION IMMEDIATELY. NOTE THAT LAWN AREAS WILL NOT BE DEEMED STABLE UNTIL A MINIMUM 80% VEGETATIVE DENSITY HAS BEEN ACHIEVED.
16. MAINTAIN EROSION & SEDIMENTATION CONTROL MEASURES UNTIL THE SITE HAS BEEN COMPLETELY STABILIZED. ALL AREAS OF VEGETATIVE SURFACE, WHETHER PERMANENT OR TEMPORARY, SHALL BE CONSIDERED TO BE IN PLACE AND FUNCTIONAL WHEN THE REQUIRED UNIFORM RATE OF COVERAGE (80%) IS OBTAINED.
17. REMOVE SEDIMENT CONTROLS.
18. THE FOLLOWING ITEMS MUST BE COMPLETED IN ORDER BY THE CONTRACTOR, ONCE THE SITE HAS BEEN DEEMED STABLE:

a) REMOVE CONSTRUCTION ENTRANCE PRIOR TO COMPLETION OF PAVING

b) SITE CLEAN UP

c) RESEED ANY AREAS THAT REQUIRE ADDITIONAL SEED

d) SILT FENCE SHOULD BE CLEANED, REMOVED, BACKFILLED AND SEEDED WITH PERMANENT SEEDING.

A) VERIFY POSITIVE DRAINAGE FLOW IN ALL DRAINAGE STRUCTURES, REPAIR AS NECESSARY.

\*\* YEARLY INSPECTIONS, COMPLETED BY MAY 31ST OF EACH YEAR, MUST BE DOCUMENTED. COPIES SHOULD BE SENT TO THE LOCAL CITY AS WELL AS THE THE LOCAL COUNTY SOIL AND WATER CONSERVATION DISTRICT.

ONLY APPROVED SIGNED PLANS BY THE LOCAL SWCD ARE TO BE USED FOR CONSTRUCTION.

CONTRACTORS INSPECTOR SHALL BE A QUALIFIED INDIVIDUAL. SITE INSPECTIONS SHALL BE DONE WEEKLY AND WITHIN 24 HRS AFTER EVERY RAINFALL EVENT EXCEEDING 1/2" OF RAINFALL. ALL NECESSARY REPAIRS SHOULD BE IMPLEMENTED IMMEDIATELY AFTER SUCH INSPECTIONS.

CONTRACTOR'S INSPECTOR SHALL BE RESPONSIBLE FOR PREPARING AND SIGNING WEEKLY AND ALL INTERMEDIATE EROSION CONTROL INSPECTION REPORTS AFTER EVERY INSPECTION. SUCH REPORTS SHALL BE MADE AVAILABLE TO OWNER, ENGINEER AND CITY / STATE OFFICIALS UPON THEIR REQUEST.

REPORTS SHALL BE KEPT FOR 3 YEARS AFTER TERMINATION OF THE CONSTRUCTION ACTIVITIES.

CONTRACTOR MAY SUBMIT A WAIVER REQUEST TO THE STATE EPA FOR A REDUCTION TO MONTHLY INSPECTIONS IF THE SITE WILL BE STABILIZED DORMANT SITE FOR A LONG PERIOD.

ONLY A QUALIFIED INSPECTION PERSONNEL IS TO PERFORM THE INSPECTIONS.

FOR BMPS THAT REQUIRE REPAIR OR MAINTENANCE - NON SEDIMENT POND BMPS ARE TO BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT PONDS ARE TO BE REPAIRED OR CLEANED OUT WITHIN 10 DAYS OF INSPECTION.

FOR BMPS THAT DO NOT MEET THE INTENDED FUNCTION, A NEW BMP SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

FOR MISSING BMPS REQUIRED, THE MISSING BMPS SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

STORM WATER POLLUTION PREVENTION PLAN NARRATIVE

PROJECT DESCRIPTION

THE EXISTING SITE IS HOME TO AN EXISTING TACO BELL BUILDING, INCLUDING A PARKING LOT, SITE LIGHTING, AND OTHER SITE AMENITIES. THE ENTIRE SITE WILL BE DEMOLISHED AND A NEW TACO BELL WILL BE CONSTRUCTED IN ITS PLACE.

THE PROPOSED SITE WILL INCLUDE A NEW BUILDING, PARKING LOT, SITE LIGHTING, SIDEWALKS, STORMWATER DETENTION, PRETREATMENT STRUCTURES, ALL APPURTENANT UTILITY CONNECTIONS, GRADING AND LANDSCAPING.

PROJECT COMPLETION STATISTICS

PARCEL SIZE:	0.56 ACRES
TOTAL DISTURBED AREA:	APPROX. 0.56 ACRES
EXISTING LAND USE FOR THE SITE IS RETAIL.	
ESTIMATED PRE-CONSTRUCTION IMPERVIOUS AREA:	0.40 ACRES
ESTIMATED PRE-CONSTRUCTION IMPERVIOUS PERCENT:	71%
PRE-CONSTRUCTION RUN-OFF COEFFICIENT:	.84
PROPOSED LAND USE WILL BE RETAIL.	
ESTIMATED POST-CONSTRUCTION IMPERVIOUS AREA:	0.44 ACRES
ESTIMATED POST-CONSTRUCTION IMPERVIOUS PERCENT:	78%
POST-CONSTRUCTION RUN-OFF COEFFICIENT:	.86

PROJECT LOCATION:

<u>LATITUDE</u>	<u>LONGITUDE</u>
42.250597°	-83.195331°

EXISTING SITE SOIL TYPES:

UrbanB: URBAN LAND.

REFERENCE: USDA NATIONAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

WETLAND INFORMATION:

THERE ARE NO WETLANDS ON THIS SITE.

FIRST AND SUBSEQUENT RECEIVING STREAM:

INITIAL RECEIVING AND SUBSEQUENT WATER IS DETROIT RIVER.

CONTROL RATIONAL AND DESCRIPTION

DETENTION/WATER QUALITY:  
DUE TO NEW DEVELOPMENT IN WAYNE COUNTY, DETENTION AND WATER QUALITY WILL BE REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED TACO BELL. STORMWATER WILL BE COLLECTED AND ROUTED TO TWO SEPARATE PRETREATMENT SYSTEMS AND THE NORTH AND SOUTH END OF THE SITE. AFTER PRETREATMENT, THE STORMWATER WILL ROUTE THROUGH STORMTECH SC-740 UNDERGROUND CHAMBERS AND RELEASE AT THE REQUIRED RATE AS SHOWN ON SHEET C-143. THE REQUIRED RESTRICTED FLOW WILL EXIT THE UNDERGROUND DETENTION SYSTEM AND ENTER IN THE MS4 OF THE CITY OF LINCOLN PARK.

OWNER CONTACT:

OWNER  
POSITION  
XXXXXXXXXXXX / XXXXXXXX  
CITY, STATE ZIP  
000.000.000 FAX: 000.000.000  
XXXXXXXXXX.COM

ANTICIPATED TIMING:

CONSTRUCTION BEGIN: XXXXX, 2018  
CONSTRUCTION COMPLETE: XXXXX, 2018

CONTRACTOR: T.B.D.  
CONTACT: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

CONTRACTOR SHALL MAINTAIN A CONSTRUCTION LOG DOCUMENTING ALL GRADING AND STABILIZATION ACTIVITIES.



TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



EXPLORER LITE  
LARGE50

SWPP NOTES

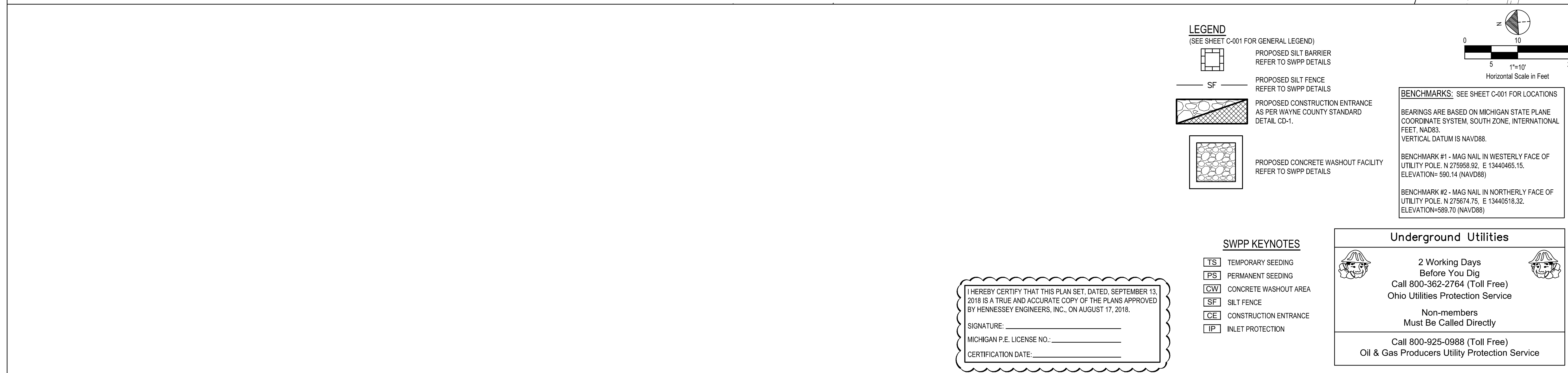
C-131

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.  
SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_





# C-132



1) MULCH AND OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 21 DAYS OR ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.

-STRAW SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/AC. OR 90 LB./1,000 SQ. FT. (TWO TO THREE BALES) THE STRAW MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND PLACE TWO 45-LB BALES OF STRAW IN EACH SECTION.

-ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS AND ROLLED EROSION CONTROL PRODUCTS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD MULCH/CHIPS APPLIED AT 10-20 TONS/AC.

-USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT BE LEFT GENERALLY LONGER THAN 6 INCHES.

-FOR STRAW MULCH, SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER. ALL APPLICATIONS OF SYNTHETIC BINDERS MUST BE CONDUCTED IN SUCH A MANNER WHERE THERE IS NO CONTACT WITH WATERS OF THE STATE.

TEMPORARY SEEDING			
SEEDING DATES	SPECIES	SEEDING RATE	
		LB./1,000 SQ FT	LB./AC.
MARCH 1 TO AUGUST 15	OATS	3	128 (4 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	55
	PERENNIAL RYEGRASS	3.25	142
	CREeping RED FESCUE	0.4	17
	KENTUCKY BLUEGRASS	0.4	17
	OATS	3	128 (3 BUSHEL)
	TALL FESCUE	1	40
ANNUAL RYEGRASS	1	40	
AUGUST 16 TO OCTOBER 31	RYE	3	112 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	WHEAT	3	120 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREeping RED FESCUE	0.4	40
KENTUCKY BLUEGRASS	0.4		
NOVEMBER 1 TO FEBRUARY 29	USE MULCH ONLY OR DORMANT SEEDING		
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED			

PERMANENT SEEDING				
SEED MIX	SEEDING RATE		NOTES:	
	LB./AC.	LB./1,000 SQ FT		
GENERAL USE				
CREeping RED FESCUE	20-40	1/2 - 1	FOR CLOSE MOWING & FOR WATERWAYS WITH < 2.0 FT/SEC VELOCITY	
DOMESTIC RYEGRASS	10-20	1/4 - 1/2		
KENTUCKY BLUEGRASS	10-20	1/2-1		
TALL FESCUE	40-50	1-1 1/4		
DWARF FESCUE	90	2 1/4		
STEEP BANKS OR CUT SLOPES				
TALL FESCUE	40-50	1 1/4	DO NOT SEED LATER THAN AUGUST	
CROWN VETCH	10-20	1/4-1/2		
TALL FESCUE	20-30	1/2-3/4		
FLAT PEA	20-25	1/2-3/4	DO NOT SEED LATER THAN AUGUST	
TALL FESCUE	20-30	1/2-3/4		
ROAD DITCHES AND SWALES				
TALL FESCUE	40-50	1-1 1/4		
DWARF FESCUE	90	2 1/4		
KENTUCKY BLUEGRASS	5	0.1		
LAWNS				
KENTUCKY BLUEGRASS	100-120	2		
PERENNIAL RYEGRASS		2		
KENTUCKY BLUEGRASS	100-120	2	FOR SHADED AREAS	
CREeping RED FESCUE		1-1/2		
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED				

NOTES:  
CONSTRUCTION SEQUENCING AND DISTURBING ONLY SMALL AREAS AT A TIME CAN GREATLY REDUCE PROBLEMATIC DUST FROM THE SITE. IF LAND MUST BE DISTURBED, ADDITIONAL TEMPORARY STABILIZATION MEASURES SHOULD BE CONSIDERED PRIOR TO DISTURBANCES.

1) STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.

5) SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER, SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

ANY DISTURBED AREAS THAT ARE NOT GOING TO BE WORKED FOR 14 DAYS DURING WINTER MUST BE SEEDED AND MULCHED BY NOVEMBER 1.

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREA WITHIN 50 FEET OF A WATERCOURSE AND NOT AT FINAL GRADE	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE, IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 21 DAYS
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES, THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A WATERCOURSE	WITHIN 7 DAYS IF THE MOST RECENT DISTURBANCE WITHIN THE AREA
DISTURBED AREAS THAT WILL BE IDLE OVER THE WINTER	PRIOR TO NOVEMBER 1.

NOTES:

1) SUBSOILER, PLOW, OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. (MAXIMUM INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY.) SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.

4) AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000 SQ. FT. OR 2 TONS PER ACRE.

5) FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN PLACE OF A SOIL TEST FERTILIZER SHALL BE APPLIED AT A RATE OF 25 POUNDS PER 1,000 SQ. FT. OR 1,000 POUNDS PER ACRE OF A 10-10-10 OR 12-12-12 ANALYSES.

6) THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES. ON SLOPING LAND, THE SOIL SHALL BE WORKED ON THE CONTOUR.

9) THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING"

- FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
- FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
- APPLY SEED UNIFORMLY WITH A CYCLOCON SEEDER, DRILL, CULTIPLACKER SEEDER, OR HYPO-SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON A FIRM, MOST SEEDBED, WHERE FEASIBLE. EXCEPT WHEN A CULTIPLACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPLACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHERE FEASIBLE.

10) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH. IRRIGATION SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDED AREAS FROM EXCESSIVE RUNOFF.

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREA WITHIN 50 FEET OF A WATERCOURSE AND AT FINAL GRADE.	WITHIN 2 DAYS OF REACHING FINAL GRADE.
ANY AREA AT FINAL GRADE.	WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

SITE INSPECTIONS SHALL BE DONE WEEKLY AND AFTER EVERY RAINFALL EVENT EXCEEDING 1/2" OF RAINFALL. ALL NECESSARY REPAIRS SHOULD BE IMPLEMENTED IMMEDIATELY AFTER SUCH INSPECTIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING WEEKLY EROSION CONTROL INSPECTION REPORTS. SUCH REPORTS SHALL BE MADE AVAILABLE TO OWNER, ENGINEER AND CITY / STATE OFFICIALS UPON THEIR REQUEST.

PROJECT NAME: \_\_\_\_\_

SWPPP CONTACT: \_\_\_\_\_

AMENDMENT No.	DATE OF AMENDMENT	AMENDMENT PREPARED BY [NAME(S) AND TITLE]	DESCRIPTION OF THE AMENDMENT
1			
2			
3			
4			
5			
6			

PROJECT NAME: \_\_\_\_\_

SWPPP CONTACT: \_\_\_\_\_

[illegible]

# EXPLORER LITE

# SWPP NOTES AND DETAILS

# C-133

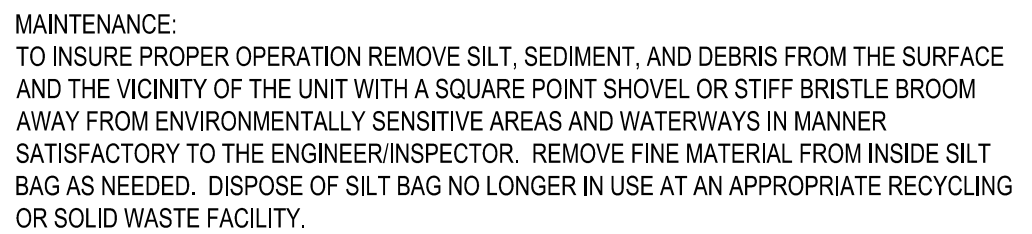




- MAINTENANCE:**  
SILT FENCE SHOULD BE INSPECTED REGULARLY AND FREQUENTLY AS WELL AS AFTER EACH RAINFALL EVENT TO INSURE THAT THEY ARE INTACT AND THERE ARE NO GAPS AT THE FENCE-GROUND INTERFACE OR TEARS ALONG THE LENGTH OF THE FENCE. IF GAPS OR TEARS ARE FOUND, THEY SHOULD BE REPAIRED OR THE FABRIC REPLACED IMMEDIATELY. ACCUMULATED SEDIMENTS SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMOVAL SHOULD OCCUR MORE FREQUENTLY IF ACCUMULATED SEDIMENT IS CREATING NOTICEABLE STRAIN ON THE FABRIC AND THERE IS THE POSSIBILITY OF THE FENCE FAILING FROM A SUDDEN STORM EVENT. WHEN THE SILT FENCE IS REMOVED, THE ACCUMULATED SEDIMENT SHOULD BE REMOVED.

B1

(A1)



**INLET INSPECTION:**  
TO INSPECT INLET, REMOVE SILT BAG WITH GRATE INSIDE, INSPECT CATCH BASIN AND  
REPLACE SILT BAG BACK INTO GRATE FRAME.

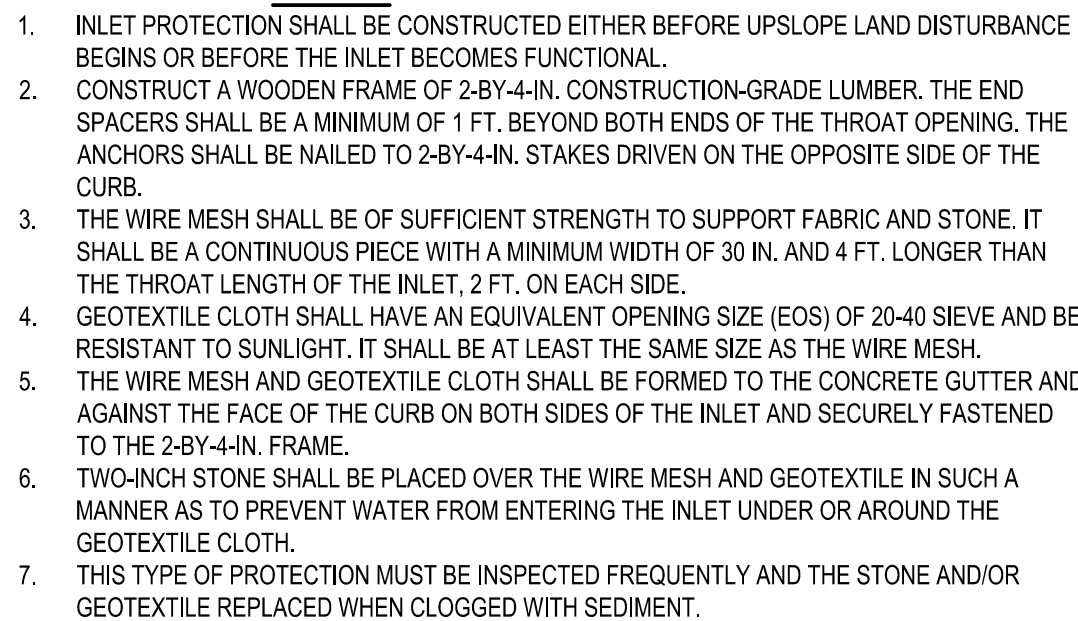
PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. THE SILT BAG MUST NEVER BE USED WHERE OVERFLOW MAY ENDANGER AN EXPOSED SLOPE.

C2



1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE OF WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

B2



C3

TWO-PLY SYSTEMS	
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET
	CONTINUOUSLY WOUND
	FUSION-WELDED JOINTURES
OUTER FILTRATION MESH	3/4" X 3/4" MAX. APERTURE SIZE
	COMPOSITE POLYPROPYLENE FABRIC
	(WOVEN LAYER & NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)
	3/16" MAX. APERTURE SIZE
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS	



TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

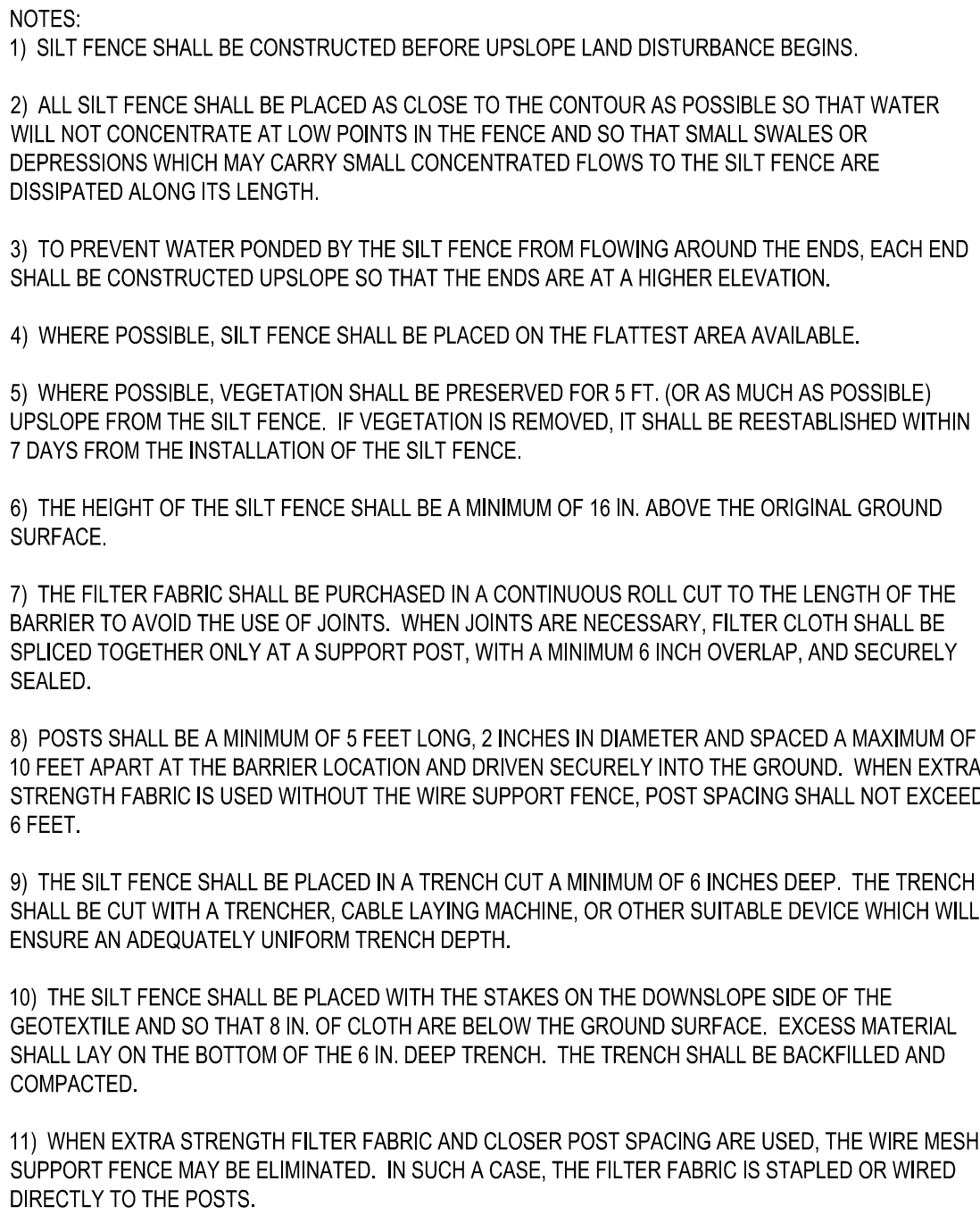
ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH 1/2 INCH STORM RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

A4



12) THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

13) SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.

14) SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: A) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, B) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR C) OTHER PRACTICES SHALL BE INSTALLED.

**MAINTENANCE:**  
SILT FENCE SHOULD BE INSPECTED REGULARLY AND FREQUENTLY AS WELL AS AFTER EACH RAINFALL EVENT TO INSURE THAT THEY ARE INTACT AND THERE ARE NO GAPS AT THE FENCE-GROUND INTERFACE OR TEARS ALONG THE LENGTH OF THE FENCE. IF GAPS OR TEARS ARE FOUND, THEY SHOULD BE REPAIRED OR THE FABRIC REPLACED IMMEDIATELY. ACCUMULATED SEDIMENTS SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMOVAL SHOULD OCCUR MORE FREQUENTLY IF ACCUMULATED SEDIMENT IS CREATING NOTICEABLE STRAIN ON THE FABRIC AND THERE IS THE POSSIBILITY OF THE FENCE FAILING FROM A SUDDEN STORM EVENT. WHEN THE SILT FENCE IS REMOVED, THE ACCUMULATED SEDIMENT SHOULD BE REMOVED.



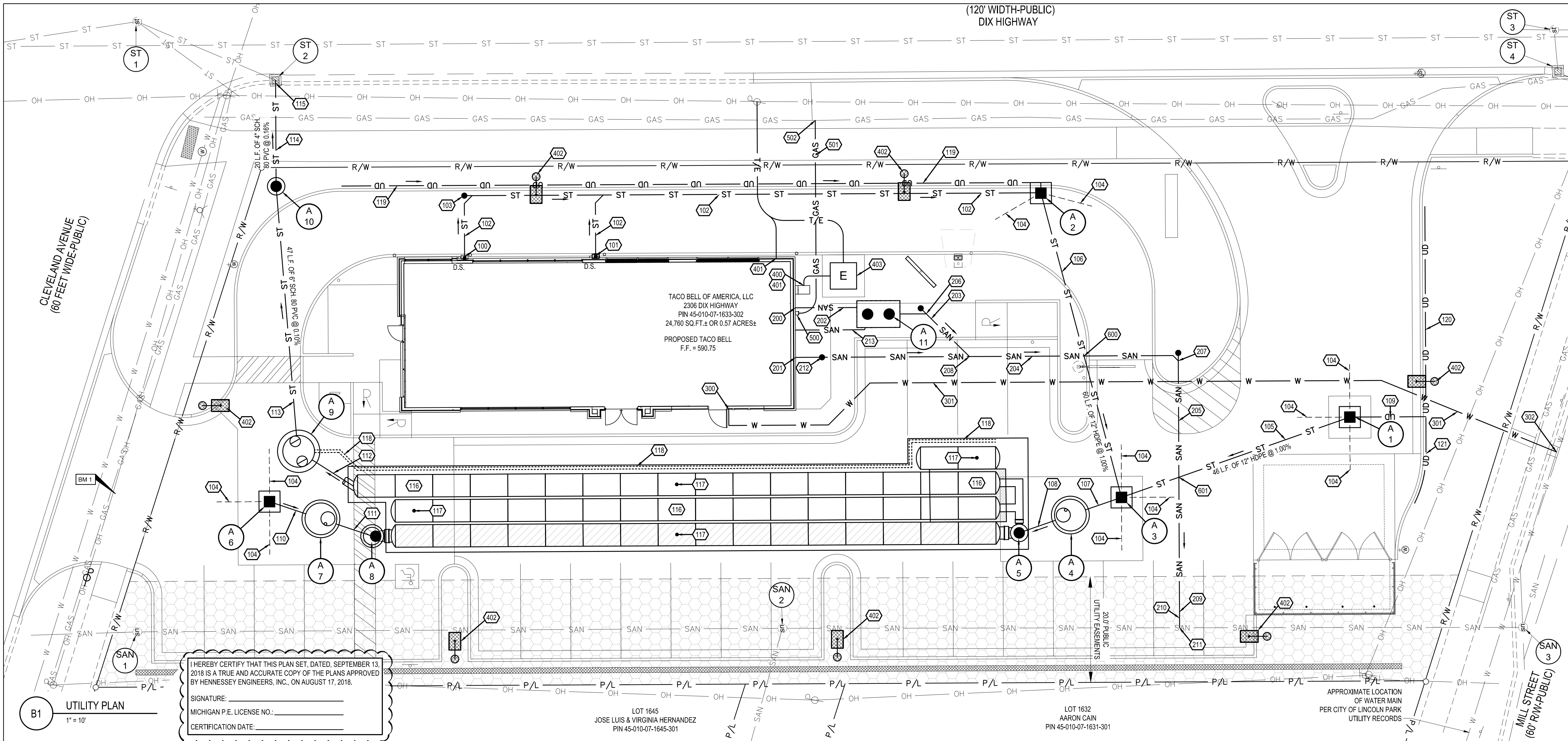
(A5)



## SWPP NOTES AND DETAILS

***C-134***





#### GENERAL SHEET NOTES

- SEE SHEET C-001 FOR ADDITIONAL UTILITY NOTES.

#### PLAN KEYNOTES

#### STORM

- DOWNSPOUT INVERT AT BUILDING = 587.75.
- DOWNSPOUT INVERT AT BUILDING = 587.45.
- CONTRACTOR SHALL INSTALL 8" SDR 26 PVC STORM PIPES AND SUPPLY FITTINGS AS REQUIRED TO CONNECT PROPOSED DOWNSPOUT CONNECTIONS TO PROPOSED CATCH BASIN A2. STORM PIPES SHALL BE INSTALLED AT A MINIMUM OF 2.0% SLOPES AND CONNECT INTO PROPOSED CATCH BASIN AT THE ELEVATIONS SHOWN ON PLAN. ALL PIPES SHALL MAINTAIN A MINIMUM COVER OF THREE FEET. THE CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED PIPE LOCATIONS AND NOTIFY CONSTRUCTION MANAGER IMMEDIATELY IF THERE ARE ANY ISSUES MAINTAINING POSITIVE DRAINAGE. CONTRACTOR SHALL INSTALL CLEANOUTS AS SHOWN ON PLAN, FLUSH WITH FINISHED PAVEMENT GRADE. SEE SHEET C-503.
- PROPOSED STORM CLEAN OUT AND WYE CONNECTION, SEE SHEET C-503.
- PROPOSED FINGER DRAIN, SEE SHEET C-503.
- PROPOSED 46 L.F. OF 12" HDPE STORM SEWER @ 1.00%.
- PROPOSED 80 L.F. OF 12" HDPE STORM SEWER @ 1.00%.
- PROPOSED 7 L.F. OF 12" HDPE STORM SEWER @ 1.00%.
- PROPOSED 7 L.F. OF 12" HDPE STORM SEWER @ 1.00%.
- PROPOSED 15 L.F. OF 4" PVC UNDERDRAIN @ 1.0%, SEE SHEET C-501.
- PROPOSED 7 L.F. OF 12" HDPE STORM SEWER @ 1.00%.
- PROPOSED 7 L.F. OF 12" HDPE STORM SEWER @ 1.00%.
- PROPOSED 9 L.F. OF 15" ADS N-12 STORM SEWER @ 0.00%.
- PROPOSED 47 L.F. OF 6" SCH. 80 PVC STORM SEWER @ 0.10%.
- PROPOSED 20 L.F. OF 4" SCH. 80 PVC STORM SEWER @ 0.16%.
- CONTRACTOR SHALL CONNECT INTO EXISTING STRUCTURE WITH A WATERTIGHT SEAL.
- PROPOSED STORMTECH UNDERGROUND DETENTION SYSTEM, SEE SHEET C-145 FOR SPECIFICATIONS AND DETAIL INFORMATION.
- PROPOSED SC-740 INSPECTION PORT, SEE SHEET C-145.
- PROPOSED 6" HD PVC UNDERDRAIN.
- PROPOSED 134 L.F. OF 4" PVC UNDERDRAIN @ 0.50%, SEE SHEET C-501.
- PROPOSED 40 L.F. OF 4" PVC UNDERDRAIN @ 1.0%, SEE SHEET C-501.
- PROPOSED 17 L.F. OF 4" PVC UNDERDRAIN @ 1.0%, SEE SHEET C-501.

#### SANITARY

- PROPOSED SANITARY CONNECTION. INV.=583.95.
- PROPOSED SANITARY CONNECTION. INV.=583.80.
- PROPOSED 12 L.F. OF 6" (PVC) SANITARY SEWER @ 2.00% MINIMUM.
- PROPOSED 16 L.F. OF 6" (PVC) SANITARY SEWER @ 2.00% MINIMUM.
- PROPOSED 73 L.F. OF 6" (PVC) SANITARY SEWER @ 2.00% MINIMUM.
- PROPOSED 51 L.F. OF 6" (PVC) SANITARY SEWER @ 2.00% MINIMUM.
- PROPOSED SANITARY CLEANOUT SEE SHEET C-503 AND WYE CONNECTION SHEET C-503. INV.=583.36.
- PROPOSED SANITARY CLEANOUT SEE SHEET C-503 AND WYE CONNECTION SHEET C-503. INV.=582.34.
- PROPOSED SANITARY WYE CONNECTION, SEE SHEET C-503. INV.=583.14.
- PROPOSED BEND FITTING, POINTED DOWN, INV.=581.39.
- PROPOSED 6" (PVC) SANITARY SEWER @ 37.7% SLOPE.
- PROPOSED 3'0" SANITARY SEWER RISER (TAP). CONTRACTOR SHALL UTILIZE A ROMAC SADDLE (OR APPROVED EQUAL) TO MAKE CONNECTION TO EXISTING SANITARY MAIN. PROPOSED 6" INV.=579.61; EXISTING 12" INV.=579.11. SEE SHEET C-503.
- PROPOSED SANITARY CLEANOUT IN LANDSCAPING. SEE SHEET C-503.
- PROPOSED 3" PVC SANITARY VENT. COORDINATE EXACT LOCATION WITH PLUMBING PLANS.

#### WATER

- PROPOSED WATER CONNECTION. COORDINATE WITH PLUMBING PLANS.
- PROPOSED 1-1/2" (COPPER TYPE "K") WATER SERVICE LINE.
- PROPOSED WATER SERVICE TAP AND WATER VALVE PER CITY OF LINCOLN PARK STANDARDS AND SPECIFICATIONS. SEE SHEET C-503.

#### ELECTRIC AND COMMUNICATIONS

- PROPOSED ELECTRIC METER PER ELECTRIC COMPANY SPECIFICATIONS. SEE BUILDING DRAWINGS FOR EXACT LOCATION. ELECTRIC SERVICE LINE TO BE COORDINATED WITH THE ELECTRIC COMPANY.
- PROPOSED ELECTRIC AND TELECOMMUNICATIONS SERVICE CONNECTION TO BE COORDINATED WITH THE UTILITY COMPANIES.
- PROPOSED LIGHT POLE. SEE SHEET C-502. SEE ELECTRICAL DRAWINGS FOR SPECIFICATIONS.
- PROPOSED ELECTRICAL TRANSFORMER PER ELECTRICAL COMPANY SPECIFICATIONS. G.C. TO VERIFY EXACT LOCATION AND SIZE WITH UTILITY ENGINEER.

#### EXISTING SANITARY NOTE:

CONTRACTOR SHALL VIDEOAPE ENTIRE EXISTING SANITARY LINE WITHIN THE PROJECT LIMITS, FROM MANHOLE TO MANHOLE, TO DETERMINE THE CONDITIONS OF THE SEWER. THE SEWER MAY NEED TO BE LINED PRIOR TO ANY SITE IMPROVEMENTS AS DEEMED NECESSARY BY THE ENGINEER.

NOTE: EMERGENCY OVERLAND OVERFLOW FROM UNDERGROUND DETENTION SYSTEM FLOWS TO APRONS AND OUT TO PUBLIC ROADS.

#### GAS

- PROPOSED GAS METER PER GAS COMPANY SPECIFICATIONS. SEE BUILDING DRAWINGS FOR EXACT LOCATION. GAS SERVICE LINE TO BE COORDINATED WITH THE GAS COMPANY.
- PROPOSED 39 L.F. OF 2" GAS SERVICE CONNECTION TO BE COORDINATED WITH THE GAS COMPANY.
- PROPOSED CONNECTION TO EXISTING UTILITY. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR METHOD OF CONNECTION.

#### UTILITY CROSSINGS

GENERAL CROSSING NOTES: CONTRACTOR SHALL COORDINATE ALL CROSSINGS WITH THE UTILITY COMPANY. PRESSURIZED AND SECONDARY UTILITIES SHALL DEFLECT TO MAINTAIN 18" CLEAR AT SANITARY OR STORM SEWER CROSSINGS.

- PROPOSED UTILITY CROSSING: 6" STORM INV.=585.36; 6" SANITARY INV.=582.70.
- PROPOSED UTILITY CROSSING: 6" STORM INV.=585.20; 6" SANITARY INV.=581.90.

#### LEGEND

(SEE SHEET C-001 FOR GENERAL LEGEND)

—ST—	PROPOSED STORM SEWER
- - - -	PROPOSED FINGER DRAIN
—SAN—	PROPOSED SANITARY SEWER
—W—	PROPOSED WATER SERVICE
—GAS—	PROPOSED GAS SERVICE
—T&E—	PROPOSED UNDERGROUND TELEPHONE, CABLE, AND ELECTRIC SERVICE
D.S. ■	PROPOSED DOWNSPOUT
A #	APPURTENANCES
E	UTILITY CONSTRUCTION KEYNOTE
	EXISTING EASEMENT
	PROPOSED ISOLATOR ROW

#### EXISTING STRUCTURES

STRICT. ID	STRUCTURE DETAILS
ST 1	EXISTING STORM SEWER MANHOLE RIM=589.29 INV. 12" (SW)=585.26 INV. (W)=581.10 INV. 12" (N)=582.96
ST 2	EXISTING STORM CATCH BASIN RIM=588.79 INV. 12" (NE)=583.49 PROP. INV. 4" (W)=583.52
ST 3	EXISTING STORM SEWER MANHOLE RIM=588.99 INV. (N)=586.75 INV. (S)=583.40 (RESTRICTED FLOW) INV. (W)=584.40
ST 4	EXISTING STORM CATCH BASIN RIM=588.52 INV. (E)=585.97
SAN 1	EXISTING SANITARY SEWER MANHOLE RIM=589.55 INV. 12" (N)=580.65 INV. 12" (S)=580.25
SAN 2	EXISTING SANITARY SEWER MANHOLE RIM=589.46 INV. 12" (N)=579.56 INV. (S)=579.56 INV. 12" (W)=579.46
SAN 3	EXISTING SANITARY SEWER MANHOLE RIM=588.41 INV. 12" (N)=578.73 INV. 12" (E)=578.61

#### PROPOSED STRUCTURES

STRICT. ID	STRUCTURE DETAILS
A 1	PROPOSED STANDARD INLET, 2' DIA. (SEE SHEET C-504) RIM=588.88 INV. 4" (N.E.W)=587.46 INV. 4" (S)=586.76 INV. 12" (NW)=584.93 SUMP=582.93
A 2	PROPOSED STANDARD INLET, 2' DIA. (SEE SHEET C-504) RIM=589.25 INV. 4" (NW,SW)=587.83 INV. 4" (E)=587.09 INV. 8" (N)=585.35 INV. 12" (SW)=585.07 SUMP=583.07
A 3	PROPOSED CATCH BASIN, 4' DIA. W/ 2' SUMP (SEE SHEET C-504) RIM=588.50 INV. 4" (E,S,W)=587.08 INV. 12" (NW,NE,SE)=584.47 SUMP=582.547
A 4	PROPOSED STORMCEPTOR STC 1800 (SEE SHEET C-144) RIM=588.75 INV. 12" (SE)=584.40 INV. 12" (NW)=584.32
A 5	PROPOSED 48" Ø DIVERSION STRUCTURE (SEE SHEET C-504) RIM=589.00 INV. 24" (N)=584.20 INV. 15" (E)=584.95 INV. 12" (SE)=584.25 SUMP=582.20

#### PROPOSED STRUCTURES

STRICT. ID	STRUCTURE DETAILS
A 6	PROPOSED CATCH BASIN, 4' DIA. W/ 2' SUMP (SEE SHEET C-504) RIM=589.10 INV. 4" (N.E.W)=587.68 INV. 12" (SW)=584.47 SUMP=582.47
A 7	PROPOSED STORMCEPTOR STC 900 (SEE SHEET C-144) RIM=589.37 INV. 12" (NE)=584.40 INV. 12" (SW)=584.32
A 8	PROPOSED 48" Ø DIVERSION STRUCTURE WITH OFFSET MANHOLE LID (SEE SHEET C-504) RIM=589.47 INV. 12" (NE)=584.25 INV. 24" (S)=584.20 SUMP=582.20
A 9	PROPOSED CONTROL STRUCTURE (SEE SHEET C-144) RIM=589.69 INV. 6" (E,S)=583.60 INV. 15" (SW)=584.21
A 10	PROPOSED 4" DIA. MANHOLE W/ 2' SUMP (SEE SHEET C-504) RIM=589.21 INV. 4" (W)=583.55 INV. 6" (E)=583.55 SUMP=581.55
A 11	PROPOSED 1,000 GALLON EXTERIOR GREASE INTERCEPTOR (SEE SHEET C-503) RIM=590.20 INV. 6" PVC (N)=583.71 INV. 6" PVC (S)=583.46

ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17

BUILDING TYPE: EXPLORER LITE LG

PLAN VERSION: July 2017

SITE NUMBER: 283405/445231

STORE NUMBER: 2017088.46

#### TACO BELL

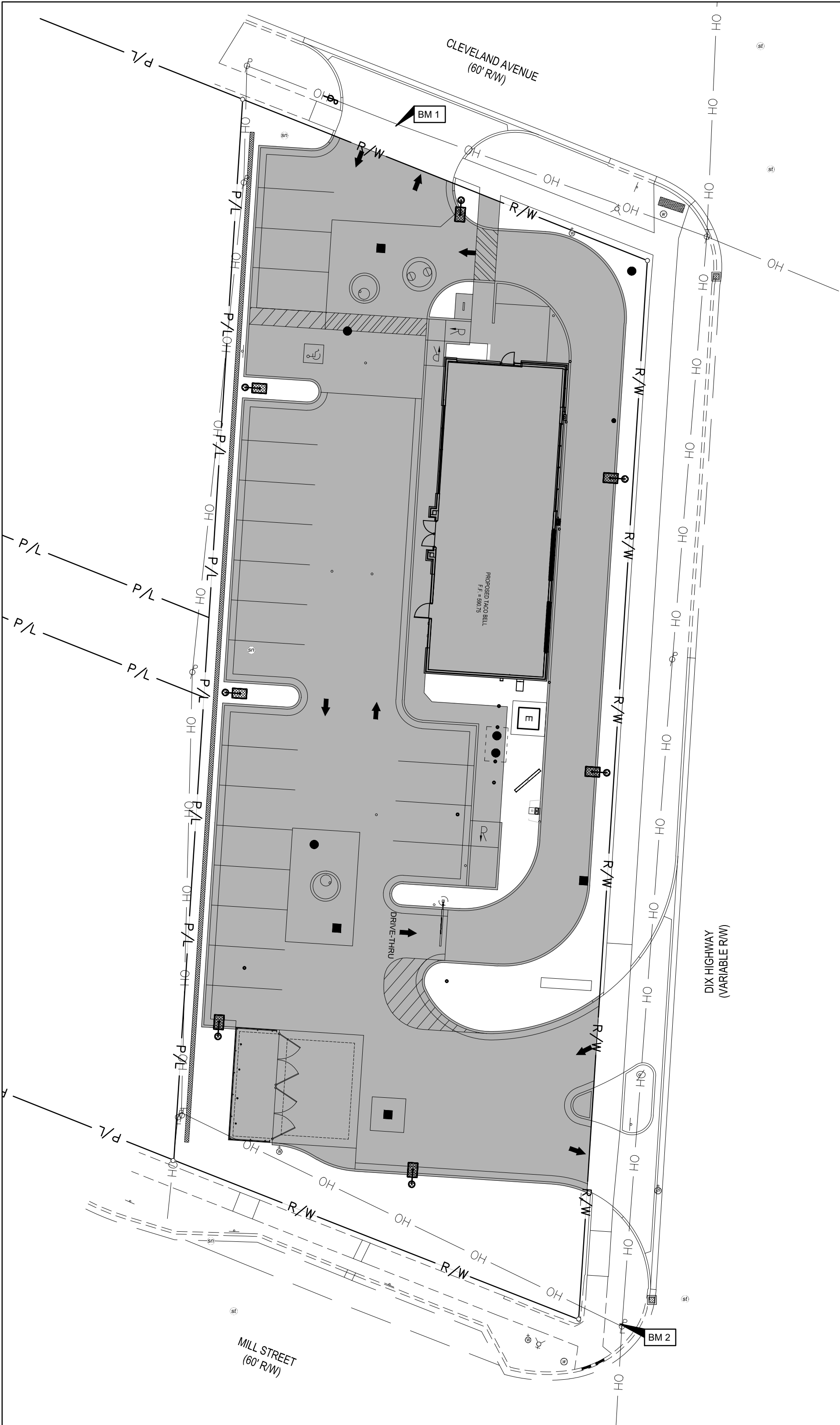
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



EXPLORER LITE  
LARGE50

#### UTILITY PLAN

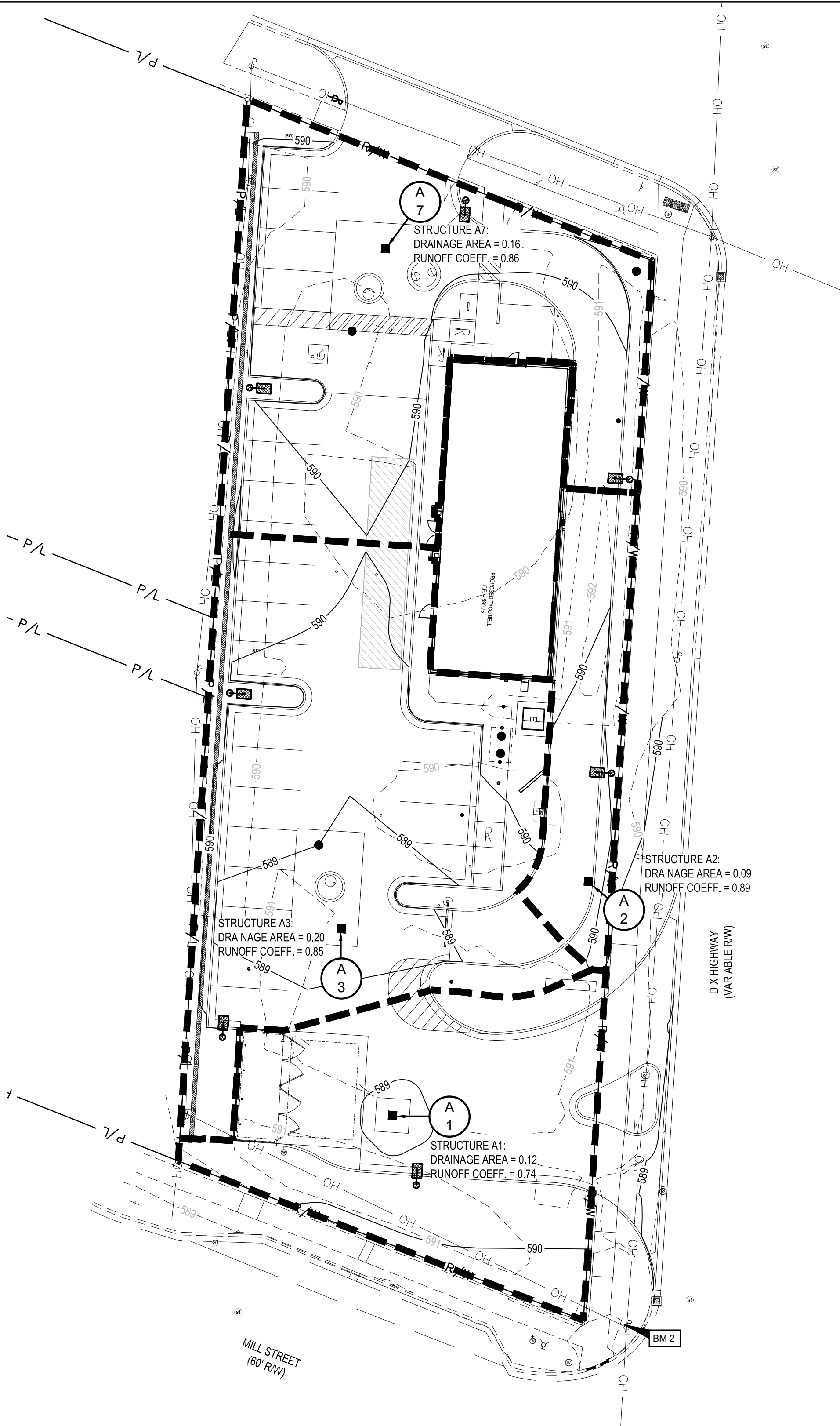
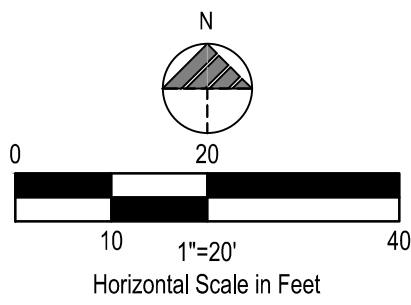
**C-141**



IMPERVIOUS/PERVIOUS DELINEATION

PROPOSED IMPERVIOUS AREA

TOTAL IMPERVIOUS DRAINAGE AREA = 0.44 AC  
TOTAL PERVIOUS DRAINAGE AREA = 0.13 AC  
IMPERVIOUS RUNOFF COEFFICIENT = 0.95  
PERVIOUS RUNOFF COEFFICIENT = 0.45  
TOTAL WEIGHT RUNOFF COEFFICIENT = 0.84



NOTE: EMERGENCY OVERLAND OVERFLOW FROM UNDERGROUND DETENTION SYSTEM FLOWS TO APRONS AND OUT TO PUBLIC ROADS.

BENCHMARKS: SEE SHEET C-001 FOR LOCATIONS

BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FEET, NAD83.  
VERTICAL DATUM IS NAVD88.

BENCHMARK #1 - MAG NAIL IN WESTERLY FACE OF UTILITY POLE. N 275958.92, E 13440465.15.  
ELEVATION= 590.14 (NAVD88)

BENCHMARK #2 - MAG NAIL IN NORTHERLY FACE OF UTILITY POLE. N 275674.75, E 13440518.32.  
ELEVATION=589.70 (NAVD88)

Underground Utilities

2 Working Days  
Before You Dig  
Call 800-362-2764 (Toll Free)  
Ohio Utilities Protection Service

Non-members  
Must Be Called Directly  
Call 800-925-0988 (Toll Free)  
Oil & Gas Producers Utility Protection Service

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_

A1

PROPOSED IMPERVIOUS/PERVIOUS MAP  
1" = 20'

C1

PROPOSED DRAINAGE MAP  
1" = 20'

ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

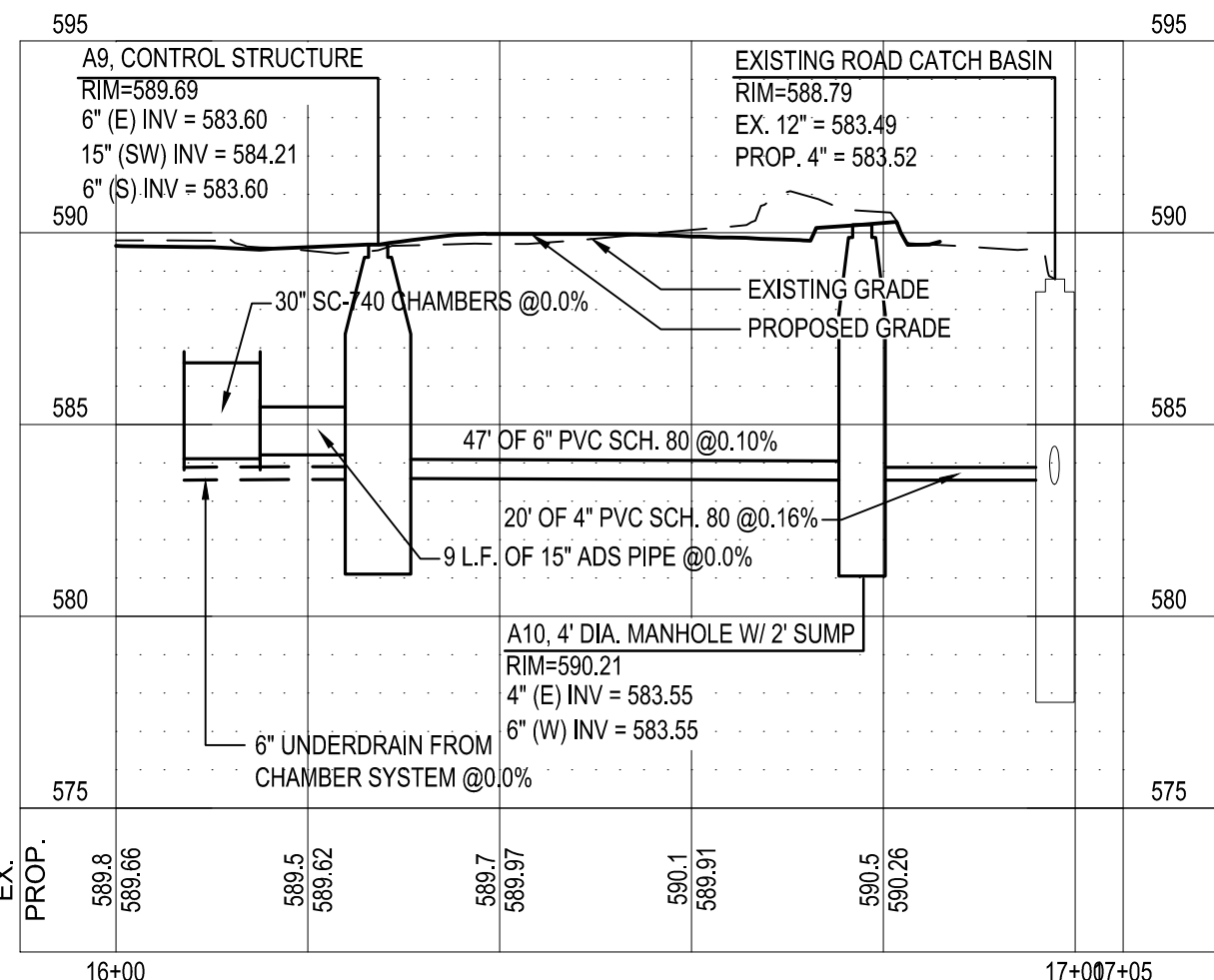
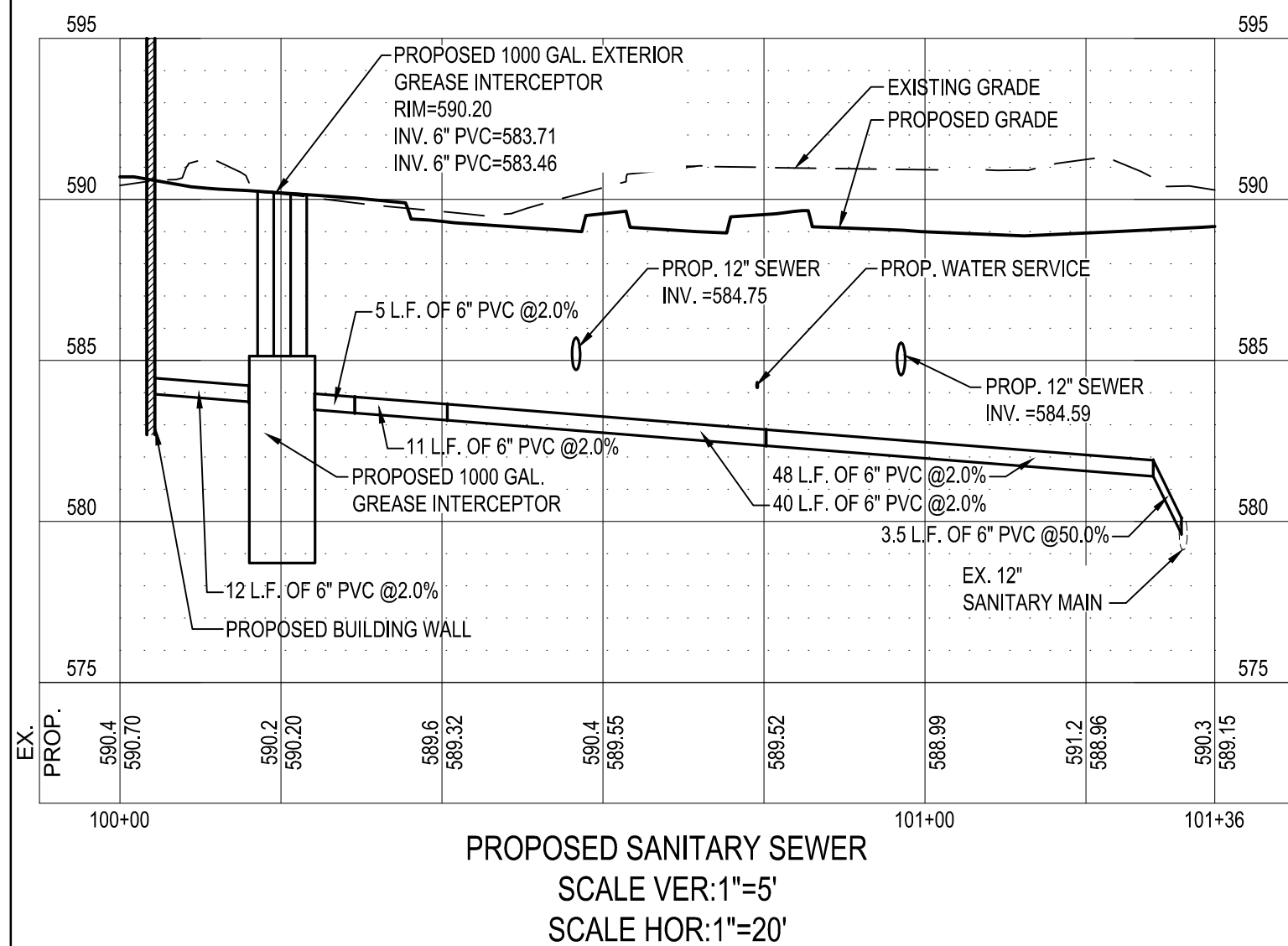
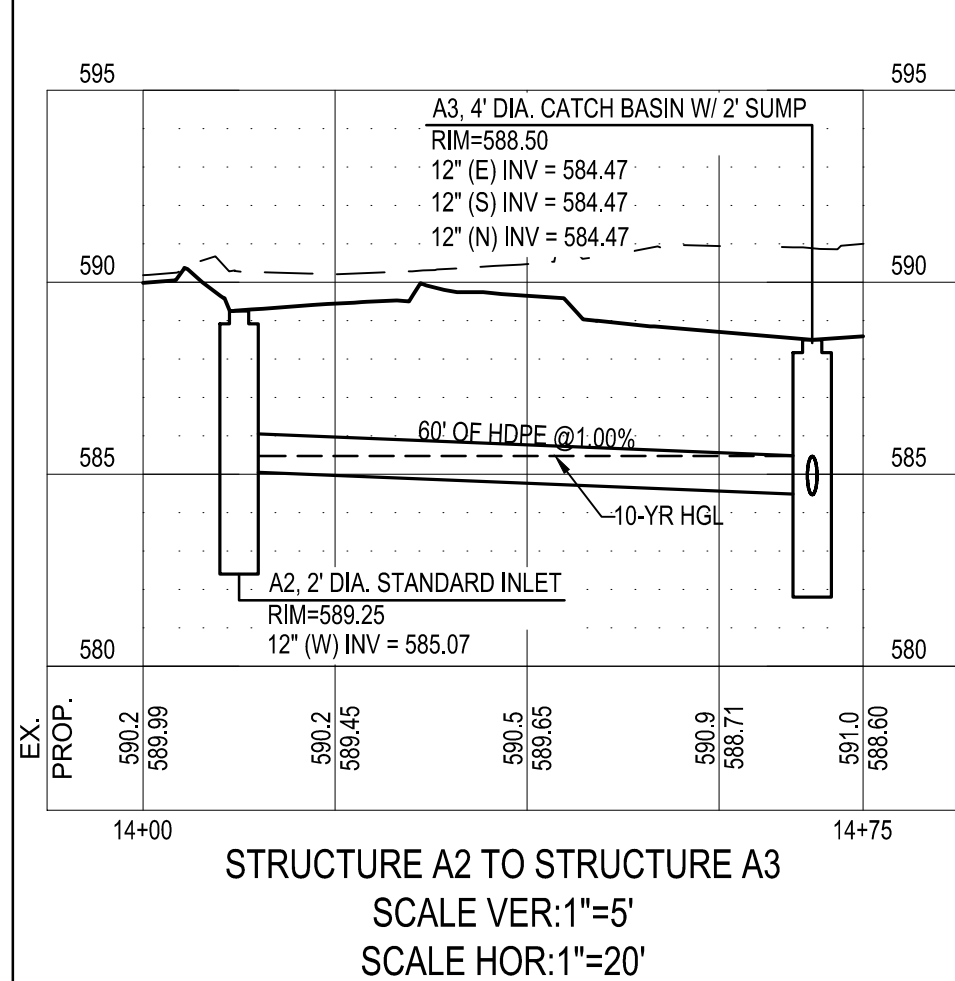
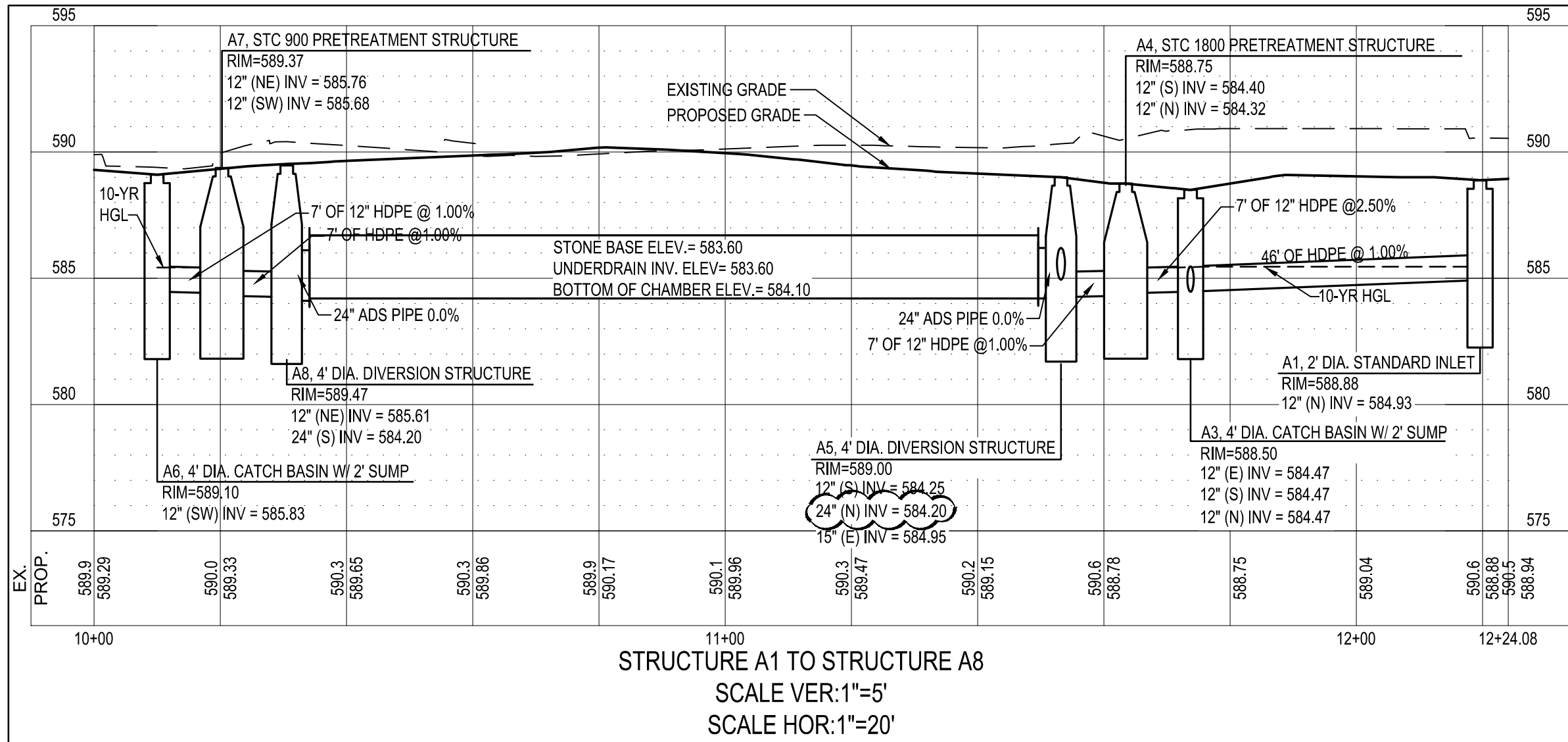


EXPLORER LITE  
LARGE50

DRAINAGE MAPS

**C-142**





EXISTING STRUCTURES	
STRICT. ID	STRUCTURE DETAILS
ST 1	EXISTING STORM SEWER MANHOLE RIM=589.29 INV. 12" (SW)=585.26 INV. (W)=581.10 INV. 12" (N)=582.96
ST 2	EXISTING STORM CATCH BASIN RIM=588.79 INV. 12" (NE)=583.49 PROP. INV. 4" (W)=583.52
ST 3	EXISTING STORM SEWER MANHOLE RIM=588.99 INV. (N)=586.75 INV. (S)=583.40 (RESTRICTED FLOW) INV. (W)=584.40
ST 4	EXISTING STORM CATCH BASIN RIM=588.52 INV. (E)=585.97
SAN 1	EXISTING SANITARY SEWER MANHOLE RIM=589.55 INV. 12" (N)=580.65 INV. 12" (S)=580.25
SAN 2	EXISTING SANITARY SEWER MANHOLE RIM=589.46 INV. 12" (N)=579.56 INV. 12" (S)=579.56 INV. 12" (W)=579.46
SAN 3	EXISTING SANITARY SEWER MANHOLE RIM=588.41 INV. 12" (N)=578.73 INV. 12" (E)=578.61

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

#### TEN (10) YEAR STORM CALCULATIONS FOR CLOSED CONDUIT SIZING

From Structure	To Structure	A (Acres)	C Factor	C*A	Sum of C*A	Time, t (min)	l=151.8/(T+19.9) (in/hr)	Q=CIA (cfs)	Pipe Dia. (in.)	Slope of Pipe (%)	Length (ft)	Velocity Full (ft/s)	n <sub>HOPE</sub>	Q <sub>manning</sub> =(1.486A <sup>2/3</sup> S <sup>1/2</sup> )/n	Upper Rim (ft)	Upper Invert	Upper HG Elev. (ft)	Upper Rim-HG (ft)	Lower Rim (ft)	Lower Invert	Lower HG Elev. (ft)	Lower Rim-HG (ft)
A1	A3	0.12	0.74	0.09	0.09(1)	15.0	4.35	0.39	12.0	1.00	46.0	4.92	0.012	3.86	588.88	584.93	585.49	3.39	588.50	584.47	585.49	3.01
A2	A3	0.09	0.89	0.08	0.08(1)	15.0	4.35	0.25	12.0	1.00	60.0	4.92	0.012	3.86	589.25	585.07	585.49	3.76	588.50	584.47	585.49	3.01
A3	A4	0.2	0.85	0.17	0.34	15.3	4.31	1.47	12.0	1.00	7.0	4.92	0.012	3.86	588.50	584.47	585.41	3.09	588.75	584.40	584.40	4.35
A6	A7	0.16	0.86	0.14	0.14	15.0	4.35	0.60	12.0	1.00	7.0	4.92	0.012	3.86	589.10	584.47	585.40	3.70	589.37	584.40	585.4	3.97

i=independent run, part of A3

#### EXISTING/PROPOSED STRUCTURES

PROPOSED STRUCTURES	
STRICT. ID	STRUCTURE DETAILS
A 1	PROPOSED STANDARD INLET, 2' DIA. (SEE SHEET C-504) RIM=588.88 INV. 4" (N.E.W)=587.46 INV. 4" (S)=586.76 INV. 12" (NW)=584.93 SUMP=582.93
A 2	PROPOSED STANDARD INLET, 2' DIA. (SEE SHEET C-504) RIM=589.25 INV. 4" (NW,SW)=587.83 INV. 4" (E)=587.09 INV. (N)=586.75 INV. 12" (SW)=585.07 SUMP=583.07
A 3	PROPOSED CATCH BASIN, 4' DIA. W/ 2' SUMP (SEE SHEET C-504) RIM=588.50 INV. 4" (E.S.W)=587.08 INV. 12" (NW,NE,SE)=584.47 SUMP=582.547
A 4	PROPOSED STORM CATCHER STC 1800 (SEE SHEET C-144) RIM=588.75 INV. 12" (N)=584.40 INV. 12" (W)=584.32
A 5	PROPOSED 48" Ø DIVERSION STRUCTURE (SEE SHEET C-504) RIM=589.00 INV. 24" (N)=584.20 INV. 15" (E)=584.95 INV. 12" (SE)=584.25 SUMP=582.20

PROPOSED STRUCTURES	
STRICT. ID	STRUCTURE DETAILS
A 6	PROPOSED CATCH BASIN, 4' DIA. W/ 2' SUMP (SEE SHEET C-504) RIM=589.10 INV. 4" (N.E.W)=587.68 INV. 12" (SW)=584.47 SUMP=582.47
A 7	PROPOSED STORM CATCHER STC 900 (SEE SHEET C-144) RIM=589.37 INV. 12" (NE)=584.40 INV. 12" (SW)=584.32
A 8	PROPOSED 48" Ø DIVERSION STRUCTURE WITH OFFSET MANHOLE LID (SEE SHEET C-504) RIM=589.47 INV. 12" (NE)=584.25 INV. 24" (S)=584.20 SUMP=582.20
A 9	PROPOSED CONTROL STRUCTURE (SEE SHEET C-144) RIM=589.69 INV. 6" (E)=583.60 INV. 15" (SW)=584.21
A 10	PROPOSED 4' DIA. MANHOLE W/ 2' SUMP (SEE SHEET C-504) RIM=590.21 INV. 4" (W)=583.55 INV. 6" (E)=583.55 SUMP=581.52
A 11	PROPOSED 1,000 GALLON EXTERIOR GREASE INTERCEPTOR (SEE SHEET C-503) RIM=590.20 INV. 6" PVC (N)=583.71 INV. 6" PVC (S)=583.46

#### TACO BELL - WAYNE COUNTY, MI Underground Detention Storm System Calculations

Performed by: MCC  
Date: 01/29/18  
Revise: 08/07/18  
10-year Storm Calculations

	Area (Ac.)	C	A x C
Roof	0.05	0.95	0.05
Asphalt/Concrete	0.4	0.95	0.38
Gravel	0	0.85	0.00
Lawn	0.12	0.45	0.05
Total	0.57		0.482
C <sub>AVG</sub>		0.845	

A = 0.57 acres

C = 0.845

Frontage = 252 ft

Q<sub>A</sub> (allowable) = 0.15\*A

Q<sub>A</sub> (allowable) = 0.103\*Frontage/100

Q<sub>0</sub> (max) = Q<sub>A</sub>/(A\*C)

T<sub>10</sub> = -19.9\*(4530/Q<sub>0</sub>)\*0.5

V<sub>s10</sub> = ((9108\*T<sub>10</sub>/(T<sub>10</sub> + 19.9))-40)\*Q<sub>0</sub>\*T<sub>10</sub>

V<sub>T10</sub> = V<sub>s10</sub>\*A\*C

V<sub>T10</sub> = 5,160\*A\*C

First flush calculations will not be required due to existence of mechanical forebay.

Storage Volume Calculations

Using StormTech Chamber

Size	Size	Size	Size	Size
SC-740	9.85	369.37	51	3,638

Z<sub>0</sub> =

Z<sub>OUT</sub> =

Bank Full Elevation

Z<sub>bf</sub> = Bank Full Storage Elevation =

Flood Control Storage Elevation

Z<sub>10</sub> = V<sub>T10</sub> Elevation =

Control Outlet Structure Design

Outlet Sizing for Bank Full Flood

Discharge to be released within a 40-hour timeframe

Q<sub>avg</sub> = V<sub>T10</sub>/40 (40\*3600) =

h<sub>avg</sub> = 0.5\*(Z<sub>bf</sub>-Z<sub>0</sub>)+(Z<sub>0</sub>-Z<sub>OUT</sub>) =

A = Q<sub>avg</sub>/(0.62\*(32.2\*2\*h<sub>bf</sub>)\*0.5) =

Hole Dia. =

Using one 1" hole @ elev. 583.60

A<sub>ACTUAL</sub> =

Q<sub>avg ACTUAL</sub> =

T<sub>ACTUAL</sub> =

Outlet Sizing for 10-Year Storm

Q<sub>peak</sub> =

Calculate for Bank Full Hole(s) Contribution

h<sub>bf</sub> = Z<sub>10</sub>-Z<sub>OUT</sub> =

Q<sub>bf</sub> = 0.62\*A<sub>ACTUAL</sub>\*(32.2\*2\*h<sub>bf</sub>)\*0.5 =

Additional holes required to release remainder of Q<sub>A</sub>

Q<sub>ADJ</sub> = Q<sub>MAX</sub>-Q<sub>bf</sub> =

h<sub>MAX</sub> = Z<sub>10</sub>-Z<sub>bf</sub> =

A<sub>ADJ</sub> = Q<sub>ADJ</sub>/(0.62\*(32.2\*2\*h<sub>MAX</sub>)\*0.5) =

Hole Size (diameter) =

Hole Size (area) =

Number of Holes =

Number of holes used =

Use one 1-1/8" holes at Elev. 585.65

A<sub>10ACTUAL</sub> =

Q<sub>10ACTUAL</sub> = 0.62\*A<sub>10ACTUAL</sub>\*(32.2\*2\*h<sub>MAX</sub>)\*0.5 =

Q<sub>TOTAL</sub> = Q<sub>bf</sub> + Q<sub>10ACTUAL</sub> =

Outlet Pipe Design for 10-Year Event

Q<sub>A</sub> =

(See closed conduit sizing for 10-year storm)

Pipe Size =

Area =

n =

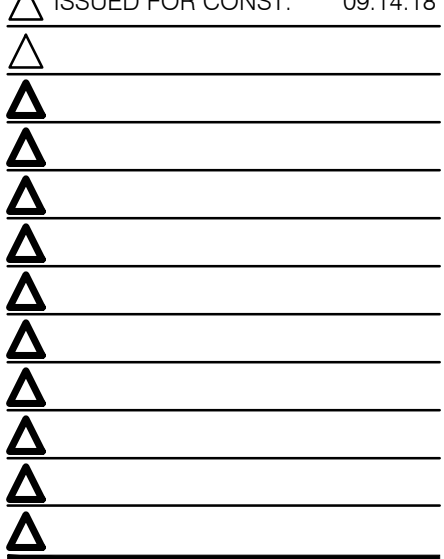
R =

Slope = [(Q<sub>PEAK</sub>\*n)/(1.486\*A<sub>OUT</sub>\*R\*0.67)\*2

V = Q<sub>PEAK</sub>/A



ISSUED FOR CONST. 09.14.18



CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

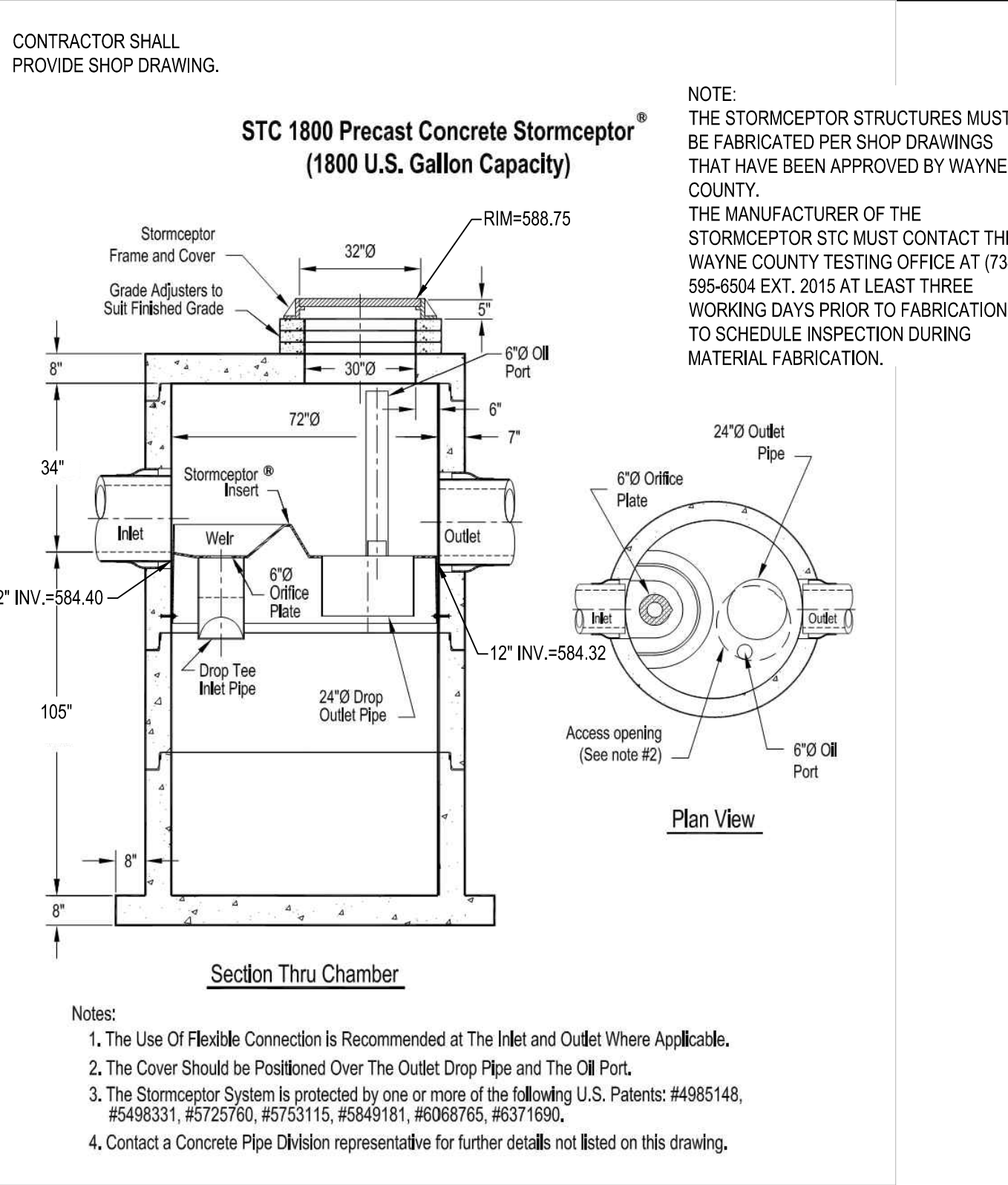
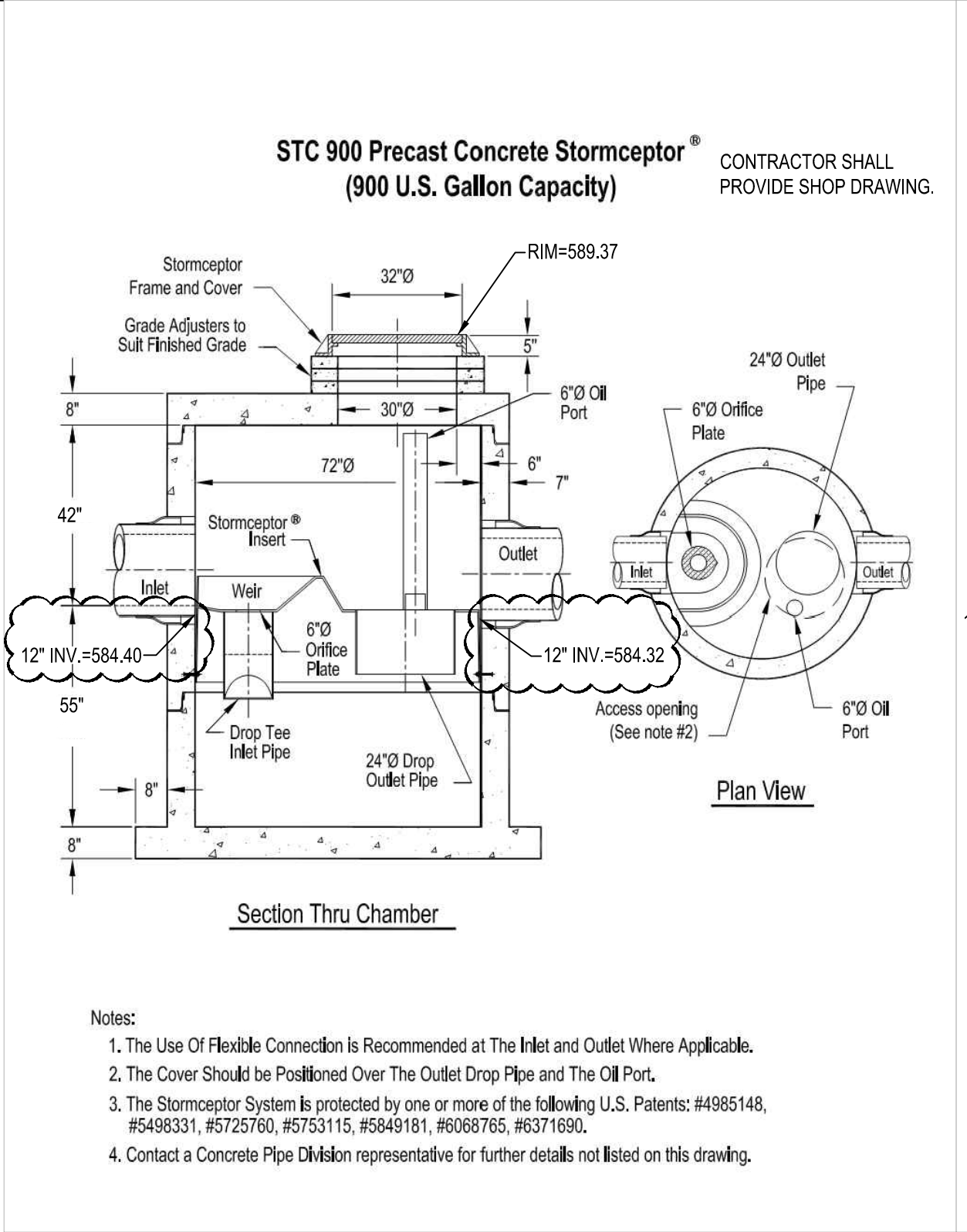
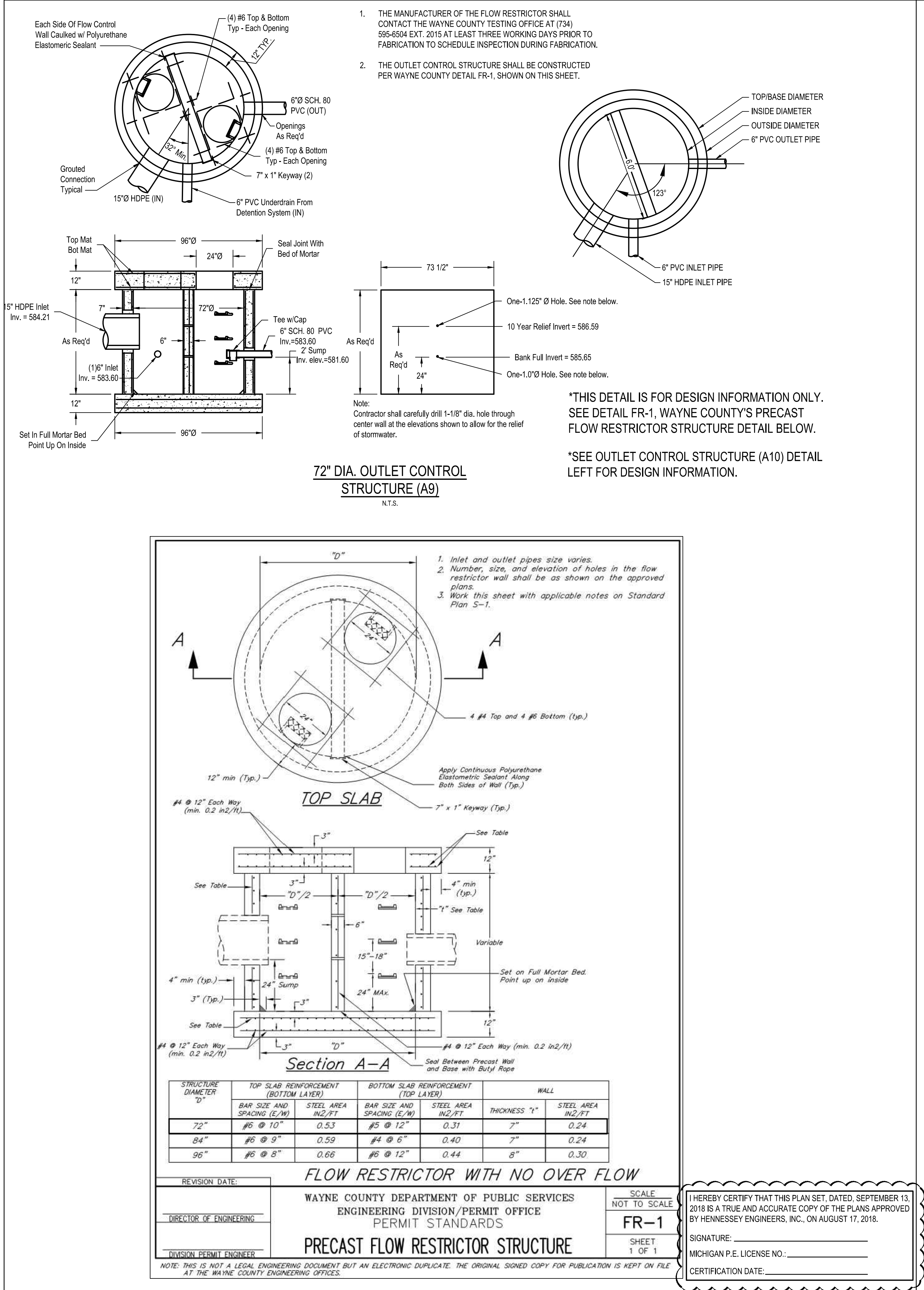
TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



UTILITY PROFILES  
AND DESIGN  
CALCULATIONS

C-143





#### 10. Installation

The installation of the concrete Stormceptor should conform in general to state highway, or local specifications for the installation of manholes. Selected sections of a general specification that are applicable are summarized in the following sections.

#### 10.1. Excavation

Excavation for the installation of the Stormceptor should conform to state highway, or local specifications. Topsoil removed during the excavation for the Stormceptor should be stockpiled in designated areas and should not be mixed with subsoil or other materials. Topsoil stockpiles and the general site preparation for the installation of the Stormceptor should conform to state highway or local specifications.

The Stormceptor should not be installed on frozen ground. Excavation should extend a minimum of 12 inches (300 mm) from the precast concrete surfaces plus an allowance for shoring and bracing where required. If the bottom of the excavation provides an unsuitable foundation additional excavation may be required.

In areas with a high water table, continuous dewatering may be required to ensure that the excavation is stable and free of water.

#### 10.2. Backfilling

Backfill material should conform to state highway or local specifications. Backfill material should be placed in uniform layers not exceeding 12 inches (300mm) in depth and compacted to state highway or local specifications.

#### 11. Stormceptor Construction Sequence

The structures shall be fabricated as per shop drawings approved by Wayne County.

The concrete Stormceptor is installed in sections in the following sequence:

- Aggregate base
- Base slab
- Lower chamber sections
- Upper chamber section with fiberglass insert
- Connect inlet and outlet pipes
- Assembly of fiberglass insert components (drop tee, riser pipe, oil cleanout port and orifice plate)
- Remainder of upper chamber
- Frame and access cover

The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations.

Adjustment of the Stormceptor can be performed by lifting the upper sections free of the excavated area, re-leveling the base and re-installing the sections. Damaged sections and gaskets should be repaired or replaced as necessary. Once the Stormceptor has been constructed, any lift holes must be plugged with mortar.

#### 12. Maintenance

##### 12.1. Health and Safety

The Stormceptor System has been designed considering safety first. It is recommended that confined space entry protocols be followed if entry to the unit is required. In addition, the fiberglass insert has the following health and safety features:

- Designed to withstand the weight of personnel
- A safety grate is located over the 24 inch (600 mm) riser pipe opening
- Ladder rungs can be provided for entry into the unit, if required

##### 12.2. Maintenance Procedures

Maintenance of the Stormceptor system is performed using vacuum trucks. No entry into the unit is required for maintenance (in most cases). The vacuum service industry is a well-established sector of the service industry that cleans underground tanks, sewers and catch basins. Costs to clean a Stormceptor will vary based on the size of unit and transportation distances.

The need for maintenance can be determined easily by inspecting the unit from the surface. The depth of oil in the unit can be determined by inserting a dipstick in the oil inspection/cleanout port.

Similarly, the depth of sediment can be measured from the surface without entry into the Stormceptor via a dipstick tube equipped with a ball valve. This tube would be inserted through the riser pipe. Maintenance should be performed once the sediment depth exceeds the guideline values provided in the Table 4.

Table 4. Sediment Depths indicating required servicing.

Sediment Depths Indicating Required Servicing *	
Model	Sediment Depth inches (mm)
450i	8 (200)
900	8 (200)
1200	10 (250)
1800	15 (381)
2400	12 (300)
3600	17 (430)
4800	15 (380)
6000	18 (460)
7200	15 (381)
11000	17 (380)
13000	20 (500)
16000	17 (380)

\* based on 15% of the Stormceptor unit's total storage

Although annual servicing is recommended, the frequency of maintenance may need to be increased or reduced based on local conditions (i.e. if the unit is filling up with sediment more quickly than projected, maintenance may be required semi-annually; conversely once the site has stabilized maintenance may only be required every two or three years).

Oil is removed through the oil inspection/cleanout port and sediment is removed through the riser pipe. Alternatively oil could be removed from the 24 inches (600 mm) opening if water is removed from the lower chamber to lower the oil level below the drop pipes.

The following procedures should be taken when cleaning out Stormceptor:

- Check for oil through the oil cleanout port
- Remove any oil separately using a small portable pump
- Decant the water from the unit to the sanitary sewer, if permitted by the local regulating authority, or into a separate containment tank
- Remove the sludge from the bottom of the unit using the vacuum truck
- Re-fill Stormceptor with water where required by the local jurisdiction

##### 12.3. Submerged Stormceptor

Careful attention should be paid to maintenance of the Submerged Stormceptor System. In cases where the storm drain system is submerged, there is a requirement to plug both the inlet and outlet pipes to economically clean out the unit.

##### 12.4. Hydrocarbon Spills

The Stormceptor is often installed in areas where the potential for spills is great. The Stormceptor System should be cleaned immediately after a spill occurs by a licensed liquid waste hauler.

##### 12.5. Disposal

Requirements for the disposal of material from the Stormceptor System are similar to that of any other stormwater Best Management Practice (BMP) where permitted. Disposal options for the sediment may range from disposal in a sanitary trunk sewer upstream of a sewage treatment plant, to disposal in a sanitary landfill site. Petroleum waste products collected in the Stormceptor (free oil/chemical/fuel spills) should be removed by a licensed waste management company.

##### 12.6. Oil Sheens

With a steady influx of water with high concentrations of oil, a sheen may be noticeable at the Stormceptor outlet. This may occur because a rainbow or sheen can be seen at very small oil concentrations (<10 mg/L). Stormceptor will remove over 98% of all free oil spills from storm sewer systems for dry weather or frequently occurring runoff events.

The appearance of a sheen at the outlet with high influent oil concentrations does not mean the unit is not working to this level of removal. In addition, if the influent oil is emulsified the Stormceptor will not be able to remove it. The Stormceptor is designed for free oil removal and not emulsified conditions.





ADVANCED DRAINAGE SYSTEMS, INC.



## STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMWTECH SC-740 OR SC-310.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPIDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURE BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE ASHTO LFRD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE ASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE TRAILER VEHICLE PRESENCE.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F4918-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
  - a. A STRUCTURAL EVALUATION PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.85 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY ASHTO FOR THERMOPLASTIC PIPE.
  - b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE ASHTO LFRD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 30 YEAR CREEP CRACK DATA SPECIFIED IN THE ASHTO LFRD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12.2 MUST BE USED AS PART OF THE ASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
  - c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY(ANY) THEY SHALL BE TESTED AT A RATE OF ONE (1) TEST PER SHIFT, BUT NOT TO EXCEED 200 PIECES OF CHAMBER (7 LONG EACH PIECE) OR END CAPS BY WAYNE COUNTY OR AN INDEPENDENT THIRD PARTY.
9. A WAYNE COUNTY OR AN INDEPENDENT THIRD PARTY CERTIFICATION SHALL BE PROVIDED WITH EACH TESTED SHIPMENT.

A WAYNE COUNTY PERMIT ENGINEER/INSPECTOR MUST OBSERVE INSTALLATION OF THE UNDERGROUND DETENTION SYSTEM. CONTACT WAYNE COUNT PERMIT OFFICE AT (734) 595-6504 X 2009.

## IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
  2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
  3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
    - STORMTECH RECOMMENDS 3 BACKFILL METHODS:
      - STONE/HOOTER LOCATED OFF THE CHAMBER BED.
      - BACKFILL AS ROWS WITH AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
      - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
  4. THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
  5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
  6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
  7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CROWNED, ANGULAR STONE 3/4"-2" (20-50 mm).
  8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
  9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.
- ## NOTES FOR CONSTRUCTION EQUIPMENT
1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
  2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
    - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
    - NO RUBBER Tired LOADERS, DUMP TRUCKS OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
    - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
  3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

## NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

## PROPOSED LAYOUT

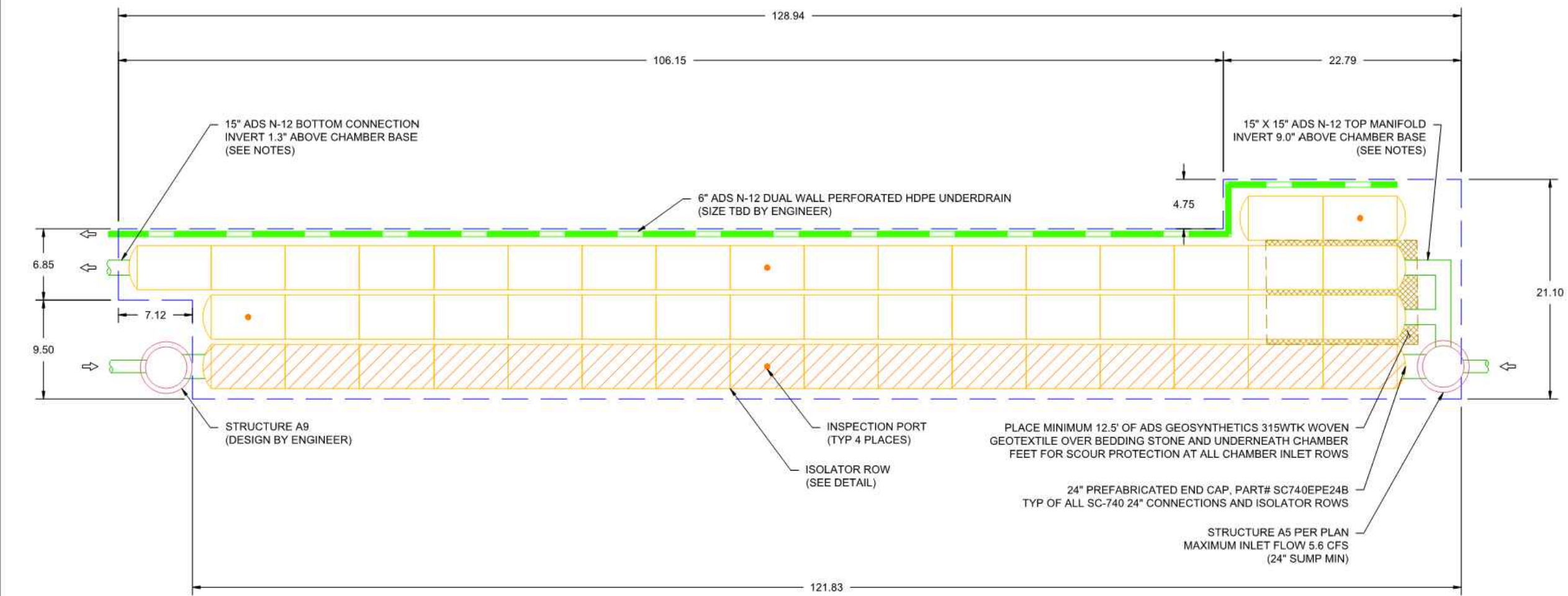
- |              |  |
|--------------|--|
| 51           | STORMTECH SC-740 CHAMBERS  |
| 8            | STORMTECH SC-740 END CAPS  |
| 6            | STONE ABOVE (in)   |
| 6            | STONE BELOW (in)   |
| 25           | % STONE VOID   |
| <b>3,638</b> | <b>INSTALLED SYSTEM VOLUME (CF)<br/>(PERIMETER STONE INCLUDED)</b> |
| 2,149        | SYSTEM AREA (ft <sup>2</sup> )                                     |
| 300          | SYSTEM PERIMETER (ft)  |


## PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	594.60
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	588.60
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	588.10
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	588.10
MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):	588.10
TOP OF STONE:	597.10
TOP OF SC-740 CHAMBER:	586.60
15" TOP MANIFOLD INVERT:	594.85
15" TOP CONNECTION INVERT:	594.21
24" ISOLATOR ROW INVERT:	584.11
BOTTOM OF SC-740 CHAMBER:	584.10
UNDERDRAIN INVERT:	583.60
BOTTOM OF STONE:	583.60

## NOTES

- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANHOLE SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD. THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER OPERATES PROPERLY.
- CAPACITY: THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSTALLED SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- WAYNE COUNTY OR THIRD INDEPENDENT PARTY CERTIFICATION SHALL BE PROVIDED WITH EACH TESTED SHIPMENT.





**StormTech**  
720-600-0015 • 888-888-1188 • WWW.STORMTECH.COM

DATE: 02/27/17    DRAWN: CLB

PROJECT #: 04218-18    CHECKED: AGC

OWNER: TACO BELL

PROJECT: LINCOLN PARK, MI

LOCATION: 4440 TRUMAN BLVD  
ANN ARBOR, MI 48106

DESIGN: J. BELL

DATE: 02/27/17

BY: J. BELL

SCALE: AS SHOWN

NOTES: SEE LOWER RISE FOR TOP OF STONE PIER

NOTES: SEE ELEVATIONS

0 10' 20'

1" = 10'

720-600-0015 • 888-888-1188 • WWW.STORMTECH.COM



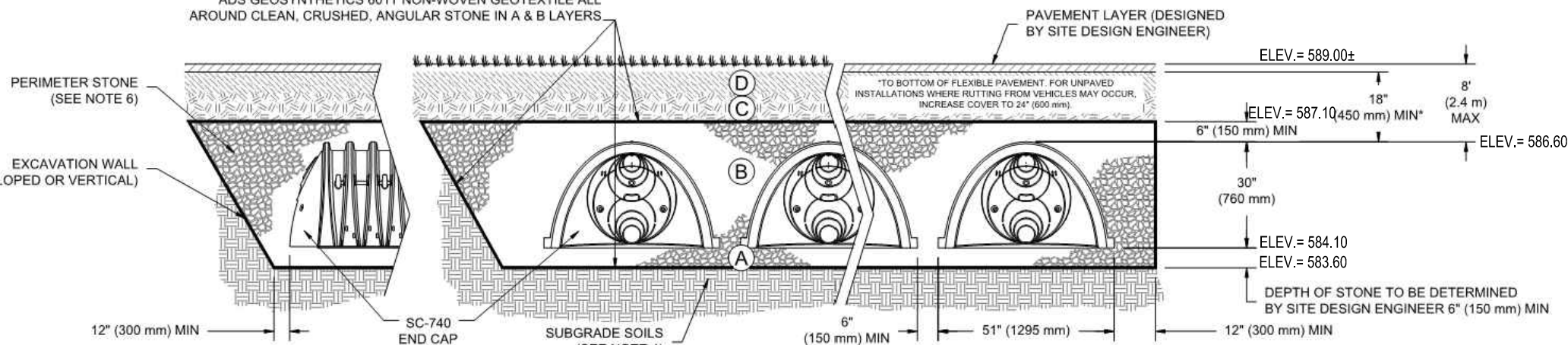
**ACCEPTABLE FILL MATERIALS: WAYNE COUNTY STORMTECH SC-740 CHAMBER SYSTEMS**

	MATERIAL LOCATION	DESCRIPTION	MDOT MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B) LAYER TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBERS. PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	N/A	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (5,3 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	4AA, 6A, 6AA, WAYNE COUNTY 3" x 1"	NO COMPACTION REQUIRED. THE MAXIMUM UNIT WEIGHT SHALL BE DETERMINED BY MICHIGAN CONE OR AASHTO T-180.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	4AA, 6A, 6AA, WAYNE COUNTY 3" x 1"	PLATE COMPACTION OR ROLL TO ACHIEVE A 95% MAX UNIT WEIGHT. <sup>2,3</sup>

PLEASE NOTE:


1. THE LISTED MUD DESIGNATIONS ARE FOR GRADINGS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR 6A STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR MUD 6A STONE".
2. PRIOR TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMCHUCK COMPACTION REQUIREMENTS ARE MET FOR "A" LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) [MAX] LIFTES USING TWO FULL PASSES WITH AN APPROPRIATE COMPACTOR ONE TEST PER LIFT OF BACKFILL PER 200 LINEAL FEET OR LESS OF TRENCH
3. FOR MATERIALS PLACED IN OPEN GRADED STONE, STORMCHUCK COMPACTION REQUIREMENTS ARE MET FOR "B" LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) [MAX] LIFTES USING TWO FULL PASSES WITH AN APPROPRIATE COMPACTOR ONE TEST PER LIFT OF BACKFILL PER 200 LINEAL FEET OR LESS OF TRENCH
4. FOR SPECIAL LAD DESIGNS, CONTACT STORMCHUCK FOR COMPACTION REQUIREMENTS.

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS.



**NOTES:**

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS," OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



**StormTech**  
Construction Software Solutions

70 HAWKWOOD DRIVE • ROCKFELL, IL 60087

4640 TRILUMEN BLVD  
HILLIARD, OH 43026

**TACO BELL**  
LINCOLN PARK, MI

REV	DATE	DESCRIPTION
02/25/18	ALS	UNDERLAYER OF STONE PAVE
03/15/18	ANK	POUR SECTIONS

DATE: 12/27/17

PROJECT #: 592118

DRAWN: CLB

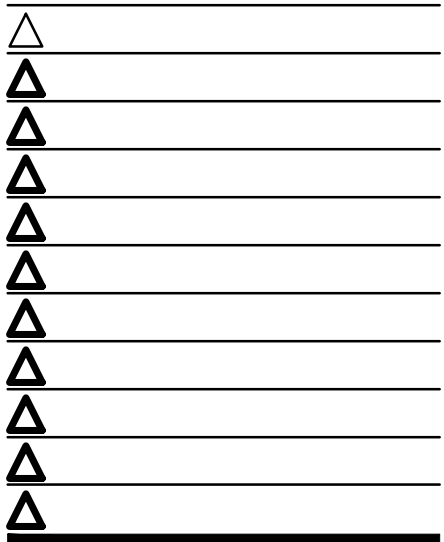
CHECK: AGC

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

ISSUED FOR CONST. 09.14.18



CONTRACT DATE: 10.03.17

BUILDING TYPE: EXPLORER LITE LG

PLAN VERSION: July 2017

SITE NUMBER: 283405/445231

STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
COLN PARK, MI 48146

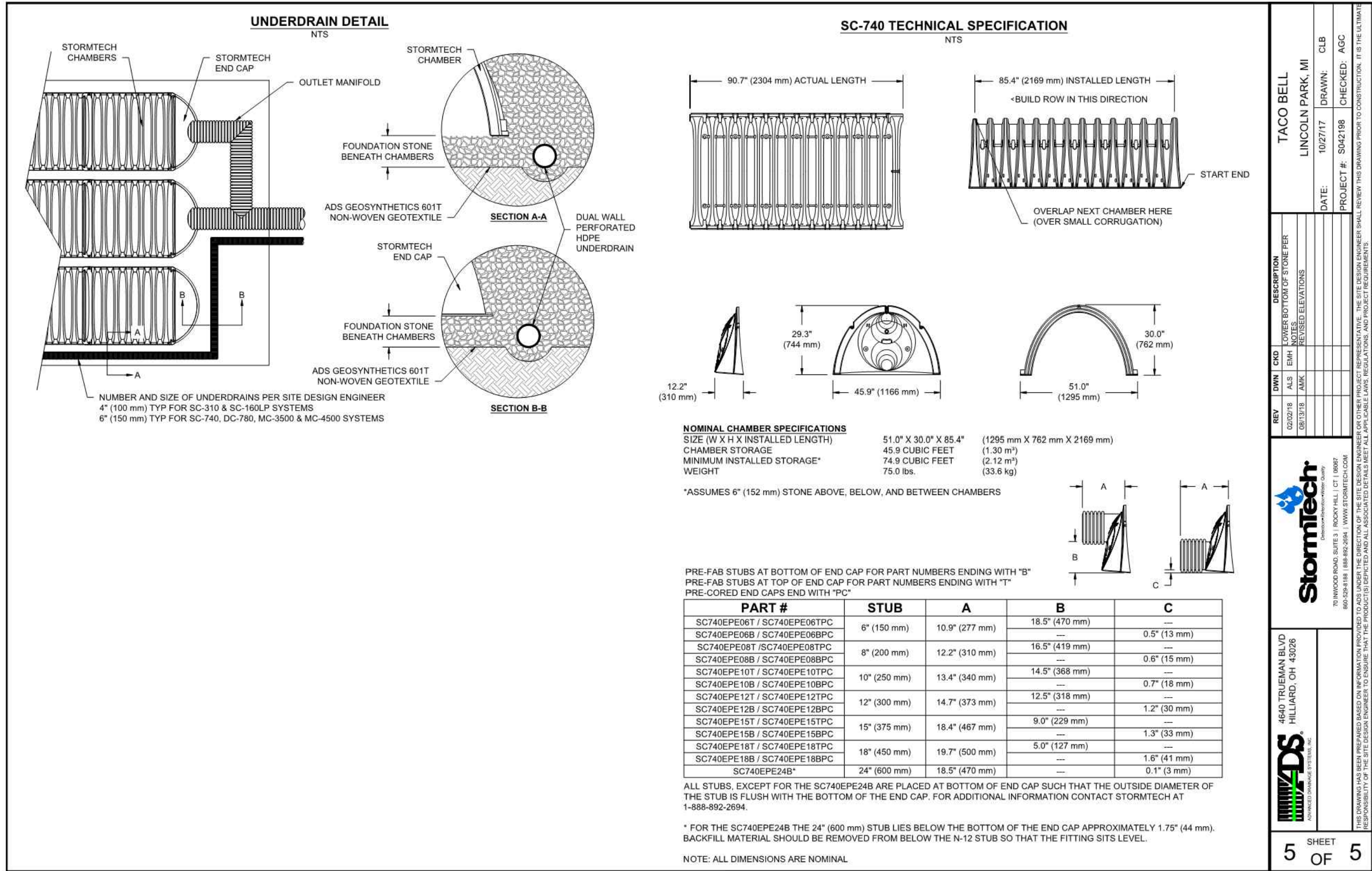
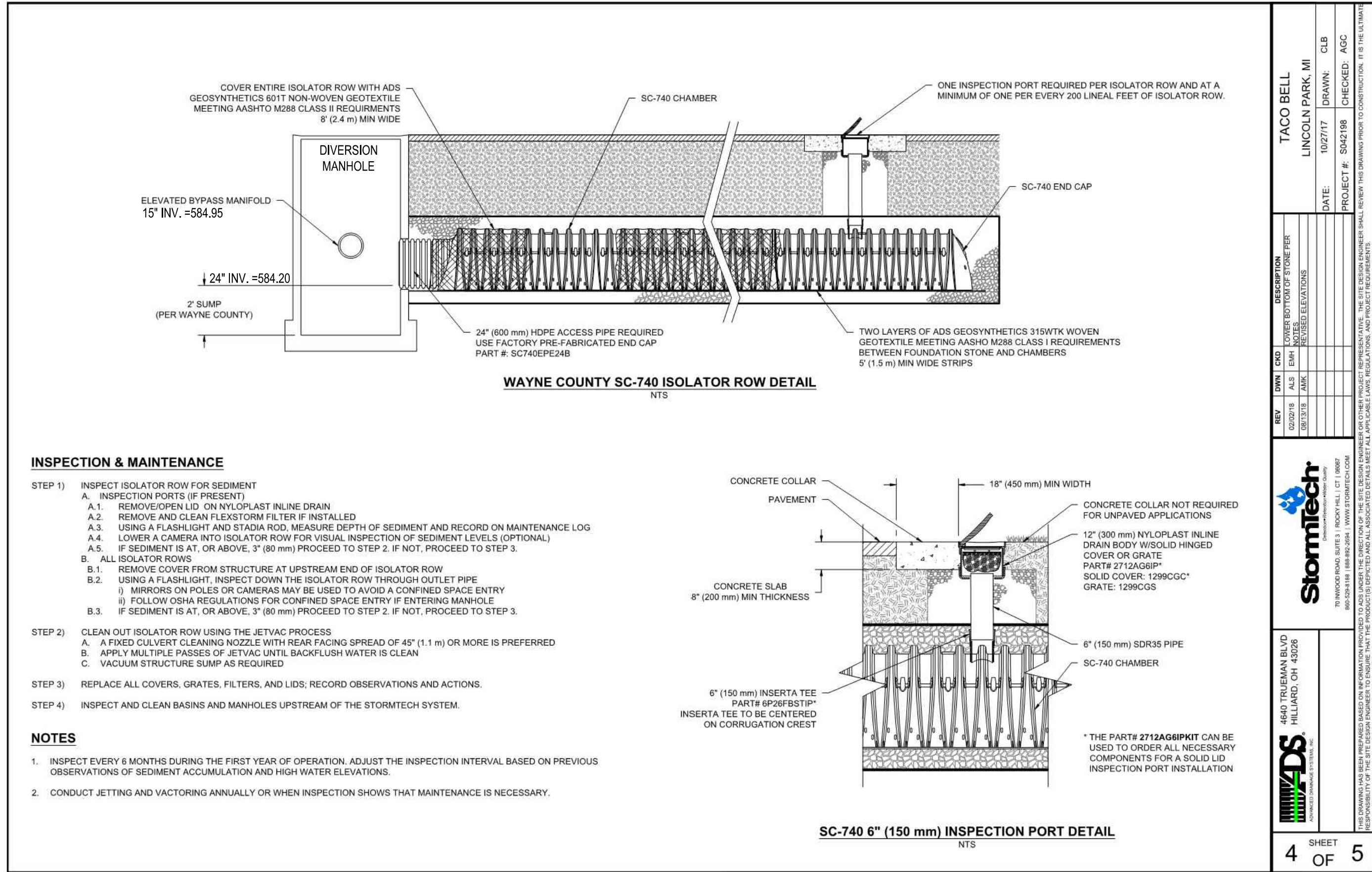


# EXPLORER LITE

## STORMTECH DETAILS

# C-145





I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

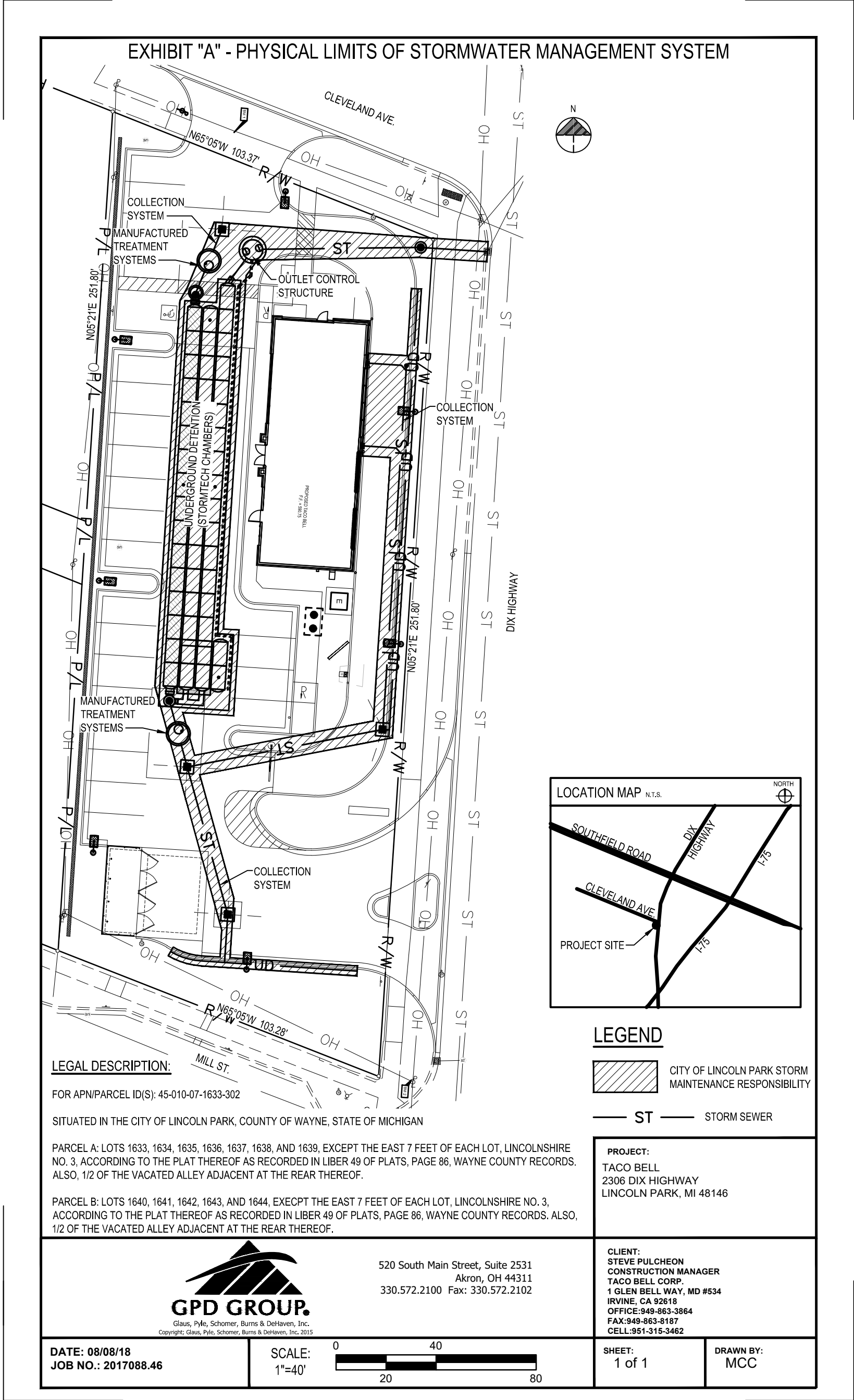
**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**EXPLORER LITE**  
LARGE50

**STORMTECH**  
**DETAILS**

**C-146**





**EXHIBIT “B” - STORM WATER MANAGEMENT SYSTEM LONG-TERM MAINTENANCE PLAN**

Wayne County DPS Permit No.: TBD

Wayne County DPS Plan review No.: R17-607

**A. Physical Limits of the Storm Water Management System**

The storm water management system (SWMS) subject to this long-term maintenance plan (Plan) is depicted on Exhibit A to the permit and includes without limitation the storm sewers, swales, catch basins, manholes, inlets, manufactured treatment systems, underground detention system, flow restrictor structure and outlet pipe that conveys flow from the underground detention system to an existing storm catch basin within the right-of-way of Dix Highway that outlets to a County Drain. For the purposes of this plan, this SWMS and all of its components as shown in Exhibit A is referred to as "Taco Bell's SWMS".

**B. Time Frame for Long-Term Maintenance Responsibility**

Taco Bell of America, LLC is responsible for maintaining the Taco Bell's SWMS including complying with applicable requirements of the local or Wayne County soil erosion and sedimentation control program until Wayne County releases the construction permit. Long-term maintenance responsibility for Taco Bell's SWMS commences when defined by the maintenance permit issued by the County. Long-term maintenance continues in perpetuity.

**C. Manner of Insuring Maintenance Responsibility**

The City of Lincoln Park has assumed responsibility for long-term maintenance of Taco Bell's SWMS. The resolution by which The City of Lincoln Park has assumed maintenance responsibility is attached to the permit as Exhibit C. Taco Bell of America, LLC., through a maintenance agreement with the City of Lincoln Park, has agreed to perform the maintenance activities required by this plan. The City of Lincoln park retains the right to enter the property and perform the necessary maintenance of the Taco Bell's SWMS if Taco Bell of America, LLC. fails to perform the required maintenance activities.

To ensure that the Taco Bell's SWMS is maintained in perpetuity, the map of the physical limits of the storm water management system (Exhibit A), this plan (Exhibit B), the resolution attached as Exhibit C, and the maintenance agreement between the City of Lincoln park and the property owner will be recorded with the Wayne County Register of Deeds. Upon recording, a copy of the recorded documents will be provided to the County.

**D. Long-Term Maintenance Plan and Schedule**

Table 1 identifies the maintenance activities to be performed, organized by category (monitoring/inspections, preventative maintenance and remedial actions). Table 1 also identifies site-specific work needed to ensure that the storm water management system functions properly as designed.

TABLE 1 STORM WATER MANAGEMENT SYSTEM LONG-TERM MAINTENANCE SCHEDULE							
MAINTENANCE ACTIVITIES	SYSTEM COMPONENTS	Storm Collection System (Sewers, Swales, Catch Basins, Manholes)	Manufactured Treatment Systems	Underground Detention System	Flow Restrictor Structure & Outlet Pipe	Pavement Areas	FREQUENCY
<b>Monitoring/Inspection</b>							
Inspect for Sediment Accumulation/Clogging		X	X	X	X	X	Annually
Inspect For Floatables, Dead Vegetation & Debris		X	X	X	X	X	Annually & After Major Events
Inspect For Erosion And Integrity of System		X				X	Annually & After Major Events
Inspect All Components During Wet weather & Compare to As-Built Plans		X	X	X	X	X	Annually
Ensure Maintenance Access Remain Open/Clear		X	X	X	X	X	Annually
<b>Preventative Maintenance</b>							
Remove Accumulated sediments		X	X	X	X	X	As Needed (See Note Below)
Remove Floatables, Dead Vegetation & Debris		X				X	As Needed
Sweeping of Paved Surfaces						X	As Needed
<b>Remedial Actions</b>							
Repair/Stabilize Areas of Erosion		X				X	As Needed
Replace Dead Plantings & Reseed Bare Areas		X					As needed
Structural Repairs		X	X	X	X	X	As Needed
Make Adjustments/Repairs to Ensure Proper Functioning		X	X	X	X	X	As Needed
<b>NOTE:</b> Manufactured treatment system and underground detention system to be cleaned according to the manufacturer's recommendations; at a minimum, whenever sediments accumulate to a depth of 8-15 inches, or if sediment resuspension is observed.							
<b>PROJECT:</b> Taco Bell 2306 Dix Highway Lincoln Park, MI, 48146	<b>PROPERTY OWNER:</b> Taco Bell Corp. 1 Glen Bell Way, MD #534 Irvine, CA 92618 Phone: 949-863-3864		<b>ENGINEER:</b> GPD Group 520 South Main St, Suite 2531 Akron, OH 44311 Phone: (330) 572-2100			<b>DATE:</b> 08 / 08 / 2018	
						<b>SHEET</b> 1 OF 1	

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_

△ ISSUED FOR CONST.	09.14.18
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**  
EXPLORER LITE  
LARGE50

**STORMWATER  
EXHIBITS**

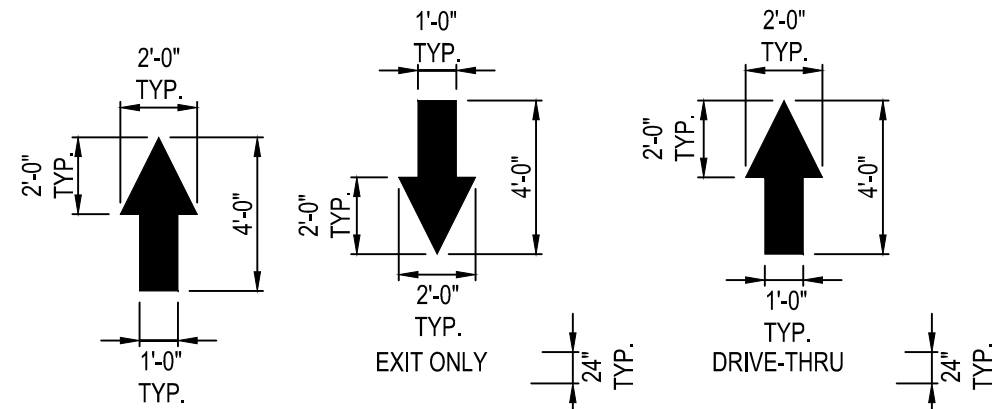
**C-147**

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_

#### KEYED NOTES

- 1 PAINT BACKGROUND BENJAMIN MOORE M58 SAFETY & ZONE MARKING LATEX M58-30 - BLUE
- 2 PAINT SYMBOL BENJAMIN MOORE M58 SAFETY & ZONE MARKING LATEX M58-01 - WHITE 4" WIDTH BOTTOM EDGE OF SYMBOL BOX SHALL MATCH END OF STALL STRIPE AT DRIVE AISLE END OF STALL.
- 3



#### NOTES:

ALL PAVEMENT MARKINGS TO BE WHITE PAVEMENT PAINT, UNLESS STATED OTHERWISE.

MARKING (STRIPING) PAINT FOR PARKING SPACES, TRAFFIC ARROWS, ADA PARKING AND SYMBOLS, ETC., PER LOCAL REQUIREMENTS AND AS FOLLOWS:

EXISTING SURFACES WITHOUT ANY SEAL COATING: OIL BASE (ALKYD RESIN TYPE TO MEET FEDERAL SPECIFICATION TTP-1952.

NEW OR EXISTING SURFACES WITH A TOP COATING OR SEAL COATING (USUALLY WATER BASE FAST DRYING 100% ACRYLIC TYPE); WATER BASE TYPE TO MEET FEDERAL SPECIFICATION TTP-01952. FOR COLD WEATHER APPLICATION PAINT PRODUCT SHALL BE IN ACCORDANCE WITH ASTM-D2369, D1394, D3723, D1475, D562, AND D711

PROVIDE A NON-SLIP AGGREGATE ADDITIVE TO MARKING PAINT USED AT ADA ACCESS RAMP.

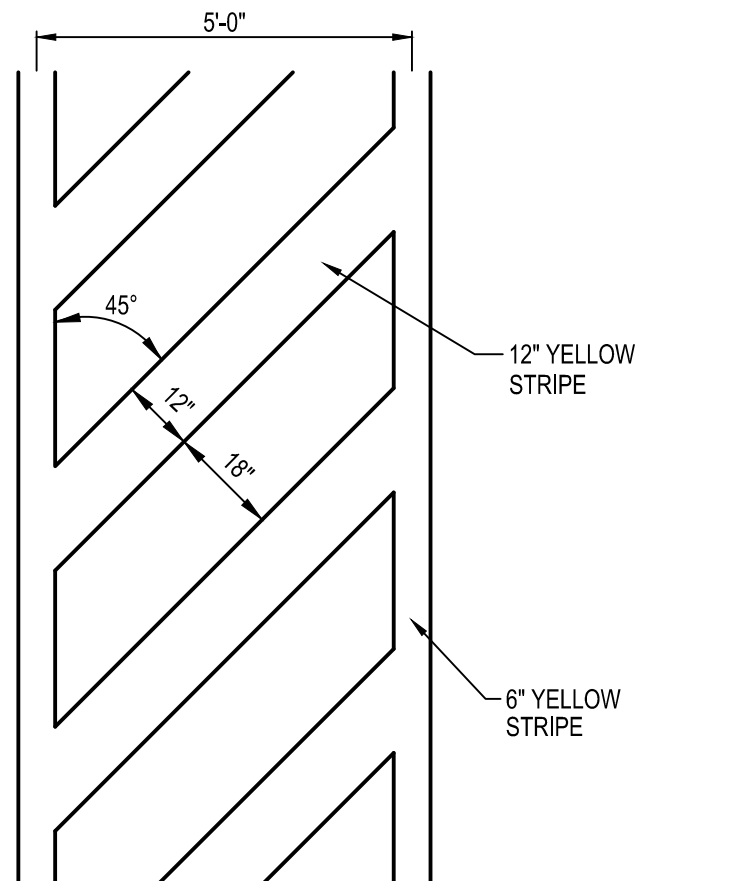
APPLY 2 COATS WITH STRAIGHT EDGES. YELLOW ON CONCRETE/WHITE ON ASPHALT EXCEPT WHEN MATCHING ADJACENT OR EXISTING COLOR WHEN THE PAVING IS AN EXPANSION OR SEGMENT OF A LARGER LOT.

#### C1 PAVEMENT MARKINGS & NOTES

N.T.S.

#### D2 INTERNATIONAL ADA SYMBOL

N.T.S.

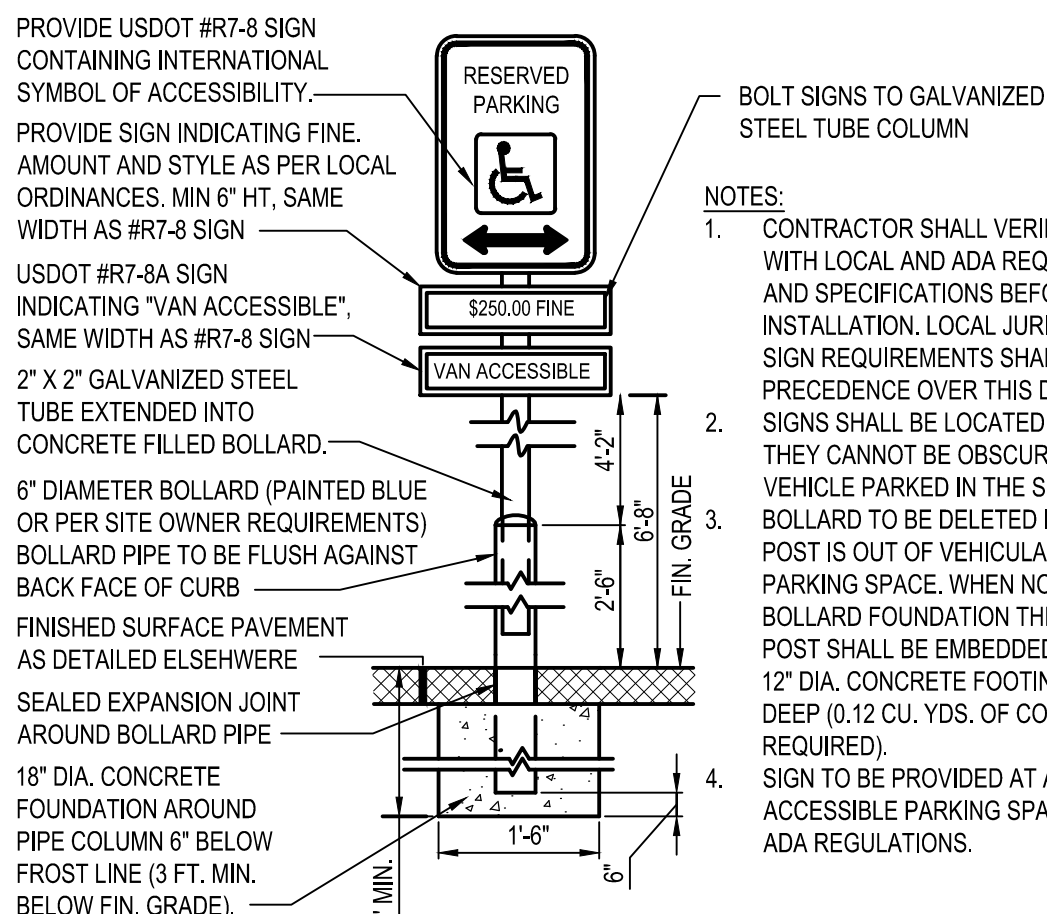


#### C2 CROSSWALK STRIPING

N.T.S.

#### D3 TRANSVERSE STRIPING

N.T.S.

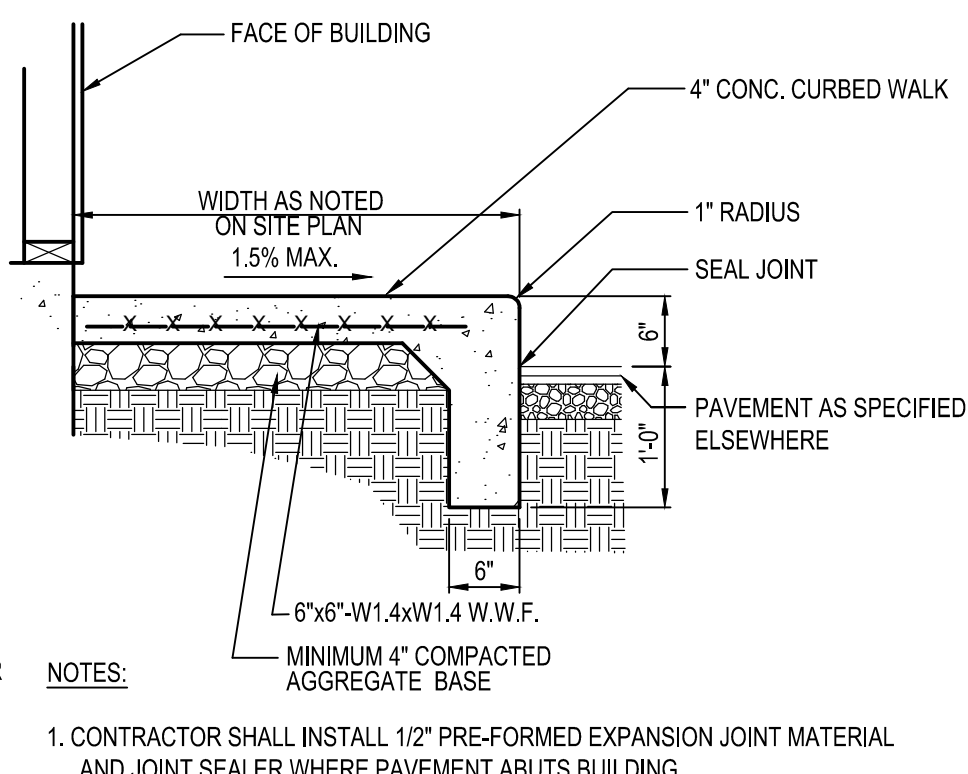


#### C3 ADA PARKING SIGN

N.T.S.

#### D4 6' CURB TAPER

N.T.S.

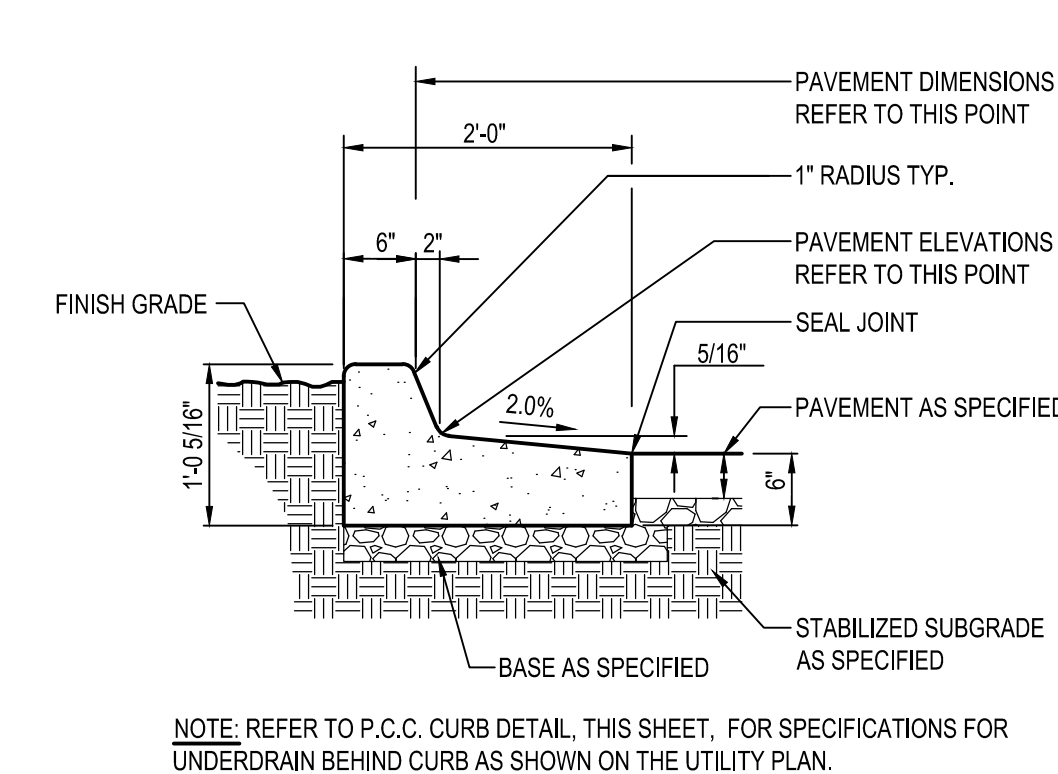


#### C4 P.C.C. CURBED WALK

N.T.S.

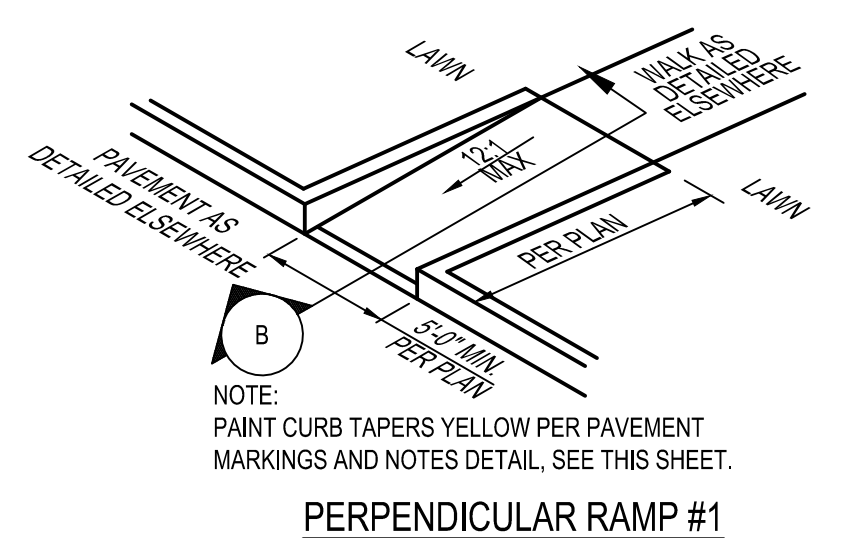
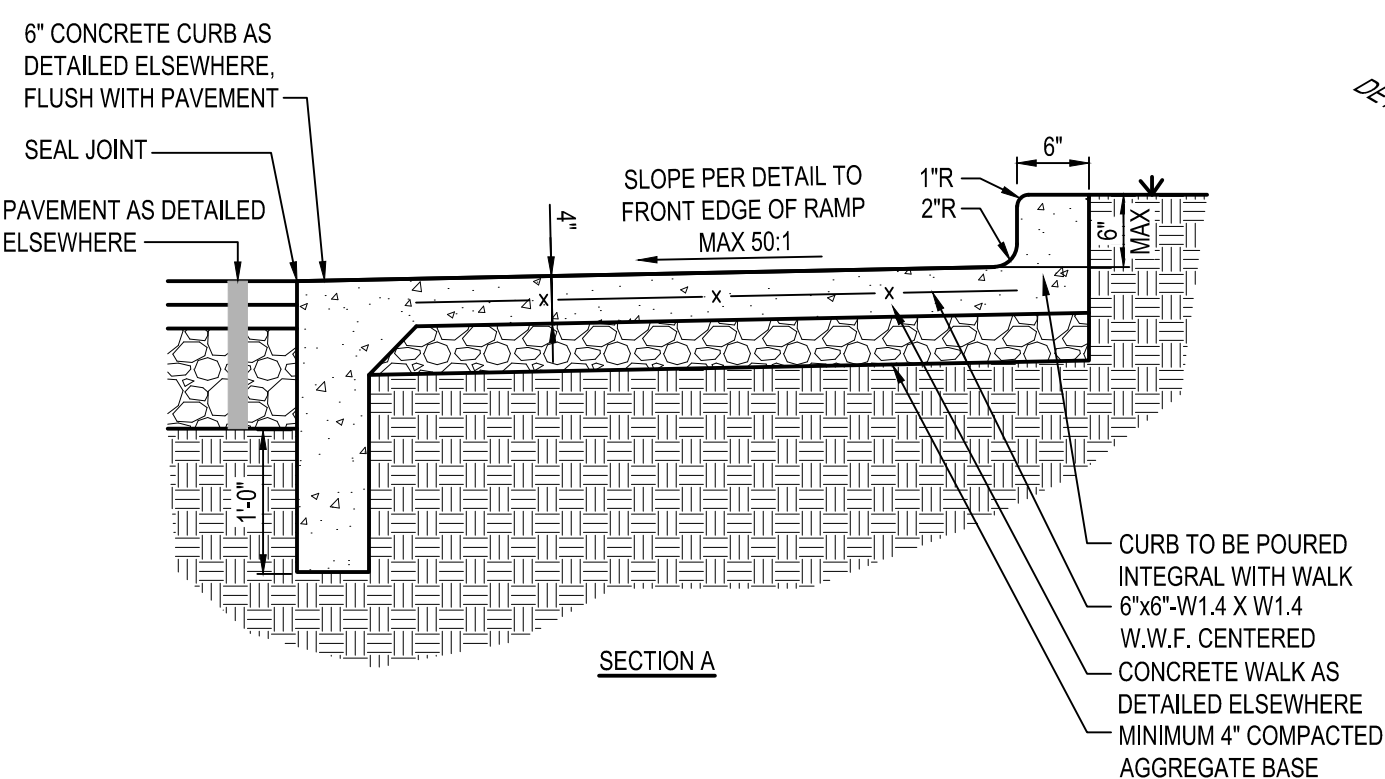
#### D5 P.C.C. CURB

N.T.S.

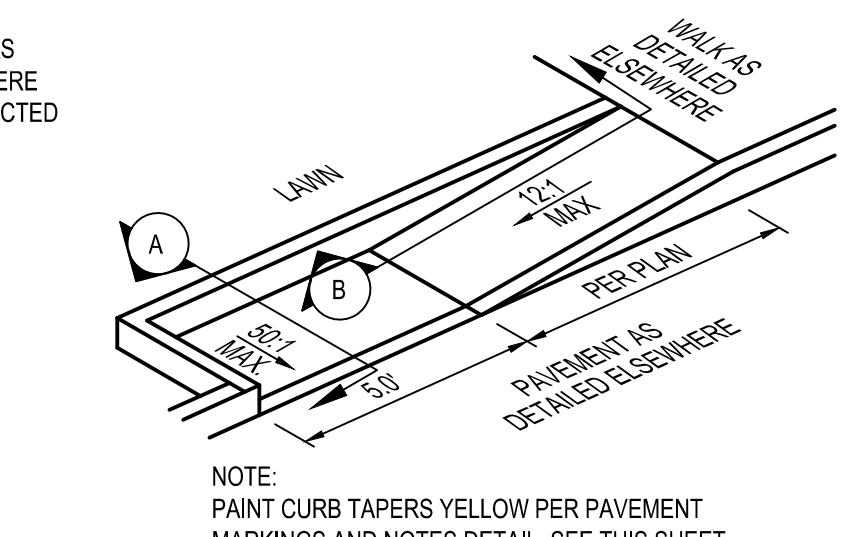
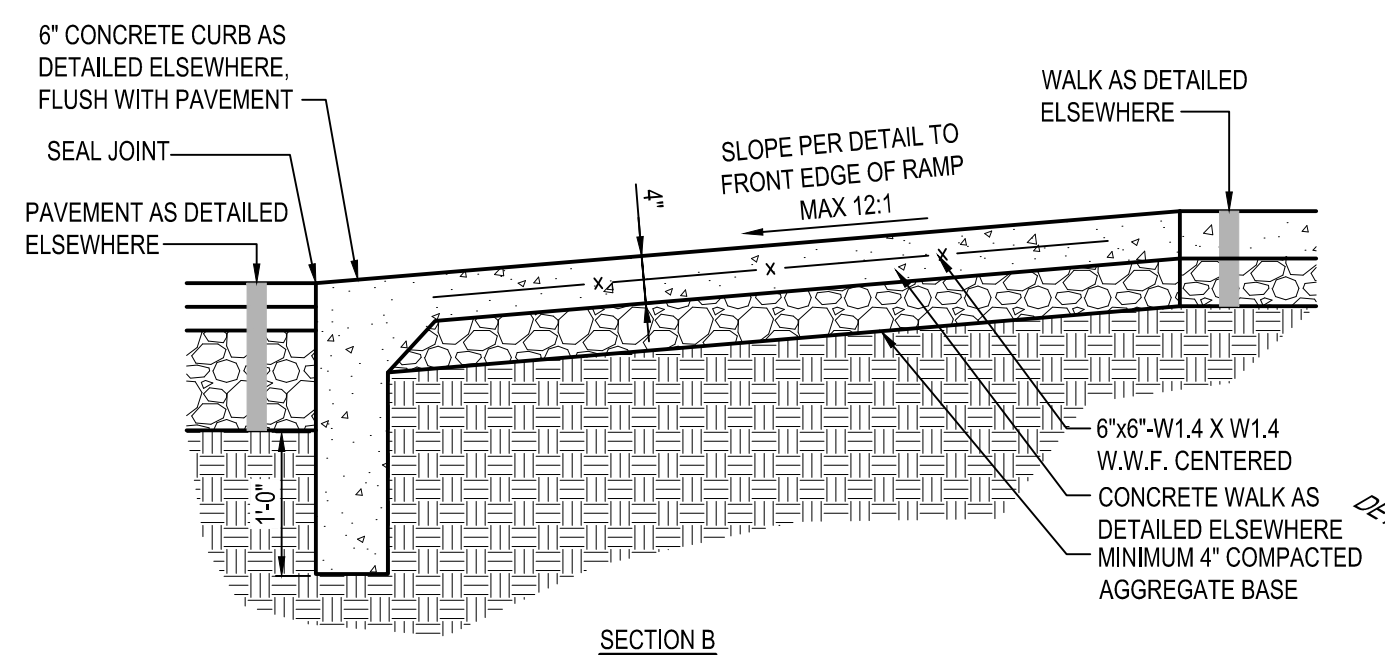


#### C5 P.C.C. CURB & GUTTER (REVERSE PITCH)

N.T.S.



#### PERPENDICULAR RAMP #1



#### PERPENDICULAR RAMP #2

#### A1 ADA ACCESSIBLE RAMP

N.T.S.

#### PERPENDICULAR RAMP #3

#### A3 BOLLARD (IN CURB)

N.T.S.

#### A4 BOLLARD DETAIL

N.T.S.

#### A5 BIKE RACK DETAIL

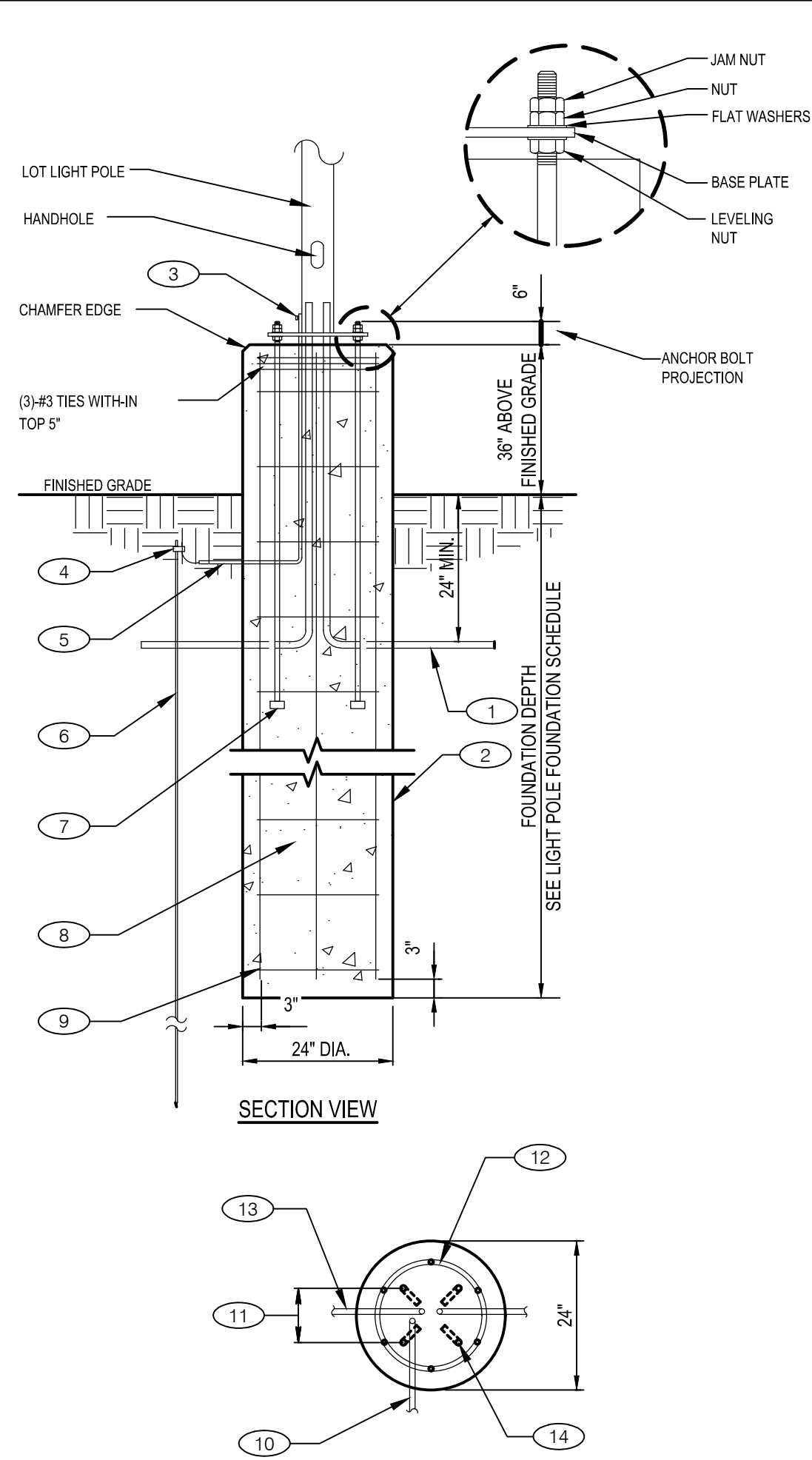
N.T.S.

#### TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

#### SITE DETAILS





PLAN VIEW

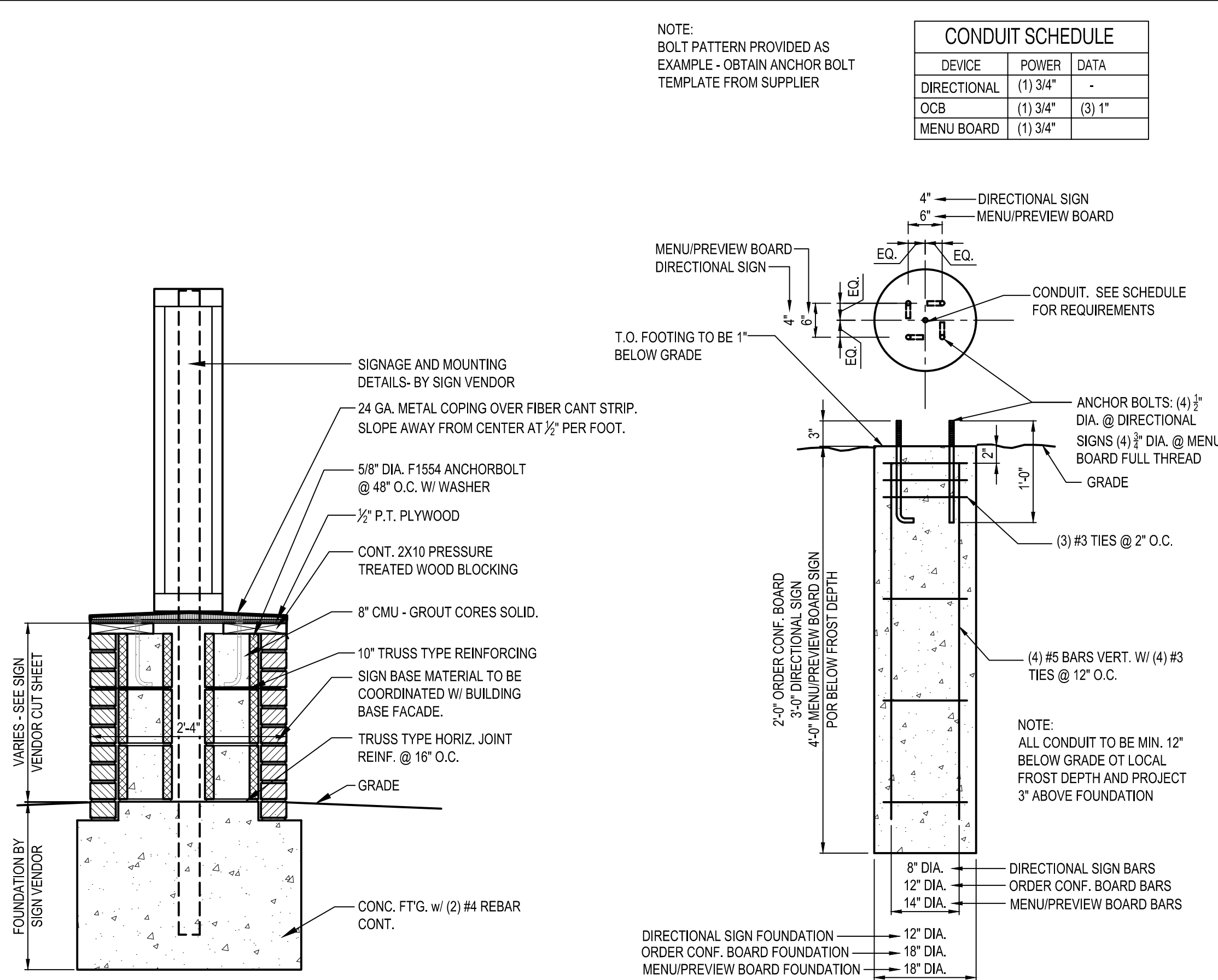
- KEY NOTES**
- 1" CONDUIT OR AS NOTED. EXTEND 3/4" MAX. ABOVE FOUNDATION. (INSTALL ON MIN. 6" SAND BED WITH MIN. 6" SAND COVER BEFORE BACKFILL. CONDUIT SHALL BE FULL WEIGHT SCHEDULE 40 PVC)
  - POURED CONCRETE BASE BY G.C. (24" DIA.) (3,000 PSI CLASS "C" CONCRETE)
  - PROVIDE GROUND LUG IN BASE BOLTED TO BASE PLATE. GROUND SHALL BE MIN. #6 BARE WIRE.
  - T & B #3 GND. CLAMP
  - 1/2" EMT OR PVC CONDUIT FOR GROUND WIRE
  - GROUNDING ROD
  - (4) 4'-0" LONG HEADED ANCHOR RODS. COORDINATE ANCHOR ROD DIAMETER W/ POLE SUPPLIER. FURNISHED BY LOT LIGHTING SUPPLIER & INSTALLED BY G.C.
  - #3 TIES SPACED @ 12" O.C.
  - (8) #5 VERTICAL REBARS
  - CONDUIT STUB OUT FOR GROUND WIRE CONNECTION
  - BOLT PATTERN BY LOT LIGHTING SUPPLIER
  - REBAR CAGE
  - CONDUIT STUB OUT
  - ANCHOR BOLTS

LIGHT POLE FOUNDATION SCHEDULE	
BASIC WIND SPEED (MPH) (ASCE 7-05)	FOUNDATION DEPTH
90 - 100	6'-0"
101 - 120	7'-0"
121 - 140	8'-0"

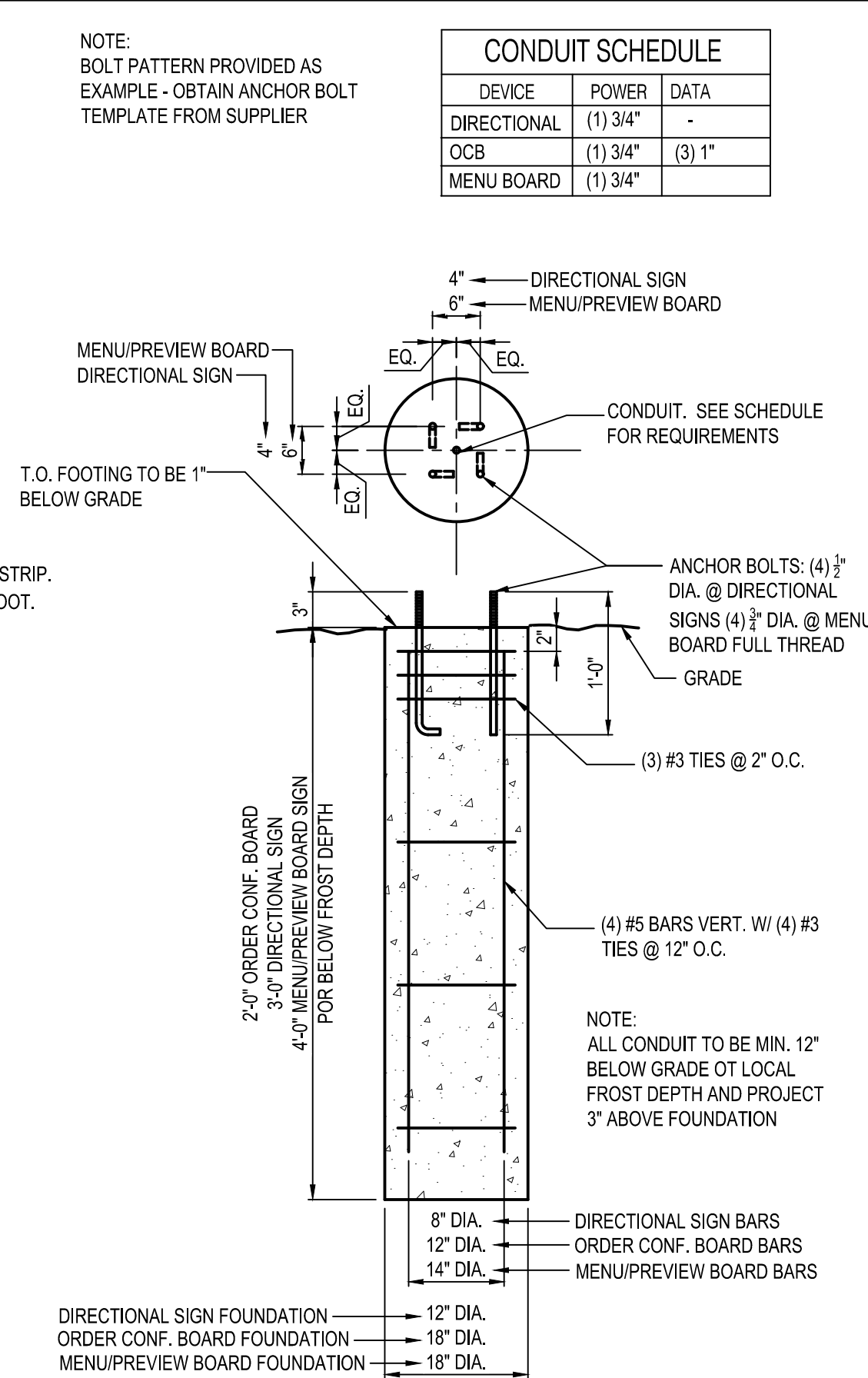
**NOTES**

- WIND LOADS ARE BASED ON EXPOSURE C.
- MAX. POLE HEIGHT = .25 MAX. (POLE LENGTH) + 3' (FOUNDATION HEIGHT ABOVE GRADE) = 28' MAX.
- FOUNDATION DESIGN IS BASED ON A MAX. LUMINARY EFFECTIVE PROJECTED AREA (EPA) OF 4.0 S.F.
- LIGHT POLES SHALL MEET FOR ASCE 7-05 ASD DESIGN WIND SPEEDS PROVIDED IN STRUCTURAL PLANS.
- ALL REINFORCING STEEL SHALL DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60.
- CONCRETE ABOVE FINISH GRADE TO BE SMOOTH WITH RUBBED FINISH.
- MINIMUM REQUIRED SOIL PARAMETERS:
  - ALLOWABLE LATERAL PASSIVE PRESSURE = 250 PLF/FT
  - 6" MAX. DEPTH OF DISTURBED TOP SOIL.
  - WATER TABLE SHALL BE LOCATED BELOW THE BOTTOM OF FOUNDATION.

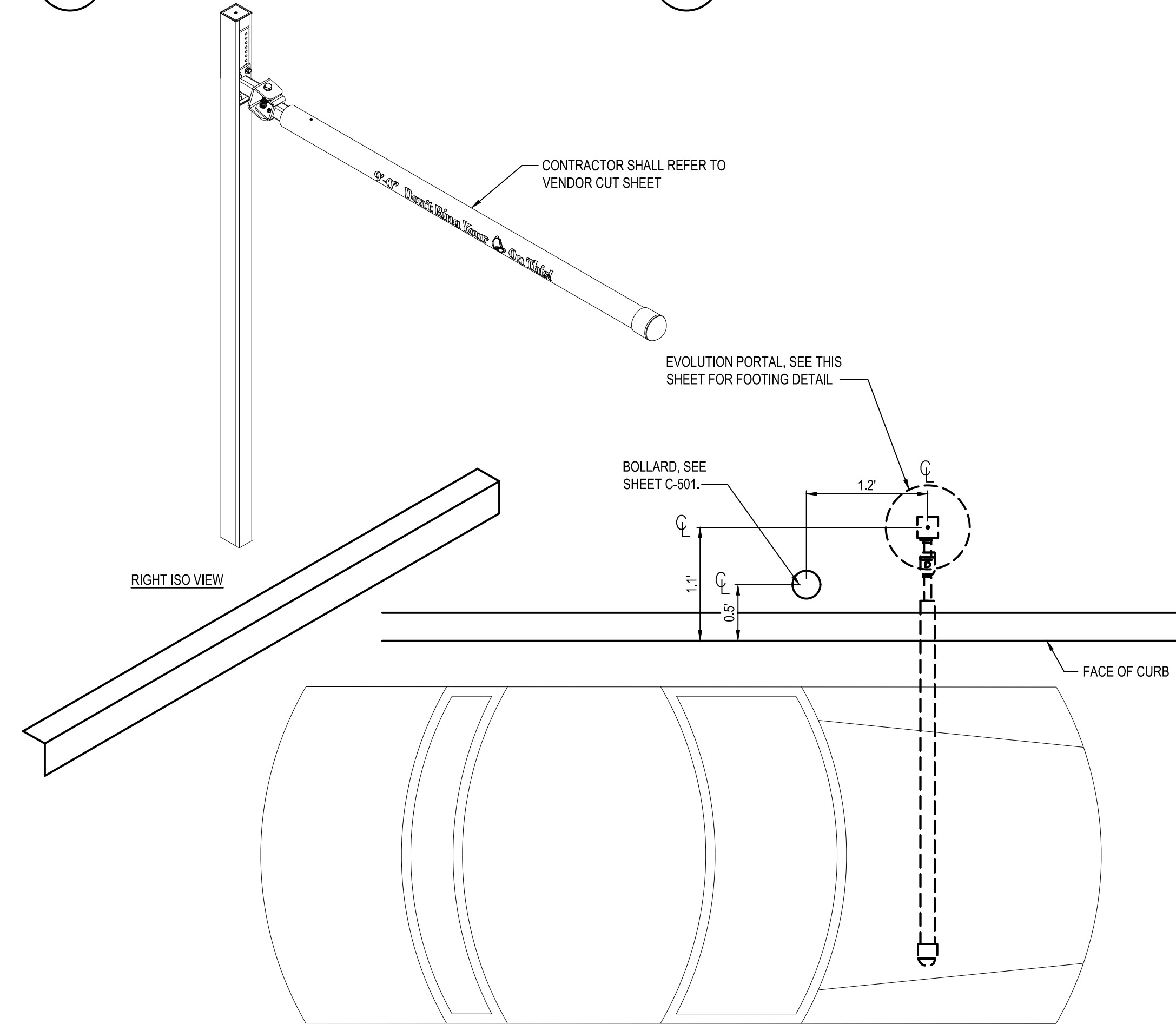
A1 LIGHT POLE FOUNDATION DETAIL  
N.T.S.



C2 MONUMENT SIGN FOUNDATION  
N.T.S.



C3 MENU BOARD FOOTING DETAIL  
N.T.S.



A2 PORTAL PLACEMENT DETAIL  
N.T.S.

**CONDUIT SCHEDULE**

DEVICE	POWER	DATA
DIRECTIONAL	(1) 3/4"	-
OCB	(1) 3/4"	(3) 1"
MENU BOARD	(1) 3/4"	-

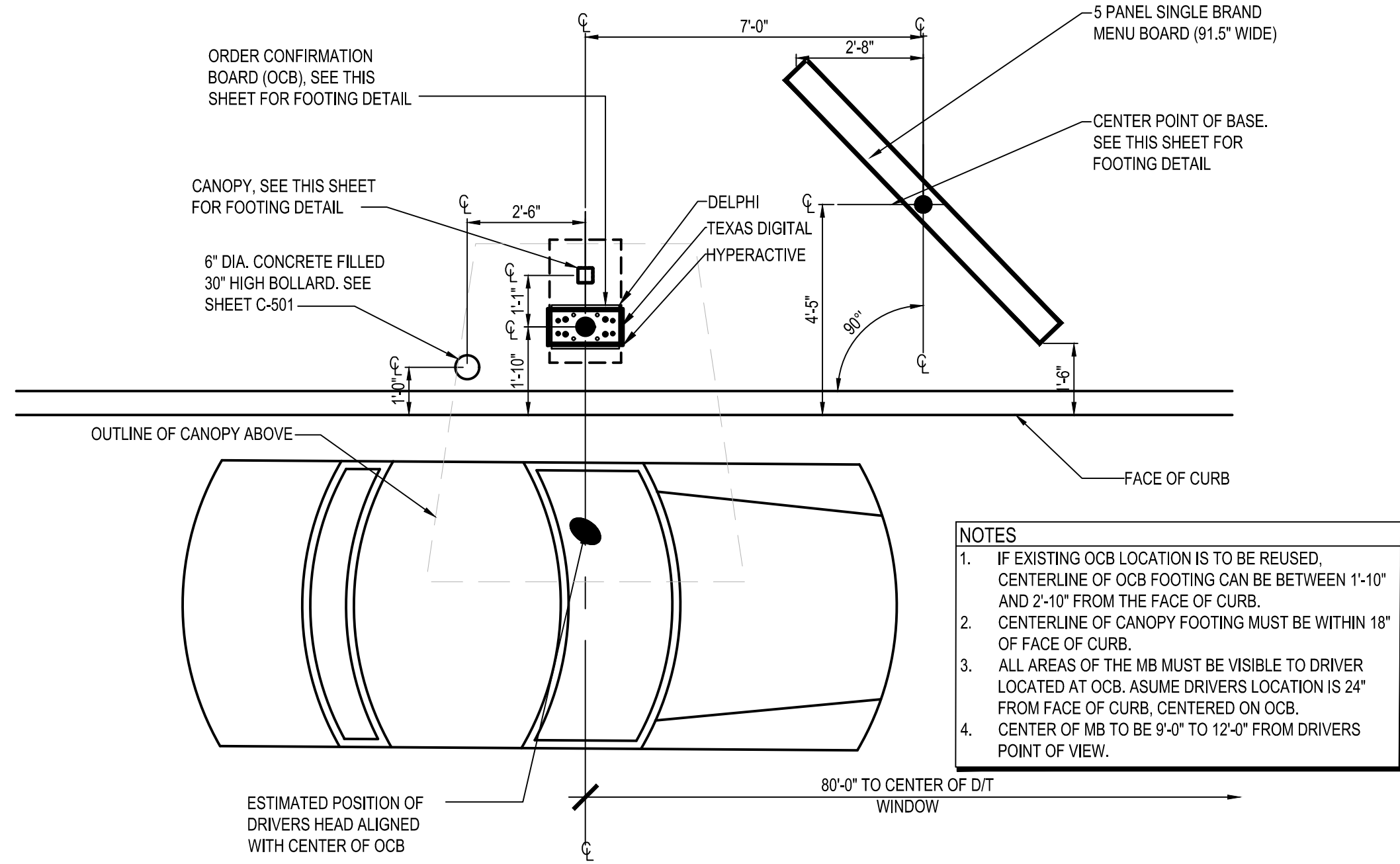
NOTE:  
BOLT PATTERN PROVIDED AS  
EXAMPLE - OBTAIN ANCHOR BOLT  
TEMPLATE FROM SUPPLIER

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

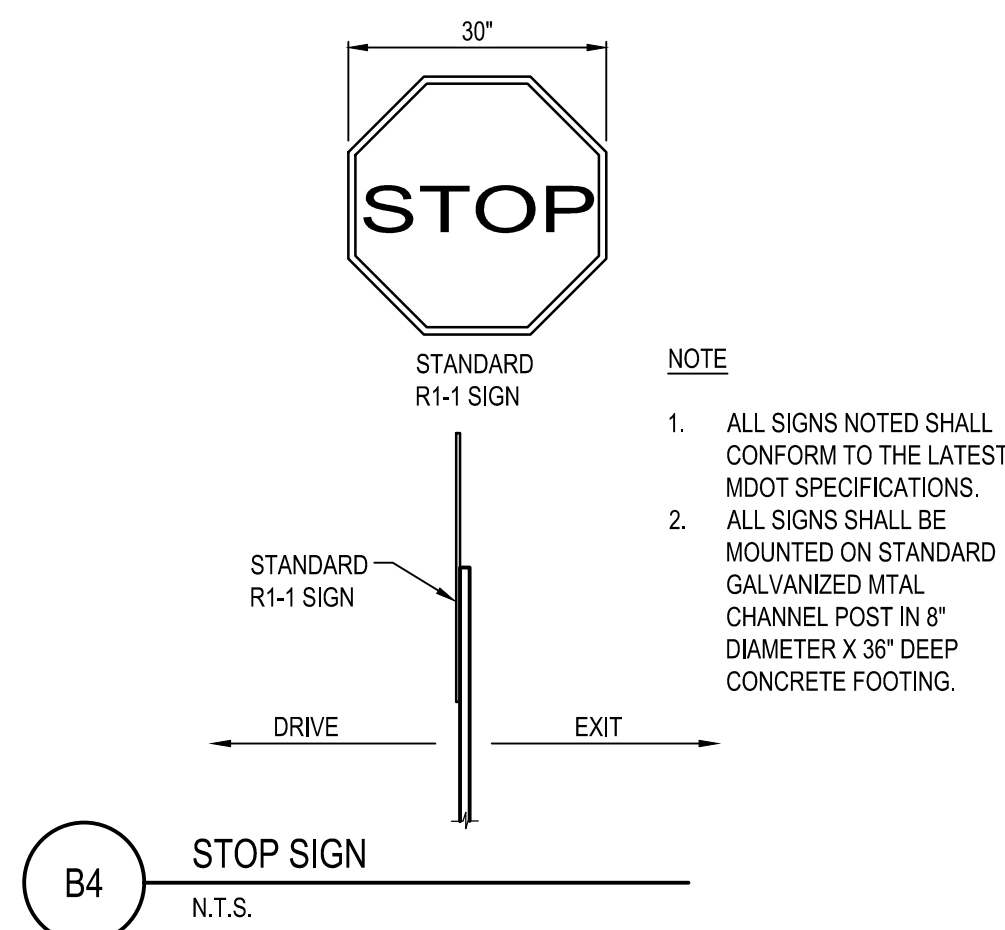
SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

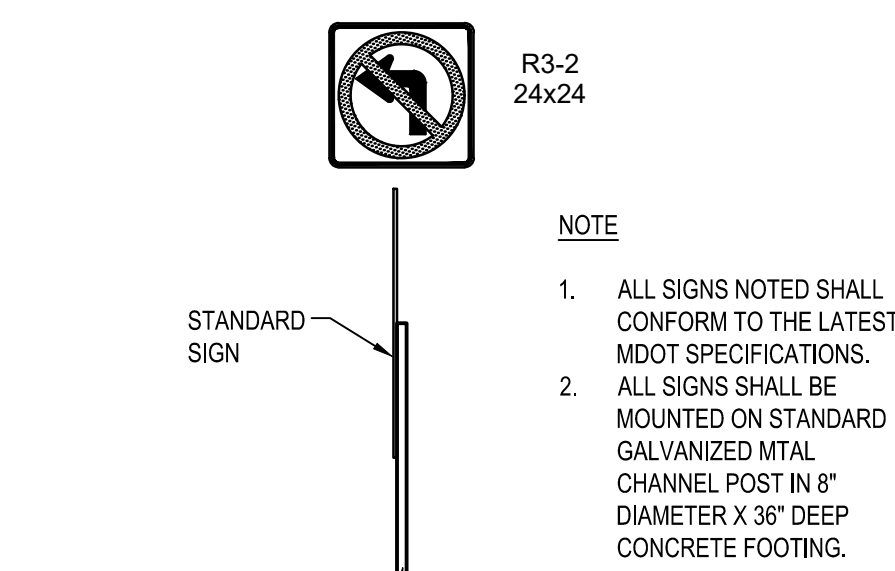
CERTIFICATION DATE: \_\_\_\_\_



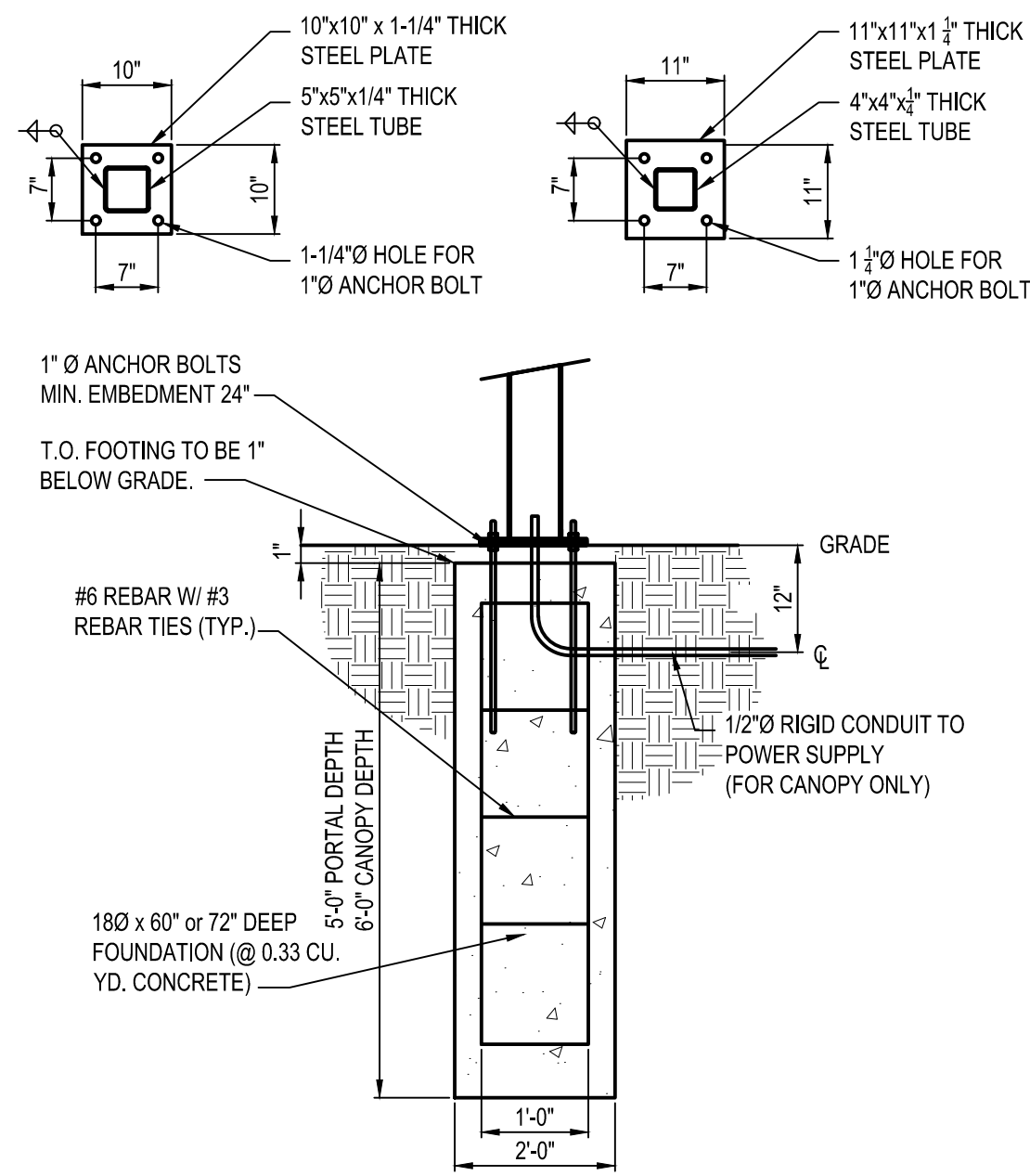
C4 ENLARGED MENU BOARD  
DETAIL @ STRAIGHT CURB  
N.T.S.



B4 STOP SIGN  
N.T.S.

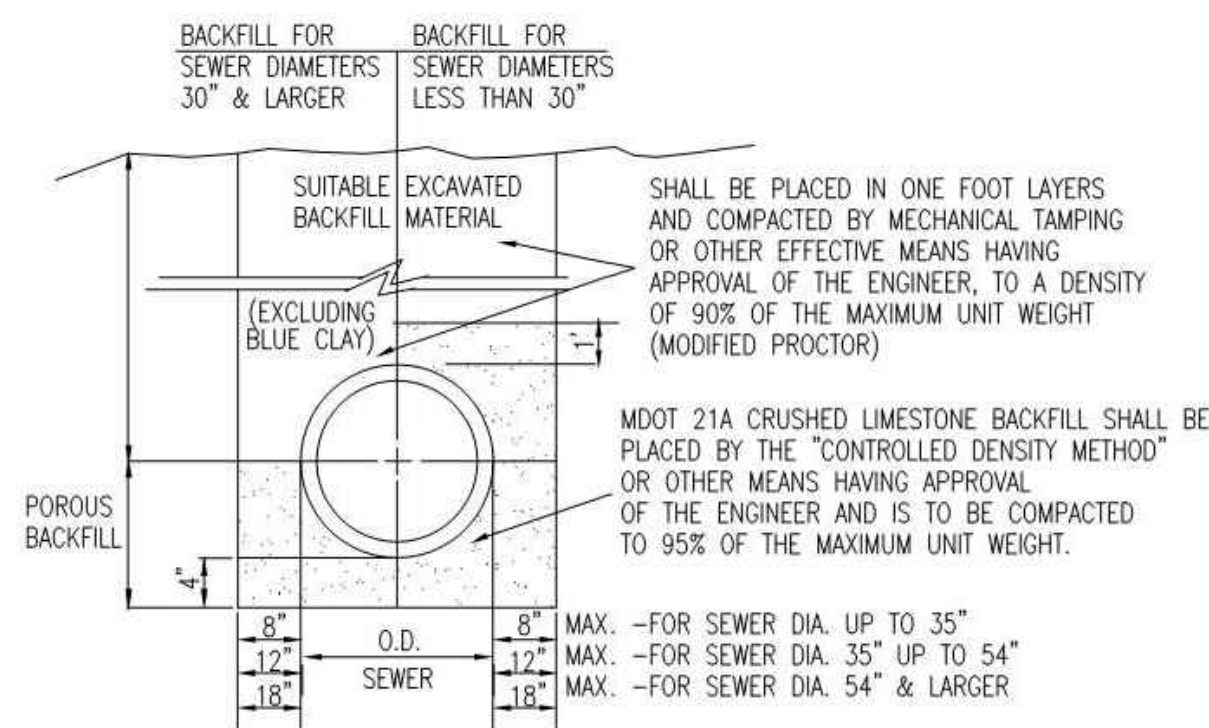


A4 NO LEFT TURN SIGN  
N.T.S.



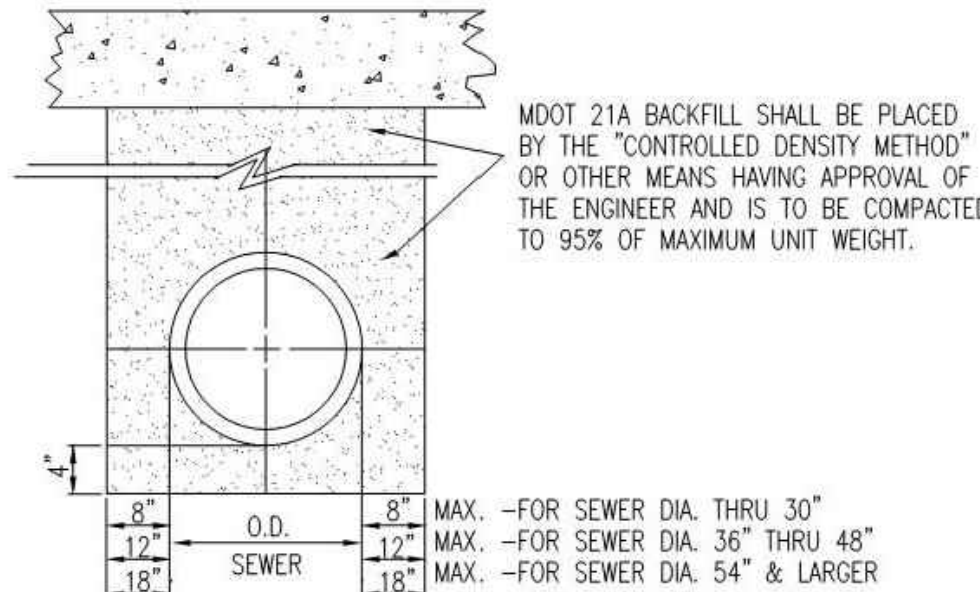
A5 EVOLUTION FOUNDATION DETAIL  
N.T.S.





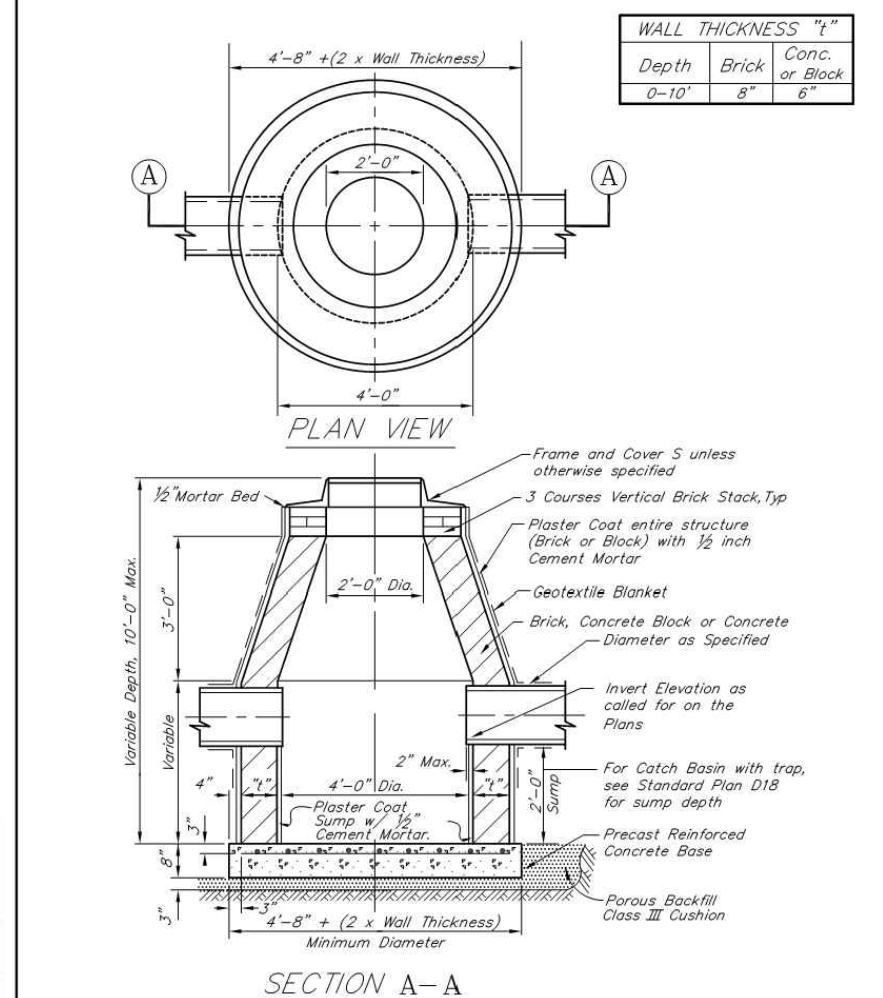
## SEWER TRENCH 'A'

NOTE:  
PVC PIPE:  
MIN. TRENCH WIDTH = 1.5 X O.D.+12" (FOR ALL  
INSTALLATION DEPTHS)  
HDPE PIPE:  
PER MANUFACTURER'S RECOMMENDATIONS



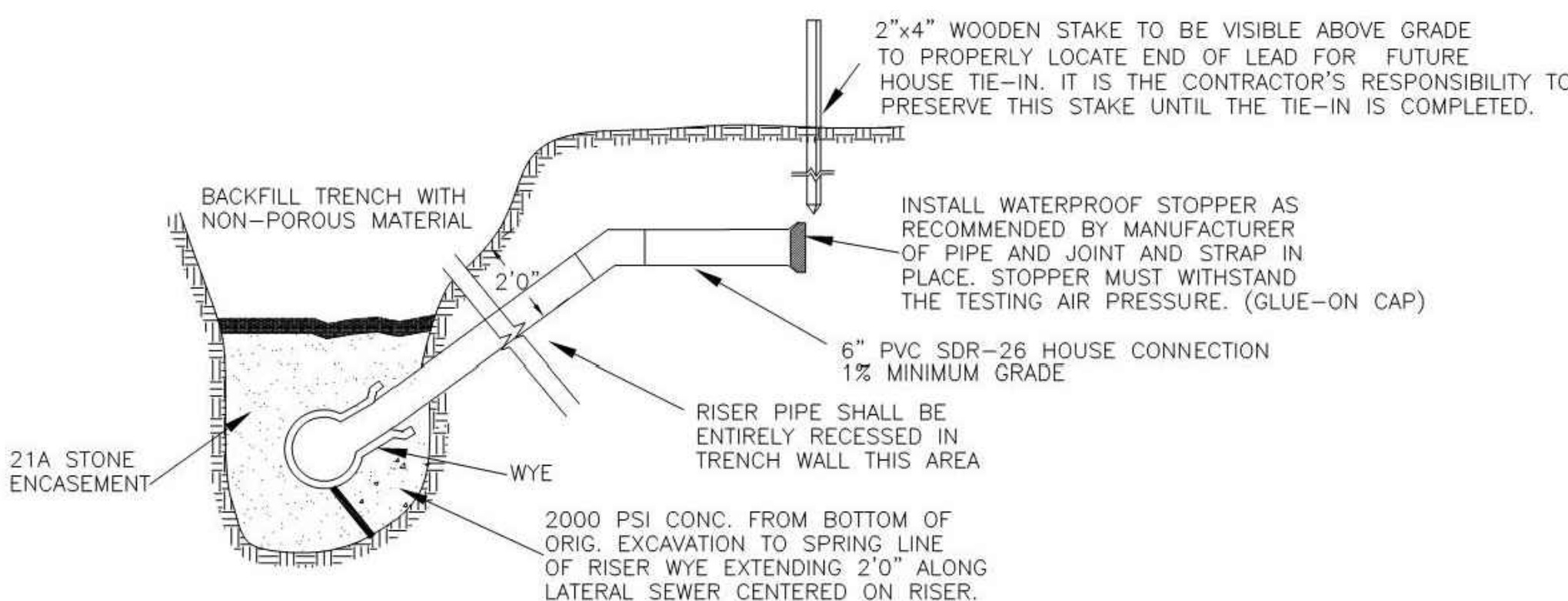
## SEWER TRENCH 'B'

NOTE:  
PVC PIPE:  
MIN. TRENCH WIDTH = 1.5 X O.D.+12" (FOR ALL  
INSTALLATION DEPTHS)  
HDPE PIPE:  
PER MANUFACTURER'S RECOMMENDATIONS

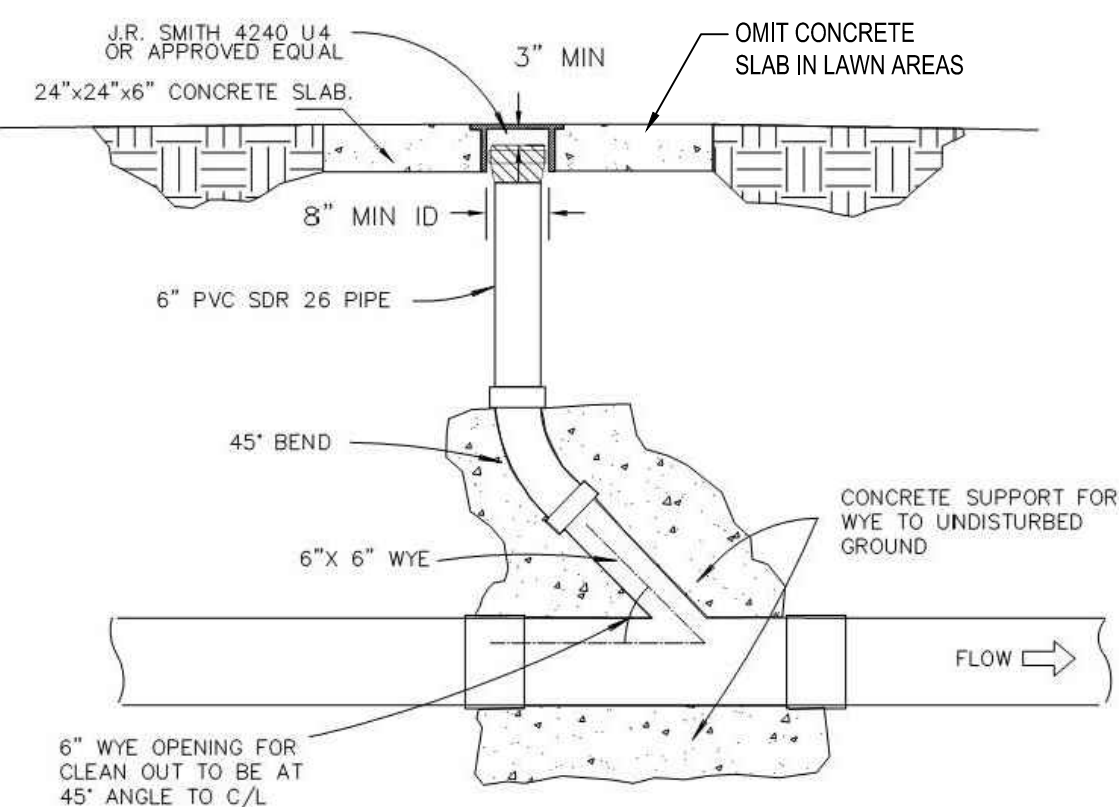


## CATCH BASIN A

Work this Sheet with the General Notes on Standard Plan S-1  
WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION/PERMIT OFFICE  
PERMIT STANDARDS  
S-6  
SHEET  
1 OF 1



## RISER DETAIL



## DETAIL OF SANITARY AND STORM SEWER CLEANOUT

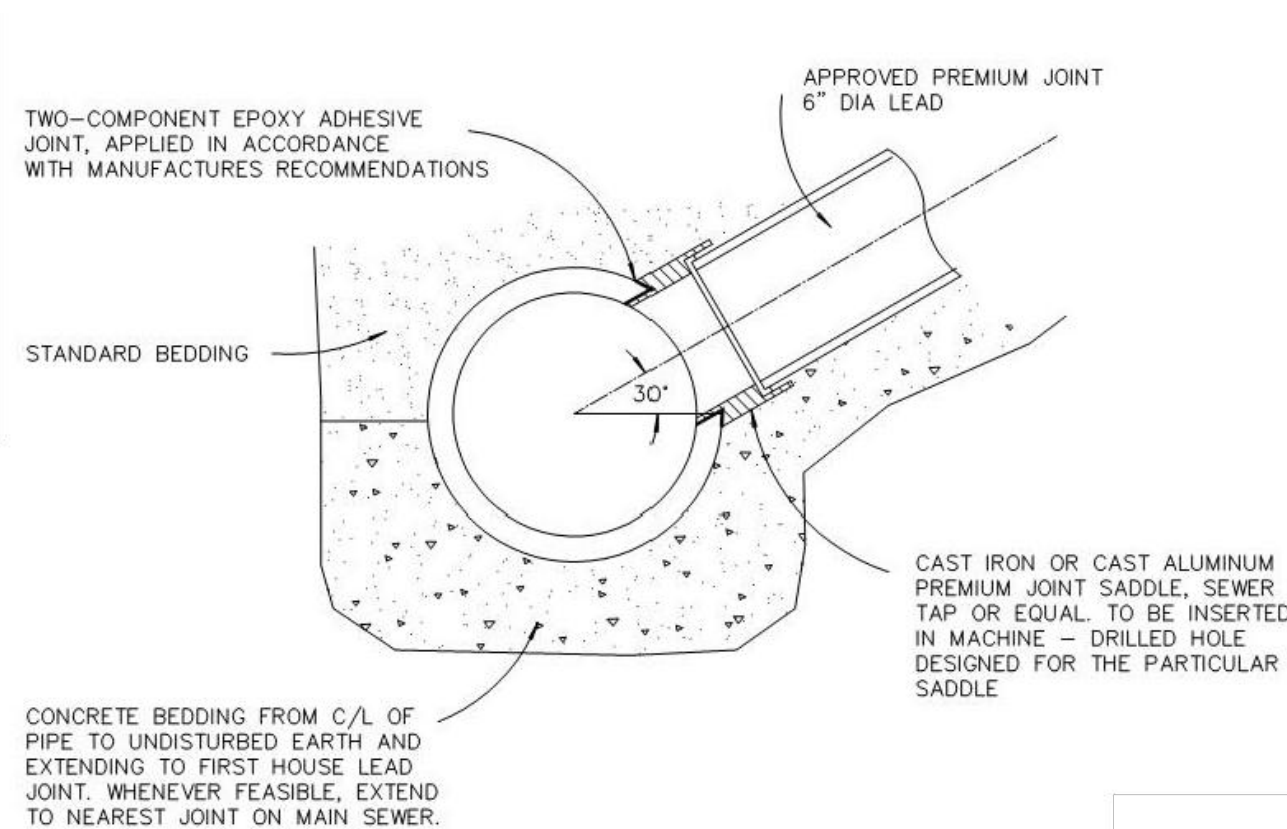
THE DETAILS ABOVE ARE CITY OF  
LINCOLN PARK DETAILS  
PROVIDED BY:



SHEET: SAN 1, DATED 12/15/09  
SAN 2, DATED 12/15/09

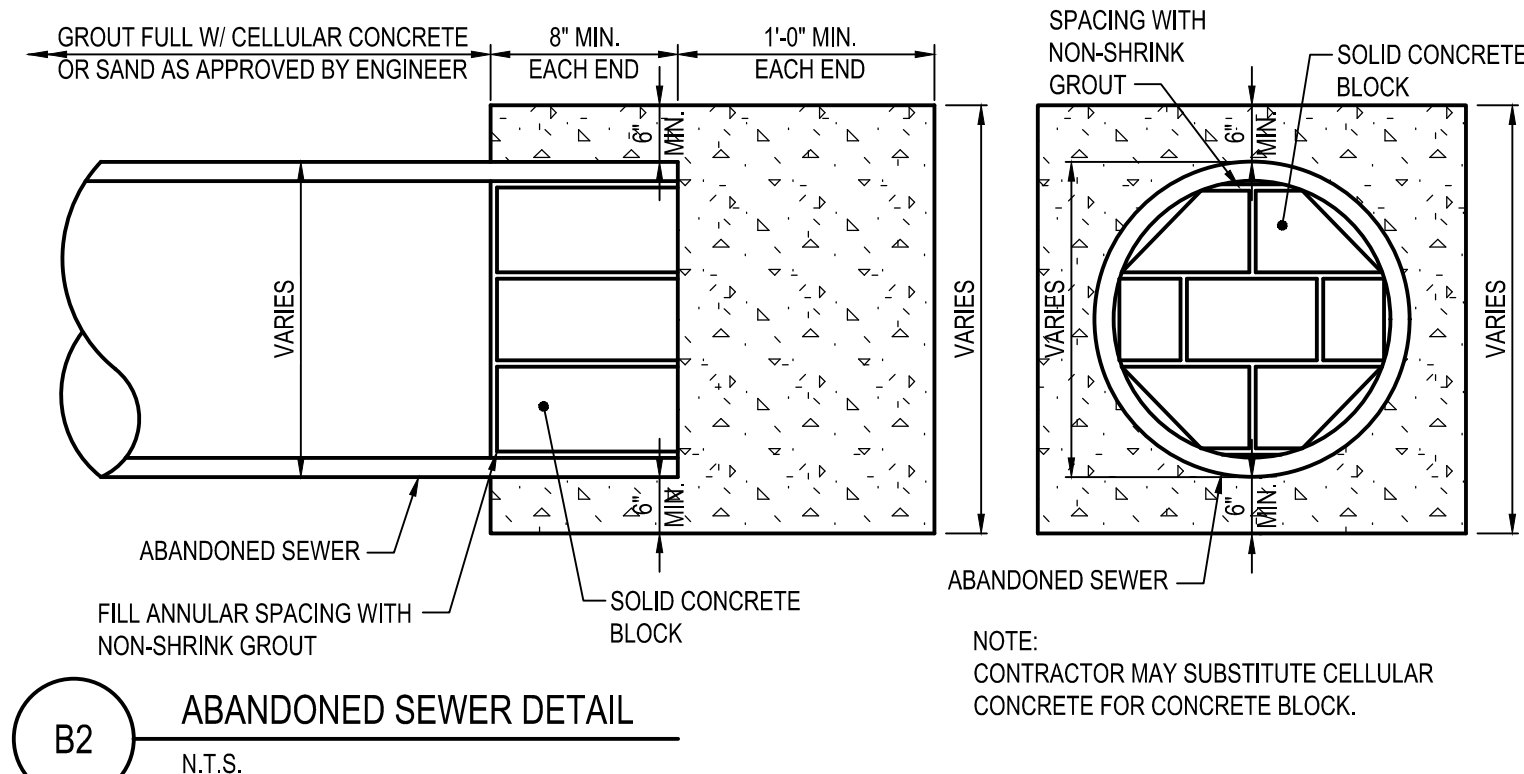
I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13,  
2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED  
BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_

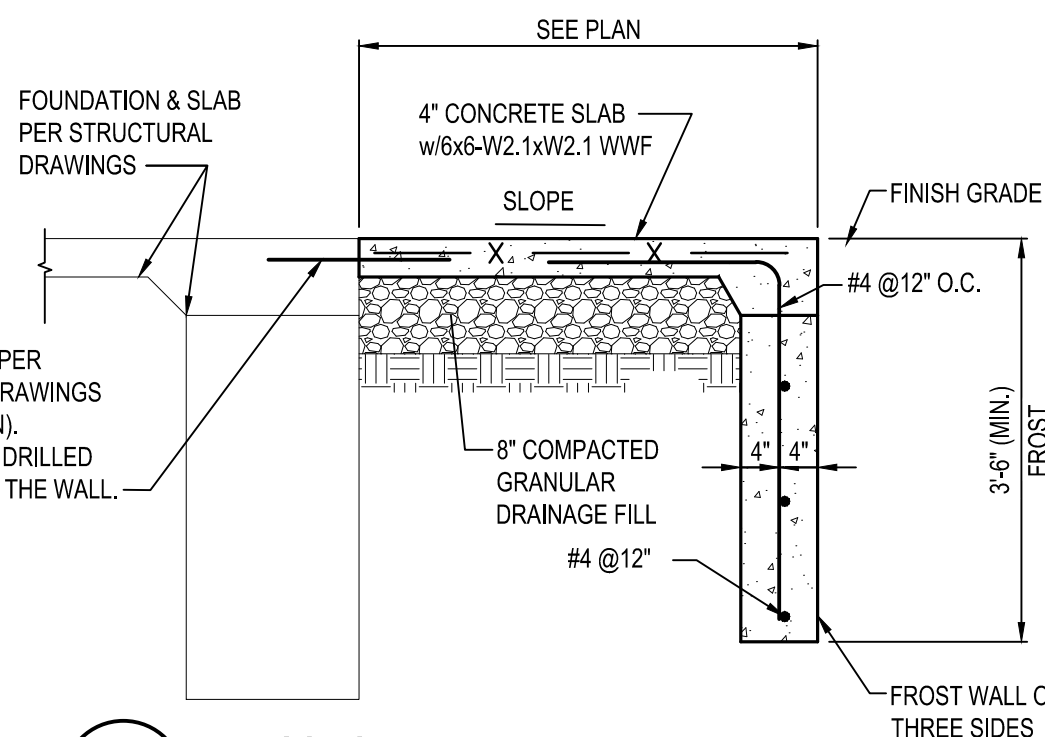


## METHOD B

## SADDLE TAP - ALL SIZE OF PVC SEWER

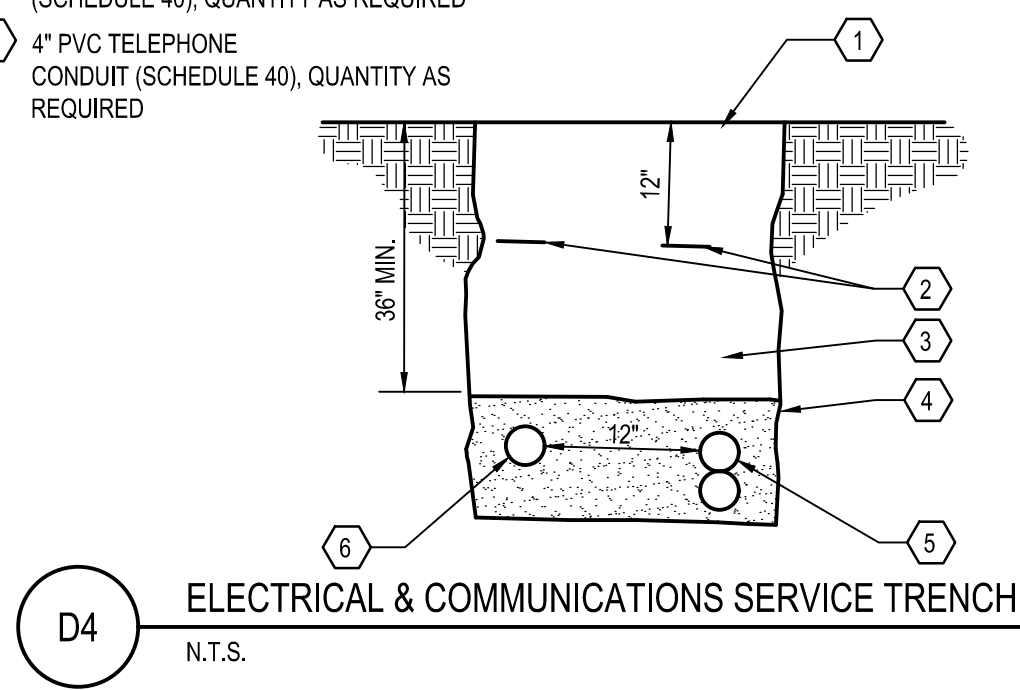


## ABANDONED SEWER DETAIL

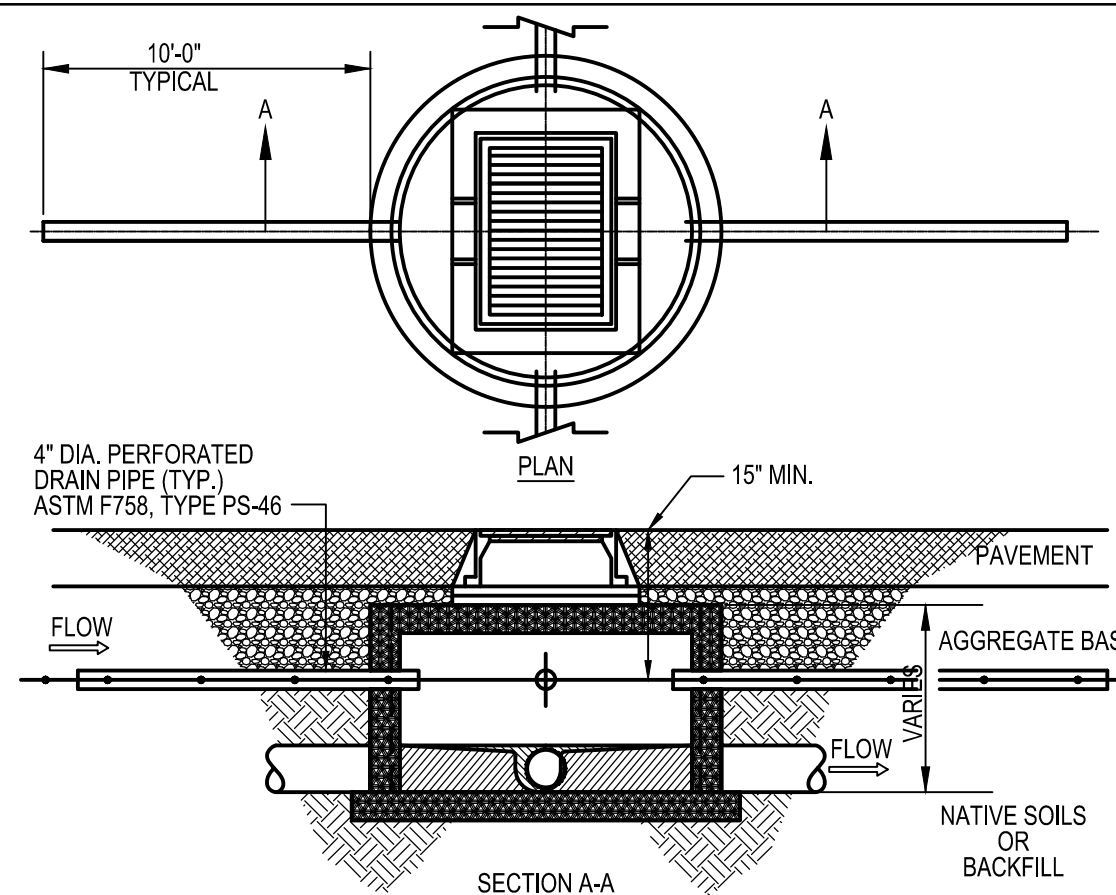
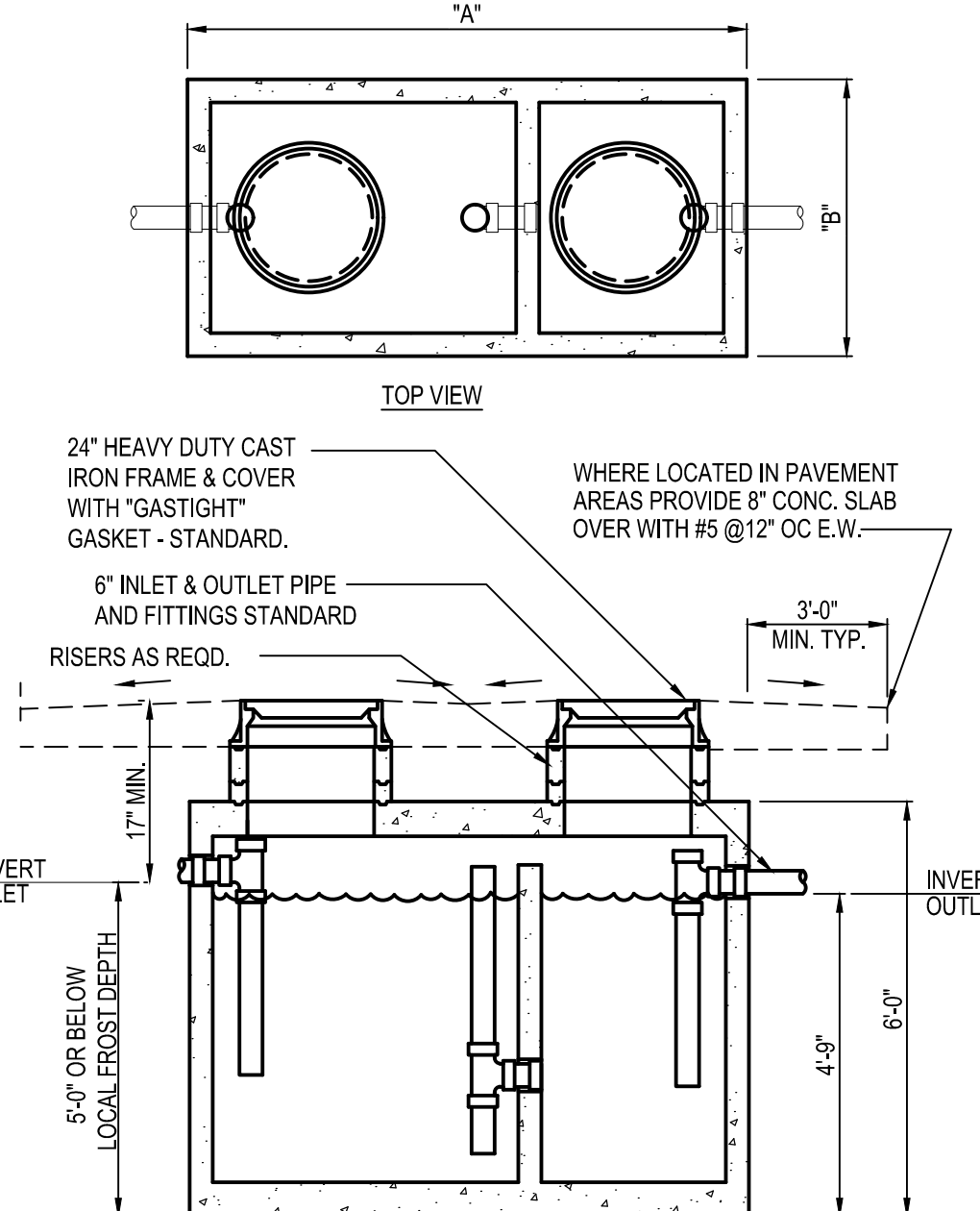


## FROST SLAB DETAIL

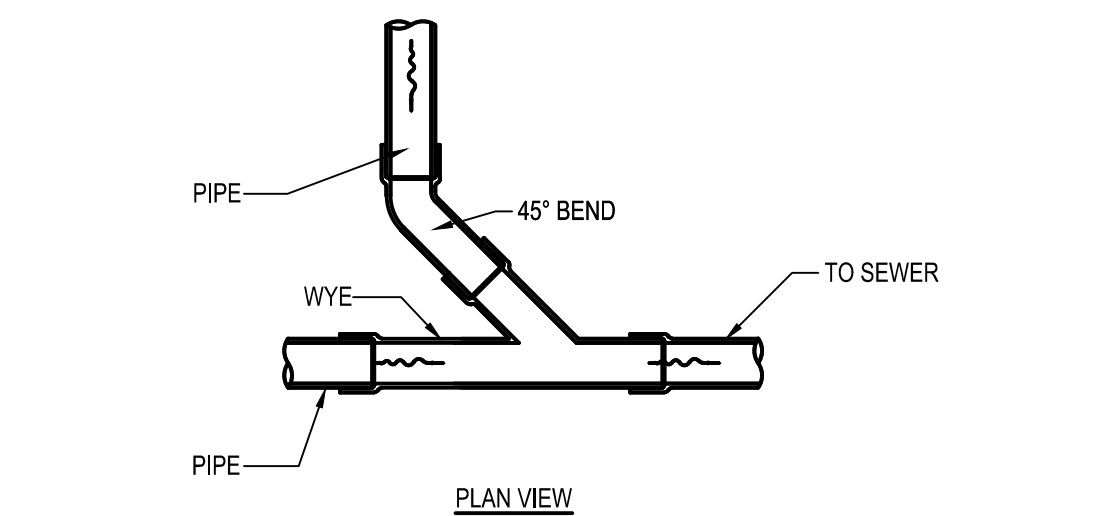
- KEYED NOTES
- 1 TOPSOIL & SOD, OR PAVEMENT AS  
DETAILED ELSEWHERE.
  - 2 CONTINUOUS METALLIC WARNING TAPE
  - 3 CLEAN SELECT GRANULAR BACKFILL
  - 4 6" CLEAN SAND ENVELOPE
  - 5 4" PVC ELECTRICAL CONDUITS  
(SCHEDULE 40), QUANTITY AS REQUIRED
  - 6 4" PVC TELEPHONE  
CONDUIT (SCHEDULE 40), QUANTITY AS  
REQUIRED



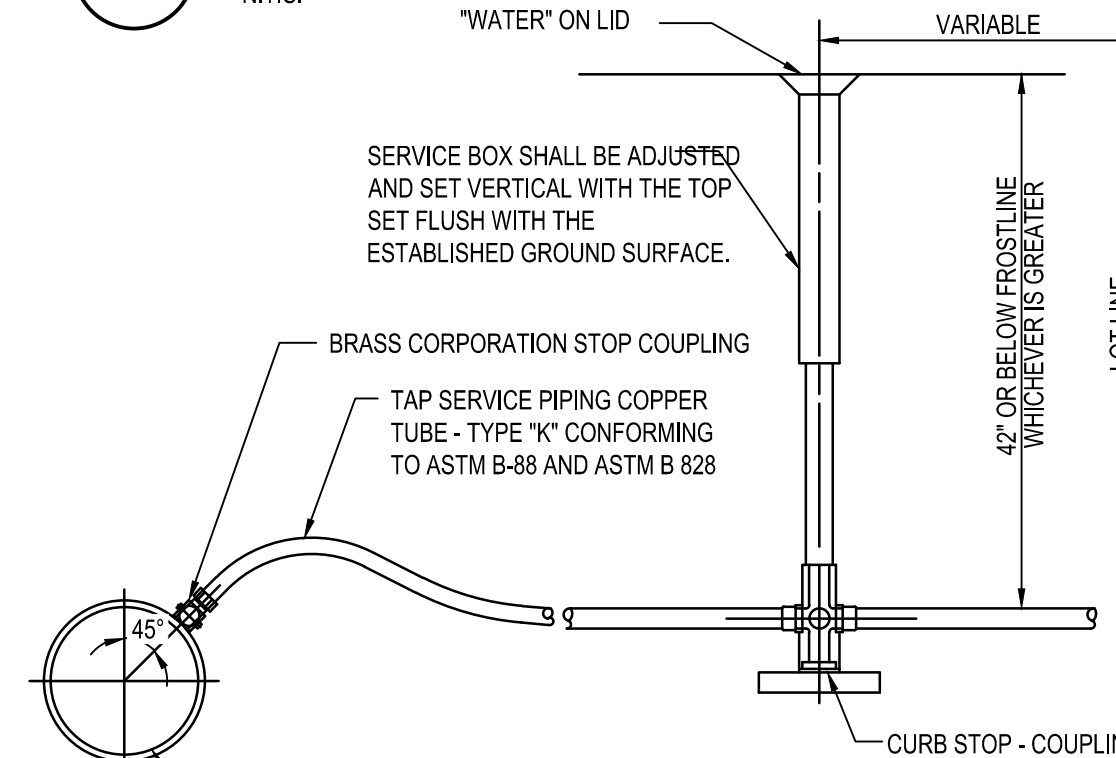
## ELECTRICAL & COMMUNICATIONS SERVICE TRENCH



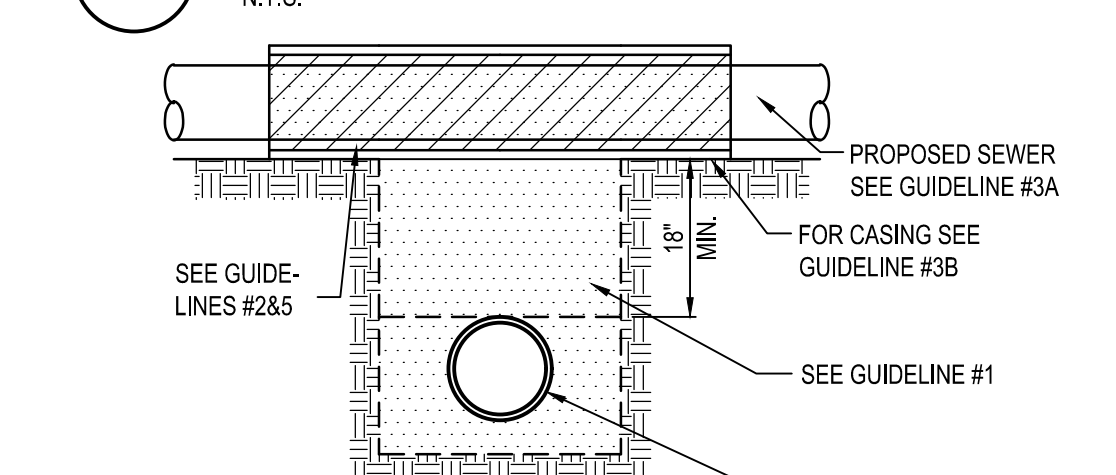
## FINGER DRAIN DETAIL



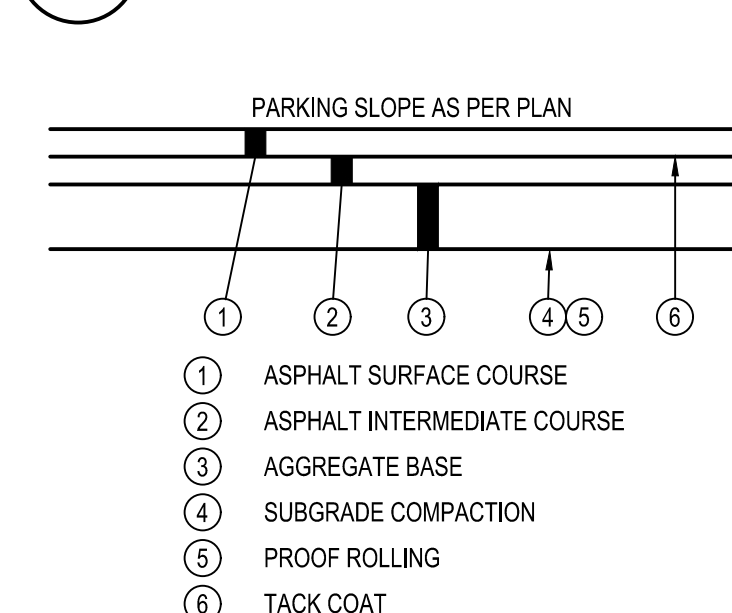
## WYE CONNECTION



## WATER SERVICE TAP



## EXTERIOR GREASE INTERCEPTOR



## NOTES:

1. APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT AND WHERE  
PROPOSED ASPHALT MEETS EXISTING ASPHALT INCLUDING SAW CUT JOINTS.
2. SEE SITE PLAN FOR PAVEMENT THICKNESSES.

## TYPICAL PAVEMENT SECTION

- NOTES:
- PROPOSED WATER SERVICE BELOW PROPOSED SEWER LINE WITH 18" MINIMUM SEPARATION.  
GRANULAR MATERIAL TO BE COMPACTED TO 75% OF RELATIVE DENSITY.
- GUIDELINES:
1. IF SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER  
TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL AND COMPACT.
  2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF PIPE AND  
USE SELECT EXCAVATED MATERIAL AND COMPACT FOR 10 FEET ON EITHER SIDE OF WATER MAIN
  3. A. CONSTRUCT 10 FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR,  
B. USE 10 FEET OF CASING FOR PROPOSED SEWER AND SEAL ENDS OF CASING.
  4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
  5. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO  
SETTLEMENT OF SEWER TRENCH.

## WATER & SEWER TRENCH SEPARATOR

## TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

## SITE DETAILS



SEE SEWER NOTES

3-5 BRICK COURSES FOR FUTURE ADJUSTMENT

PLASTERCOAT ENTIRE STRUCTURE (BRICK OR BLOCK) WITH 1/2" CEMENT MORTAR.(INSIDE AND OUT)

CONCRETE BLOCK OR PRECAST CONCRETE

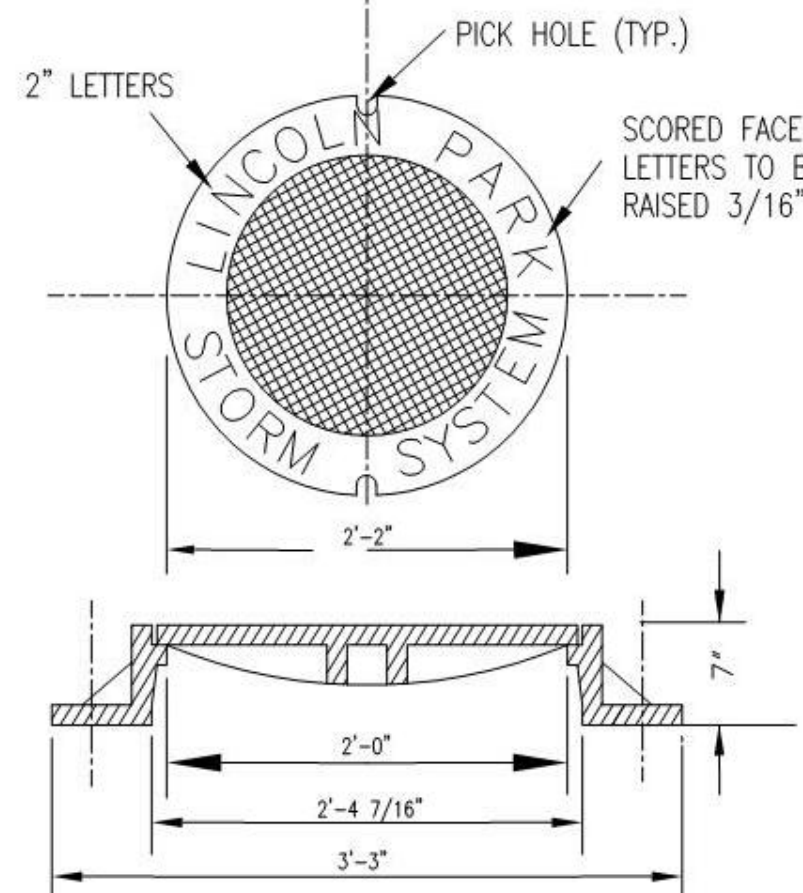
MANHOLES MAY BE REQUIRED TO BE A LARGER DIAM. FOR LARGER PIPES, AND SOME PIPE ANGLES.)

PRECAST MANHOLE..... THE BOTTOM PRECAST SECTION SHALL IN ALL CASES BE CAST WITH ING OF FULL WALL THICKNESS. BOTTOM SECTIONS SHALL BE SET IN 1:2 CEMENT MORTAR

JOINTS ON PRECAST SECTIONS SHALL BE THE SAME AS JOINTS ON STORM SEWER.

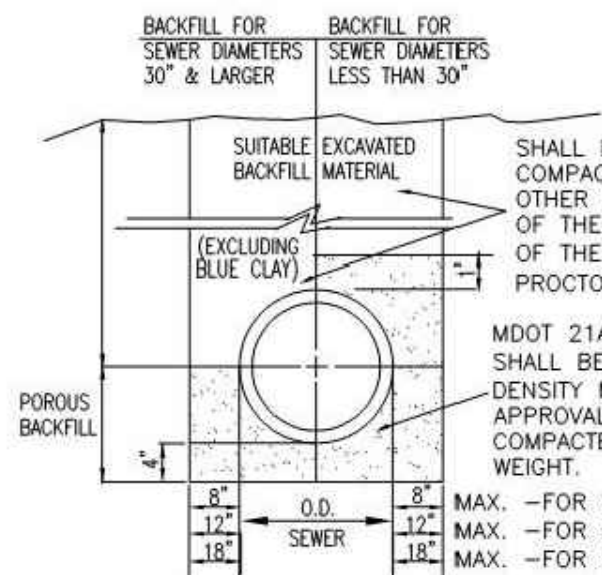
PRE-CAST STRUCTURE.  
(8" BLOCK OR 6" BRICK TO BE USED ON A CASE BY CASE ONLY)  
PLASTER COAT BLOCK WITH 1/2" CEMENT MORTAR (INSIDE AND OUT)

NOTE:  
CONTRACTOR SHALL INSTALL AN OFFSET MANHOLE LID ON STRUCTURE A9 TO ALLOW FOR 36" OF CLEAR ZONE BETWEEN EDGE OF LID AND EDGE OF CROSSWALK STRIPING. ADDITIONALLY, AN ADA COMPLIANT LID SHALL BE INSTALLED AT MANHOLE A9.



STANDARD MANHOLE FRAME AND COVER  
SEE SEWER NOTES

STANDARD STORM MANHOLE  
FOR SEWER WITH OUTLETS  
OF 18" & UNDER

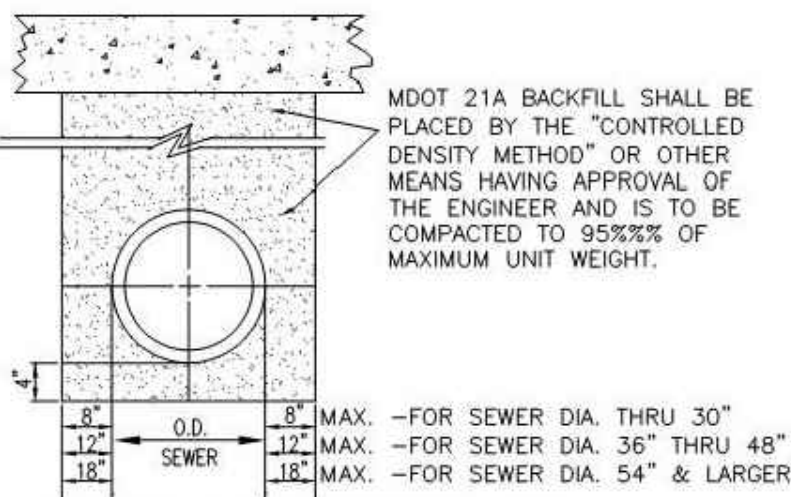


SEWER TRENCH "A"

NOTE:  
PVC PIPE:  
MIN. TRENCH WIDTH = 1.5 X O.D.+12"  
(FOR ALL INSTALLATION DEPTHS)

HDPE PIPE:  
MIN. TRENCH WIDTH=O.D.+36"  
(FOR INSTALLATION DEPTHS UP TO 10')  
MIN. TRENCH WIDTH=3XO.D.  
(FOR INSTALLATION DEPTHS BELOW 10')  
(O.D. = OUTSIDE DIAMETER OF PIPE)

MAX WIDTH OF TRENCH 12" ABOVE TOP OF PIPE		
6" THRU 12" PIPE	30" WIDE	
15" THRU 36" PIPE	O.D. +16"	
42" THRU 60" PIPE	O.D. +24"	
MIN WIDTH OF TRENCH 12" ABOVE TOP OF PIPE SHALL BE 6" ON EACH SIDE OF PIPE		

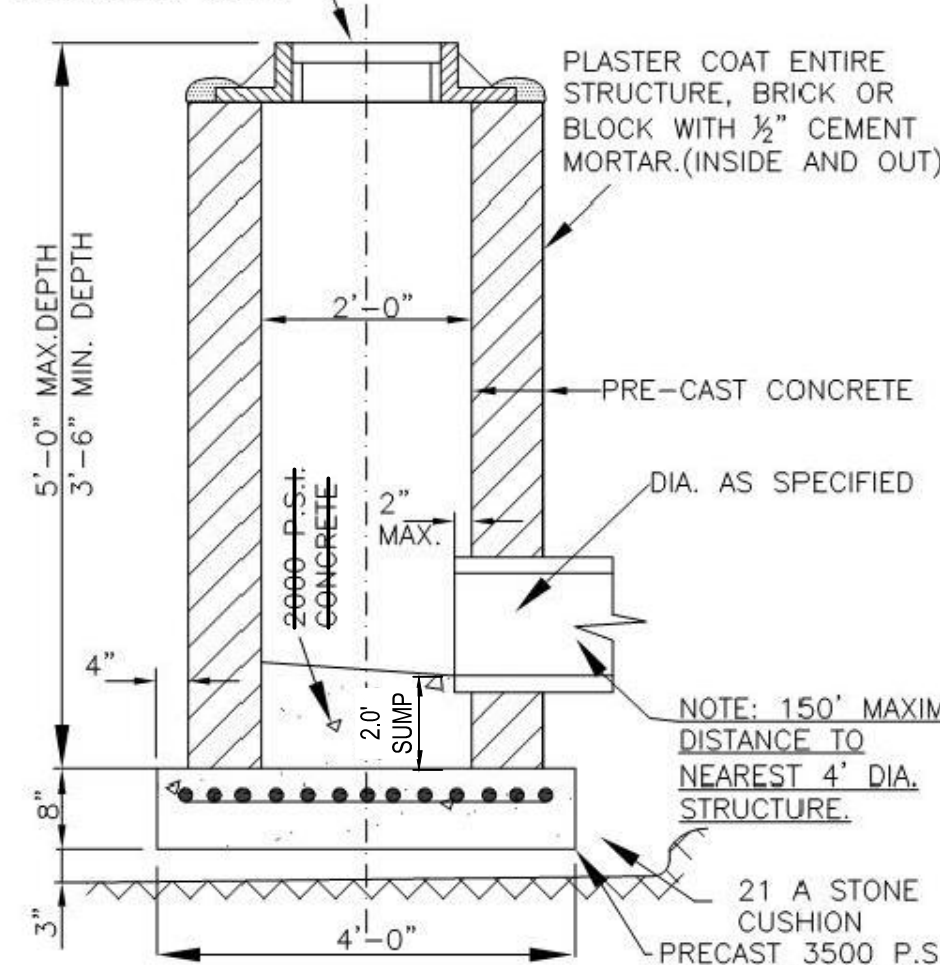


SEWER TRENCH "B"

NOTE:  
PVC PIPE:  
MIN. TRENCH WIDTH = 1.5 X O.D.+12"  
(FOR ALL INSTALLATION DEPTHS)

HDPE PIPE:  
MIN. TRENCH WIDTH=O.D.+36"  
(FOR INSTALLATION DEPTHS UP TO 10')  
MIN. TRENCH WIDTH=3XO.D.  
(FOR INSTALLATION DEPTHS BELOW 10')  
(O.D. = OUTSIDE DIAMETER OF PIPE)

SEE SEWER NOTES



STANDARD INLET

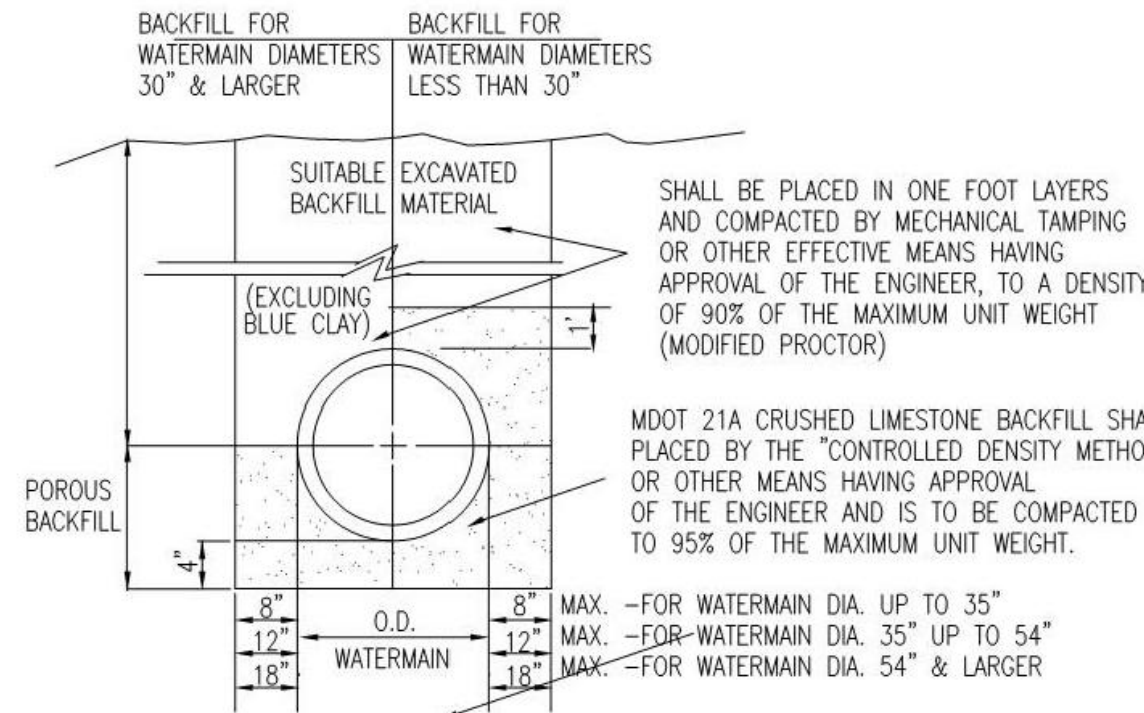
ALL DETAILS ON THIS PAGE ARE  
CITY OF LINCOLN PARK DETAILS  
PROVIDED BY:



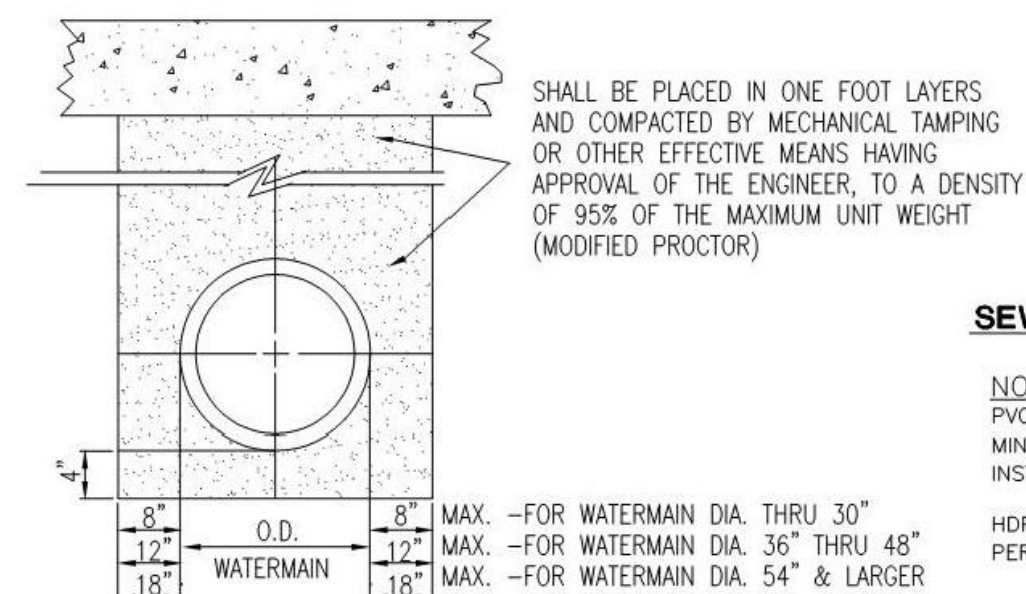
HENNESSEY  
ENGINEERS, INC.

**ENGINEERING THE FUTURE.**  
13500 REECK ROAD  
SOUTHGATE, MI 48195  
(734) 759-1600  
FAX (734) 282-6566  
WWW.HENGINEERS.COM

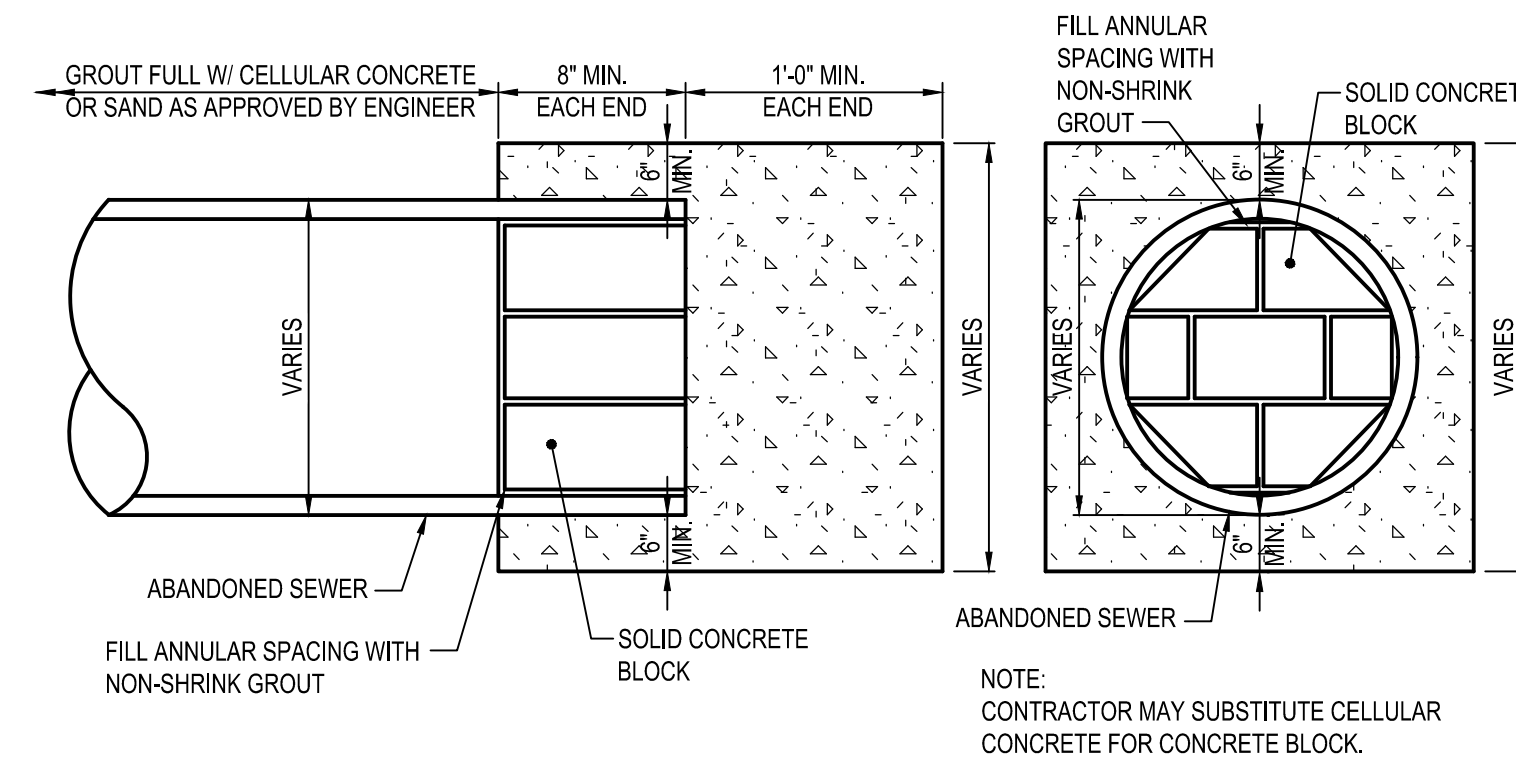
SHEET: STM 1 , DATED 12/17/09  
WD 2 , DATED 12/21/09



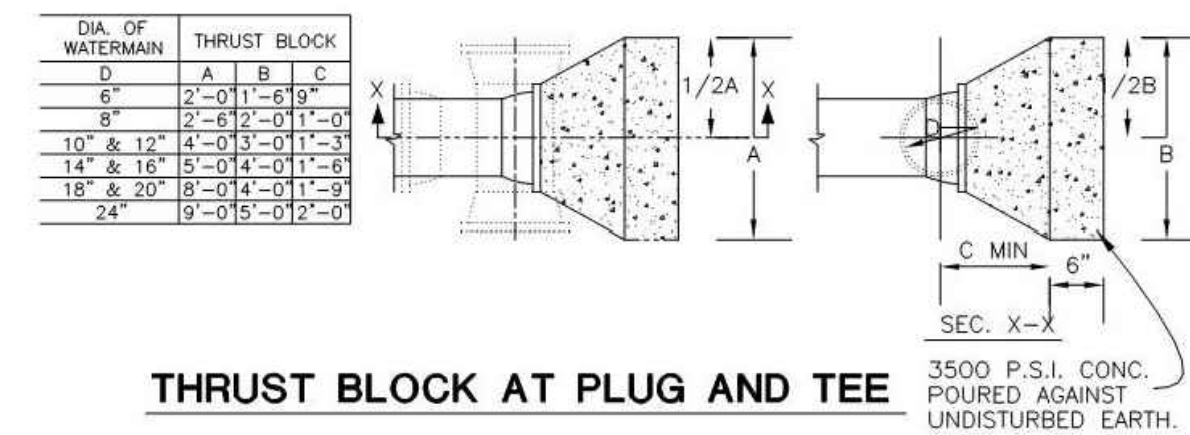
TRENCH "A"



TRENCH "B"



ABANDONED SEWER DETAIL  
N.T.S.



THRUST BLOCK AT PLUG AND TEE

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.  
SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_

ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**  
**EXPLORER LITE**  
LARGE50

**SITE DETAILS**

**C-504**



## CLEANUP

1. THIS WORK SHALL CONSIST OF PERFORMING CLEARING AND GRUBBING, SOIL PREPARATION FINISH GRADING, PLANTING AND DRAINAGE, INCLUDING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT.
2. QUANTITY TAKEOFF IS SUPPLIED FOR CONTRACTOR'S ASSISTANCE ONLY. CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL PLANT MATERIALS AS PER PLAN.
3. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR WITHIN EASEMENT OR RIGHT-OF-WAY LIMITS.

1. CONTRACTOR SHALL MAINTAIN AND PRESERVE TREES AND SHRUBS NOT BEING REMOVED, INCLUDING THEIR ROOTS. TREE PROTECTION FENCING SHALL BE USED AT THE DRIP LINE OF ALL TREES AND SHRUBS WITHIN 50 FEET OF CONSTRUCTION EXCEPT AS SHOWN ON PLAN. FENCING SHALL REMAIN IN PLACE UNTIL FINAL PLANT INSPECTION FOLLOWING CONSTRUCTION. MATERIALS SHALL NOT BE STOCKPILED WITHIN THIS DEFINED AREA AND VEHICLES AND OTHER EQUIPMENT SHALL BE OPERATED TO AVOID SOIL COMPACTION.
2. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA EQUAL TO TWICE THE TREE CIRCUMFERENCE (MEASURED 6" ABOVE THE GROUND LINE IN INCHES) EXPRESSED IN FEET. (EXAMPLE: A CIRCUMFERENCE OF 10" WOULD HAVE A "NO CUT" ZONE OF 20 FEET IN ALL DIRECTIONS FROM THE TREE). THIS SHOULD APPLY TO UTILITY SERVICES, IF FEASIBLE. THE ONLY EXCEPTION TO THIS REQUIREMENT WILL BE THOSE SPECIFICALLY ALLOWED BY THE LANDSCAPE ARCHITECT SPECIFICATIONS OR AS INDICATION ON THE PLANS.
3. TREE TRUNKS AND EXPOSED ROOTS DAMAGED DURING EQUIPMENT OPERATIONS SHALL BE TREATED IN ACCORDANCE WITH THE ARBOR CULTURAL STANDARDS OF THE CITY.

1. GENERAL - ALL MATERIALS SHALL BE OF ITS KIND AVAILABLE AND SHALL HAVE BEEN GROWN IN A CLIMATE SIMILAR TO THAT ON SITE.
2. PLANTS - ALL PLANTS SHALL BE HEALTHY, OF NORMAL GROWTH, WELL ROOTED, FREE FROM DISEASE AND INSECTS. QUALITY AND SIZE OF PLANT MATERIAL SHALL CONFORM TO ANSI Z60.1 "AMERICAN STANDARDS FOR NURSERY STOCK".
3. VARIETIES AND SIZES OF PLANTS SHALL BE AS SHOWN ON DRAWINGS.
4. PLANTS SHALL BE IN A HEALTHY, VIGOROUS CONDITION, FREE OF DEAD OR BROKEN BRANCHES, SCARS THAT ARE NOT COMPLETELY HEALED, FROST CRACKS, DISFIGURING KNOTS, BROKEN OR ABRADED BARK, REDUNDANT LEADERS OR BRANCHES, OR ABERRATIONS OF ANY KIND. PLANTS SHALL NOT HAVE MULTIPLE LEADERS, UNLESS THIS IS THE NATURAL FORM.
5. BALLED AND BURLAPPED (B&B) PLANTS SHALL BE DUG WITH A FIRM ROOT BALL OF NATURAL EARTH, OF A SIZE IN PROPORTION TO THE PLANTS SIZE, AS MEASURED BY CALIPER, HEIGHT OR SPREAD. BALLED AND BURLAPPED PLANTS SHALL BE HANDLED ONLY BY THE ROOT BALL, NOT BY THE TRUNK OR BRANCHES, AS THIS MAY BREAK OR LOOSEN THE ROOT BALL AND DAMAGE THE ROOT SYSTEM. CONTAINER PLANTS SHALL HAVE BEEN ESTABLISHED FOR A MINIMUM OF ONE FULL GROWING SEASON IN THEIR CONTAINERS BEFORE INSTALLATION. CONTAINER PLANTS SHALL BE HANDLED ONLY BY THE CONTAINER, NOT BY THE STEMS OR BRANCHES, AS THIS MAY PULL THE PLANT OUT OF THE CONTAINER AND BREAK OR LOOSEN THE ROOT BALL AND DAMAGE THE ROOT SYSTEM.
6. PLANTS SHALL BE PROTECTED FROM DRYING OUT DURING SHIPPING WITH TARPAULINS OR OTHER COVERINGS. PLANTS SHALL BE PROTECTED FROM DRYING OUT AFTER DELIVERY BY PLANTING IMMEDIATELY; IF THIS IS NOT POSSIBLE, THE ROOT BALL SHALL BE COVERED WITH PEAT MOSS OR EARTH, AND WATERED FREQUENTLY TO KEEP IT MOIST UNTIL PLANTING.
7. DO NOT HANDLE, MOVE, BIND, TIE OR OTHERWISE TREAT PLANTS SO AS TO DAMAGE THE ROOT BALL, ROOTS, TRUNK, OR BRANCHES IN ANY WAY.

1. TOPSOIL HAS BEEN (OR WILL BE) STOCKPILED FOR REUSE IN LANDSCAPE WORK. IF QUANTITY OF STOCKPILED TOPSOIL IS INSUFFICIENT, PROVIDE ADDITIONAL TOPSOIL AS REQUIRED TO COMPLETE LANDSCAPE WORK. IMPORTED TOPSOIL SHALL CONSIST OF LOOSE, FRIABLE, LOAMY TOPSOIL WITHOUT ADMIXTURE OF SUBSOIL OR REFUSE. ACCEPTABLE TOPSOIL SHALL CONTAIN NOT LESS THAN 3 PERCENT NOR MORE THAN 20 PERCENT ORGANIC MATTER.
2. PLANTING BACKFILL FOR PARKING LOT ISLANDS SHALL CONSIST OF A HOMOGENEOUS MIXTURE OF 3 PARTS TOPSOIL TO ONE PART SPAGNUM PEAT INSTALLED OVER A 6" THICKNESS OF NO. 57 AGGREGATE.

1. OBTAIN LABORATORY ANALYSIS OF STOCKPILED AND IMPORTED TOPSOIL. COMPLETE WITH RECOMMENDATIONS FOR SOIL AMENDMENT.
2. BEFORE MIXING, CLEAN TOPSOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH.
3. MIX SPECIFIED SOIL AMENDMENTS AND FERTILIZERS WITH TOPSOIL AT RATES SPECIFIED BY THE LAB REPORT. DELAY MIXING OF FERTILIZER IF PLANTING WILL NOT FOLLOW PLACING OF PLANTING SOIL WITHIN A FEW DAYS.
4. FOR PLANTING BEDS AND LAWNS, MIX PLANTING SOIL EITHER PRIOR TO PLANTING OR APPLY ON SURFACE OF TOPSOIL AND MIX THOROUGHLY BEFORE PLANTING. MIX LIME WITH DRY SOIL PRIOR TO MIXING OF FERTILIZER.
5. PREVENT LIME FROM CONTACTING ROOTS OF ACID-LOVING PLANTS.
6. APPLY PHOSPHORIC ACID FERTILIZER (OTHER THAN THAT CONSTITUTING A PORTION OF COMPLETE FERTILIZERS) DIRECTLY TO SUBGRADE BEFORE APPLYING PLANTING SOIL AND TILLING.

1. PLANTING SOIL MIX SHALL BE CLEAR OF ALL STONES AND DEBRIS 1" OR LARGER, AND CONSIST OF THE FOLLOWING: 25% ORGANIC COMPOST, 75% ACCEPTABLE TOPSOIL.

1. BED EDGING - EDGING SHALL BE 4" STEEL EDGING WITH THREE (3) METAL ANCHOR STAKES PER 20 FOOT SECTION. ALL MASS PLANTING BEDS SHALL HAVE EDGING PLACED BETWEEN MULCH AREA AND ANY ADJACENT TURF AREA.
2. MULCH: ORGANIC MULCH FREE FROM DELETERIOUS MATERIALS AND SUITABLE FOR TOP DRESSING OF TREES, SHRUBS, OR PLANTS AND CONSISTING OF THE FOLLOWING:
  - a. RIVER ROCK MULCH AREA: AGGREGATE MULCH, 3/4"-2" IN SIZE, WASHED AND ROUNDED, SHALL BE INSTALLED WITHIN THE RIVER ROCK MULCH AREA PER THE PLAN. RIVER ROCK MULCH SHALL BE INSTALLED AT 3" INCHES DEPTH.
  - b. NON-DRYED, DOUBLE SHREDDED HARDWOOD SHALL BE INSTALLED IN ALL OTHER LANDSCAPE BEDS OUTSIDE OF THE RIVER ROCK MULCH AREA AT A DEPTH OF 3 INCHES.
3. WEED BARRIER - POLYETHYLENE FILTER FABRIC DESIGNED TO PERMIT WATER INFILTRATION WHILE PREVENTING WEED GROWTH- TO BE INSTALLED IN ALL PLANTING BEDS.

1. LANDSCAPE WORK SHALL BE ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE CONSTRUCTION AND PLANTING IN THE MICHIGAN STANDARDIZED LANDSCAPE SPECIFICATIONS (ASLA) AND ANY LOCAL LANDSCAPE ORDINANCES.
2. CONTRACTOR SHALL OBTAIN A COPY OF LOCAL ORDINANCES REGARDING ACCEPTABLE PLANT AND PLANTING DETAILS AND ABIDE BY THOSE ORDINANCES AND DETAILS.
3. ENGINEER RESERVES THE RIGHT TO REJECT ALL PLANT MATERIAL DEEMED NOT ACCEPTABLE.
4. ANY PROPOSED PLANT SUBSTITUTIONS SHALL BE EQUIVALENT IN FORM, HABIT, STRUCTURE, BRANCHING AND LEAF TYPE AND MUST BE ISSUED TO THE LANDSCAPE ARCHITECT FOR APPROVAL, IN WRITING, PRIOR TO INSTALLATION.

1. BEFORE AND DURING PRELIMINARY GRADING AND FINISH GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

1. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE OWNER BEFORE EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
2. PLANTING PITS SHALL BE AS PER DETAILS.
3. PREPARED SOIL SHALL BE TAMPED FIRMLY AT BOTTOM OF PIT. FILL PREPARED SOIL AROUND BALL OF PLANT. COMPLETE BACKFILLING AND WATER THOROUGHLY.
4. PREPARE RAISED EARTH BASIN AS WIDE AS PLANTING HOLE OF EACH PLANT.
5. WATER IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED.
6. INSTALL BED EDGING AND MULCH.
7. REMOVE ALL SALES TAGS, STRINGS, STRAPS, WIRE, ROPE OR OTHER MATERIALS THAT MAY INHIBIT PLANT GROWTH BOTH ABOVE AND BELOW THE SURFACE OF THE SOIL.
8. REMOVE ANY BROKEN, SUCKERING, DISEASED, CRISSCROSSED OR AESTHETICALLY DISPLEASING BRANCHES BACK TO LIVE LEADER OR SIDE LATERAL WITH A FLUSH CUT.
9. MULCH TREES AND SHRUBS AND OTHER AREAS NOTED ON THE PLANTING PLAN WITH A 3" LAYER OF MULCH AS SPECIFIED IN NOTE 2 OF "OTHER MATERIALS".

1. ALL AREAS WILL BE GRADED BY THE CONTRACTOR TO SUBSTANTIALLY PLUS/MINUS 0.1 FOOT OF FINISH GRADE.
2. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN, UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE. SOIL AREAS ADJACENT TO THE BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER.
4. PARKING LOT ISLAND SHALL BE BACKFILLED AS PART OF THIS CONTRACT.

1. SPACING AND VARIETY OF GROUND COVER SHALL BE AS SHOWN ON DRAWINGS.
2. MULCH GROUND COVER WITH 2" THICKNESS OF SPHAGNUM PEAT.
3. IMMEDIATELY AFTER PLANTING GROUND COVER, CONTRACTOR SHALL THOROUGHLY WATER GROUND COVER.
4. ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT BEFORE FINAL LANDSCAPE INSPECTION. GROUND COVER AREAS SHALL BE WEEDED PRIOR TO APPLYING PRE-EMERGENT. PRE-EMERGENT TO BE APPLIED AS PER MANUFACTURER'S RECOMMENDATION.

1. CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF PROJECT ACCEPTANCE BY THE OWNER.

1. UPON THE COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. AN 'ACCEPTABLE CONDITION' SHALL BE AS DEFINED AND APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

## (MAINTENANCE PERIOD TO COMMENCE AFTER FINAL INSPECTION.)

1. MAINTENANCE PERIOD FOR THIS CONTRACT SHALL BE 90 CALENDAR DAYS COMMENCING AFTER FINAL INSPECTION OF CONSTRUCTION.
2. MAINTAIN TREES, SHRUBS AND OTHER PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED.
3. MAINTAIN LAWNS BY WATERING, MOWING, TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
4. MAINTAIN THE LANDSCAPING BY KEEPING ALL PLANTS DISEASE-FREE AND PLANTING BEDS GROOMED, EXCEPT IN NATURALLY OCCURRING VEGETATION AREAS.
5. REPLACE ANY REQUIRED PLANTING(S), WHICH SEVERELY DECLINE OR DIE AFTER THE DATE OF PLANTING. SUCH REPLACEMENT SHALL OCCUR DURING THE NEXT APPROPRIATE PLANTING SEASON.

1. GRASS SEED SHALL BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE ASSOCIATION OF OFFICIAL SEED ANALYSTS' "RULES FOR TESTING SEEDS" FOR PURITY AND GERMINATION TOLERANCES.
2. ALL AREAS TO BE SEEDED SHALL RECEIVE NO LESS THAN FIVE POUNDS OF SEED PER ONE THOUSAND SQUARE FEET. APPLY SEED AND PROTECT WITH STRAW MULCH AS REQUIRED FOR NEW LAWNS. GRASS SEED MIX SHALL CONSIST OF THE FOLLOWING:

PROPORTION	NAME	MIN % GERM.	MIN % PURE SEED	MAX % WEED SEED
30%	KENTUCKY BLUEGRASS (POA PRATENSIS)	80	85	0.50
30%	CREeping RED FESCUE (FESTUCA RUBRA)	85	98	0.50
20%	PERENNIAL RYE GRASS (LOLIUM PERENNE)	90	98	0.50
20%	ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	85	92	1.00

1. SOD SHALL BE FIRST GRADE CERTIFIED KENTUCKY BLUEGRASS BLEND CONTAINING NOT MORE THAN 30 PERCENT OF OTHER GRASSES AND CLOVERS, AND FREE FROM ALL NOXIOUS WEEDS. SOD SHALL BE RECENTLY MOWED TO A HEIGHT OF NOT LESS THAN 3 INCHES. IT SHALL BE CUT INTO STRIPS OF NOT LESS THAN 3 FEET AND NOT OVER 6 FT. WITH A UNIFORM WIDTH OF NOT OVER 24 INCHES.
2. THE SOD SHALL BE CUT TO A DEPTH EQUAL TO THE GROWTH OF THE FIBROUS ROOTS BUT IN NO CASE LESS THAN 1 INCH. SOD SHALL BE DELIVERED TO THE JOB WITHIN 24 HOURS AFTER BEING CUT AND SHALL BE INSTALLED WITHIN 48 HOURS AFTER BEING CUT.
3. BEFORE SOD IS PLACED, THE SOD BED WILL HAVE BEEN EXCAVATED TO SUCH A DEPTH THAT WHEN THE SOD IS IN PLACE THE TOP OF THE SOD WILL BE FLUSH WITH THE SURROUNDING GRADE. NO SOD SHALL BE PLACED WHEN THE TEMPERATURE IS BELOW 32 DEGREES F. NO FROZEN SOD SHALL BE PLACED NOR SHALL ANY SOD BE PLACED ON FROZEN SOIL.
4. WHEN SOD IS PLACED BETWEEN THE DATES OF JUNE 1ST AND OCTOBER 15TH, IT SHALL BE COVERED IMMEDIATELY WITH A STRAW MULCH 1 INCH THICK (LOOSE MEASUREMENT). AFTER LAYING, THE SOD SHALL BE WATERED THOROUGHLY AND TAMPED WITH APPROVED SOD TAMPERS SUFFICIENTLY TO BRING THE SOD INTO CLOSE CONTACT WITH THE SOD BED AND INSURE TIGHT JOINTS BETWEEN THE SECTIONS OR STRIPS.
5. THE CONTRACTOR SHALL KEEP ALL SODDED AREAS INCLUDING SUBGRADE, THOROUGHLY MOIST FOR 30 DAYS AFTER SODDING.
6. THE CONTRACTOR SHALL REPAIR ANY AREAS DAMAGED FOLLOWING INSTALLATION AS DIRECTED BY THE ENGINEER. SOD SHALL BE IN PLACE AT LEAST 30 DAYS BEFORE FINAL ACCEPTANCE.

1. ALL PLANTING IS RECOMMENDED TO BE DONE WITHIN THE FOLLOWING DATES. WHEN PLANTING OUTSIDE THESE DATES, WRITTEN DOCUMENTATION SHALL BE PROVIDED THAT SURVIVAL OR REPLACEMENT WILL BE ENSURED. NO PLANTING SHALL BE DONE IN FROZEN SOIL.

<u>NORMAL PLANTING SEASONS</u>	<u>SPRING</u>	<u>FALL</u>
ALL TREES AND SHRUBS	MARCH 15-MAY 15	OCTOBER 1-DECEMBER 1
EVERGREENS	APRIL 1-MAY 15	OCTOBER 1-NOVEMBER 15
GROUNDCOVERS	APRIL 1-JUNE 1	WHEN SOD IS WORKABLE
SEED AND MULCH	APRIL 1-MAY 15	OCTOBER 1-NOVEMBER 15

1. ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE WITHIN THE RIGHT-OF-WAY SHALL BE FINE GRADED TO MAINTAIN POSITIVE DRAINAGE, HAVE A 4" LAYER OF TOPSOIL APPLIED AND BE SEEDED ACCORDING TO SPECIFICATIONS ON THIS SHEET.

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_



# EXPLORER LITE

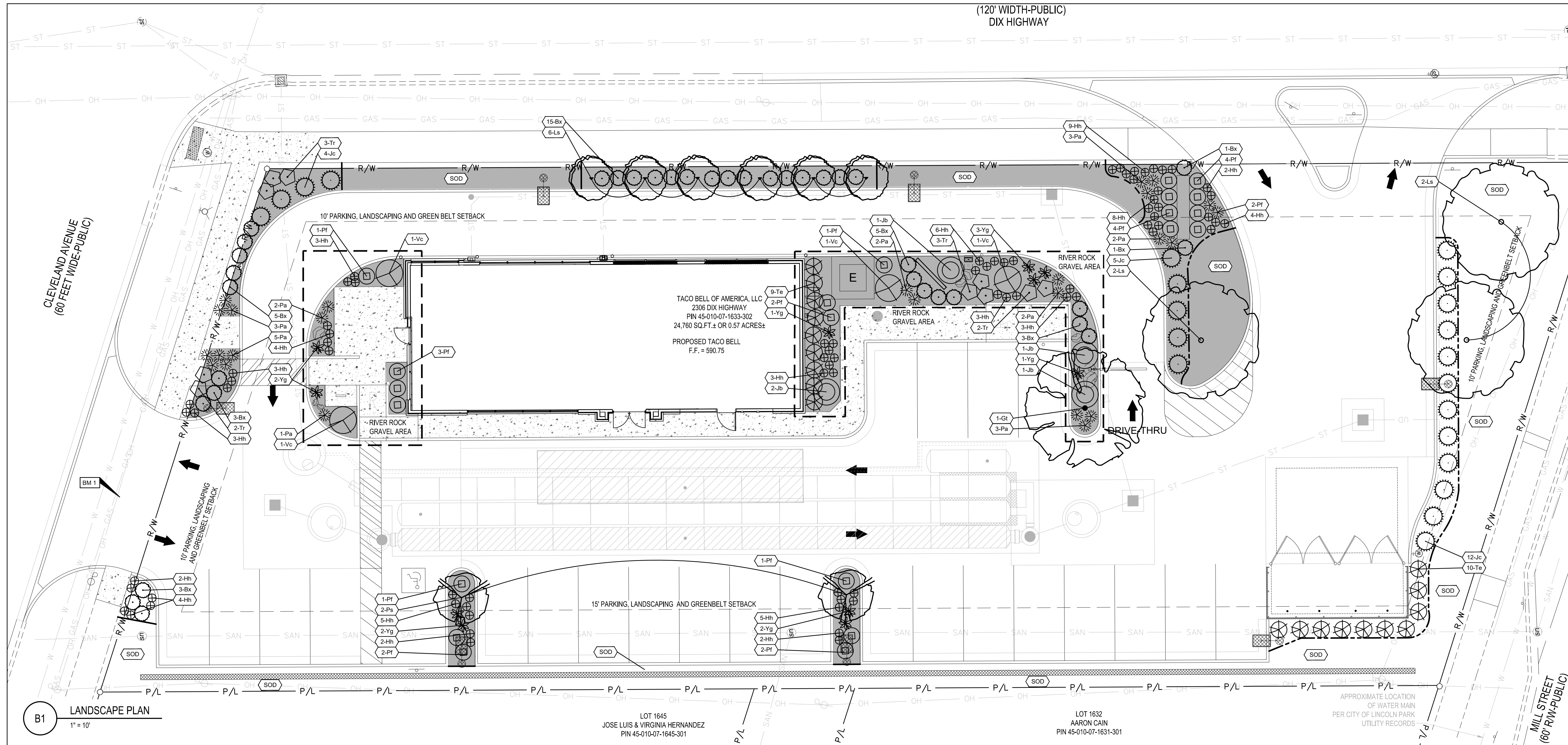
## LANDSCAPE NOTES

***L-001***




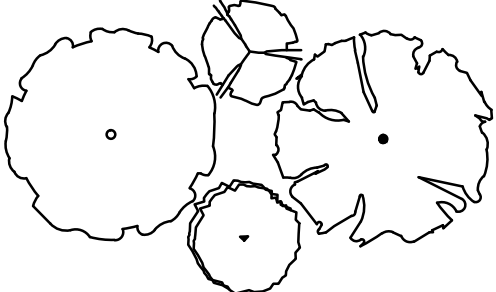








520 South Main Street, Suite 255  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2101



LANDSCAPE NOTES	
1.	MULCH PER LANDSCAPE SPECIFICATIONS.
2.	ALL DISTURBED AREAS NOT TO BE PAVED OR MULCHED SHALL BE SODDED PER SPECIFICATIONS.

### LANDSCAPE LEGEND

	PROPOSED LANDSCAPE BED EDGE
	PROPOSED TREE
	PROPOSED SHRUB
	PROPOSED LIMESTONE BOULDER,
	DESERT SAND, 12"-36"
	PROPOSED PLANT QUANTITY AND SYMBOL
	PROPOSED LAWN AREA
	PROPOSED INTERIOR LANDSCAPE AREA
	PROPOSED RIVER ROCK GRAVEL AREA; SEE SHEET L-001

Plant List						
Symbol	Botanical Name	Common Name	Qty.	Min. Size	Condition	Remarks
Ag	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	3	10' H	B&B	Mult-Stem
Bx	Buxus x 'Green Gem'	Green Gem Boxwood	36	18" H	B&B	3' o/c
Gt	Gleditsia f. inermis 'Skycole	Skyline Honeylocust	1	2.5" Cal.	B&B	Specimen
Hh	Hemerocallis 'Happy Returns'	Happy Returns Daylily	76	No. 1	Cont.	1.5' o/c
Jc	Juniperus chinensis 'Sea Green'	Sea Green Juniper	21	24" H	B&B	5' o/c
Jb	Juniperus conferta 'Blue Pacific'	Blue Pacific Juniper	4	No. 3	Cont.	5' o/c, Per Plan
Lr	Liquidambar styraciflua 'Rotundiloba'	Fruitless Sweet Gum	3	2.5" Cal.	Cont.	Matching
Ls	Liquidambar styraciflua 'Slender Silhouette'	Columnar Sweet Gum	6	2.5" Cal.	Cont.	Matching
Pa	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	25	No. 2	Cont.	Per Plan
Pf	Potentilla fruticosa 'Goldfinger'	Goldfinger Potentilla	21	No. 3, 18" H	Cont.	3' o/c
Ps	Prunus 'Spring Snow'	Spring Snow Flowering Crabapple	2	2" Cal.	B&B	Matching
Te	Thuja occidentalis 'Emerald'	Emerald Arborvitae	19	6' H	B&B	4' o/c
Tr	Thuja occidentalis 'Rheingold'	Dwarf Golden Arborvitae	10	24" H	Cont.	Per Plan
Vc	Viburnum carlesii 'Cayuga'	Cayuga Viburnum	4	30" H	Cont.	Per Plan
Yg	Yucca glauca	Soapweed	11	No. 3	Cont.	Per Plan

INTERIOR LANDSCAPE CALCULATIONS	
TOTAL SITE AREA 24,760.4 SF	
	REQUIRED: 10% = 2,476.0 SF
TOTAL PROPOSED INTERIOR LANDSCAPE SF	
	2,536 SF = 10.2%
TREES	
	REQUIRED: (1) TREE PER (400) SF OF ILA = 6.2 = 7 TREES
	PROPOSED: (7) TREES
SHRUBS	
	REQUIRED: (1) SHRUB PER (250) SF OF ILA = 9.9 = 10 SHRUBS
	PROPOSED: (67) SHRUBS

PARKING LOT LANDSCAPE CALCULATIONS	
24 TOTAL PROPOSED PARKING SPACES	
	REQUIRED: (3) DECIDUOUS TREES @ 2.5" CAL.
	PROPOSED: (4) DECIDUOUS TREES @ 2.5" CAL.

STREET LANDSCAPE CALCULATIONS	
STREET FRONTAGE TOTAL: 240'	
	REQUIRED: (6) TREES & (24) SHRUBS
	PROPOSED: (6) TREES & (30) SHRUBS

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

<h2 style="text-align: center;">Underground Utilities</h2> <div style="display: flex; justify-content: space-between; align-items: center;">  <div style="text-align: center;"> <p>2 Working Days Before You Dig</p> <p>Call 800-362-2764 (Toll Free)</p> <p>Ohio Utilities Protection Service</p> </div>  </div> <div style="text-align: center; margin-top: 20px;"> <p>Non-members Must Be Called Directly</p> </div>	
<div style="text-align: center; margin-top: 20px;"> <p>Call 800-925-0988 (Toll Free)</p> <p>Oil &amp; Gas Producers Utility Protection Service</p> </div>	

**BENCHMARKS:** SEE SHEET C-001 FOR LOCATIONS

BEARINGS ARE BASED ON MICHIGAN STATE PLANE  
COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL  
FEET, NAD83.  
VERTICAL DATUM IS NAVD88.

**BENCHMARK #1 - MAG NAIL IN WESTERLY FACE OF  
UTILITY POLE, N 27958.92, E 13440465.15.  
ELEVATION= 590.14 (NAVD88)**

**BENCHMARK #2 - MAG NAIL IN NORTHERLY FACE OF  
UTILITY POLE, N 275674.75, E 13440518.32.  
ELEVATION=589.70 (NAVD88)**

[illegible]

CONTRACT DATE: 10.03.17  
BUILDING TYPE: EXPLORER LITE LG  
PLAN VERSION: July 2017  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

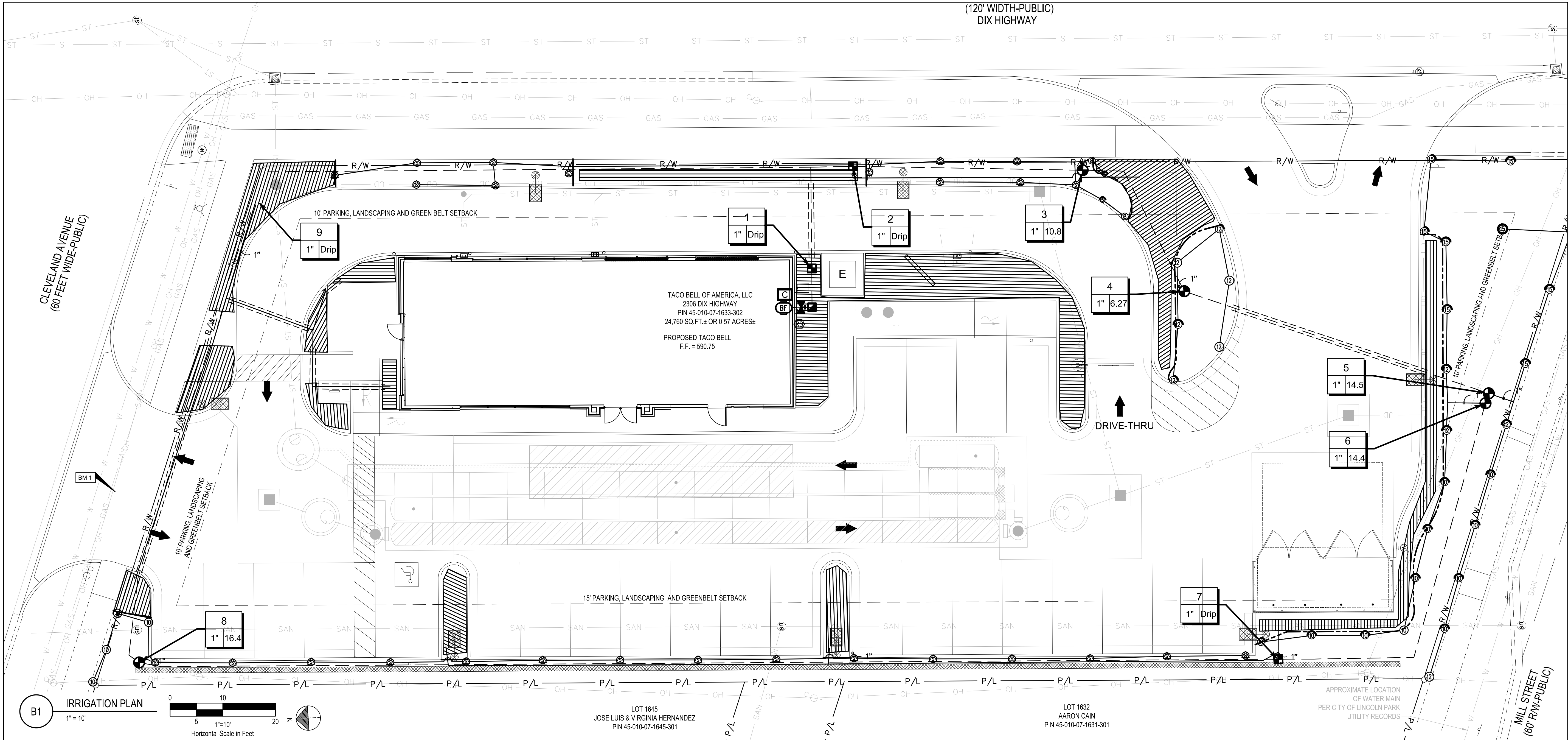
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



# LANDSCAPE PLAN

# L-101





#### IRRIGATION NOTES

THESE NOTES ARE PRESENTED AS A "SUMMARY" OF THE WRITTEN SPECIFICATIONS ISSUED FOR THE PROJECT. REFER TO THE WRITTEN SPECIFICATIONS, IF INCLUDED, FOR ADDITIONAL DETAIL AND FULL PROJECT REQUIREMENTS.

1. THE IRRIGATION SYSTEM DESIGN IS BASED ON 60 STATIC PRESSURE (PSI) AND MAXIMUM FLOW OF 16 GALLONS PER MINUTE (GPM). THE IRRIGATION CONTRACTOR SHALL VERIFY THE PRESSURE AND FLOW PRIOR TO COMMENCEMENT OF CONSTRUCTION. REPORT TO THE OWNER OR OWNER'S REPRESENTATIVE. ANY DIFFERENCES BETWEEN THE PRESSURE INDICATED AND THE ACTUAL PRESSURE READING AT THE POINT OF CONNECTION.
2. THE PIPE ROUTING SHOWN IS DIAGRAMMATIC ONLY. ALL PIPING, VALVES, HEADS, ETC SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. PRESSURE LOSS CALCULATIONS ARE BASED ON THE PIPE ROUTING AS SHOWN. SIGNIFICANT DEVIATIONS FROM THE ROUTING SHOWN SHOULD BE AVOIDED.
3. DO NOT WILLINGLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE DIMENSIONS OF THE CONSTRUCTED AREAS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE IRRIGATION DESIGN OR CHANGES HAVE OCCURRED IN THE SITE PLAN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE IRRIGATION DESIGNER AND THE GENERAL CONTRACTOR IMMEDIATELY. SHOULD THE IRRIGATION CONTRACTOR PROCEED WITH THE INSTALLATION WITHOUT NOTIFYING THE IRRIGATION DESIGNER AND THE GENERAL CONTRACTOR, THE IRRIGATION CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY AND ALL REVISIONS / RECONSTRUCTION NECESSARY.
4. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF / HERSELF WITH THE SITE, ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, AND INSTALLED UTILITIES. COORDINATE WORK WITH THE OWNER OR GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES UNDERNEATH PAVEMENT AND THROUGH WALLS.
5. DUE TO THE SCALE OF THE DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, JOINTS, ETC. WHICH MAY BE REQUIRED. THE IRRIGATION CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS/HER WORK AND PLAN HIS/HER WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC. AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. ALL WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM COMPONENTS, LANDSCAPE PLANTING, AND ARCHITECTURAL FEATURES.
6. FLUSH ALL LINES AND HEADS PRIOR TO INSTALLING NOZZLES. ADJUST NOZZLE SPRAY ARC AND RADIUS FOR OPTIMUM PERFORMANCE TO PREVENT OVERSPRAY ONTO PAVED SURFACES OR FACE OF BUILDING AS MUCH AS POSSIBLE TO FIT THE SITE CONDITIONS. THROTTLE FLOW CONTROL AT EACH VALVE FOR OPTIMUM OPERATING PRESSURE FOR EACH ZONE.
7. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISHED GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED.

8. WHEN VERTICAL OBSTRUCTIONS (POLES, SIGNS, TREES, HYDRANTS, ETC) INTERFERE WITH THE SPRAY PATTERN OF THE HEADS SO AS TO PREVENT PROPER COVERAGE, THE CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER, THIRD, OR HALF CIRCLE HEAD AT THE SIDES OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST.
9. USE TEFLON TAPE ON ALL MALE PIPE THREADS ON PVC PIPE, SWING JOINTS, AND VALVE ASSEMBLIES.
10. INSTALL VALVE BOXES 18-INCHES FROM AND PERPENDICULAR TO WALKS, CURBS, BUILDING, OR LANDSCAPE FEATURES. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE INSTALLED A MINIMUM OF 12-INCHES APART.
11. ALL VALVES SHALL BE PLACED IN VALVE BOXES AS SHOWN IN THE DETAILS AND ALL ELECTRICAL CONNECTIONS SHALL BE SEALED WITH WATERPROOF CONNECTORS.
12. 120-VOLT ELECTRICAL POWER AT THE CONTROLLER SHALL BE PROVIDED BY OTHERS. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE POWER PROVIDED TO THE CONTROLLER.
13. PROVIDE AS-BUILT DRAWINGS WITHIN 21 DAYS UPON COMPLETION OF THE IRRIGATION INSTALLATION.
14. THERE SHALL BE NO SUBSTITUTIONS OR CHANGES TO THE IRRIGATION DESIGN ALLOWED WITHOUT DIRECT, WRITTEN APPROVAL FROM THE IRRIGATION CONSULTANT OR THE LANDSCAPE ARCHITECT. CONTACT WC3 DESIGN FOR INFORMATION.
15. ALL SPRINKLERS, VALVES AND VALVE BOXES SHALL BE PLACED 5' AWAY FROM ANY RADIUS OF CURB AS SHOWN IN DETAILS.
16. IRRIGATION CONTRACTOR SHALL PROVIDE THE FIRST WINTERIZATION BLOW OUT. IN ADDITION, HE SHALL PROVIDE THE SPRING TURN ON. ALL NECESSARY HEAD ADJUSTMENTS SHALL BE MADE AT THAT TIME AND REPLACE OR REPAIR ANY WARRANTY ITEMS. THESE ITEMS SHALL BE INCLUDED WITH BID.
17. SLEEVING BY GENERAL CONTRACTOR.

#### IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL
	Toro 570Z-4P-COM 5 Series
	Toro 570Z-4P-COM 10 Series
	Toro 570Z-4P-COM 12 Series
	Toro 570Z-4P-COM 15 Series
	Toro 570Z-4P-COM ADJ
	Toro 570Z-4P-COM Turf Strip Spray
SYMBOL	MANUFACTURER/MODEL
	Toro DZK-TPV-1-MF
	Area to Receive Dripline
	Toro RGP-418 (18)

SYMBOL	MANUFACTURER/MODEL
	Toro TPV-F-100
	Toro 100-SLVLC
	Nibco TI-8
	Zurn 375 1"
	Toro EVO-040D with (02) EMOD-04
	Toro EVO-WS
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Class 200 SDR 21
	Pipe Sleeve: PVC Schedule 40

#### NOTE

GPD GROUP IS NOT RESPONSIBLE FOR IRRIGATION DESIGN, NOTE OR DETAILS. PLEASE CONTACT WC3 DESIGN FOR ANY QUESTIONS.

#### Underground Utilities



2 Working Days  
Before You Dig  
Call 800-362-2764 (Toll Free)  
Ohio Utilities Protection Service



Non-members  
Must Be Called Directly  
Call 800-925-0988 (Toll Free)  
Oil & Gas Producers Utility Protection Service



▲ ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17

BUILDING TYPE: EXPLORER LITE LG

PLAN VERSION: July 2017

SITE NUMBER: 283405/445231

STORE NUMBER: 2017088.46

#### TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

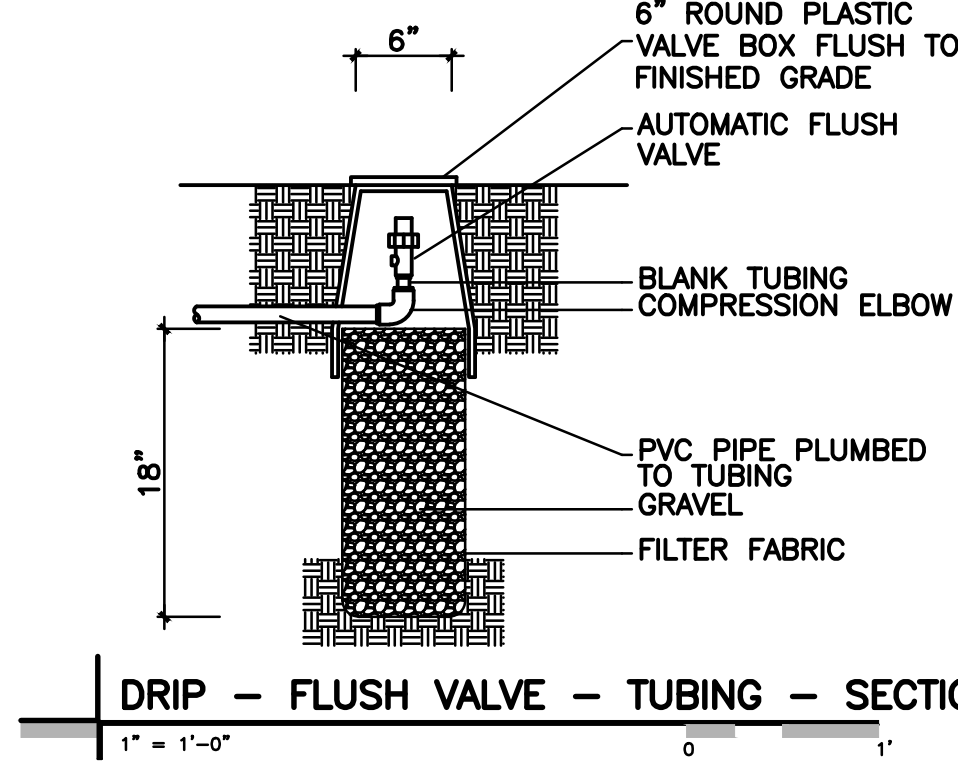
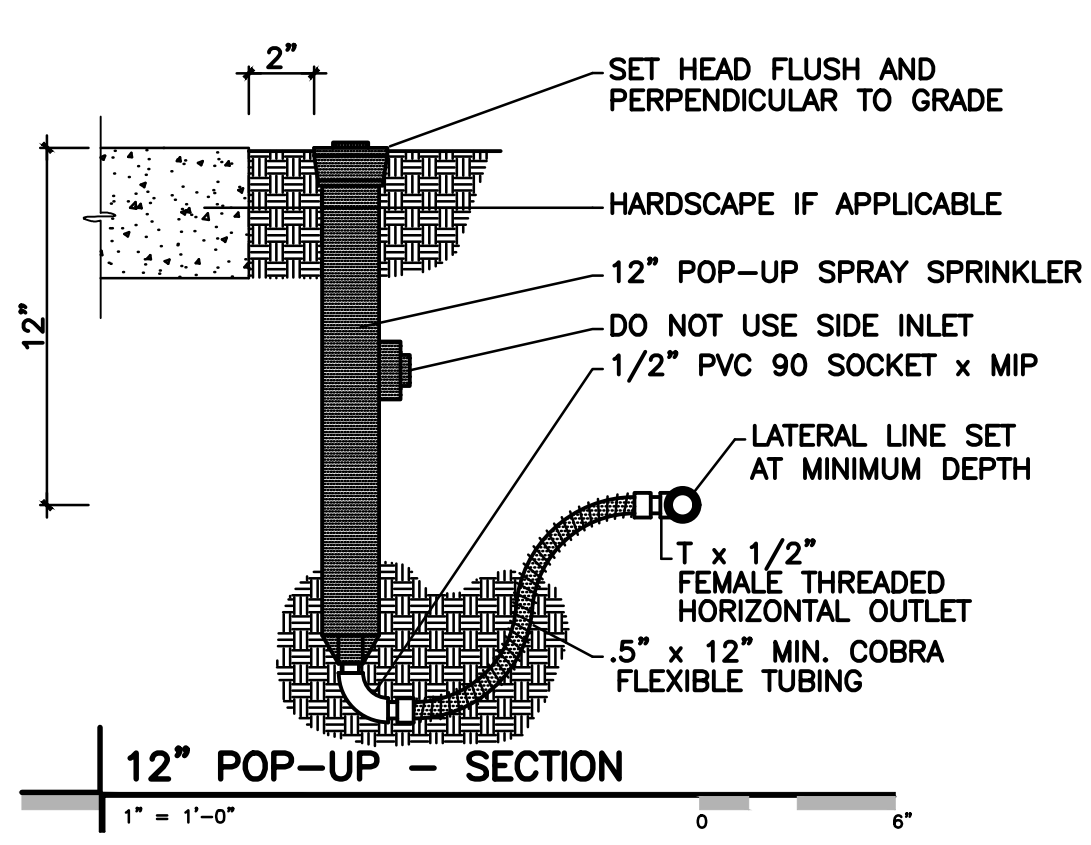
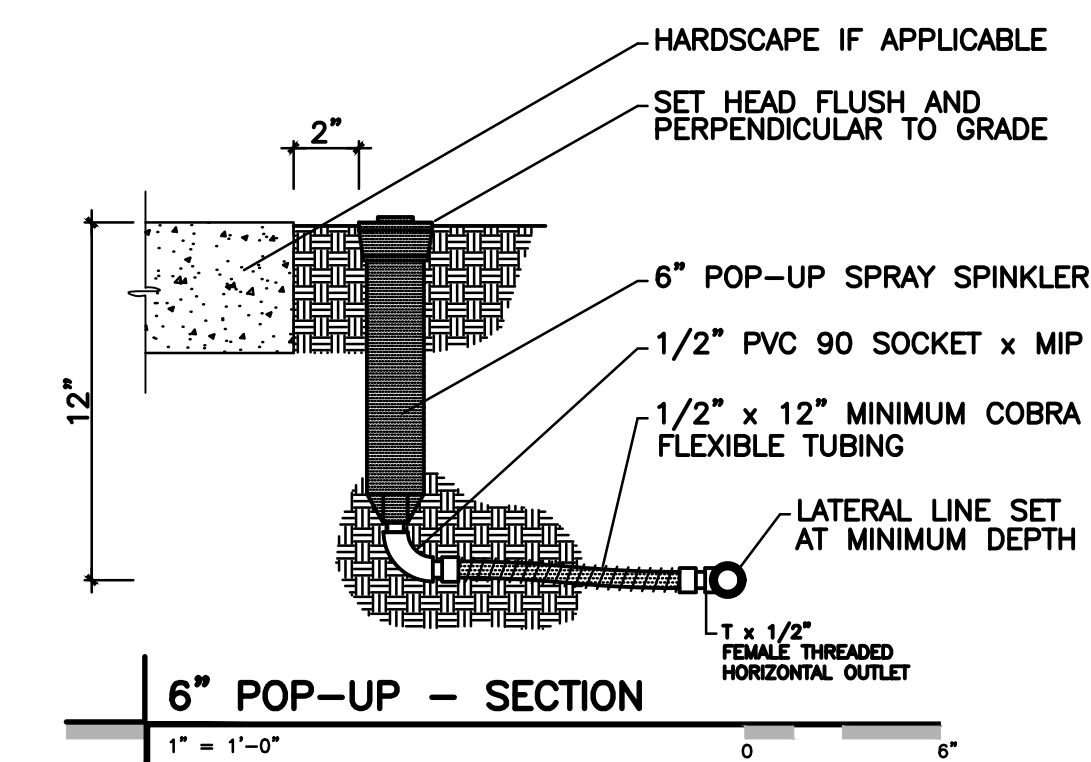
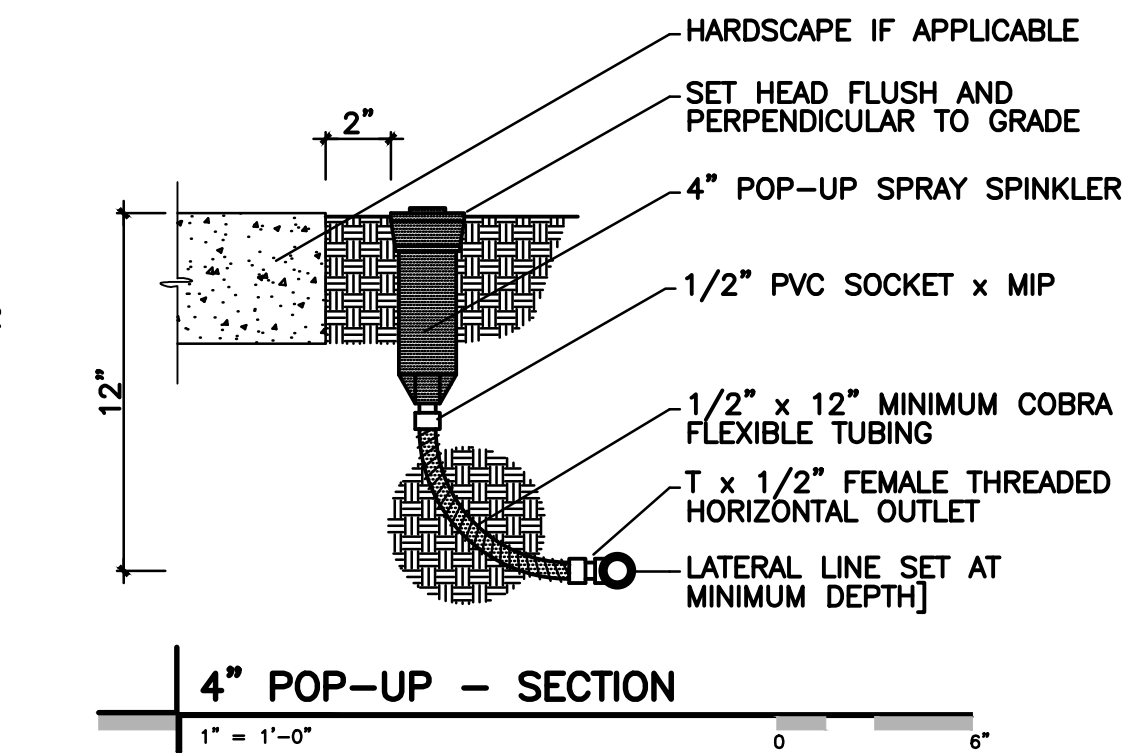
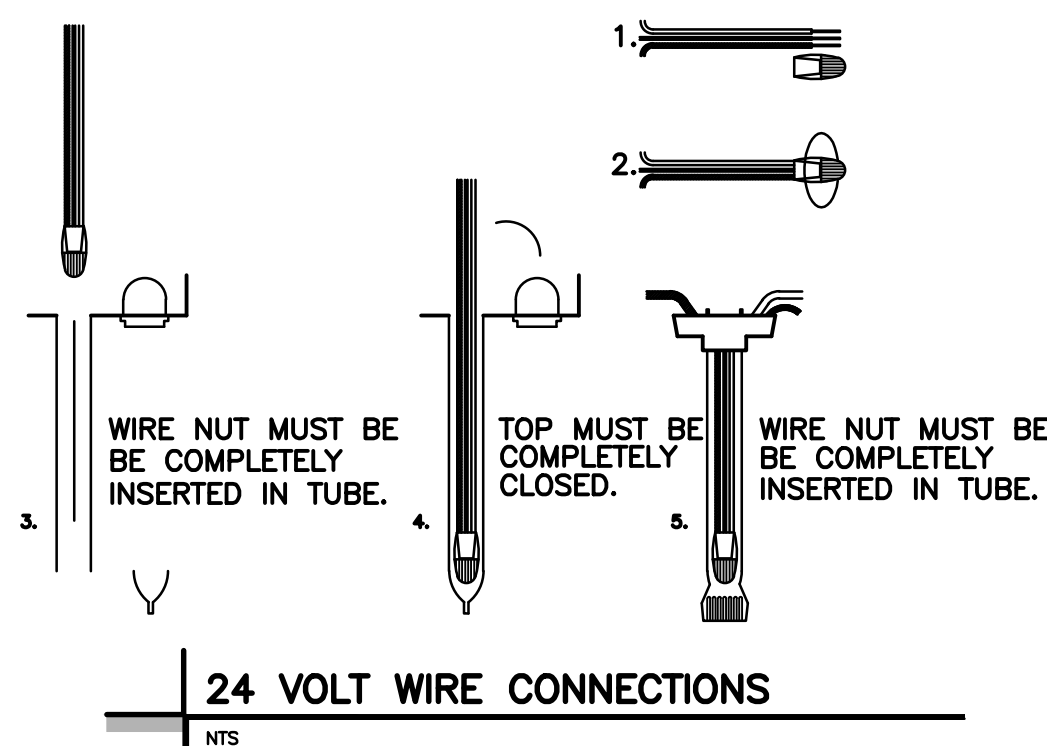
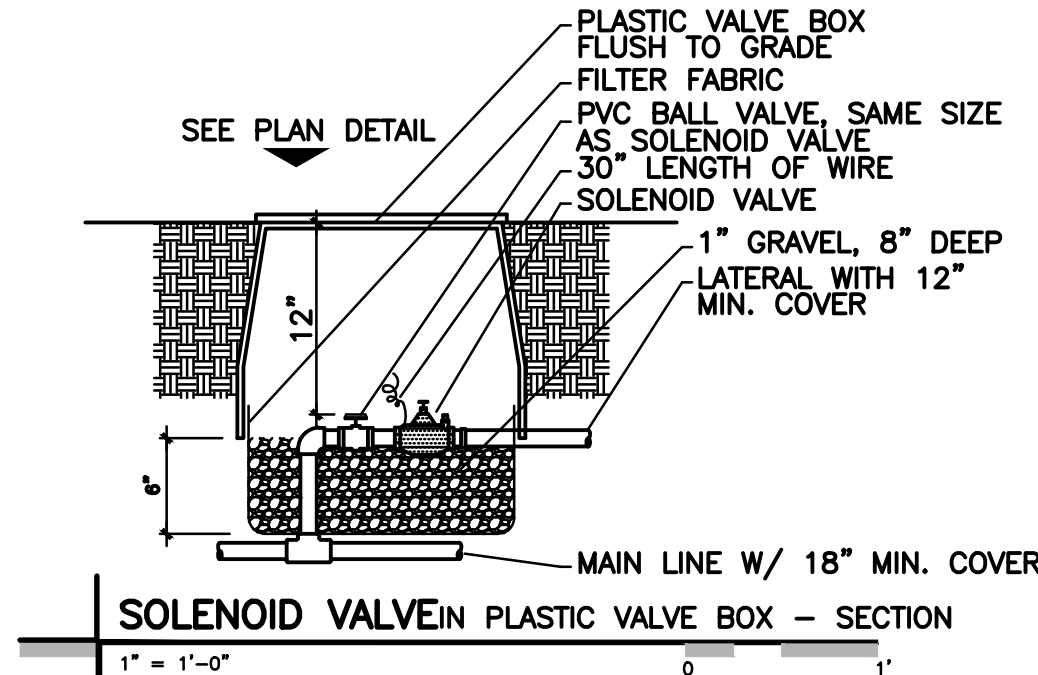
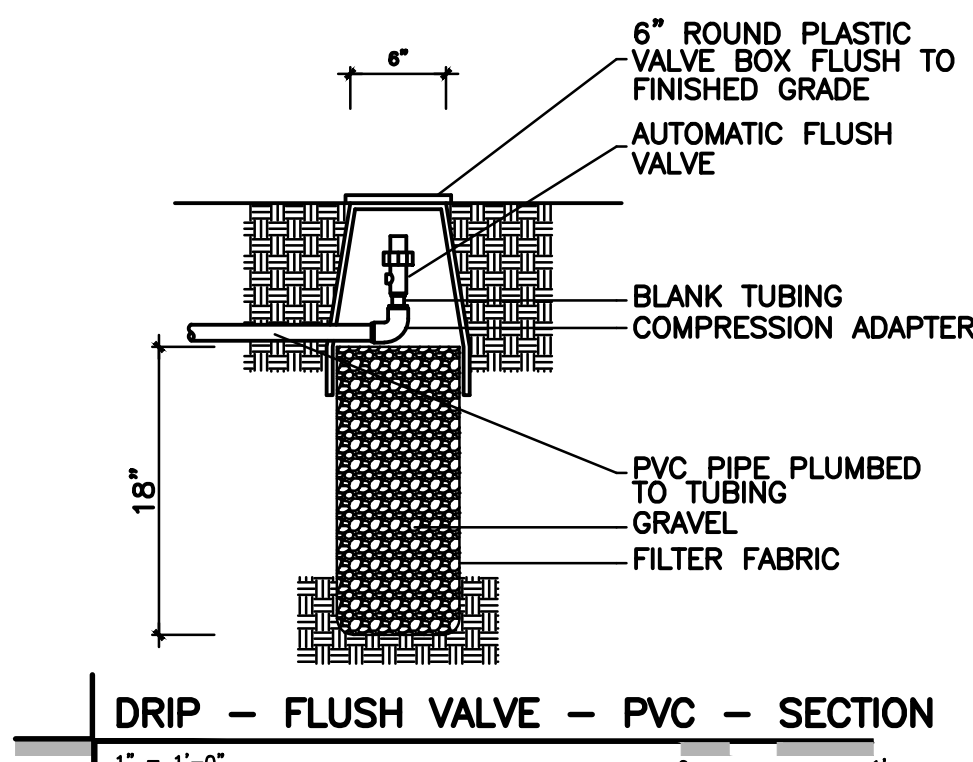
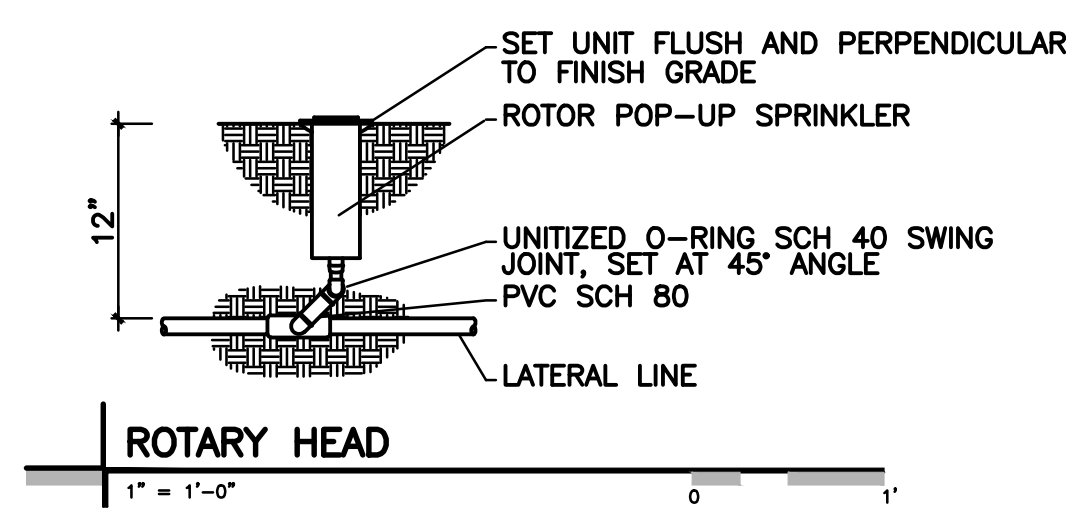
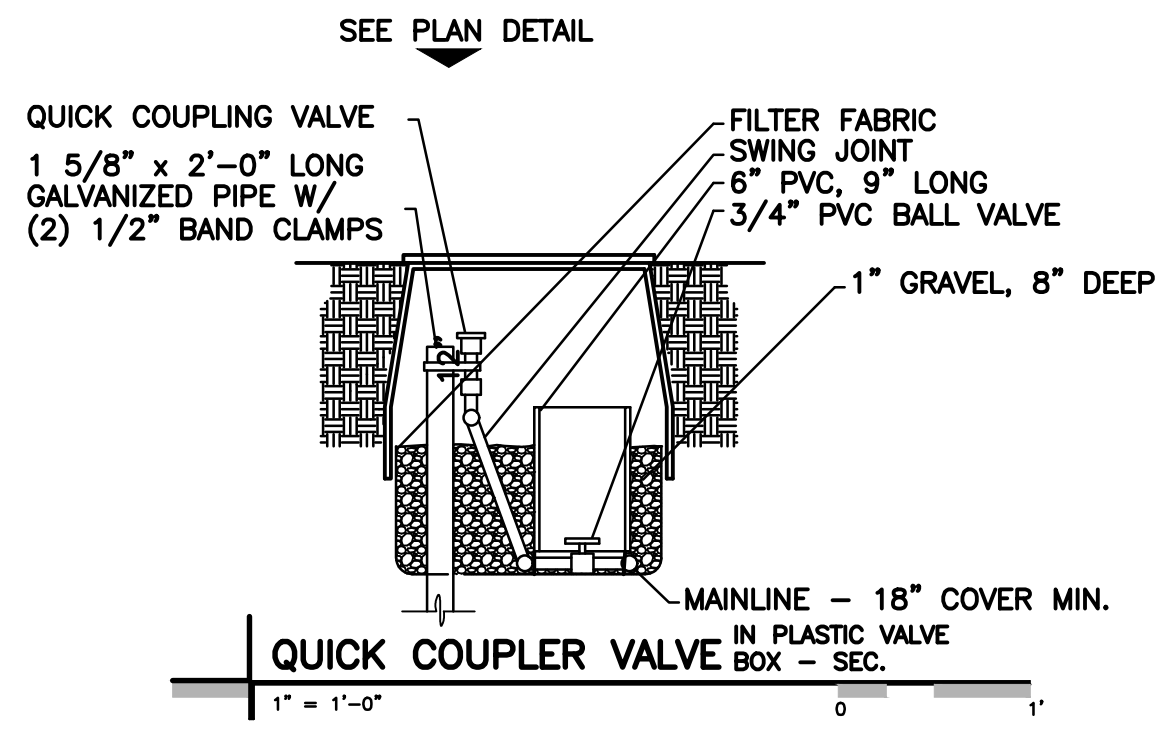
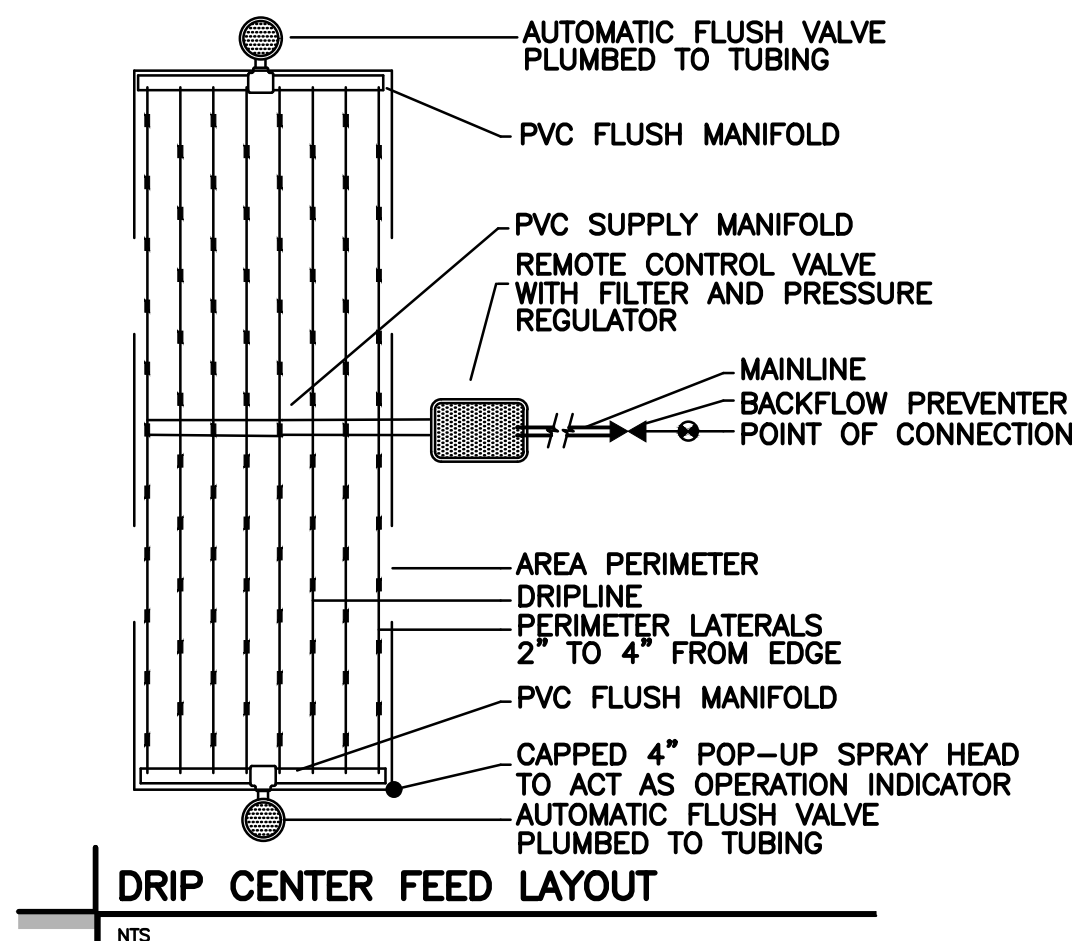
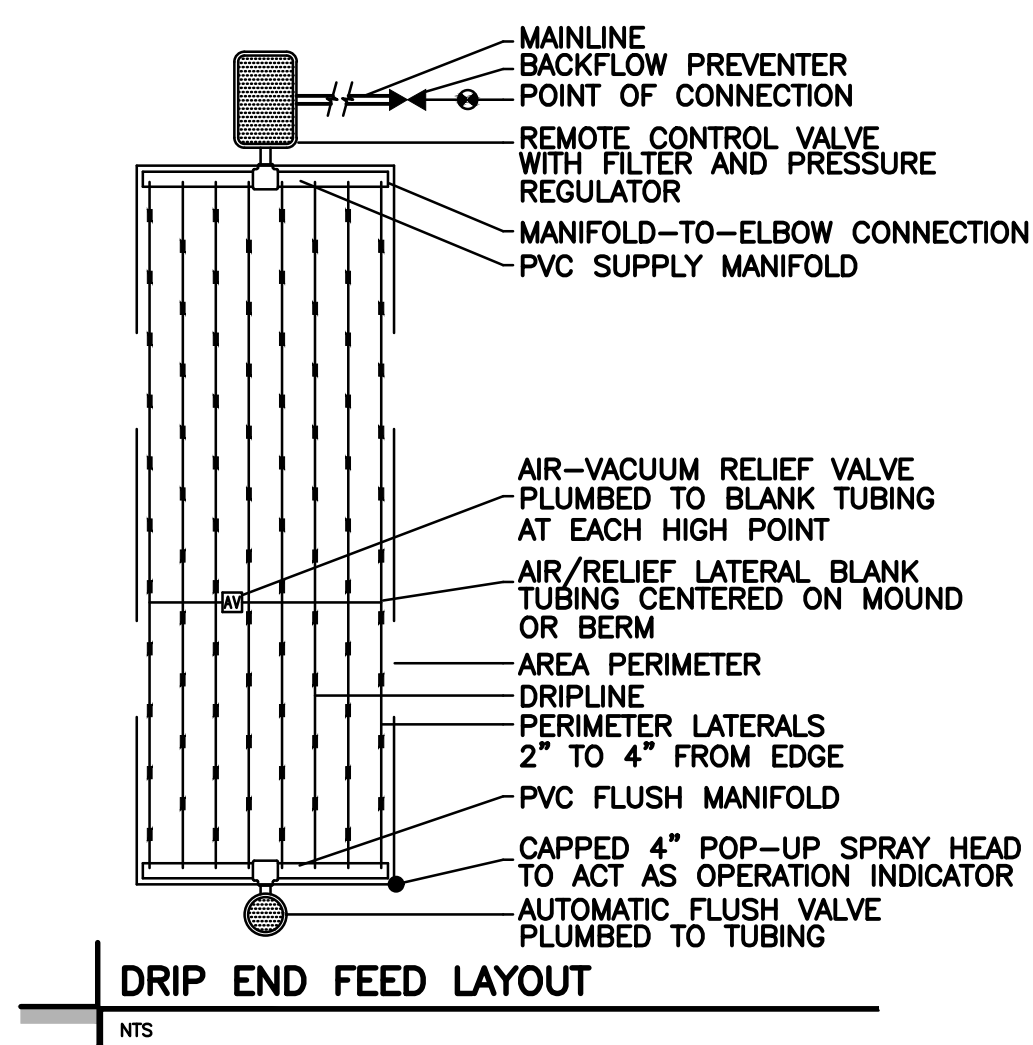
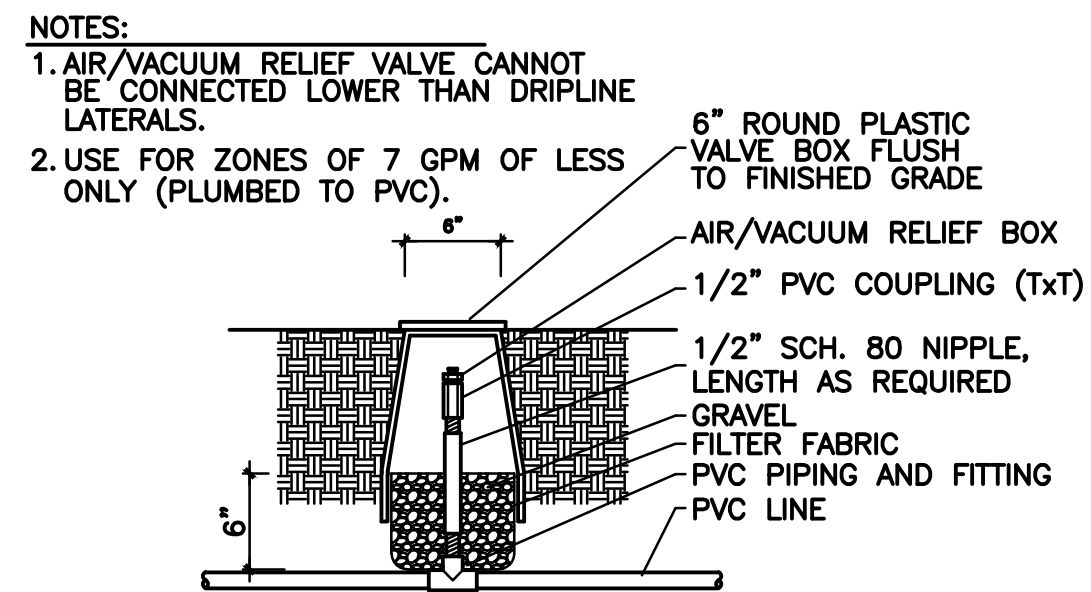
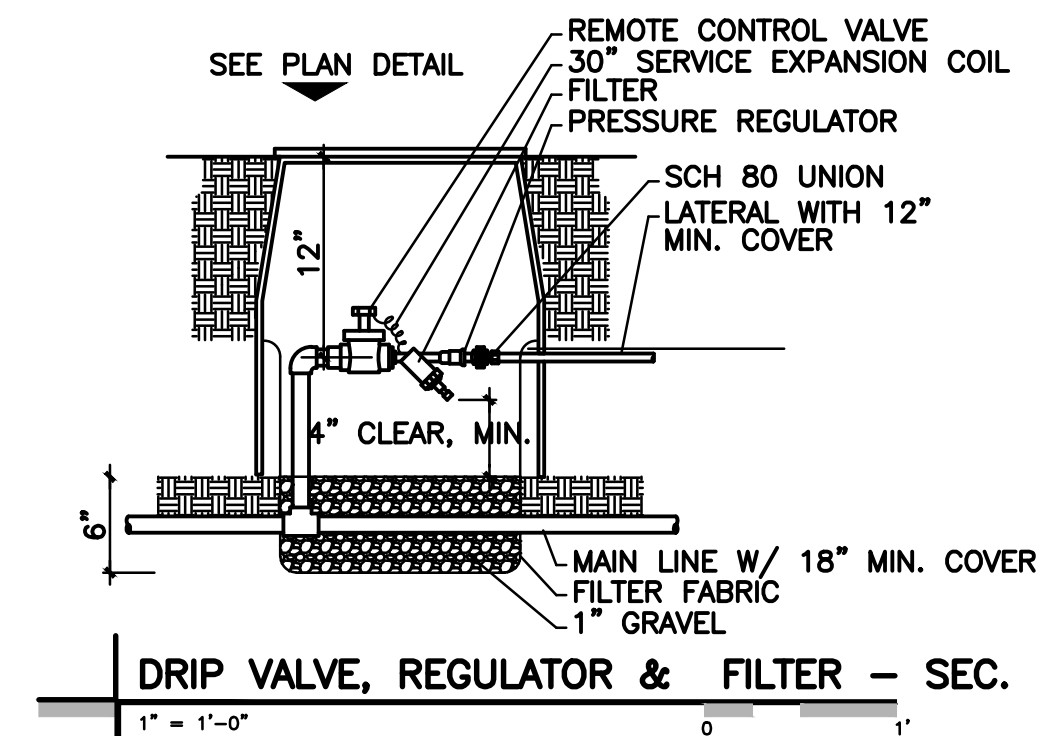
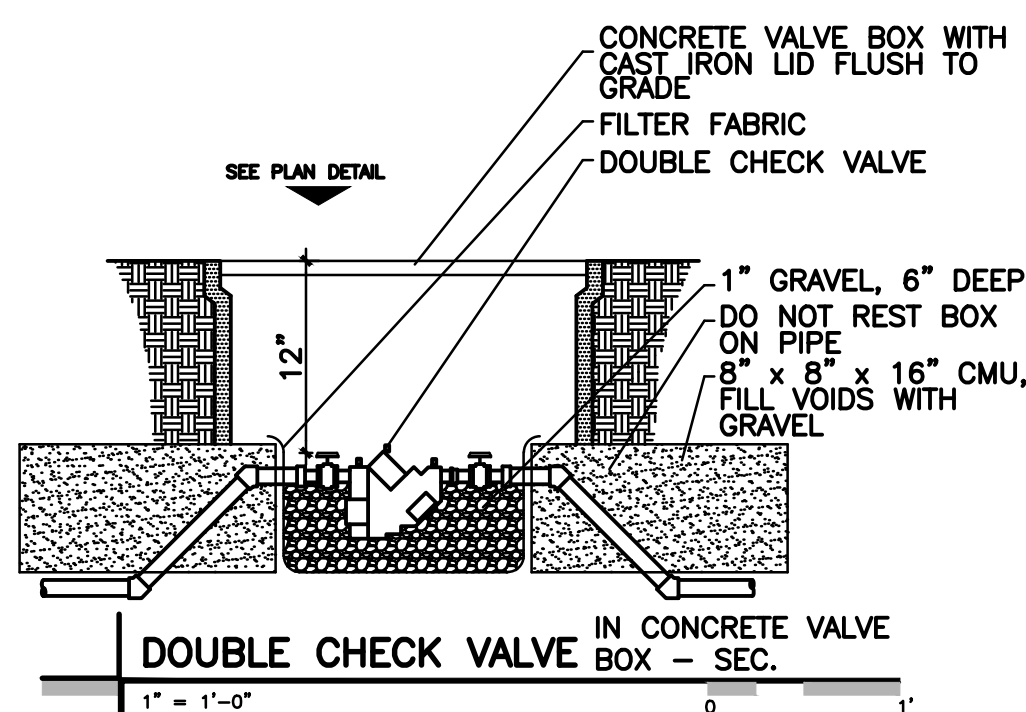
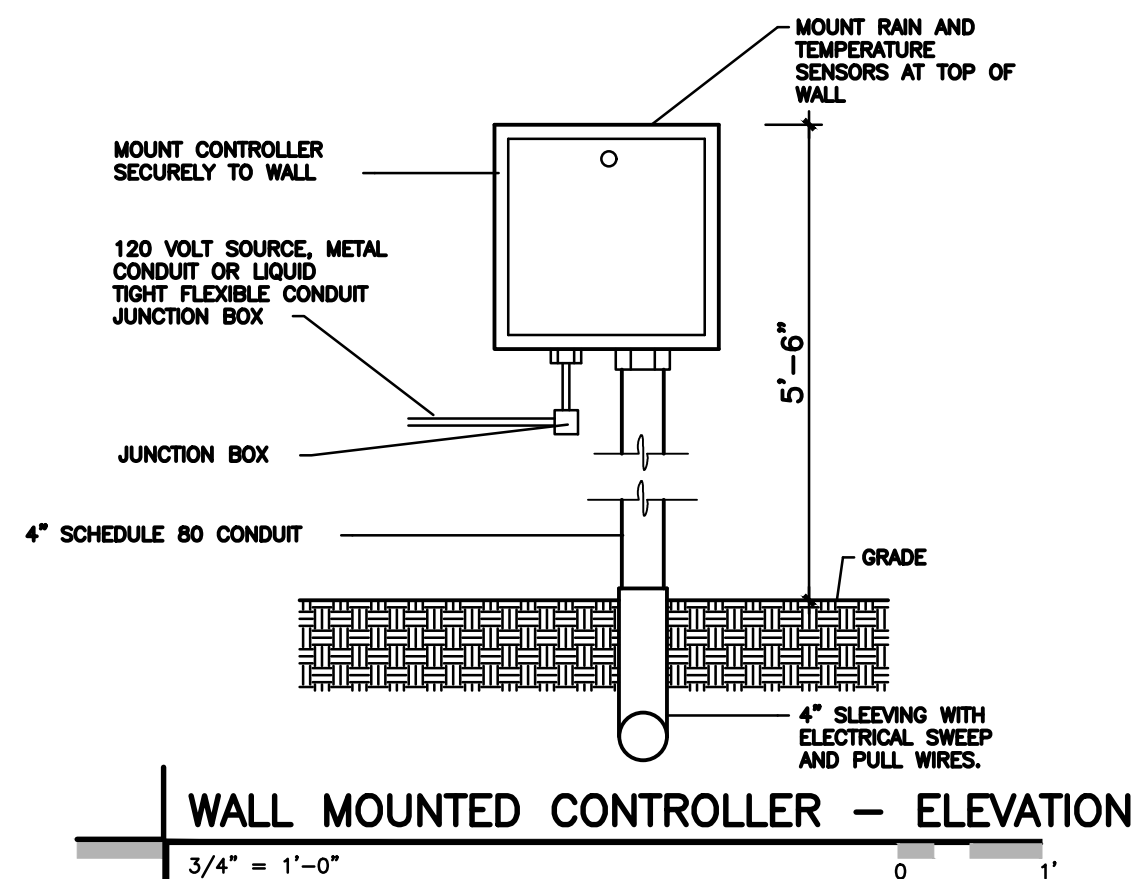
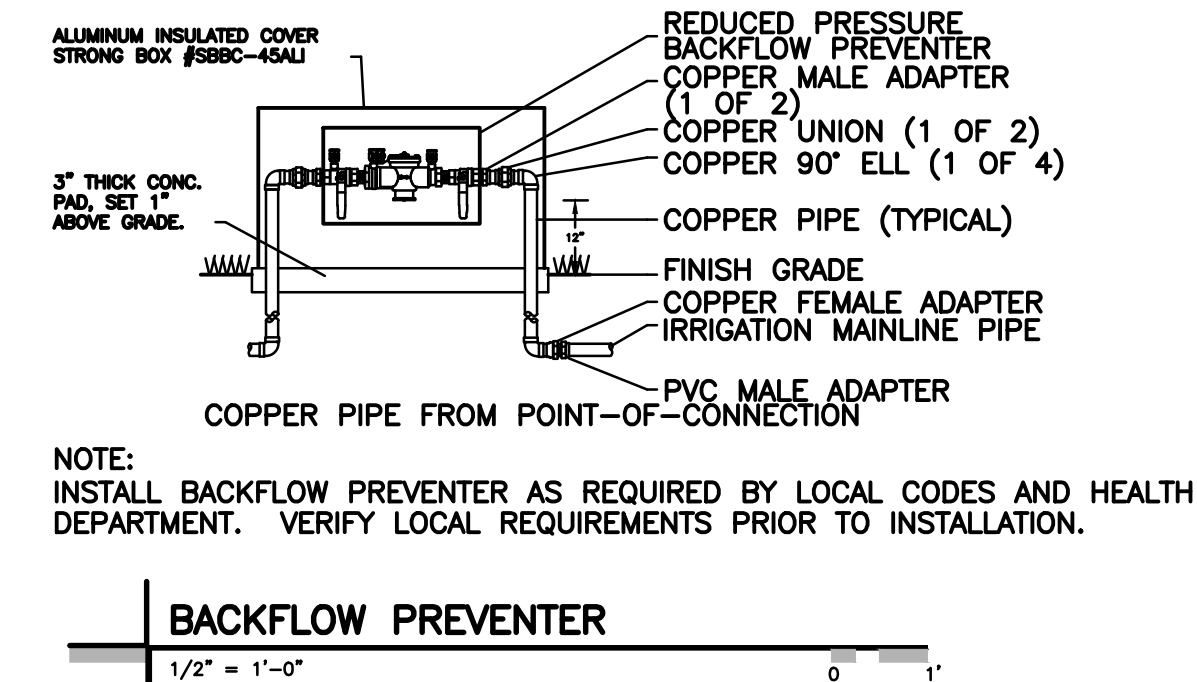
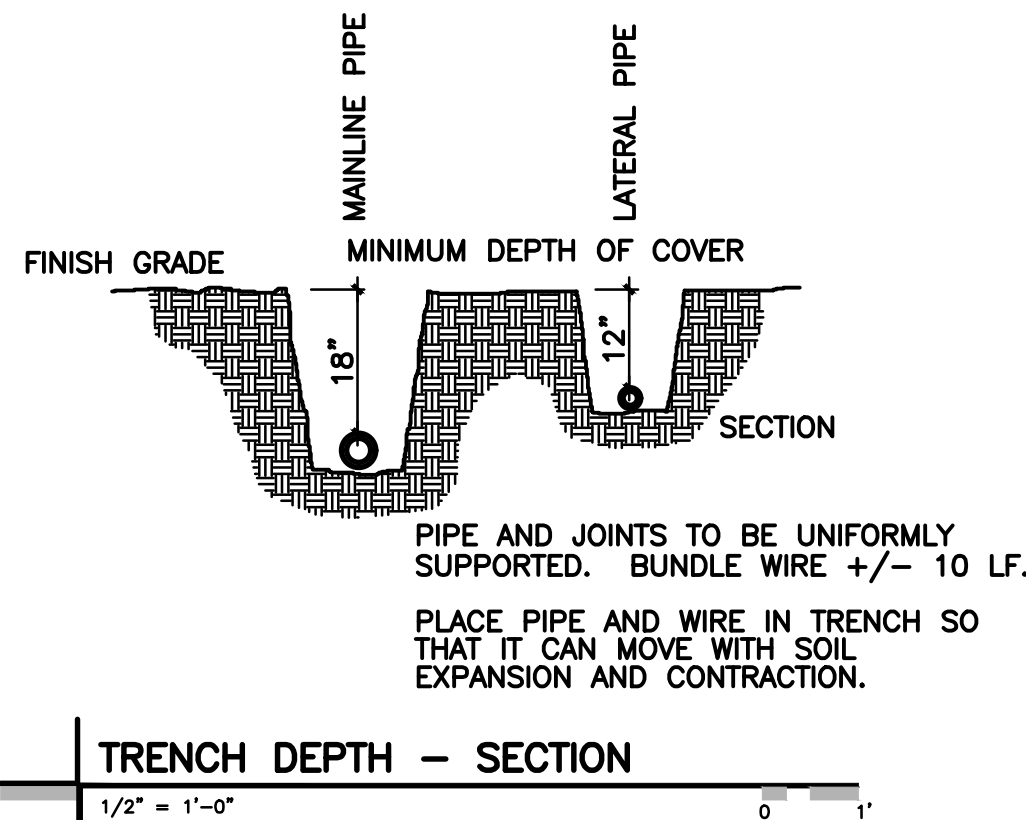


**EXPLORER LITE**  
LARGE50

#### IRRIGATION PLAN

**L-111**





NOTE

GPD GROUP IS NOT RESPONSIBLE FOR IRRIGATION DESIGN, NOTE OR DETAILS. PLEASE CONTACT WC3 DESIGN FOR ANY QUESTIONS.

I HEREBY CERTIFY THAT THIS PLAN SET, DATED, SEPTEMBER 13, 2018 IS A TRUE AND ACCURATE COPY OF THE PLANS APPROVED BY HENNESSEY ENGINEERS, INC., ON AUGUST 17, 2018.

SIGNATURE: \_\_\_\_\_

MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_

CERTIFICATION DATE: \_\_\_\_\_

**GPD GROUP**  
Professional Corporation

520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

**WC3**  
DESIGN

Irrigation Design & Consulting  
www.wc3design.com  
Tel: (844) 231-7042  
Columbus, OH • Louisville, KY  
Pittsburgh, PA



ISSUED FOR CONST. 09.14.18

CONTRACT DATE: 10.03.17

BUILDING TYPE: EXPLORER LITE LG

PLAN VERSION: July 2017

SITE NUMBER: 283405/445231

STORE NUMBER: 2017088.46

**TACO BELL**

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**

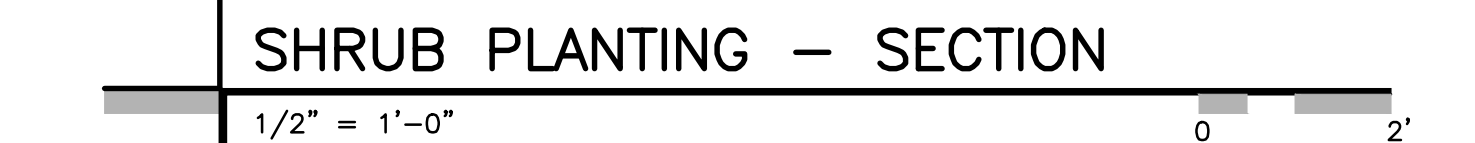
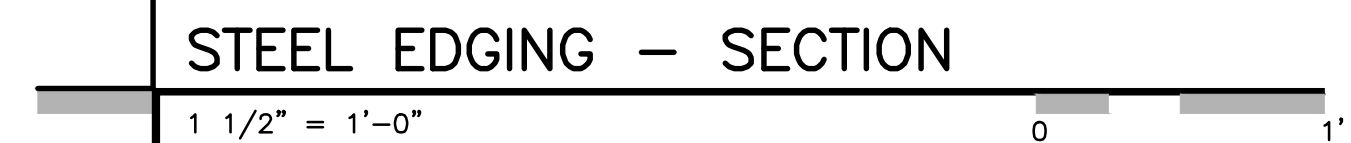
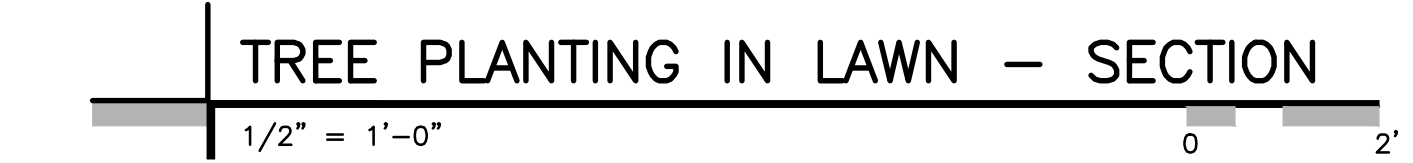
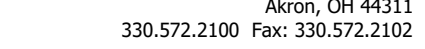
**EXPLORER LITE**  
LARGE50

**IRRIGATION**  
**DETAILS**

**L-112**



SIGNATURE: \_\_\_\_\_  
MICHIGAN P.E. LICENSE NO.: \_\_\_\_\_  
CERTIFICATION DATE: \_\_\_\_\_





[illegible]

A	CONTRACT DATE:	04.02.18
	BUILDING TYPE:	T52M-O
	PLAN VERSION:	DEC 2017
	BRAND DESIGNER:	
	SITE NUMBER:	283405/445231
	STORE NUMBER:	2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 4814

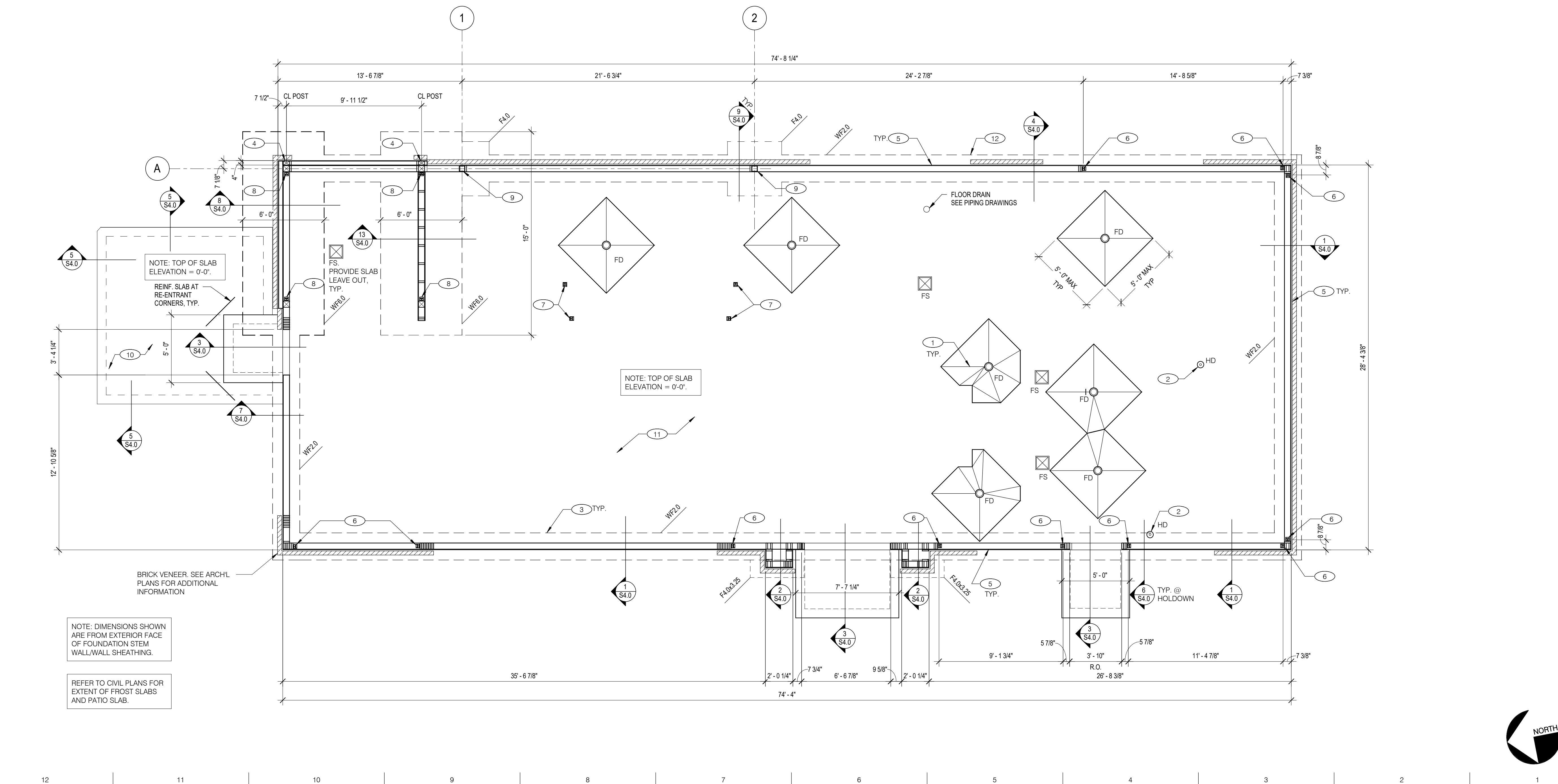


T52  
OPEN KITCHEN  
MODERN EXPLORER

## FOUNDATION PLAN

**\$1.0**

PLOT DATE: 9/13/2018 4:41:58 PM



**FOUNDATION PLAN** 1/4" = 1'-0"

<u>DESIGN CRITERIA:</u>		<u>SEISMIC LOADS:</u>	
2015 MICHIGAN BUILDING CODE		RISK CATEGORY:	II
2015 INTERNATIONAL BUILDING CODE		SEISMIC IMPORTANCE FACTOR:	1.0
		SITE CLASS:	D
<u>ROOF SNOW LOADS:</u>			
GROUND SNOW LOAD (Pg):	20 PSF	MAPPED SPECTRAL RESPONSE ACCEL:	
EXPOSURE FACTOR (Ce):	1.0	Ss:	0.099
IMPORTANCE FACTOR (I):	1.0	S1:	0.048
THERMAL FACTOR (Ct):	1.0		
FLAT ROOF SNOW LOAD (Pt):	20 PSF	SPECTRAL RESPONSE COEFF.:	
		SHORT PERIODS (SDS):	0.105
		1 SEC. PERIODS (SD1):	0.076
<u>ROOF LOADS:</u>		SEISMIC DESIGN CATEGORY:	B
LIVE LOAD:	20 PSF		
DEAD LOAD:	20 PSF	WOOD SHEAR WALLS	
		RESPONSE MOD. FACTOR (R):	6.5
<u>WIND LOADS:</u>			
RISK CATEGORY:	II	DESIGN BASE SHEAR (V):	0.0161W
3 SECOND GUST (ULTIMATE):	115 MPH		
IMPORTANCE FACTOR:	1.0	ANALYSIS BY SIMPLIFIED PROCEDURE	
EXPOSURE CATEGORY (MWFRS):	B		
INTERNAL PRESSURE COEFF.:	+/- 0.18		
<p>PROVIDE SHOP DRAWINGS AND CALCULATIONS PREPARED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF MICHIGAN FOR SIGNS AND ROOF TRUSSES.</p>			

### FOUNDATION

1. FOUNDATION DESIGN IS BASED UPON THE GEOTECHNICAL ENGINEERING REPORT BY INTERTEK-PSI DATED JANUARY 31, 2018. PROJECT NO. 03811038.
2. CONTRACTOR TO PROVIDE FOUNDATION & FOOTING AS REQUIRED FOR PYLON OR ENVIRONMENTAL SIGN. SEE ELECTRICAL DRAWINGS FOR DETAIL.
3. COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH REQUIREMENTS OF GEOTECHNICAL REPORT. FOUNDATION DESIGN IS BASED ON 2,000 PSF ALLOWABLE BEARING CAPACITY AFTER REMOVAL AND REPLACEMENT OF EXISTING FILL PER THE GEOTECHNICAL REPORT.
4. CONTRACTOR SHALL TREAT SOIL BELOW SLAB FOR TERMITES.
5. REFER TO THE GEOTECHNICAL REPORT FOR GENERAL REQUIREMENTS OF EARTHWORK, OVEREXCAVATION, SUBGRADE PREPARATION, FILL AND COMPACTION, WATERPROOFING AND DRAINAGE RETENTION REQUIREMENTS AND INFORMATION.
6. PROTECT PIPES AND CONDUITS RUNNING THROUGH WALLS AND SLABS WITH 1/2 INCH EXPANSION MATERIAL. LOWER CONTINUOUS FOOTINGS PERPENDICULAR TO PIPE RUNS TO ALLOW PIPES TO PASS ABOVE THE FOOTINGS OR THROUGH THE GRADE BEAMS. ALTERNATIVELY, PROVIDE A CONCRETE JACKET IF PIPES ARE LOW ENOUGH TO BE PLACED BELOW THE FOOTINGS. LOWER FOOTINGS AND GRADE BEAMS PARALLEL TO PIPE RUNS TO ALLOW SURCHARGE TO ADJACENT TRENCH EXCAVATIONS.
7. MAINLINE SUBGRADE TO FILL MUST BE AT LEAST 18 INCHES ABOVE FOOTINGS ARE PLACED.
8. ARRANGE FOR OWNER'S INDEPENDENT TESTING AGENCY TO MONITOR CUT AND FILL OPERATIONS AND PERFORM FIELD DENSITY AND MOISTURE CONTENT TESTS TO VERIFY COMPACTION AND APPROVE FOOTING SUBGRADES PRIOR TO PLACING CONCRETE.
9. DO NOT PLACE FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
10. MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION TO ENSURE SURFACE RUNOFF AWAY FROM STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.

**CONCRETE:**

1. CONCRETE SHALL BE HARD ROCK CONCRETE (6 SACK CEMENT PER CU.YD. MIN.) AND MEET THE FOLLOWING MIN. ULTIMATE COMPRESSIVE STRENGTHS AT 28 DAYS:
 

LOCATION	MIN. STRENGTH 28 DAYS PSI	AGGREGATE SIZE - INCHES	SUMP INCHES	TOLERANCE
SLAB ON GRADE	(4000 DESIGN)	1" x #4	3-1/2"	+1/2"
FOUNDATIONS	(4000 DESIGN)	1" x #4	3-1/2"	+1/2"
2. CONCRETE MIX DESIGN AND TESTING SHALL MEET WITH THESE SPECS. CEMENT SHALL BE IN ACCORDANCE WITH ASTM C 150 TYPE II. VERIFY MIN. CONCRETE STRENGTH AND CEMENT TYPE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. STEEL SHALL BE KEPT CLEAN AND FREE OF CURST.
4. CONCRETE CURING SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF ACI-308-14.  
AND STANDARD PRACTICE FOR CURING CONCRETE REPORTED BY COMMITTEE 308.
5. ANCHOR BOLTS - A36 OR A307, USE 5/8" DIAMETER x 20" LONG ANCHOR BOLTS (A.B.) AT 48" O.C. U.O.N. ANCHOR BOLTS SHALL BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE.
6. ALL WWF SHALL CONFORM TO ASTM 1064.

**SLAB:**

1. DESIGN IS BASED ON 4" THICK CONCRETE SLAB REINFORCED W/ WWF 6x6-W1 4x14 W.W.F. (ASTM A1064) OVER 10 MIL VISQUEEN MEMBRANE, OVER 4" AGGREGATE BASE, OVER ENGINEERED SUBGRADE.
2. PROVIDE CONTROL JOINTS AS FOLLOWS: 1/8"x 1/4 DEEP SAWCUTS @ 12'-0" O.C. SQ. MAX. w/ AN ASPECT RATIO OF NO MORE THAN 2:1.

**MISCELLANEOUS:**

1. DIMENSIONS NOTED ARE TO FACE OF CONCRETE. REFER TO DWG. A1.0 FOR DIMENSIONS TO FACE OF STUD AND OTHER DIMENSIONS NOT OTHERWISE NOTED.
2. DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
3. DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
4. SEE PLUMB, DWGS. FOR PLUMB, LAYOUT DIMENSIONS, U.O.N.
5. SEE ELEC. DWGS. FOR ELEC. LAYOUT DIMENSIONS, U.O.N.
6. COORD. FOUNDATION AND SLAB LAYOUT WITH OTHER TRADES PRIOR TO POURING SLAB.

MARK	WIDTHxLENGTHxTHICKNESS	REINFORCING
WF6.0	2'-0"xCONT.x2'-10"	(3)-#5 CONT. T.&B
WF6.0	6'-0"xCONT.x2'-10"	LONG: (9)-#6 CONT. T.&B TRANS: #6 @ 12" O.C. T.&B
F4.0x3.25	3'-3"x4'-0"x2'-10"	LONG: (7)-#5 CONT. T.&B TRANS: #5 @ 12" O.C. T.&B
F4.0	4'-0"x4'-0"x2'-10"	(7)-#5 BARS EACH WAY T.&B

NOTES:

1. "WFx" DENOTES WALL FOOTING.
2. "Fx" DENOTES COLUMN FOOTING.
3. COLUMN FOOTING TO BE CENTERED WITH COLUMN.
4. ALL FOOTINGS TO BE 8" BELOW TOP OF SLAB U.N.O.

1. FLOOR DRAINS LOCATED 1/2" BELOW T.O. SLAB. SLOPE SLAB AS INDICATED ON PLAN TO PROVIDE POSITIVE DRAINAGE.
2. PROVIDE HUB DRAIN (HD) UNLESS REQUIRED BY LOCAL CODE TO HAVE FLOOR SINK (FS). PROVIDE SLEEVE IN CONCRETE AT THESE AND HOSE BIB LOCATIONS. COORDINATE LOCATIONS WITH ARCHITECTURAL.
3. INDICATES INSIDE SURFACE OF FOOTING. SEE SHEET S4.0. BOTTOM OF FOOTING (B.O.F.) ELEVATION = -3'-6" BELOW FINISHED EXTERIOR GRADE (MIN. FOR FROST PROTECTION). ALL TOP OF FOOTING (T.O.F) ELEVATIONS = -0'-8".
4. PROVIDE SIMPSON PWS46 POST BASES AT 4x6 POSTS.
5. ANCHOR RODS LOCATED THROUGHOUT PERIMETER OF BUILDING SHALL BE PROVIDED AS REQUIRED PER THE "PLATE/ANCHOR ROD" COLUMN OF THE "WALL SHEATHING AND SHEARWALL SCHEDULE." SEE D/S2.0.
6. HDU5 EMBEDDOWN ANCHOR AT EACH END OF SHEARWALL. SEE 6/S4.0 FOR HOLDOWN EMBEDMENT DETAIL.
7. DTT2Z-SDS2.5 ANCHOR FOR SUPPORT OF HALF WALL.
8. HD19 HOLDOWN ANCHOR AT EACH END OF INTERIOR SHEARWALL. SEE 6/S4.0 FOR HOLDOWN EMBEDMENT DETAIL.
9. HS55x5x5/16 STEEL COLUMN.
10. 4" EXTERIOR CONCRETE SLAB REINFORCED W/ WWF 6#6-W/1.4x1.4 OVER 4" AGGREGATE BASE OVER SUBGRADE. SEE SLAB NOTES THIS SHEET FOR ADDITIONAL INFORMATION.
11. 4" CONCRETE SLAB PER SLAB NOTES THIS SHEET.
12. CONCRETE CURB. SEE CIVIL PLAN.

## DESIGN CRITERIA

**E**

## FOUNDATION PLAN NOTES

D

## FOOTING SCHEDULE

C

## KEY NOTES

B





B	04.24.18	ISSUED FOR PERM
---	----------	-----------------

A CONTRACT DATE: 04.02

TACO BELL

2306 DIX HIGHWAY

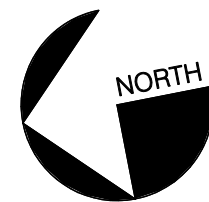


T52

## WALL FRAMING

1

PLOT DATE: 9/13/2018 4:41:59



## A

**F**

NOTES:

- ## E

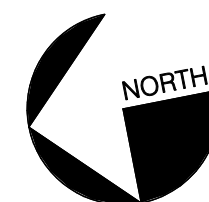
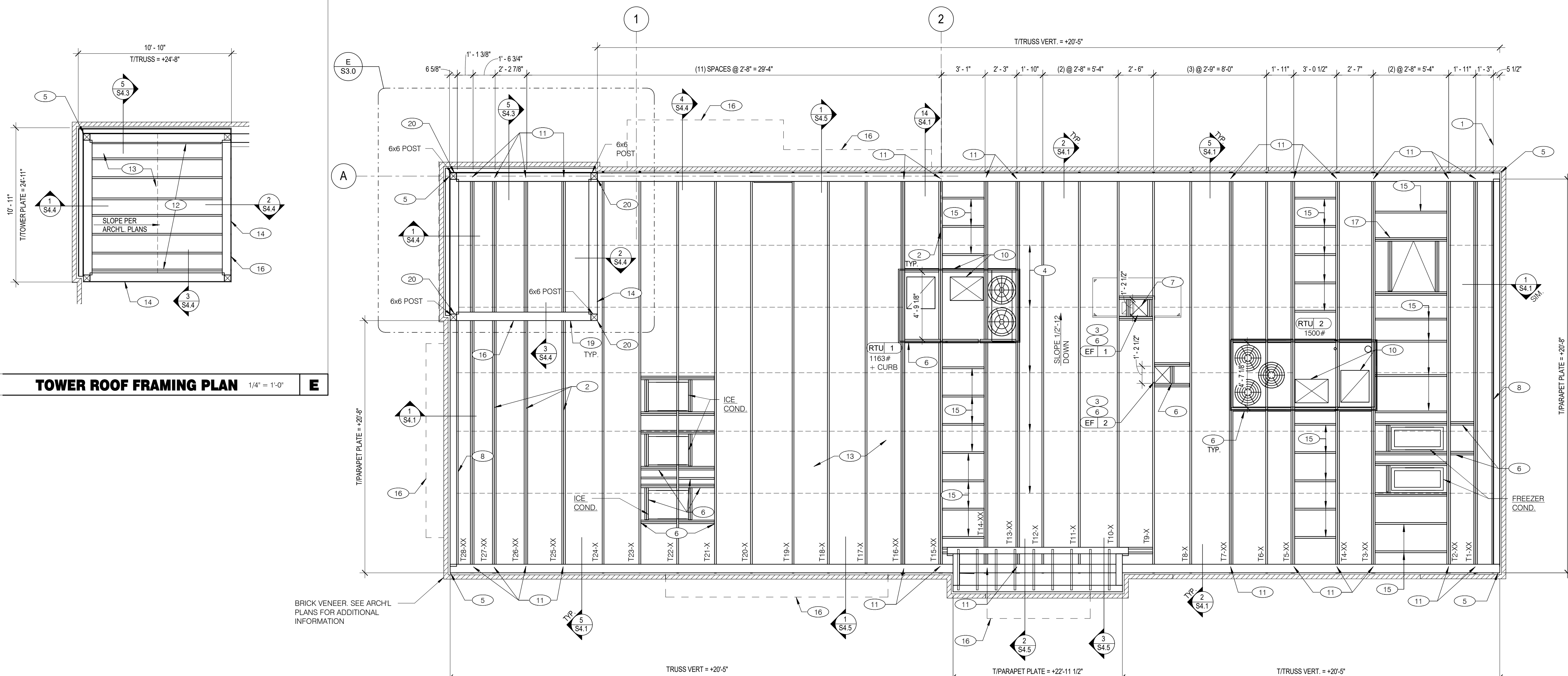
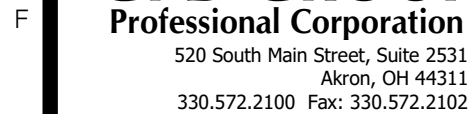
\*\*\* REQUIREMENTS FOR EXTERIOR NON-SHEARWALL WALLS

- D**

**C**

- B**



[illegible]

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52  
OPEN KITCHEN  
MODERN EXPLORER

## ROOF FRAMING PLAN

## S3.0

PLOT DATE: 9/13/2018 4:41:59 PM

TYPE	NAILING / SHEATHING	REMARKS
BN	10d @ 6" O.C.	
EN	10d @ 6" O.C.	
FN	10d @ 12" O.C.	
ROOF SHEATHING	5/8" CDX PLYWOOD (40/20), PS1 RATING	

NOTE:

SEE 8/S4.2 FOR DEFINITIONS

### NAILING SCHEDULE - ROOF

D

ROOF FRAMING NOTES:

- A. ALL UNSUPPORTED EDGES OF PLYWOOD SHEATHING SHALL BE SUPPORTED WITH SIMPSON PSCCL CLIPS, PROVIDE (2) CLIPS EQUALLY SPACED BETWEEN EACH TRUSS/SUPPORT. SEE DETAIL 9/S4.2. OSB OF COMPARABLE THICKNESS MAY BE USED IN LIEU OF PLYWOOD WHEN APPROVED IN WRITING BY THE PROJECT ENGINEER AND THE LOCAL JURISDICTION.
- B. ALL MECHANICAL SUPPLY AND RETURN OPENINGS SHALL BE BETWEEN FRAMING U.O.N.

MANUFACTURED ROOF TRUSS NOTES:

- A. MFRD ROOF TRUSSES ARE AT 2'-8" O.C. U.O.C.
- B. "T" DENOTES ROOF TRUSS TYPE. REFER TO SCHEDULE 7/S4.2.
- C. TRUSS DWGS ARE PROVIDED FOR CONCEPTUAL DESIGN ONLY. MFR SHALL SUBMIT SHOP DWGS AND CALCS. BOTH SIGNED BY A LICENSED STRUCTURAL ENGINEER (STATE OF MICHIGAN). SUBMIT SHOP DWGS AND CALCS TO THE ARCHITECT AND ENGINEER FOR REVIEW AND SUBMITTAL AND, IF REQUIRED, TO BLDG. OFFICIAL FOR APPROVAL PRIOR TO FABRICATION. SHOP DWGS SHALL INCLUDE LAYOUT PLAN AND CONNECTORS. CALCS SHALL BE BASED ON THE SPECIFIED LOADING CONDITIONS SHOWN HEREIN. MFR SHALL PROVIDE HANGERS AND CONNECTIONS BETWEEN TRUSSES. REVIEW AND APPROVE DIMENSIONS, SHAPES AND DETAILS SHOWN ON SHOP DWGS PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER FOR REVIEW AND COMMENT.
- D. SHALL SUBMIT SHOP DWGS AND CONNECTORS ADEQUATE FOR LOADS. ROOF CONNECTORS ARE BASED UPON SIMPSON "STRONG TIE" OR APPROVED EQUAL.
- E. TRUSS CHORDS AND PARAPET VERTICALS SHALL BE 2x6 MIN U.O.C. AND CONSISTENTLY SIZED THROUGHOUT PROJECT.

- F. REFER TO TRUSS ELEVATIONS FOR SHAPE, OVERHANG, SLOPES, SPAN, ETC. LOCATION OF BEARING POINTS ARE AS INDICATED ON THE DRAWINGS. SEE 3/54.2
- G. **MAJOR ROOF TRUSS DESIGN LOADS:** SEE TRUSS DESIGN CRITERIA 3/54.2 **PROVIDE ADDITIONAL LOAD FROM KEYNOTE 19 AND 21 THIS SHEET.**
- H. THE POSITIONS, WEIGHTS, AND METHODS OF ATTACHMENT OF ALL MECHANICAL UNITS, ELECT FIXTURES, PLUMBING, ETC. SHALL BE INCLUDED IN THE DESIGN OF THE TRUSSES BY THE TRUSS MFR.
- I. DESIGN ROOF TRUSSES TO SUPPORT ALL IMPOSED LOADS, INCLUDING WIND & LATERAL LOADS. COORDINATE SIZE, LOCATION AND WEIGHT OF EQUIPMENT WITH MECHANICAL WORK. PROVIDE MULTIPLE TRUSSES WHERE ONE TRUSS CANNOT SUPPORT THE LOAD. PROVIDE BRIDGING BETWEEN TRUSSES AS SPECIFIED AS MINIMUM STANDARD.
- J. INSTALLATION OF ALL TRUSSES SHALL BE DONE USING A SPREADER BAR WITH A THREE POINT VERTICAL PICK. CARE SHALL BE USED IN LIFTING TO PREVENT HORIZONTAL BENDING.
- K. IMPROPER HANDLING OF THE TRUSSES AS NOTED ABOVE AND IN THE SPECS SHALL MEAN REMOVAL OF THE TRUSSES FROM THE JOBSITE AND REPLACEMENT AT CONTRACTOR'S EXPENSE.
- L. REFERENCE MANUFACTURED TRUSS DRAWINGS FOR DETAILS ON TRUSS MANUFACTURING AND NAILING.

## ROOF FRAMING NOTES

C

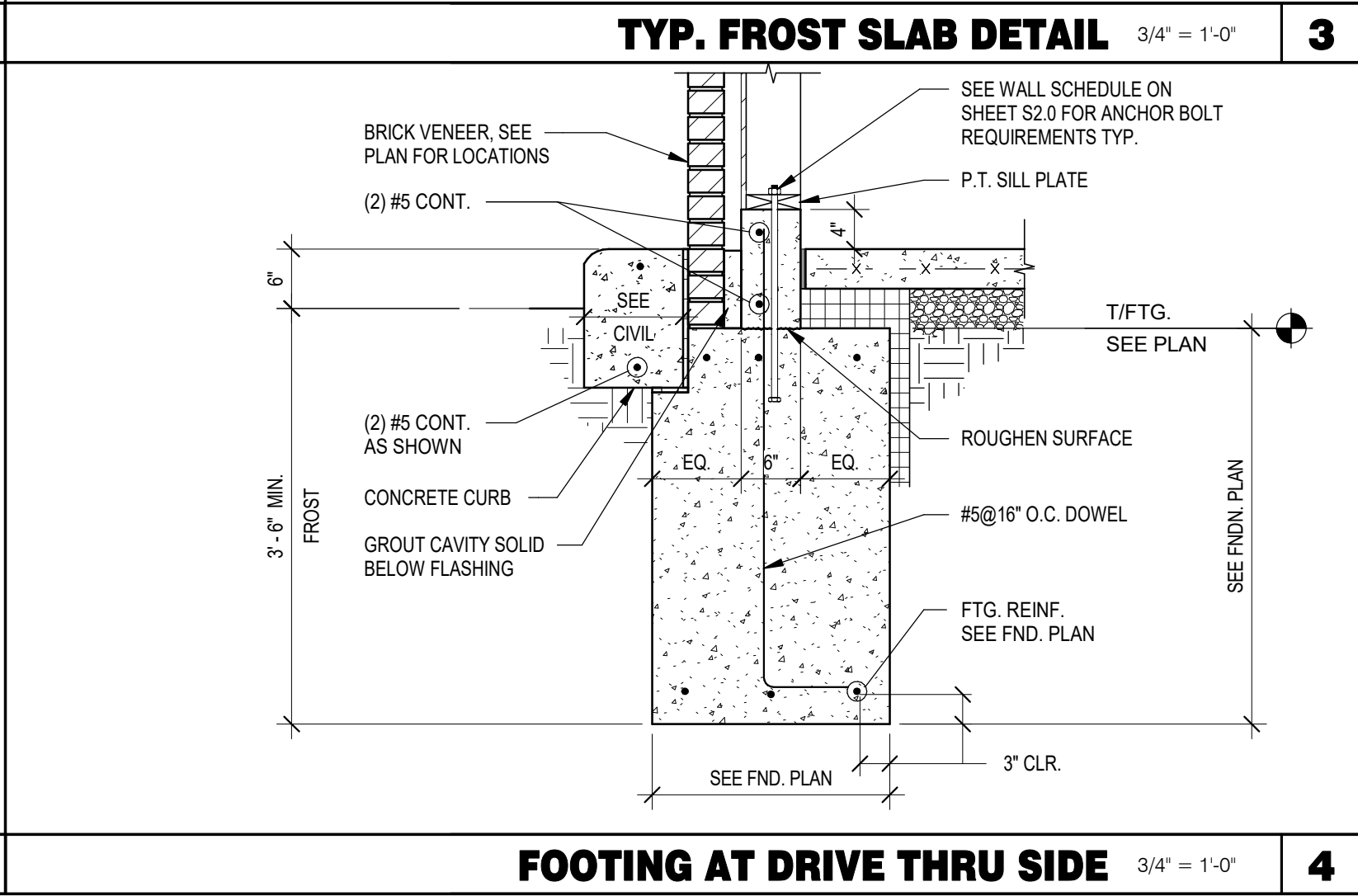
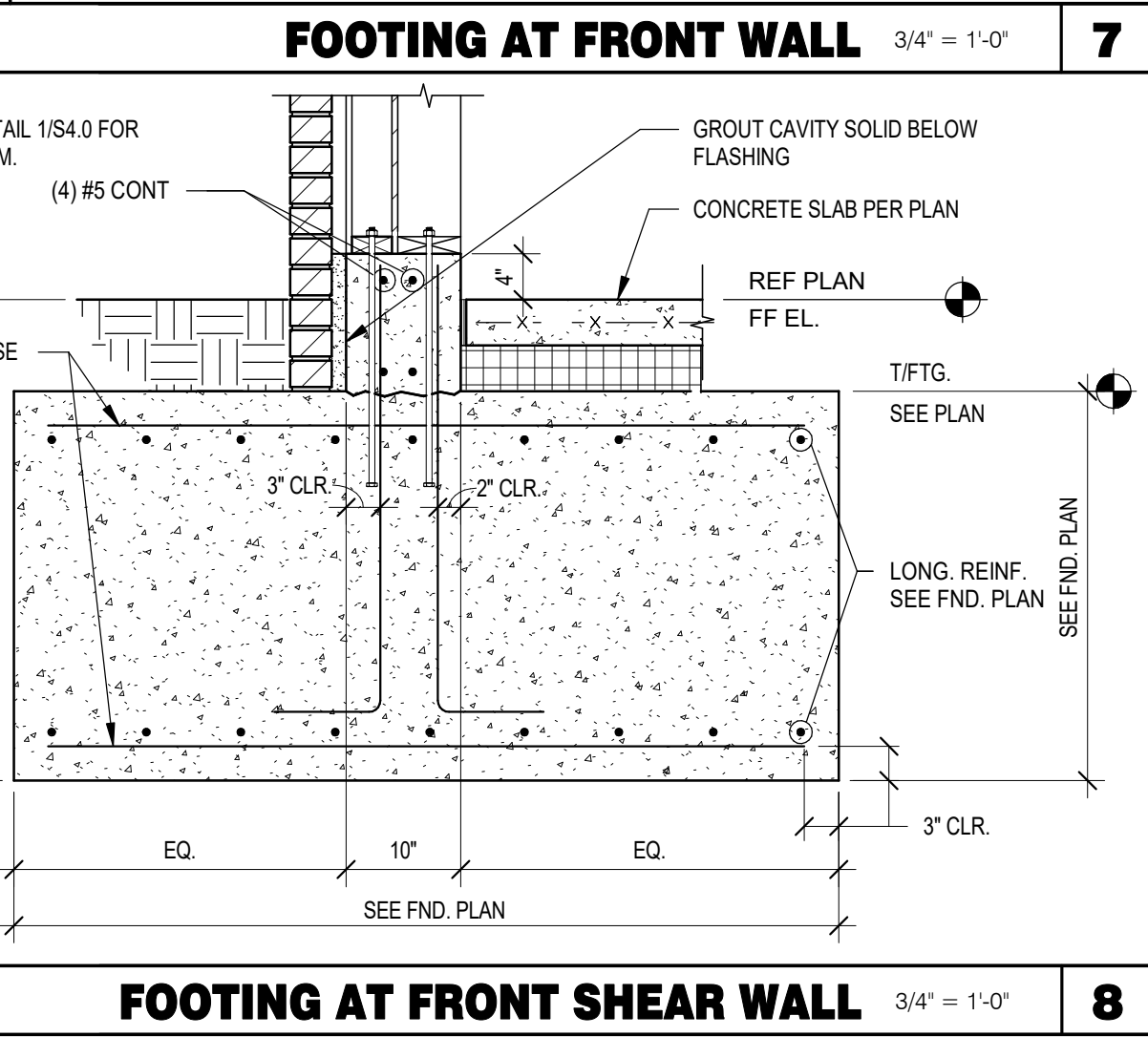
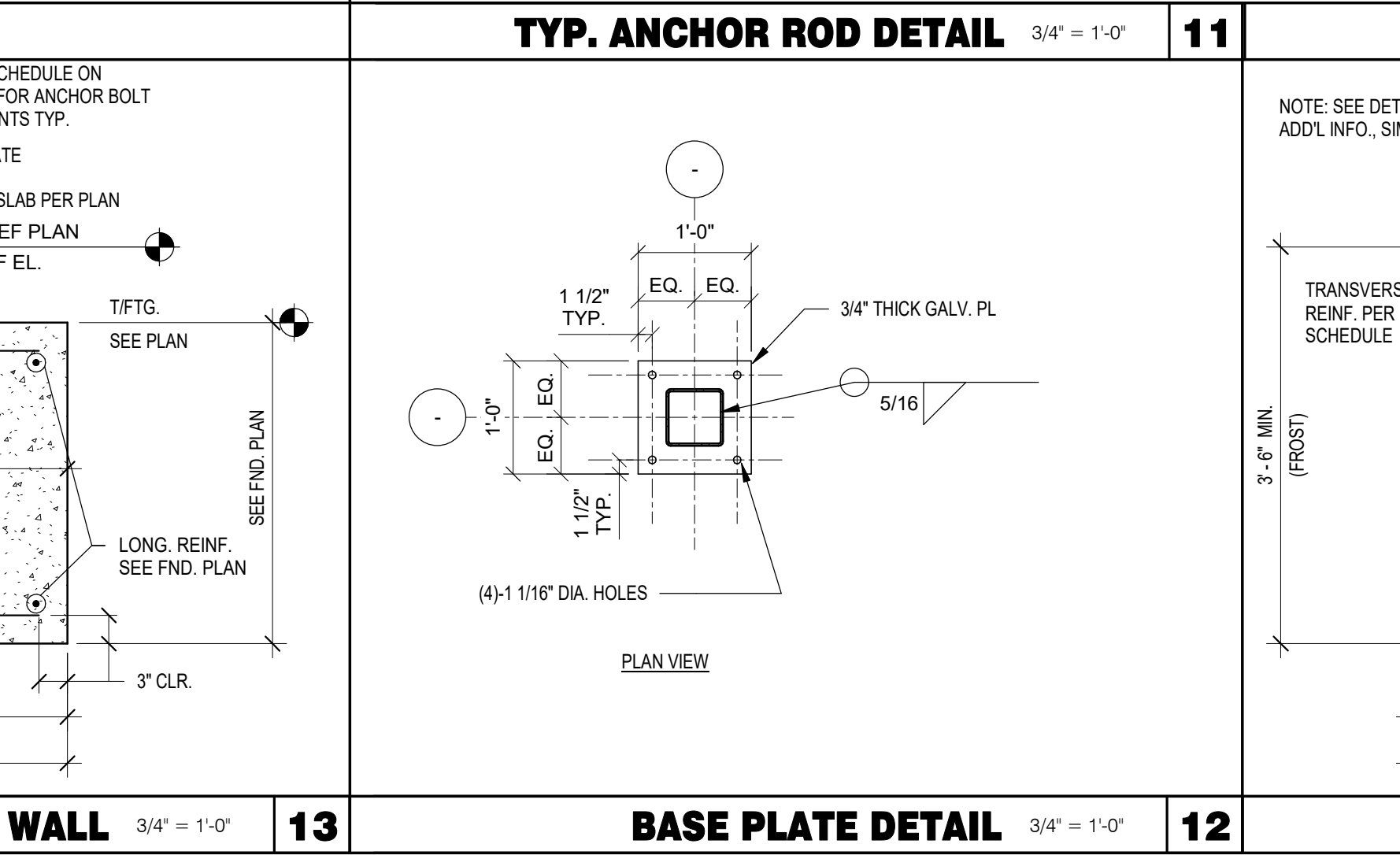
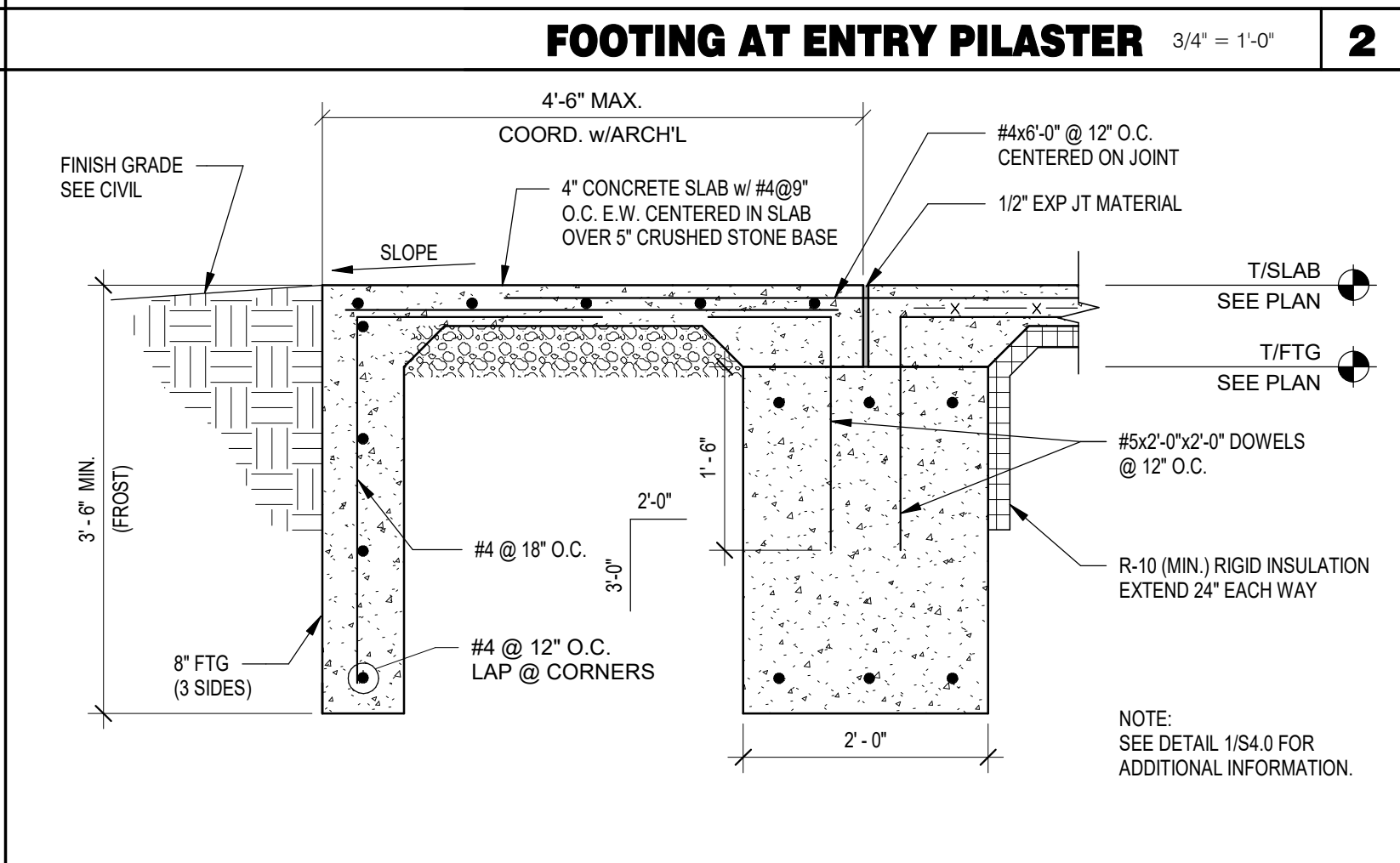
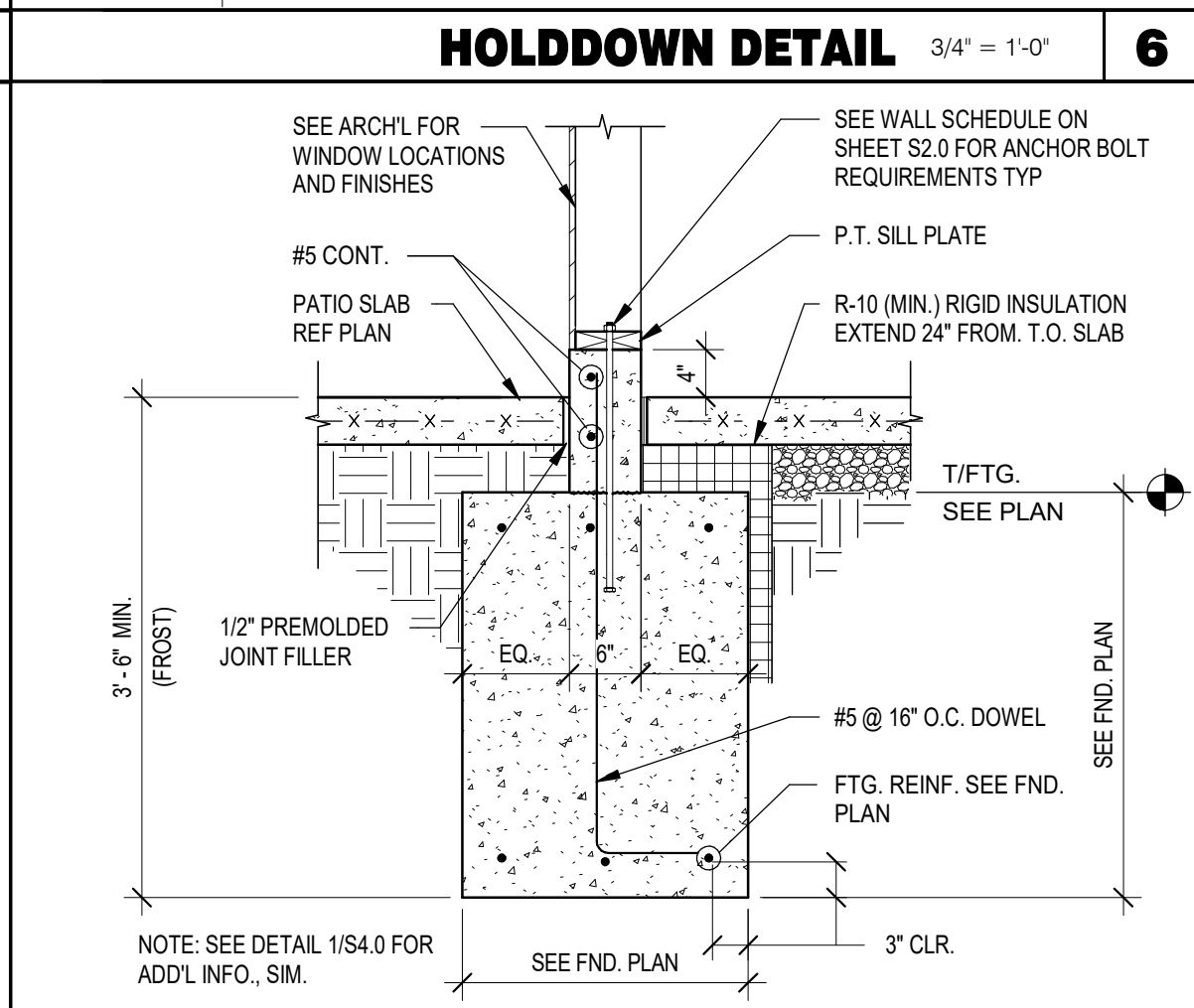
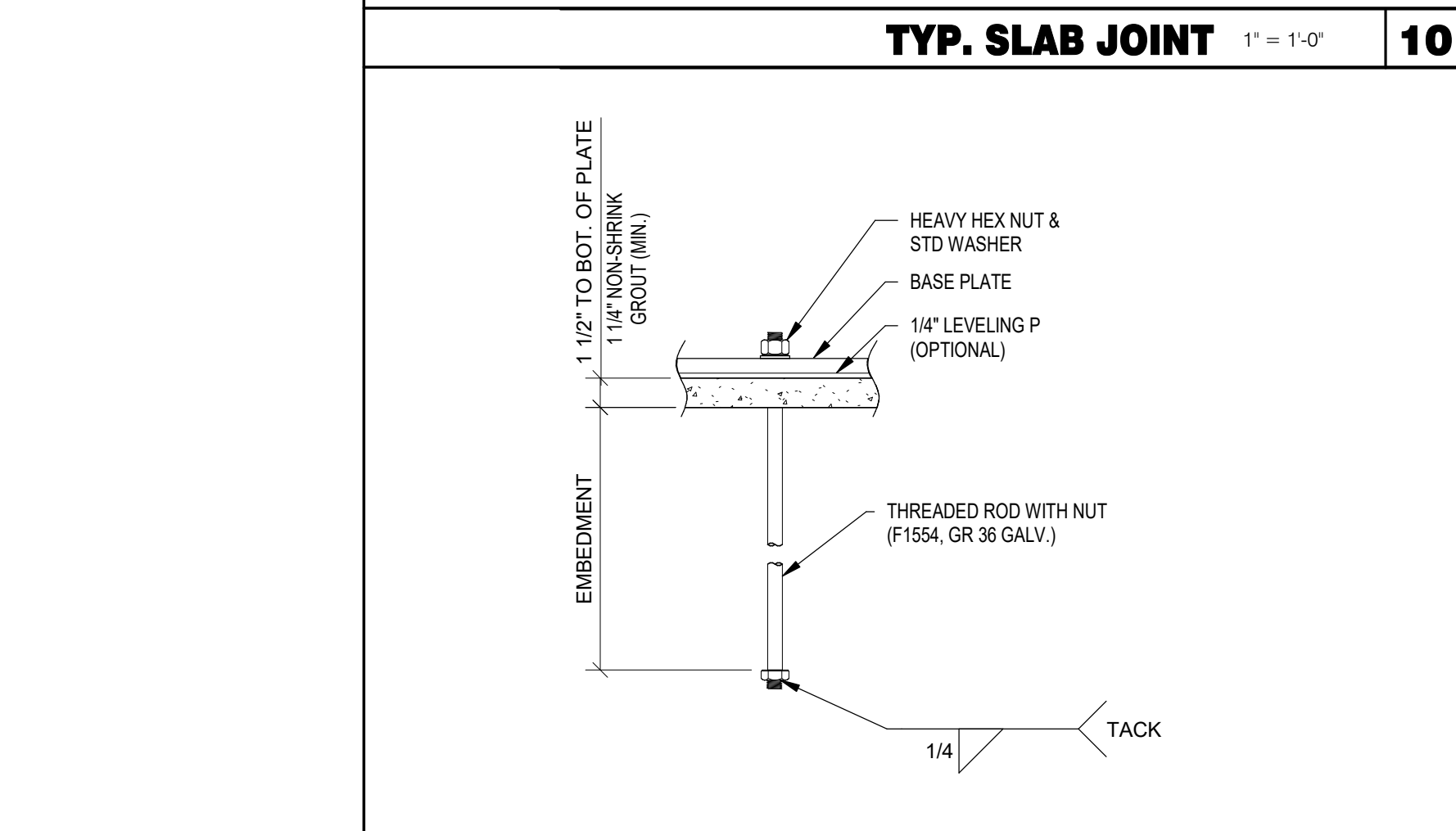
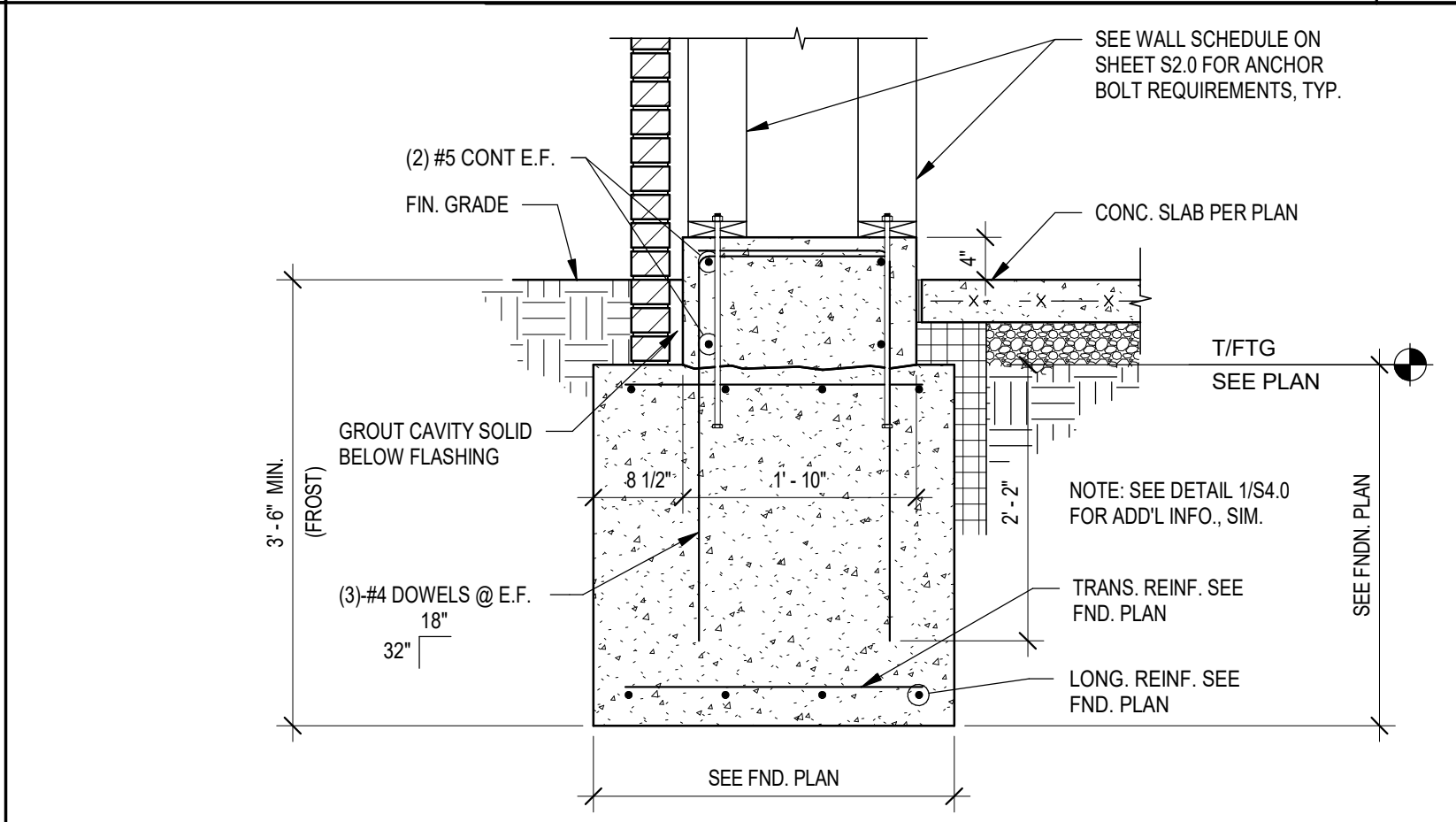
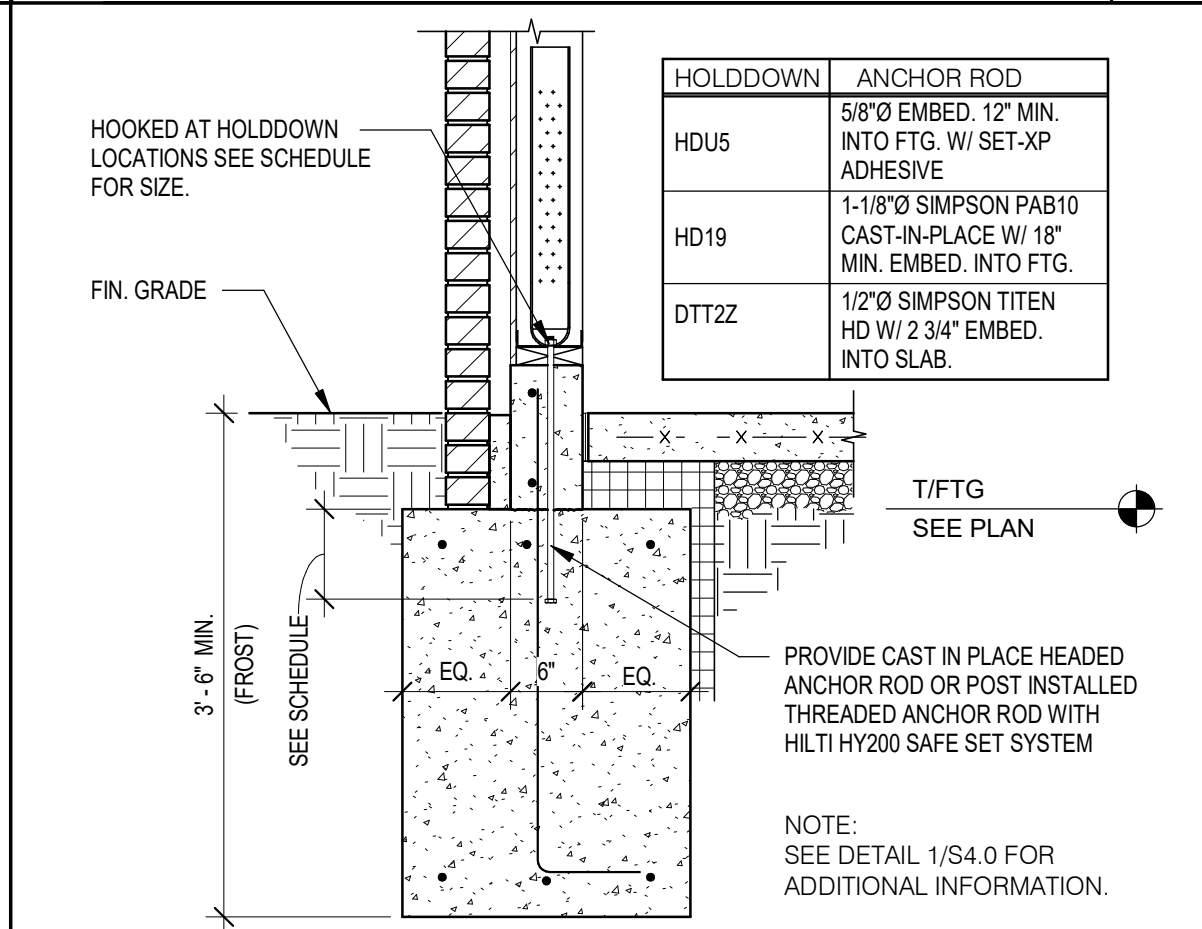
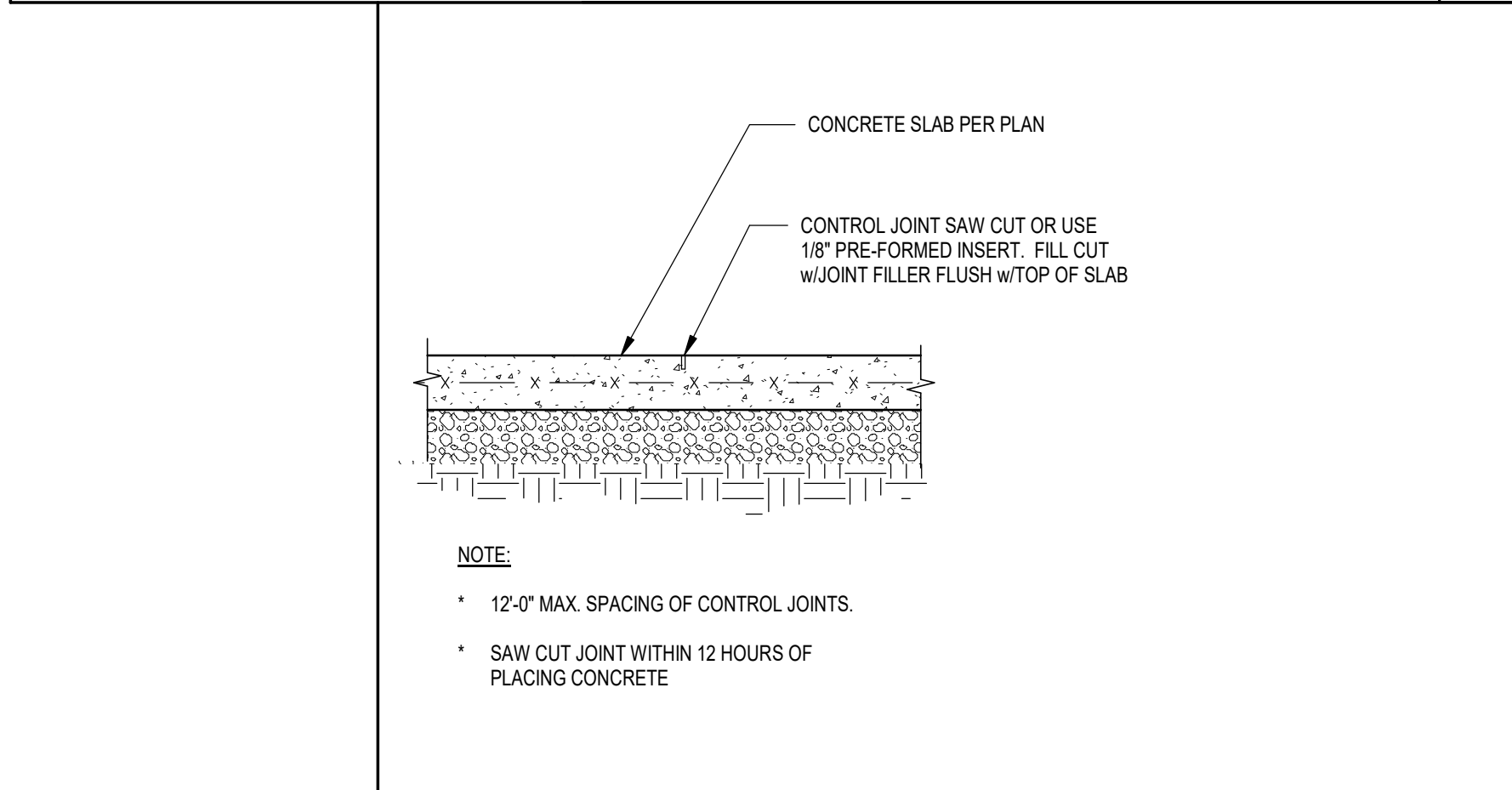
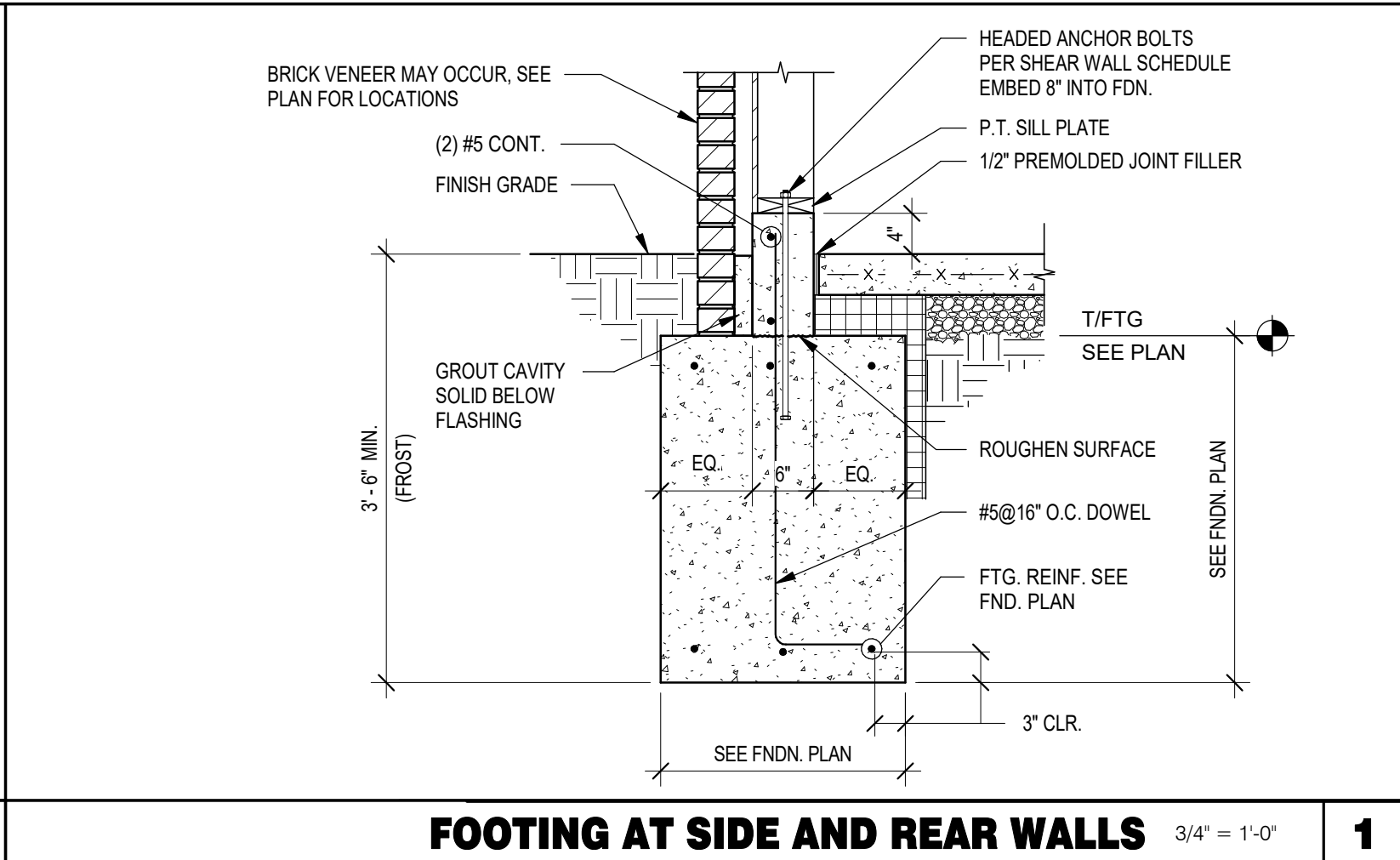
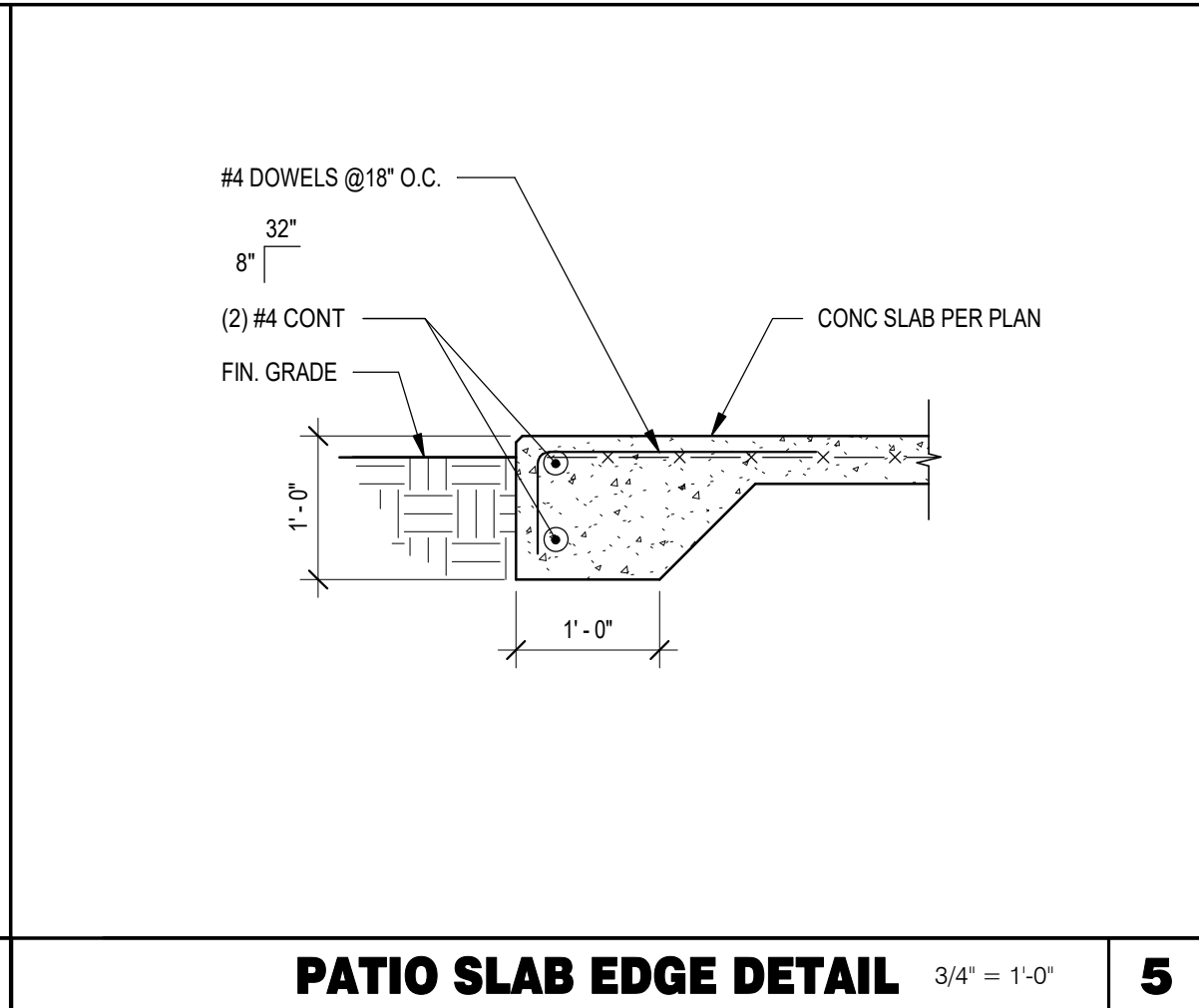
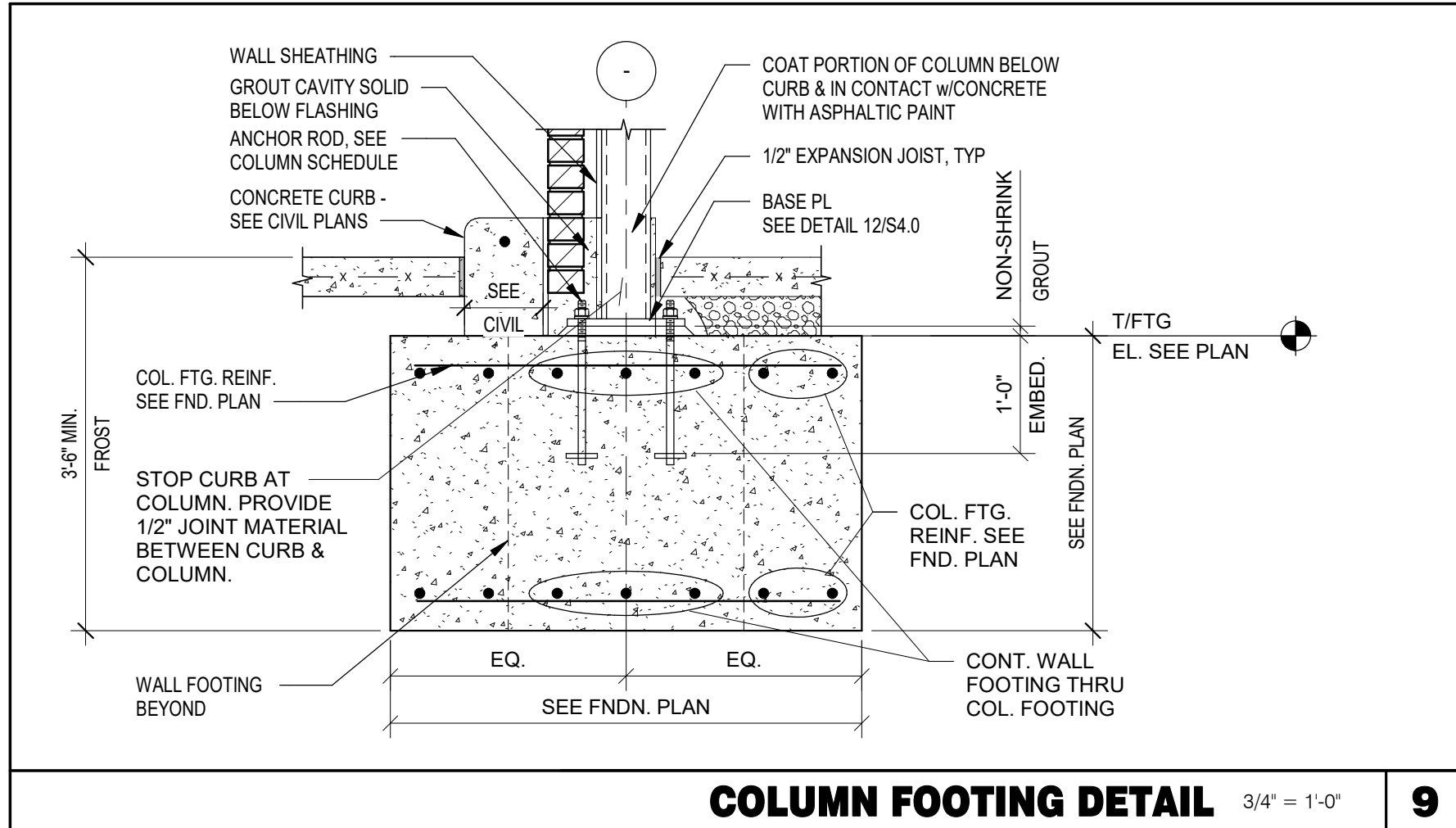
- |    |  |
|----|--|
| 1  | STARTING POINT OF TRUSS LAYOUT - CENTERLINE OF TRUSS.  |
| 2  | VERIFY NECESSITY OF DOUBLE TRUSSES WITH TRUSS MFR. DUE TO POINT LOADING AND ADDITIONAL UNIFORM LOADING, TYPICAL.   |
| 3  | COORDINATE BLOCKING WITH EXHAUST AND SUPPLY DUCT.  |
| 4  | CONT 2x4 W/DB BRIDGING ON TOP OF BOTTOM CHORD. ADJUST AS REQUIRED FOR DUCT PLENUMS, MAX SPACING AT 5'-0" O.C. OR TIGHTER SPACING AS REQUIRED BY TRUSS DESIGN. SEE 13/S4.1 FOR BRIDGING LAP DETAIL. |
| 5  | SIMPSON MSTA 24 AT CORNER DBL TOP PLATE. CENTER STRAP ON CORNER.   |
| 6  | (2) 2x6 BLOCKING W/ U26-2 HANGERS, TYP. EDGES OF ALL ROOF TOP EQUIPMENT AND ALL ROOF OPENINGS - SEE DET. 6 & 10/S4.2.  |
| 7  | LOCATION OF HOOD. SEE HOOD DRAWINGS FOR HOOD ATTACHMENT DETAIL 6/S4.1.   |
| 8  | (2) 2x8 LEDGER REF. 1/S4.1.  |
| 9  | NOT USED.  |
| 10 | HVAC ROOF OPENING FOR DUCT. VERIFY SIZE WITH HVAC MFR. & MECHANICAL DWGS.  |
| 11 | (2) 2x6 BUILT-UP COLUMN AT TRUSS BEARING, TYP. @ GIRDER, TRUSS ONLY. REF. DETAIL 12/S4.2.  |

- 12 2x8 ROOF JOIST @ 16" O.C. WITH MID-SPAN BLOCKING.
- 13 PLYWOOD ROOF SHEATHING. SEE NAILING SCHEDULE, THIS SHEET.
- 14 2x8 @ 16" O.C. STUD TOWER WALL.
- 15 2x6 @ 24" O.C. WITH SIMPSON U-26 EA. END.
- 16 CANOPY BY MANUFACTURER.
- 17 ROOF HATCH.
- 18 NOT USED.
- 19 PROVIDE (3) 2x6 BLOCKING AT CORNER AND ALONG TOWER WALL W/ HUS26-2 HANGERS, EA. END. DESIGN TRUSSES T-25XX THROUGH T-28XX FOR ADD'L 500 LB UPLIFT AND 500 LB DOWN FORCE.
- 20 6x6 POST SHALL BE CONTINUOUS FROM FLOOR TO TOP OF PARAPET. PROVIDE BLOCKING TO ADJACENT STUDS AT 48" O.C. VERTICALLY FULL HEIGHT OF POST. PROVIDE DTTZZ TENSION TIES FROM BLOCKING TO POST WITH 1/2" DIA. ANCHOR. INSTALL PER MANUF. RECOMMENDATIONS.

## KEY NOTES

E





09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**  
T52  
OPEN KITCHEN  
MODERN EXPLORER

**STRUCTURAL  
DETAILS  
FOUNDATION**

**S4.0**

PLOT DATE: 9/13/2018 4:42:01 PM

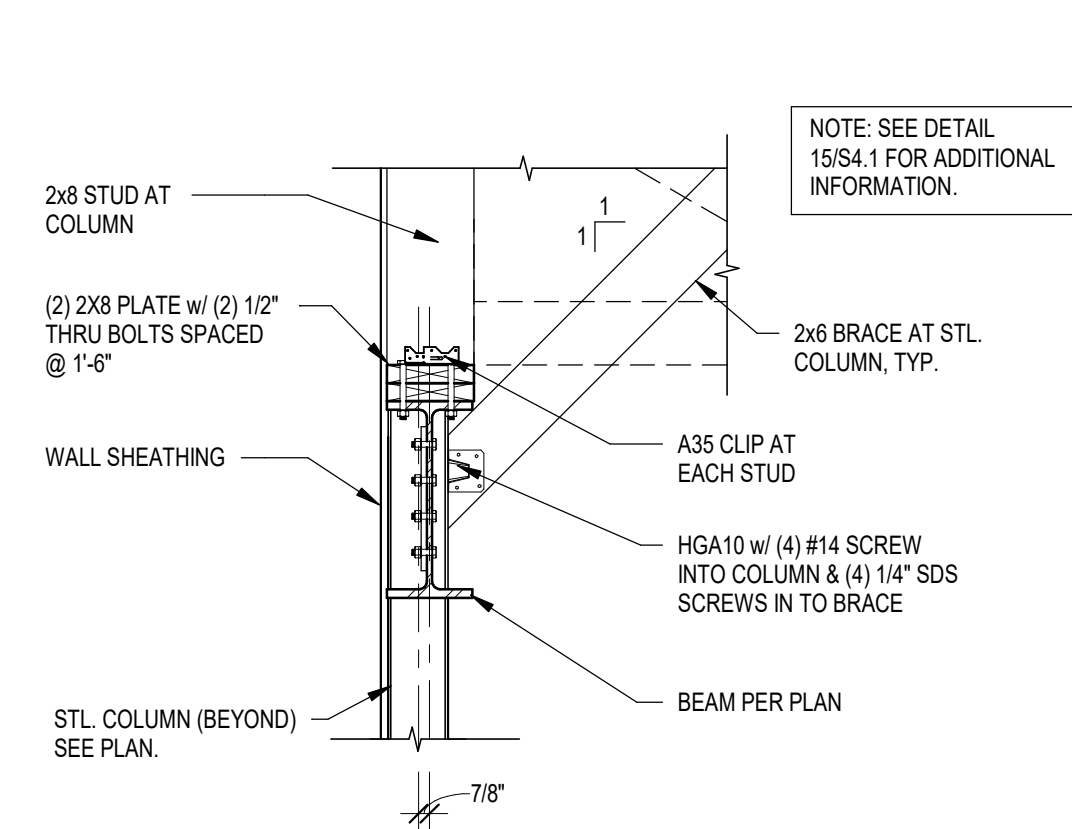
FOOTING AT FRONT SHEAR WALL 3/4\"

BASE PLATE DETAIL 3/4\"

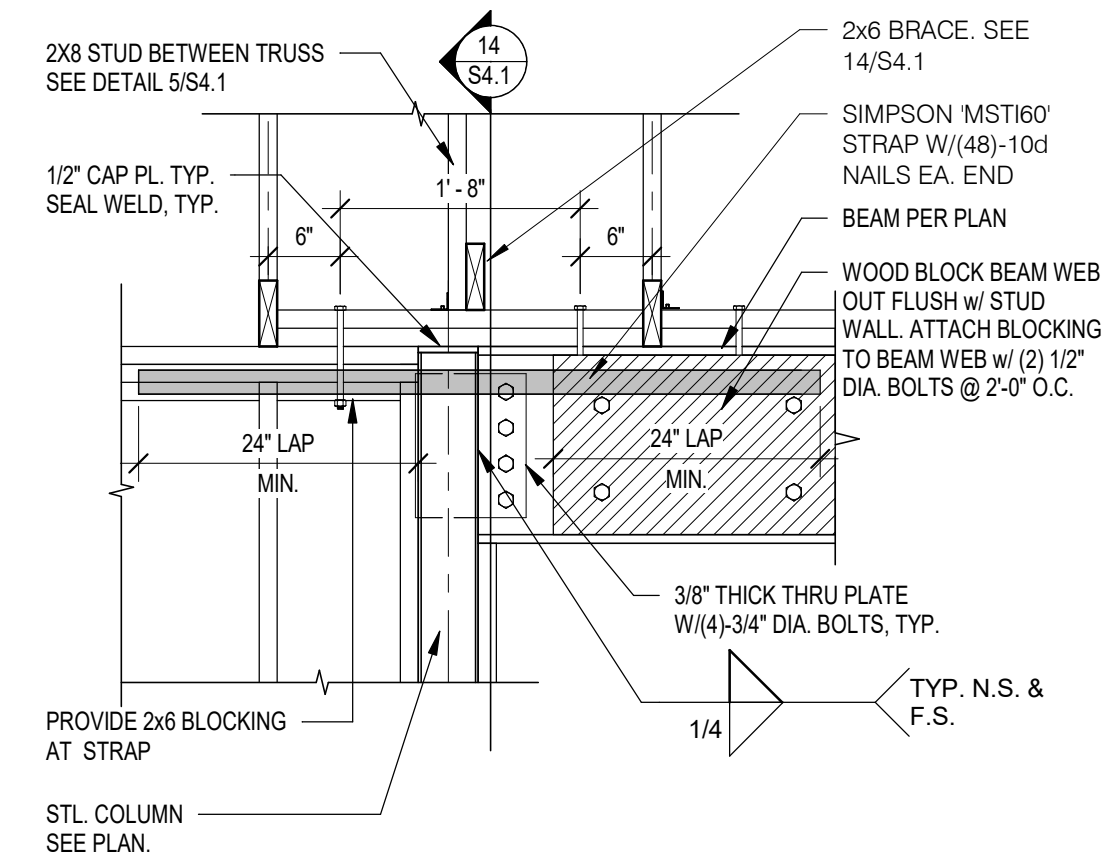
FOOTING AT FRONT SHEAR WALL 3/4\"

FOOTING AT DRIVE THRU SIDE 3/4\"

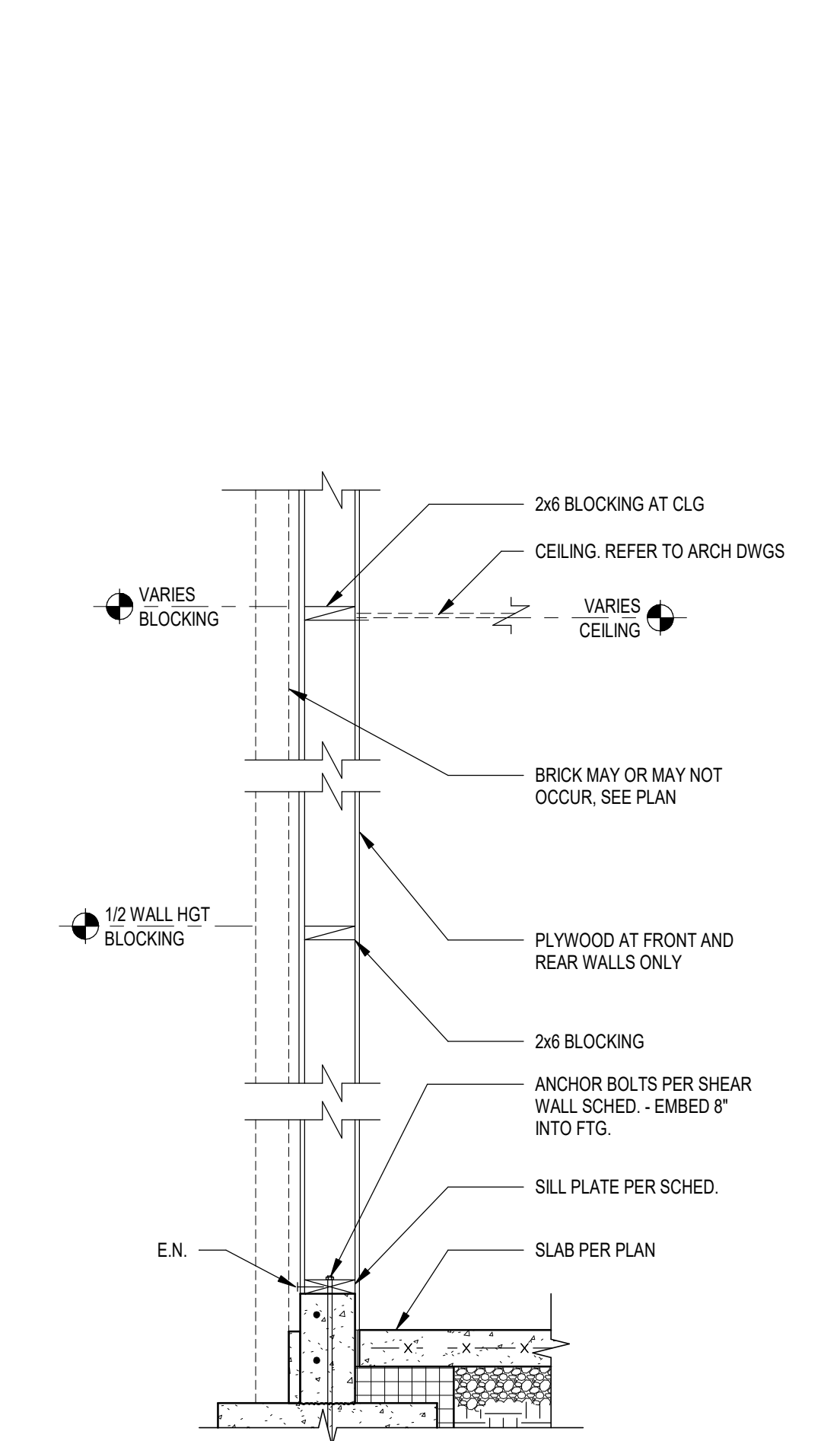




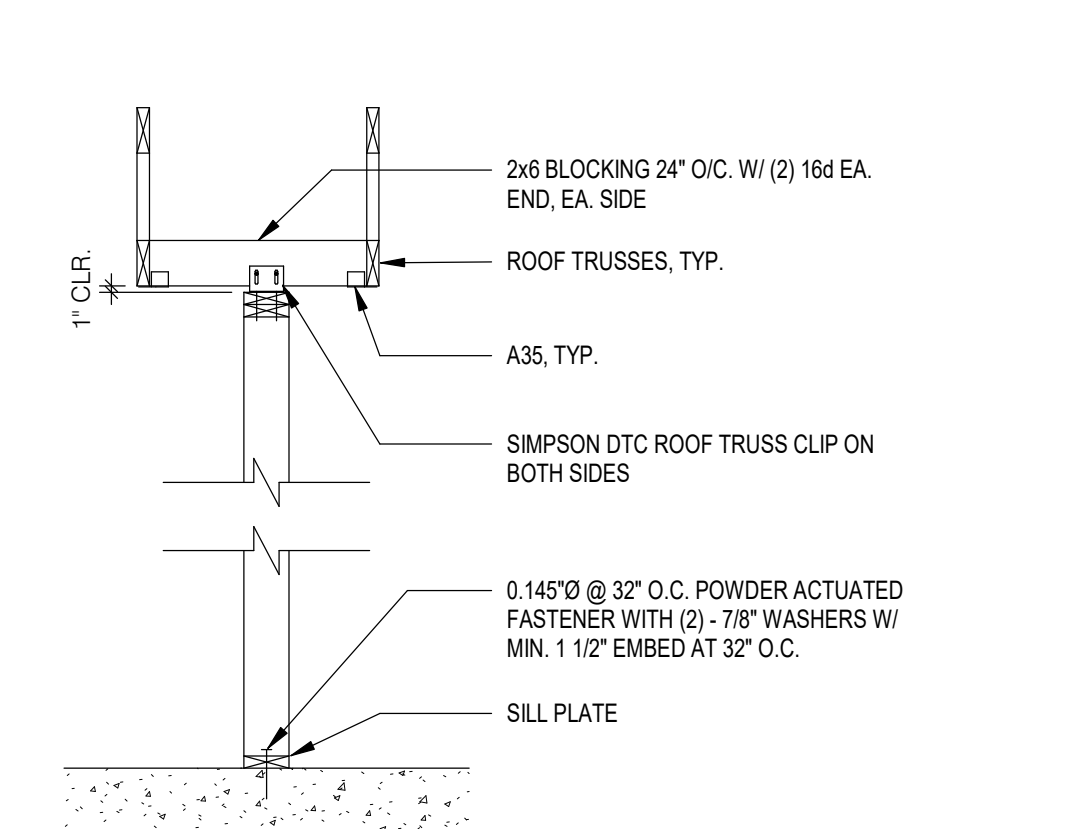
TYP. BEAM TO COLUMN DETAIL 3/4" = 1'-0" 14



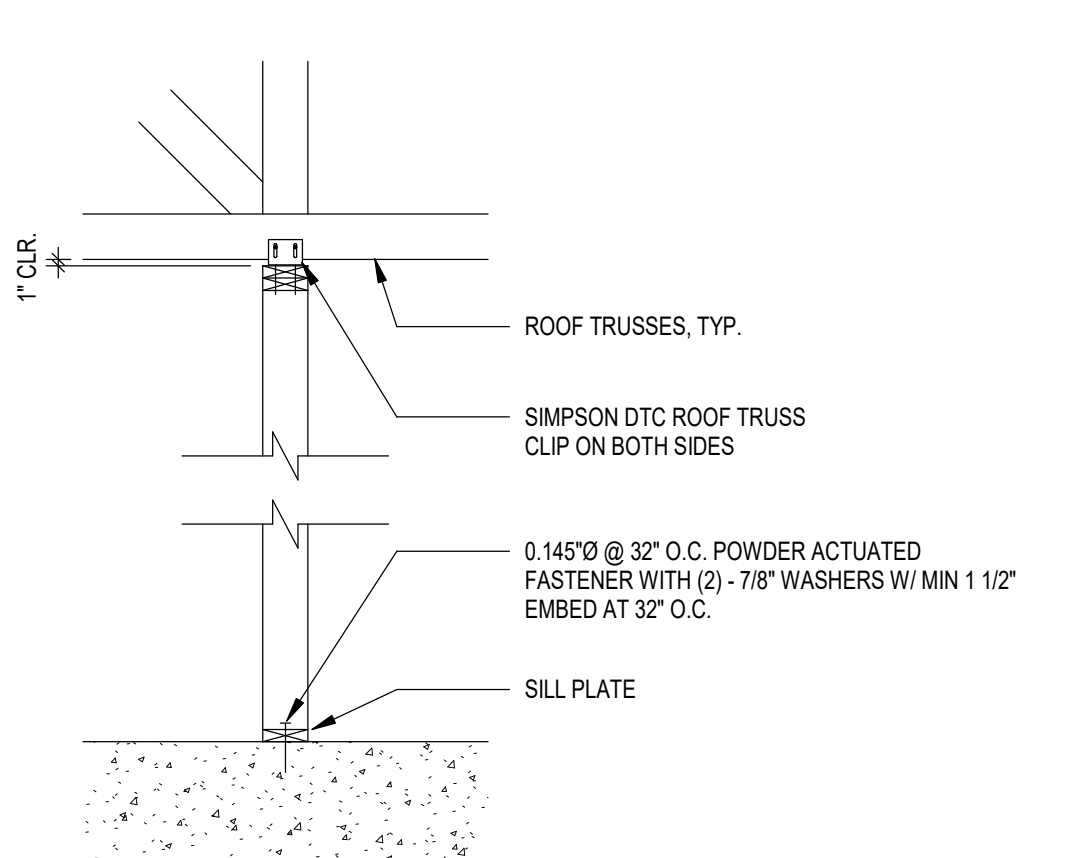
TYP. BEAM TO COLUMN DETAIL 3/4" = 1'-0" 15



TYP. WALL BELOW TRUSS 3/4" = 1'-0" 16



SUPPORT - PARALLEL TO TRUSS 1/2" = 1'-0" 10



SUPPORT PERP. TO TRUSS 1/2" = 1'-0" 11

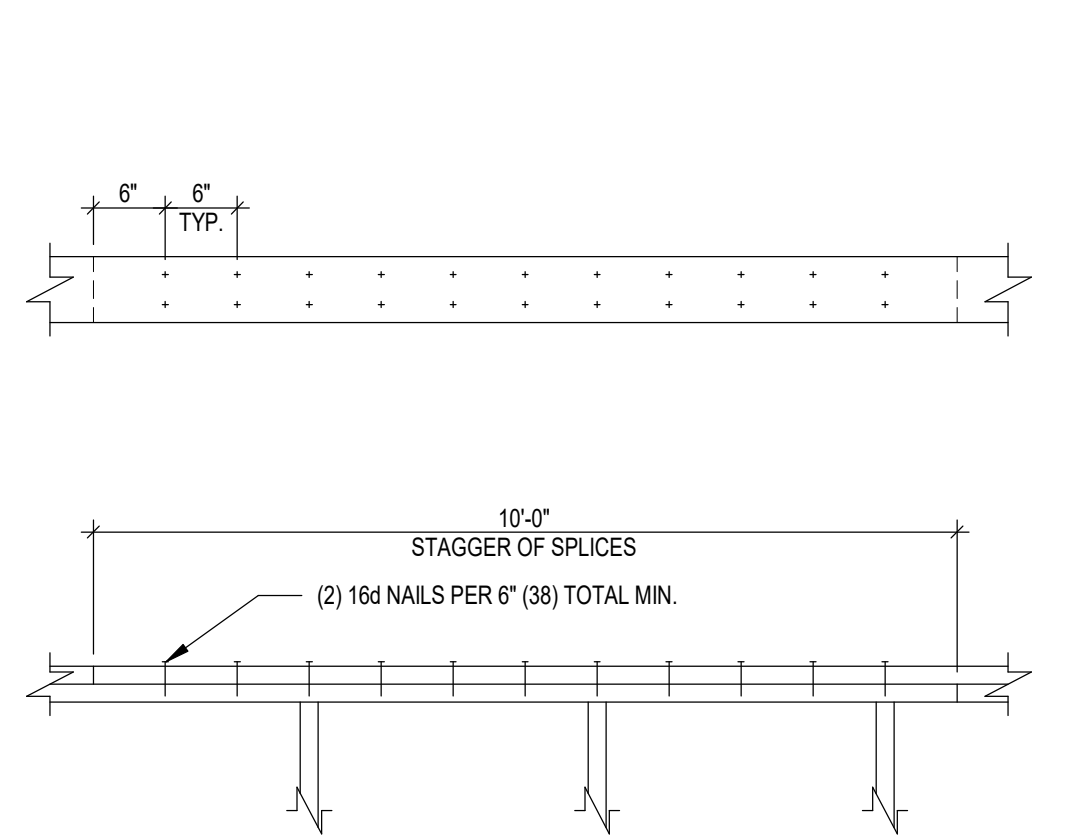
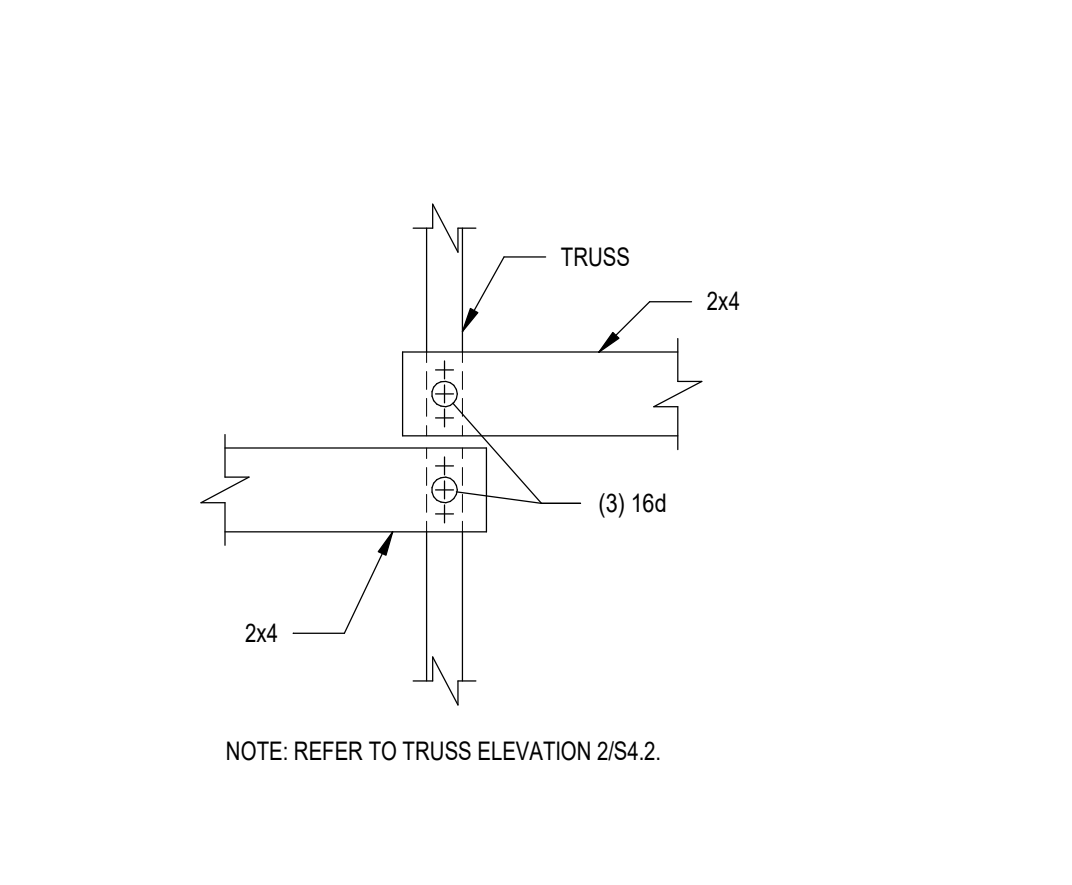
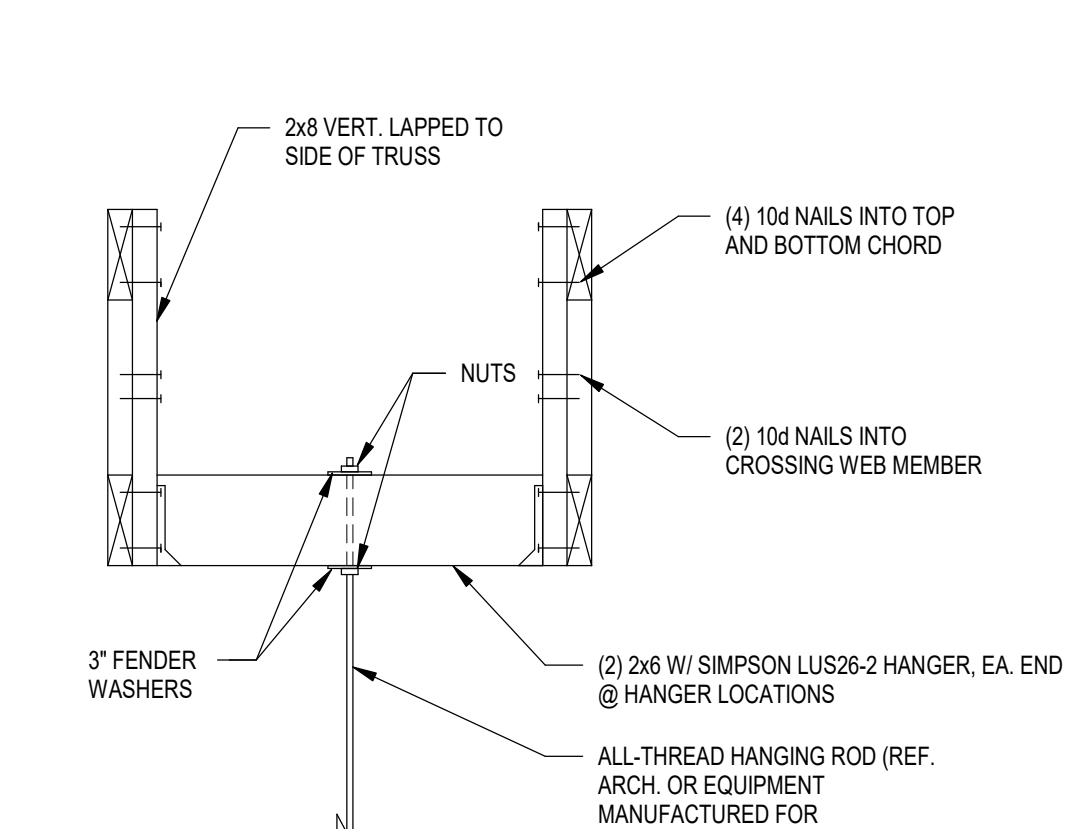


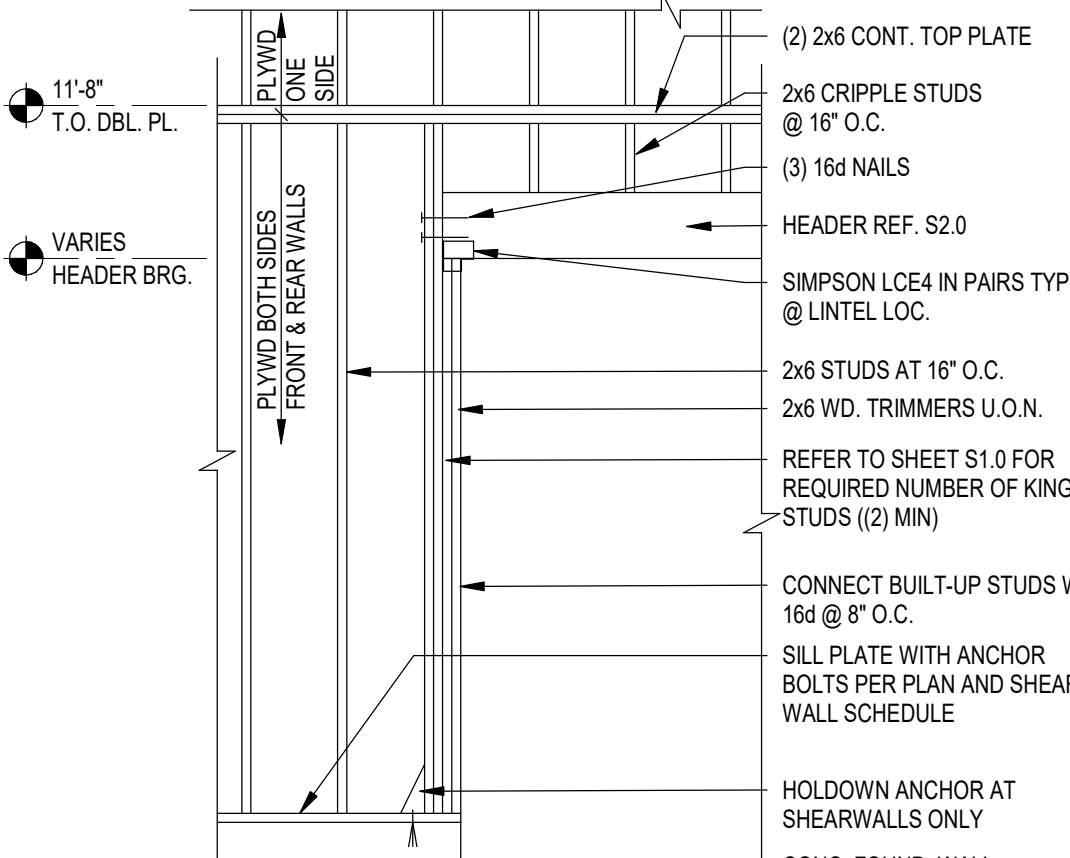
PLATE LAP DETAIL 1" = 1'-0" 12



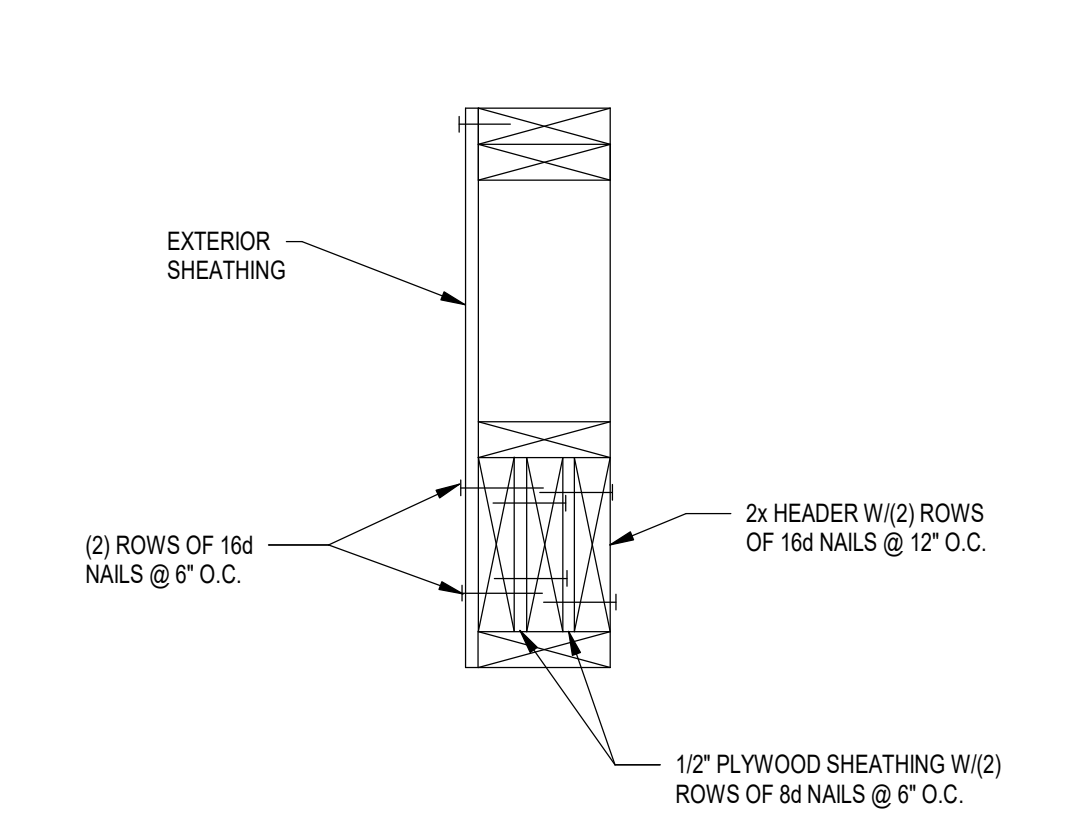
BRIDING LAP DETAIL N.T.S. 13



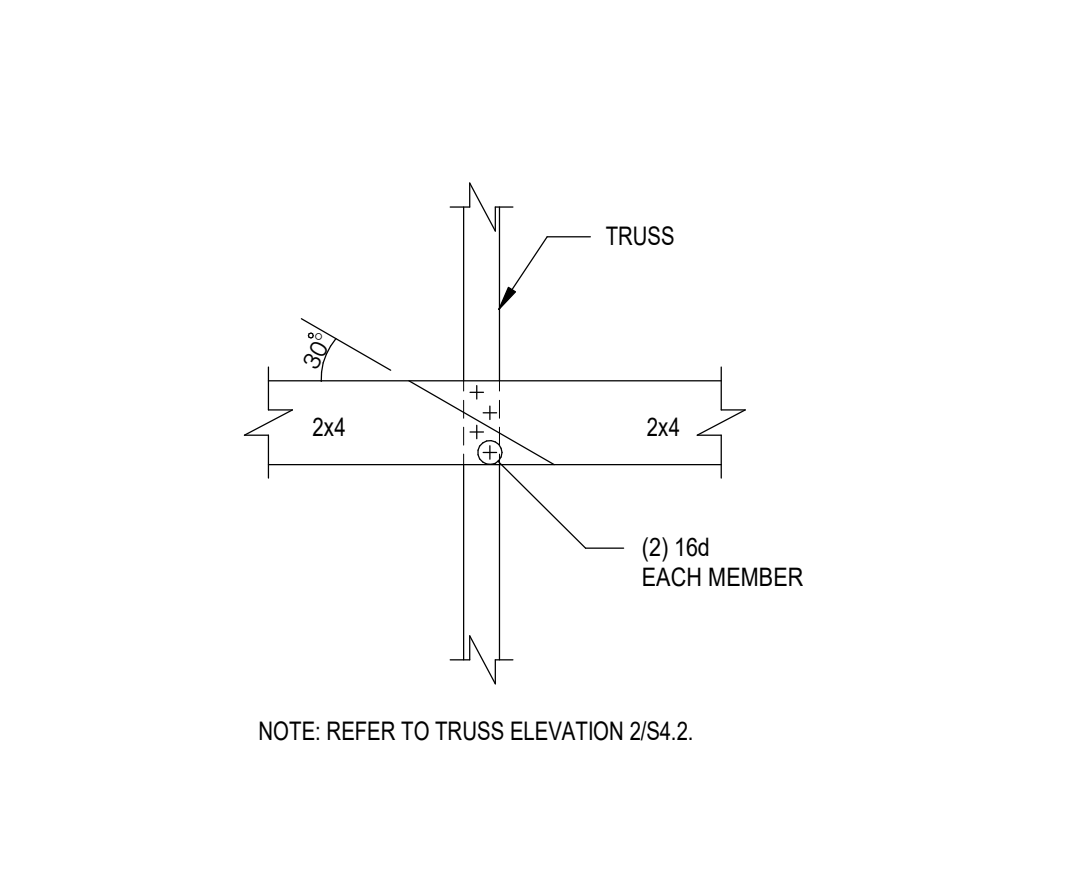
HANGING BULKHD. OR HOOD DETL. N.T.S. 6



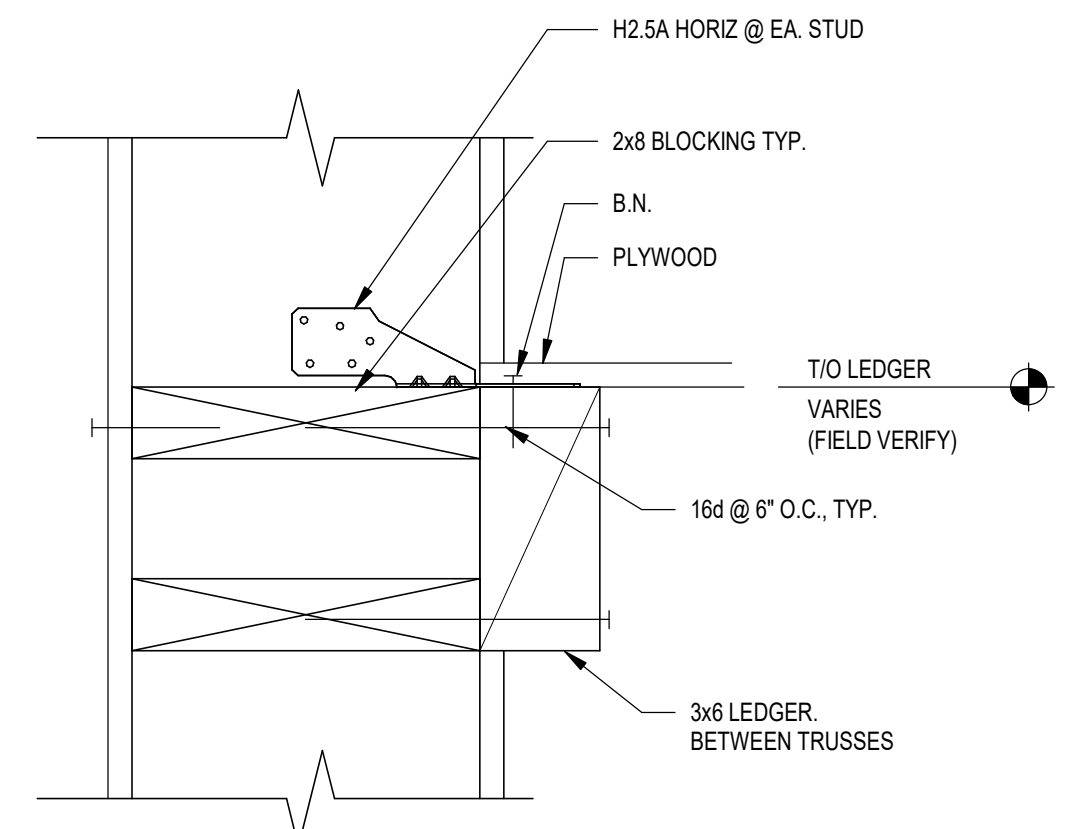
FRAMING ELEVATION @ OPENING 3/8" = 1'-0" 7



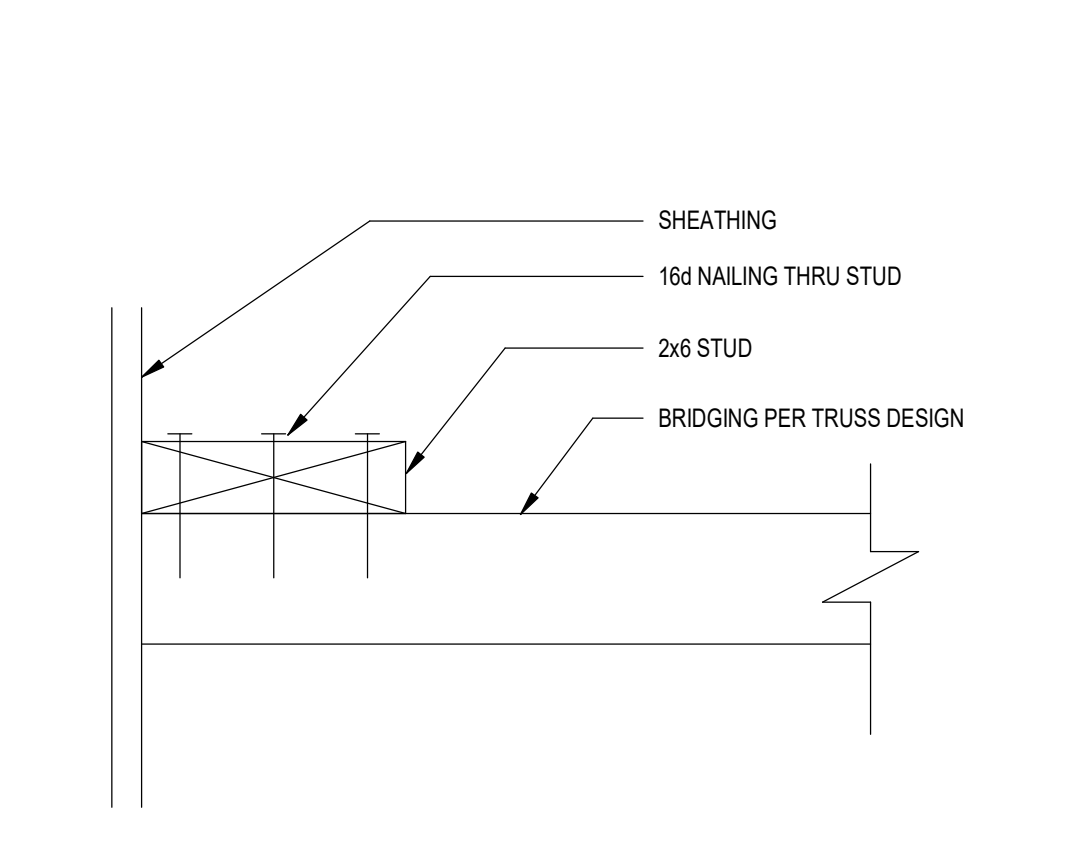
TYP. MULTIPLE HEADER 3/4" = 1'-0" 8



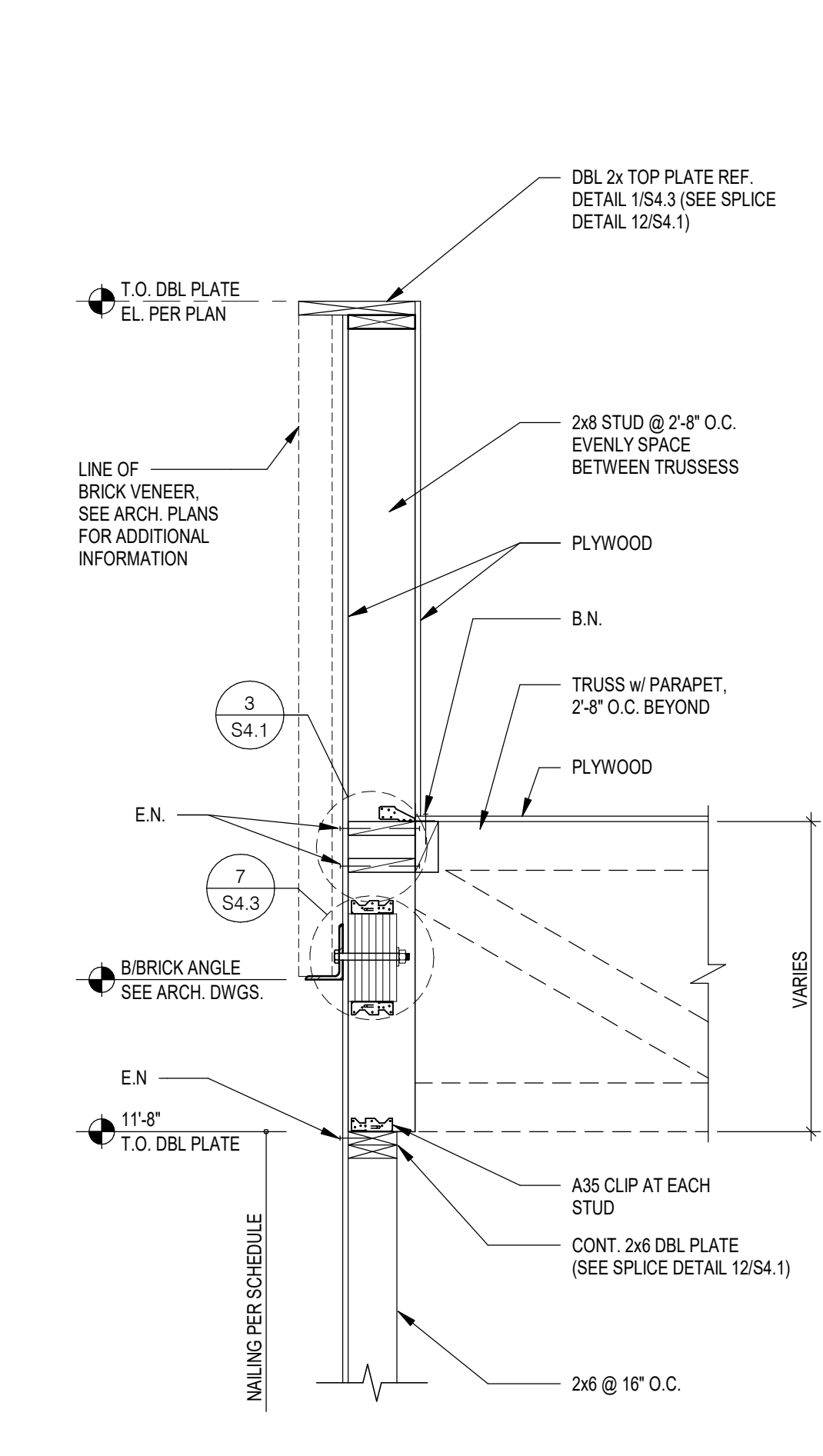
BRIDGING LAP DETAIL @ OPEN CLG. N.T.S. 9



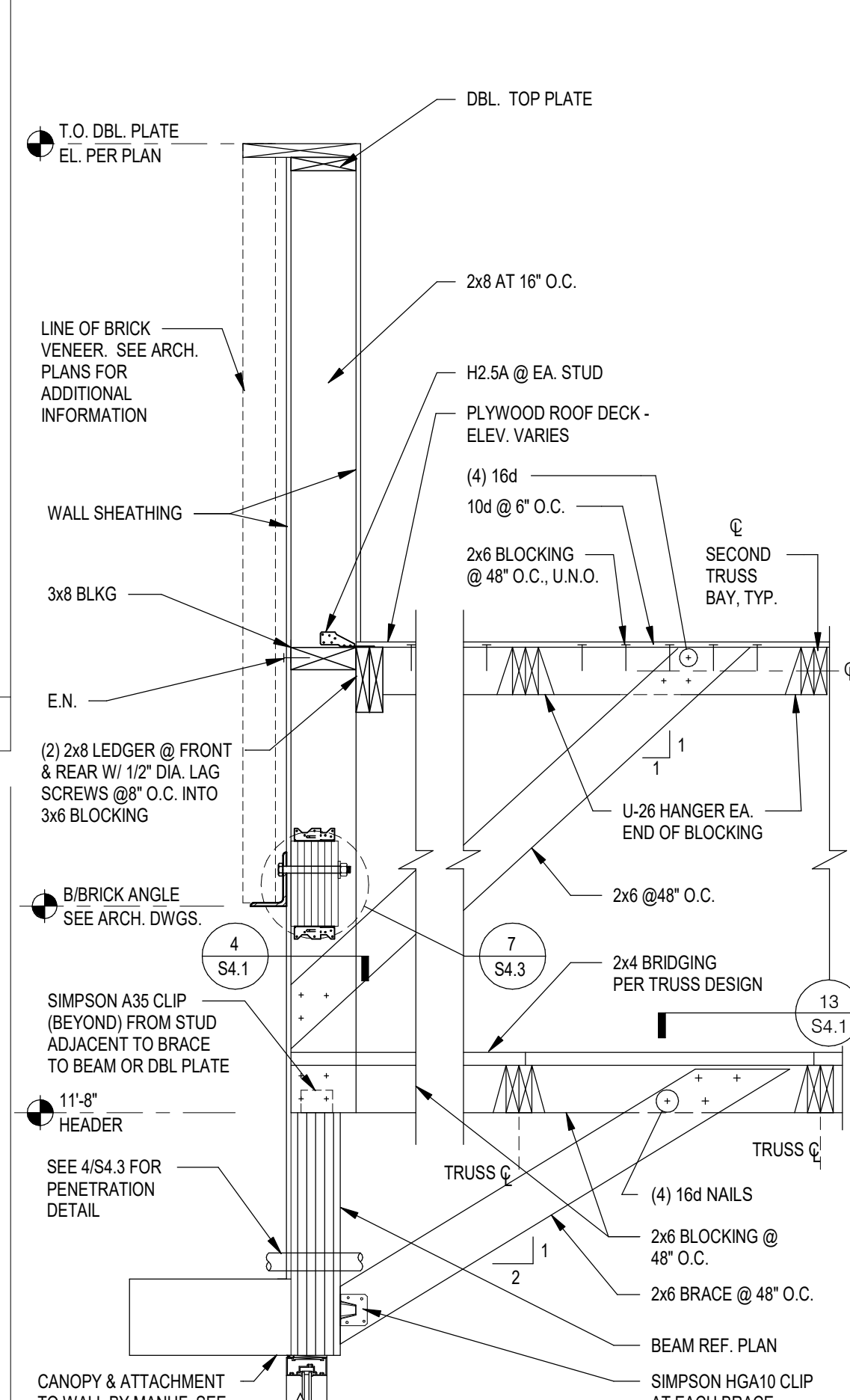
LEDGER DETAIL 3" = 1'-0" 3



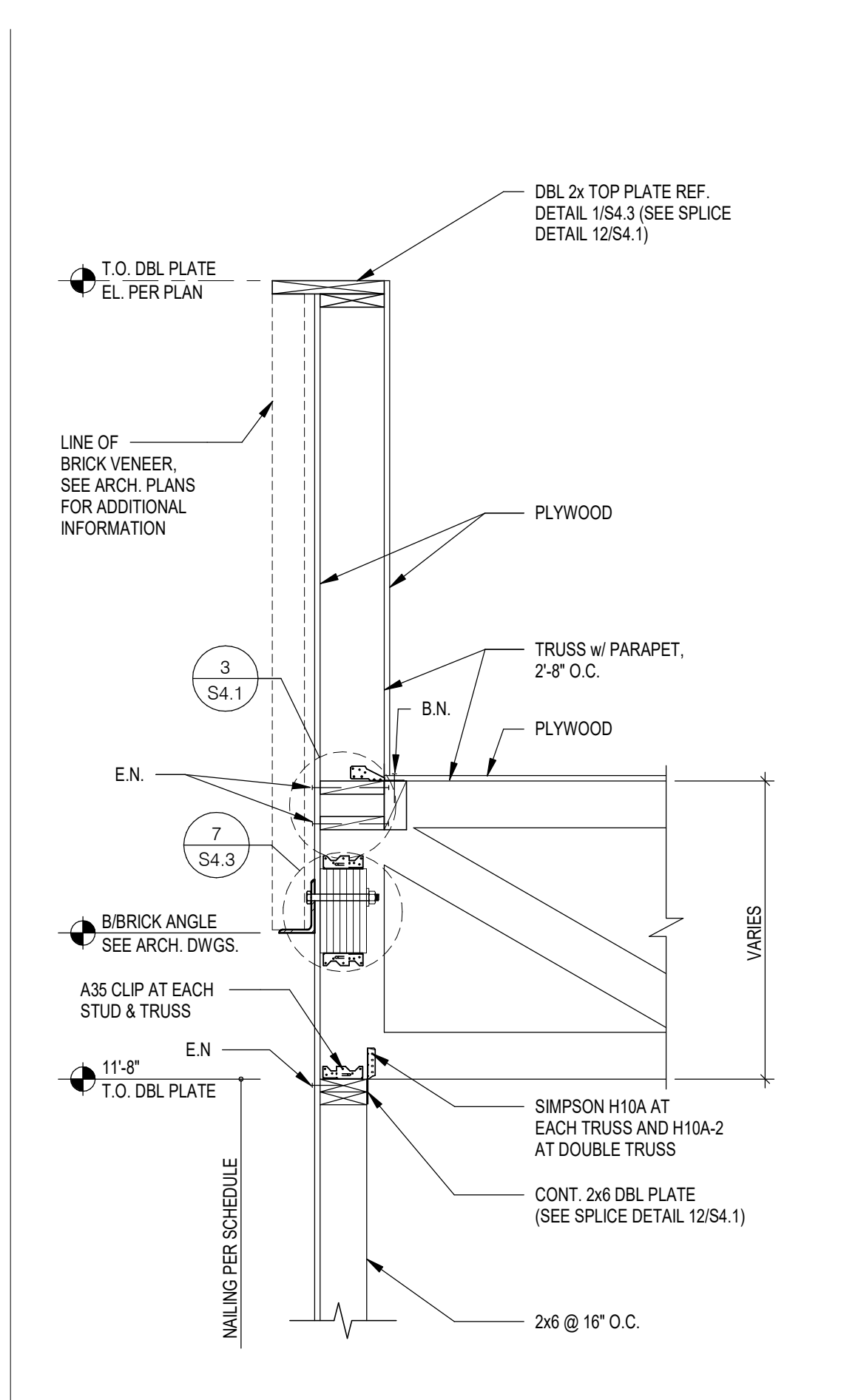
BRIDGING DETAIL 3" = 1'-0" 4



SIDE WALL @ PARAPET STUD N.T.S. 5



FRONT WALL SECTION N.T.S. 1



SIDE WALL @ TRUSS N.T.S. 2

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

TACO BELL  
T52  
OPEN KITCHEN  
MODERN EXPLORER

STRUCTURAL  
DETAILS  
FRAMING

S4.1

PLOT DATE: 9/13/2018 4:42:02 PM



1. JOIST TO SILL OR GIRDER, TOENAIL	(3-8d)
2. BRIDGING TO JOIST, TOENAIL EACH END	(2-8d)
3. 1"x6" (25MMx152MM) SUBFLOOR OR LESS TO JOIST, FACE NAIL	(2-8d)
4. WIDER THAN 1" X 6"(25MMx152MM) SUBFLOOR TO JOIST, FACE NAIL	(3-8d)
5. 2" (52MM) SUBFLOOR TO GIRDER, BLIND AND FACE NAIL	(2-16d)
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	(16d @ 16" O.C.)
7. SOLE PLATE TO JOIST OR BLOCKING, AT BRACED W. PANELS	(3-16d PER 16")
8. TOP PLATE TO STUD, END NAIL	(2-16d)
9. STUD TO SOLE PLATE	(2-16d END NAIL)
10. DOUBLE STUDS, FACE NAIL	(16d @ 24", O.C.)
11. DOUBLE TOP PLATES, TYPICAL FACE NAIL	(16d @ 16" O.C.)
12. DOUBLE TOP PLATES, LAP SPLICE	(8-16d)
13. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	(3-8d)
14. RIM JOIST TO TOP PLATE, TOENAIL	(8d @ 6" O.C.)
15. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	(2-16d)
16. CONTINUOUS HEADER, TWO PIECES	(16d @ 16" O.C. ALONG EDGE)
17. CEILING JOISTS TO PLATE, TOENAIL	(3-8d)
18. CONTINUOUS HEADER TO STUD, TOENAIL	(4-8d)
19. CEILING JOISTS, LAP OVER PARTITIONS, FACE NAIL	(3-16d)
20. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3-16d)
21. RAFTER TO PLATE, TOENAIL	(3-8d)
22. 1" (25MM) BRACE TO EACH STUD AND PLATE, FACE NAIL	(2-8d)
23. 1"x8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	(2-8d)
24. WIDER THAN 1"x8" SHEATHING TO EACH BEARING, FACE NAIL	(3-8d)
25. BUILT-UP CORNER STUDS	(16d @ 24" O.C.)
26. 2" PLANKS	(2-16d AT EACH SPLICE)
27. 2x6 BOX BEAM / HEADER	(12d @ 12" O.C.)
28. BUILT-UP GIRDER AND BEAMS	(20d @ 32" O.C. AT TOP & BOTTOM AND STAGGERED 2-20d AT ENDS AND AT EACH SPLICE)

(3-8d)  
(2-8d)  
(2-8d)  
(3-8d)  
(2-16d)  
(16d @ 16" O.C.)  
(3-16d PER 16")  
(2-16d)  
(2-16d END NAIL)  
(16d @ 24", O.C.)  
(16d @ 16" O.C.)  
(8-16d)  
(3-8d)  
(8d @ 6" O.C.)  
(2-16D)  
\* O.C. ALONG EDGE)  
(3-8d)  
(4-8d)  
(3-16d)  
(3-16d)  
(3-8d)  
(2-8d)  
(2-8d)  
(3-8d)  
(16d @ 24" O.C.)  
16d AT EACH SPLICE)  
(12d @ 12" O.C.)  
TAGGERED 2-20d AT  
END AT EACH SPLICE)



- \* A. ALL DESIGN WEIGHTS INCLUDE CURB.
- B. COORDINATE WEIGHTS WITH HVAC UNIT SCHEDULE 1/M1.0 PRIOR TO ENLISTING TRUSS ENGINEER.

## ROOF TOP EQUIPMENT WEIGHTS N.T.S. 5



1. **HOLDOWN CONNECTORS SHALL BE SPECIFIED BY SITE SPECIFIC ARCHITECT/ENGINEER BASED UPON LOADING DATA PROVIDED BY TRUSS DESIGNER.**
2. **PROVIDE SHOP DRAWINGS PRIOR TO FABRICATION.**
3. **TRUSS MEMBER SIZES ARE FOR REFERENCE ONLY. ACTUAL SIZE SHALL BE DETERMINED BY TRUSS MANUFACTURER BASED ON ACTUAL LOAD CONDITIONS AND CODES.**

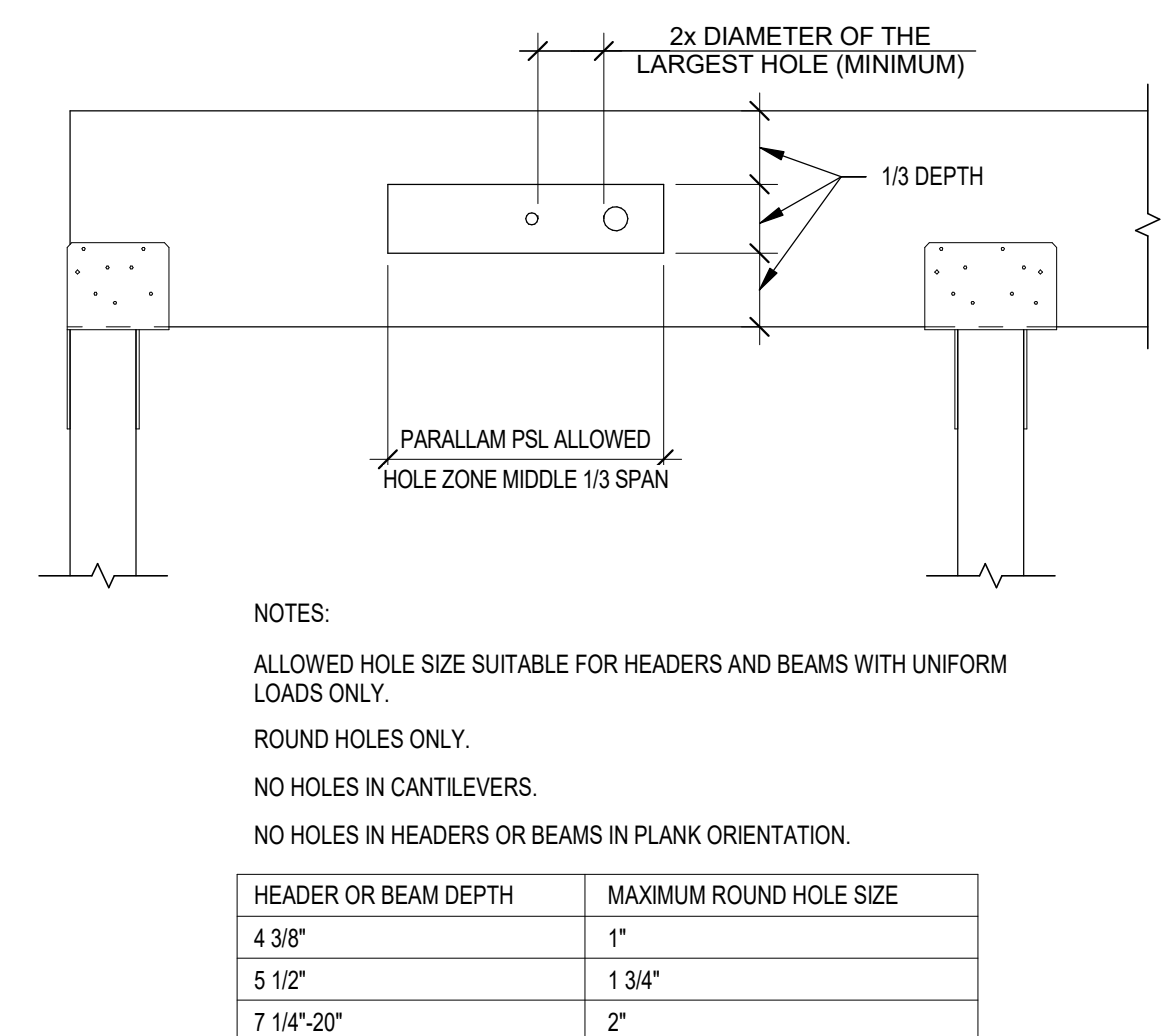
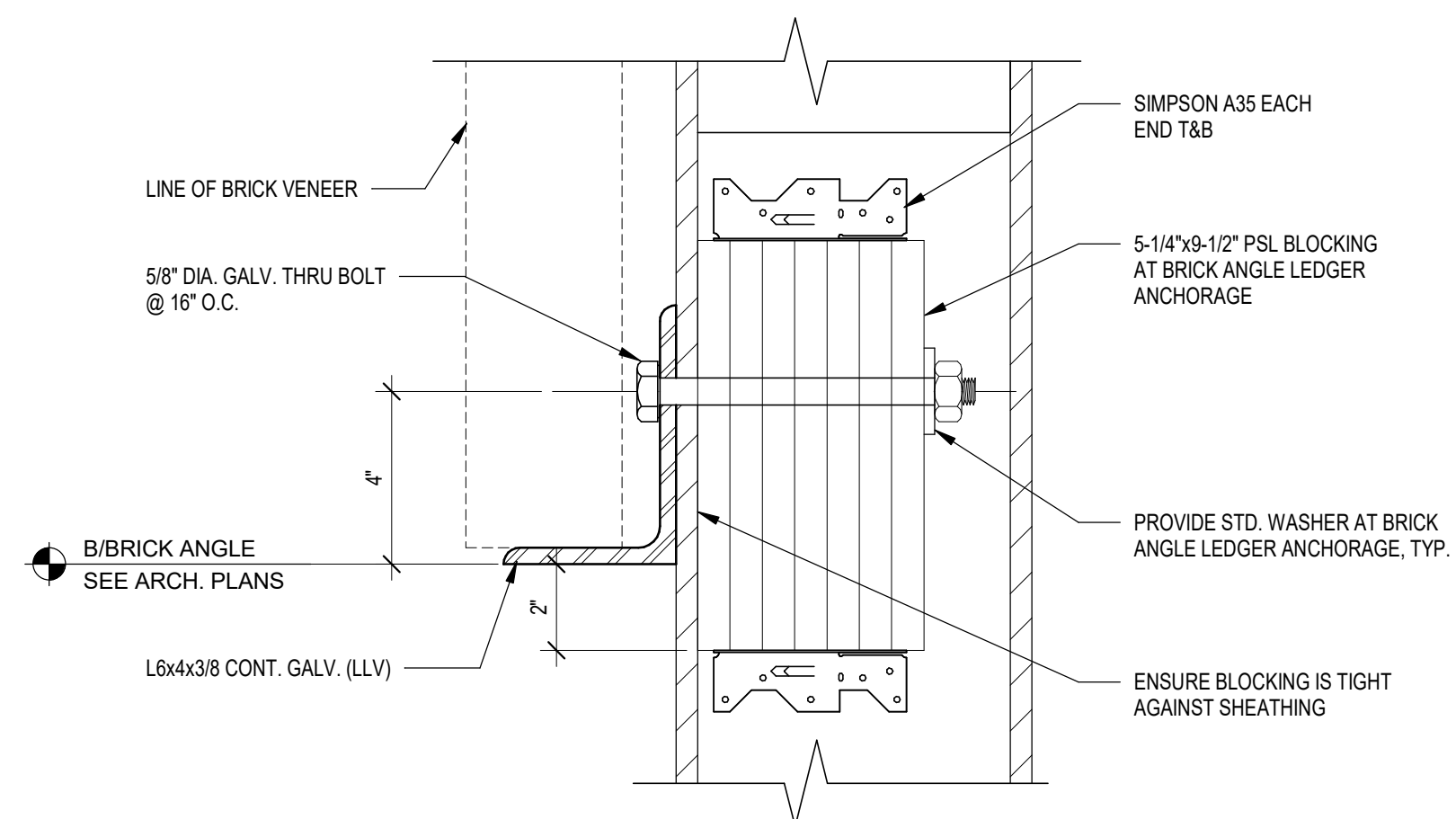
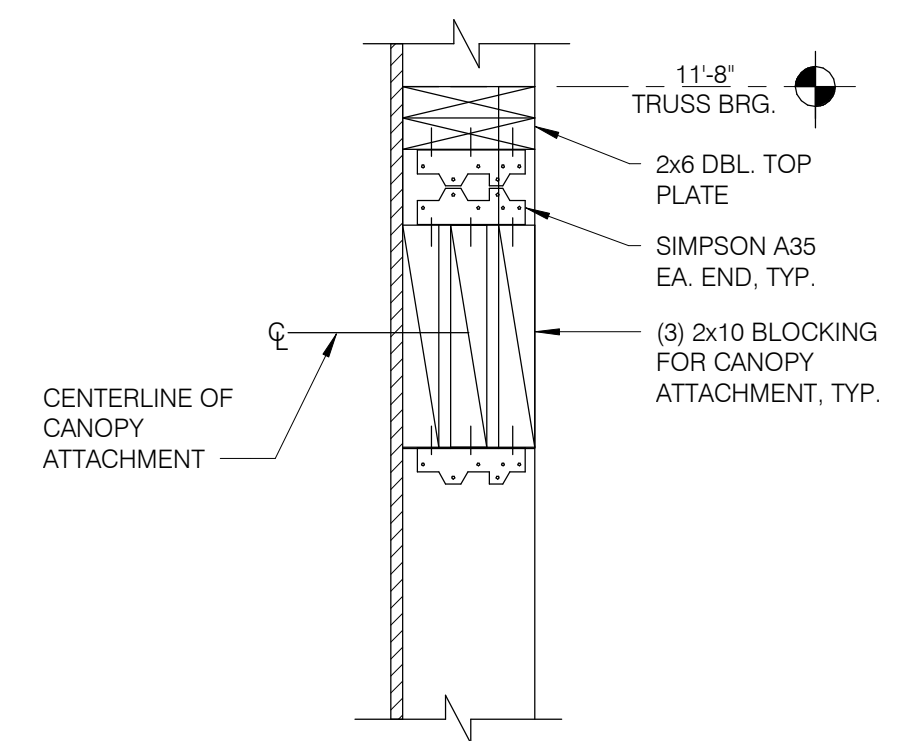
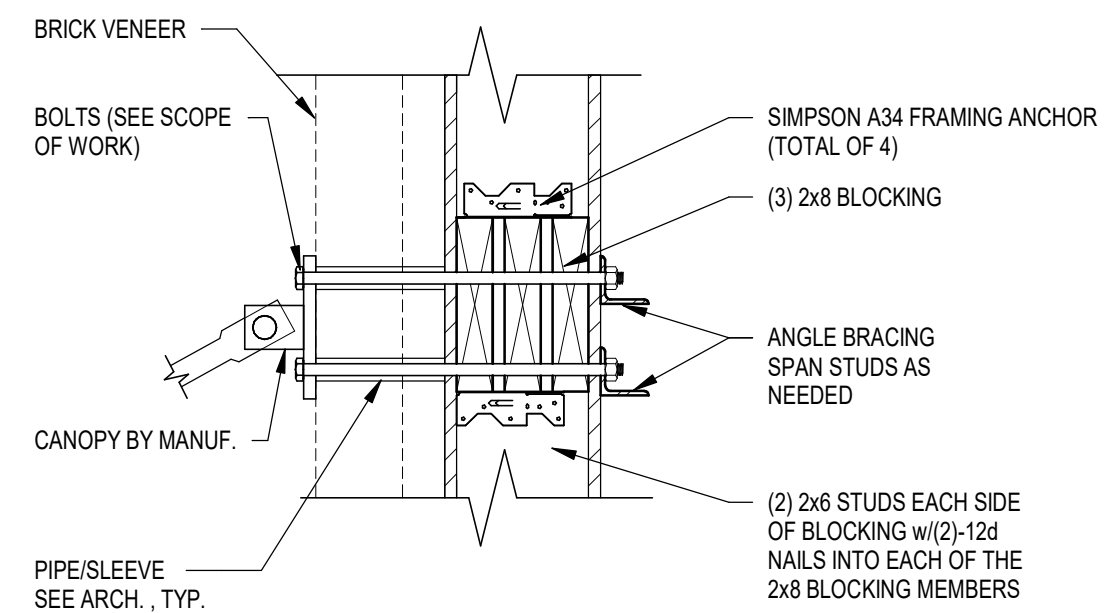
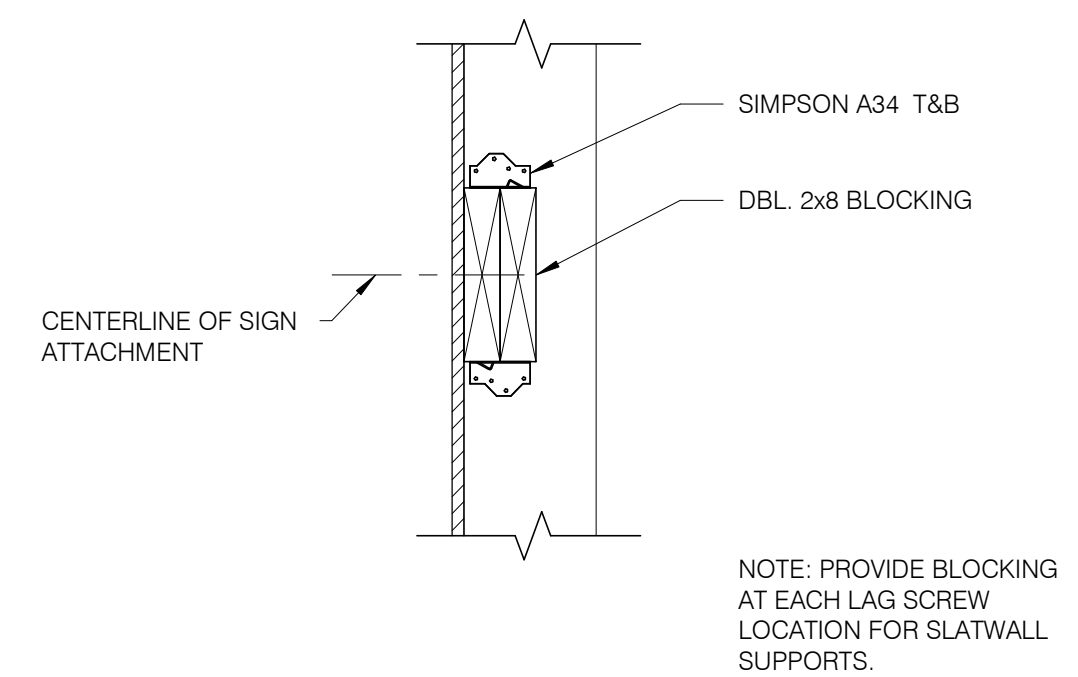
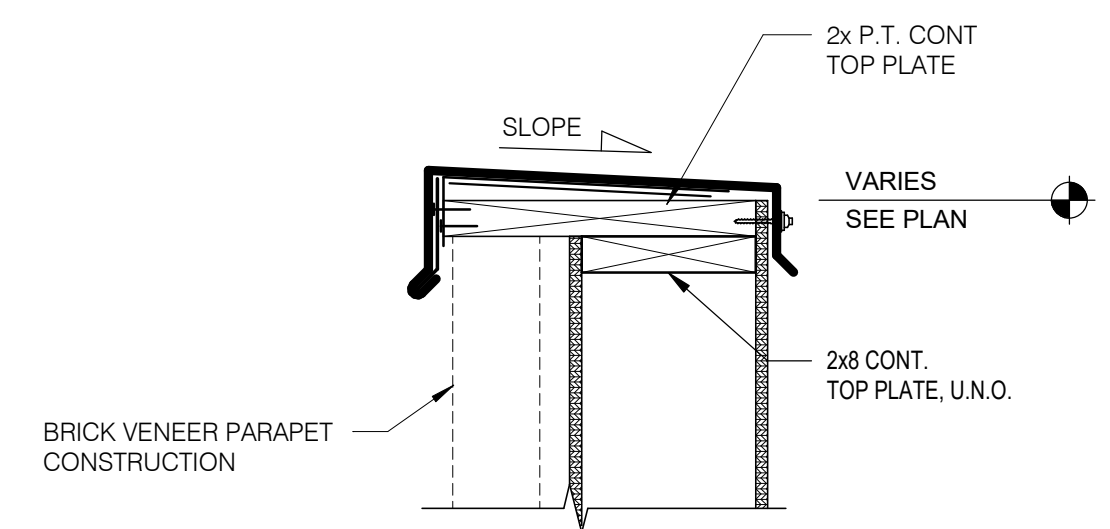
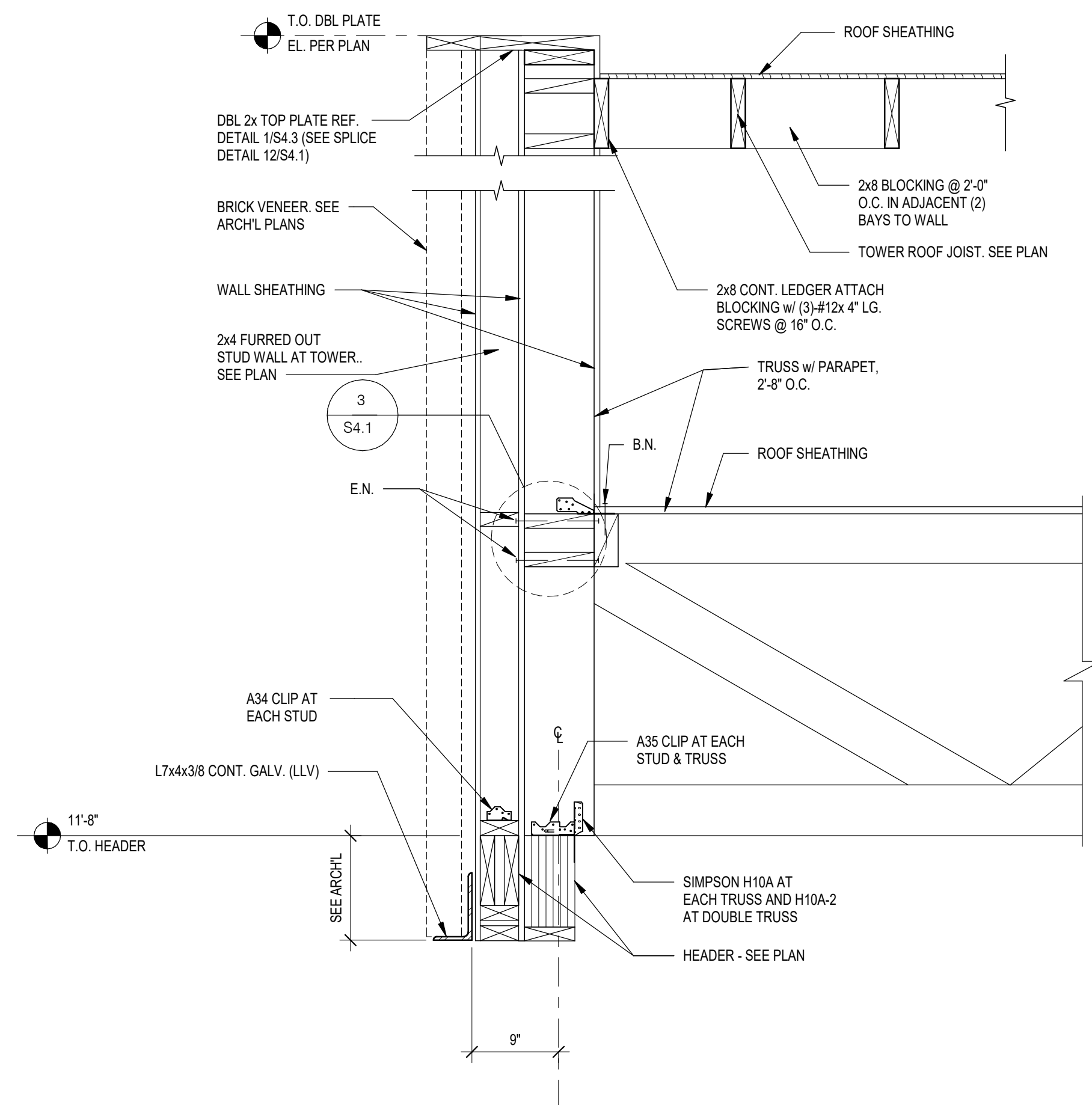
## TRUSS SCHEDULE



## HOLDOWN DETAILS $1\frac{1}{2}" = 1'-0"$ **4**

**TRUSS LOAD DIAGRAMS** N.T.S. **3**



[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



**TACO  
BELL.**

T52

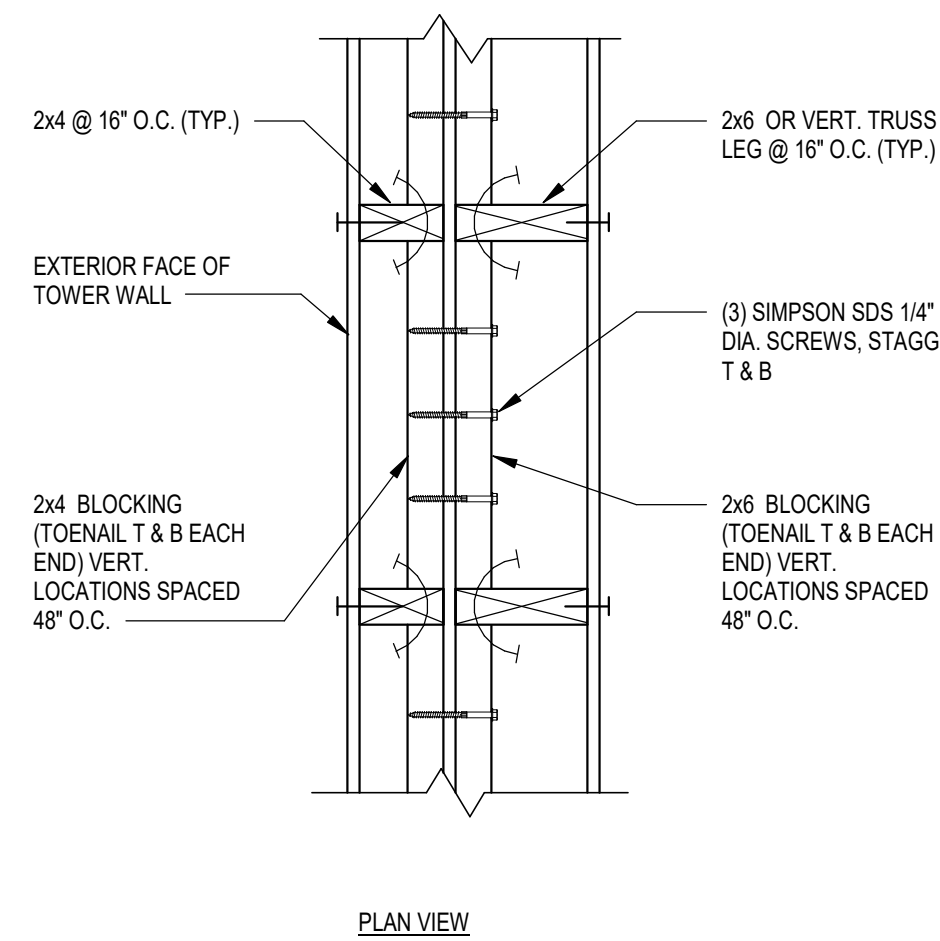
OPEN KITCHEN  
MODERN EXPLORE

## STRUCTURAL DETAILS TACO BELL TOWER

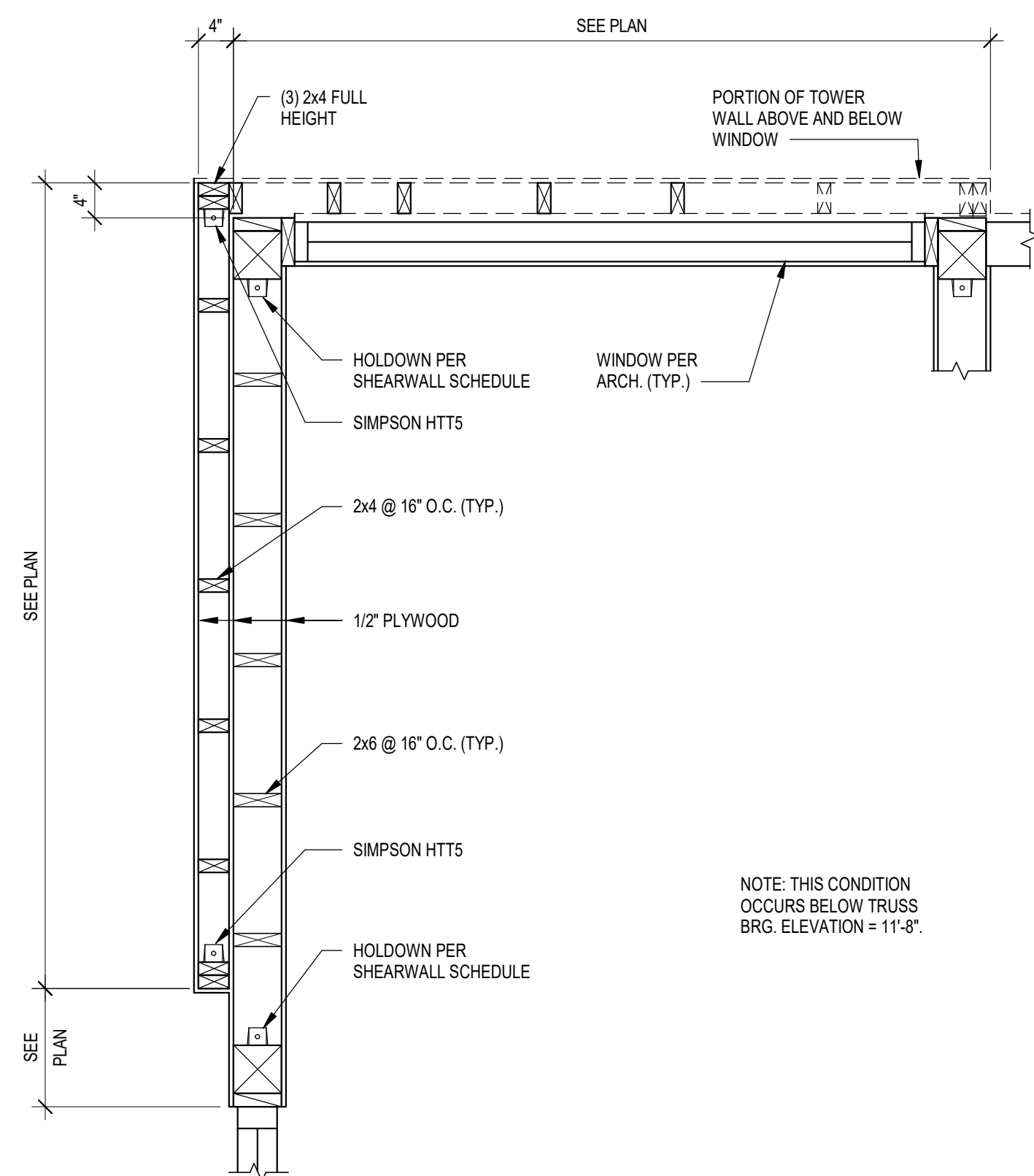
## S4.3

PLOT DATE: 9/13/2018 4:42:03 PM

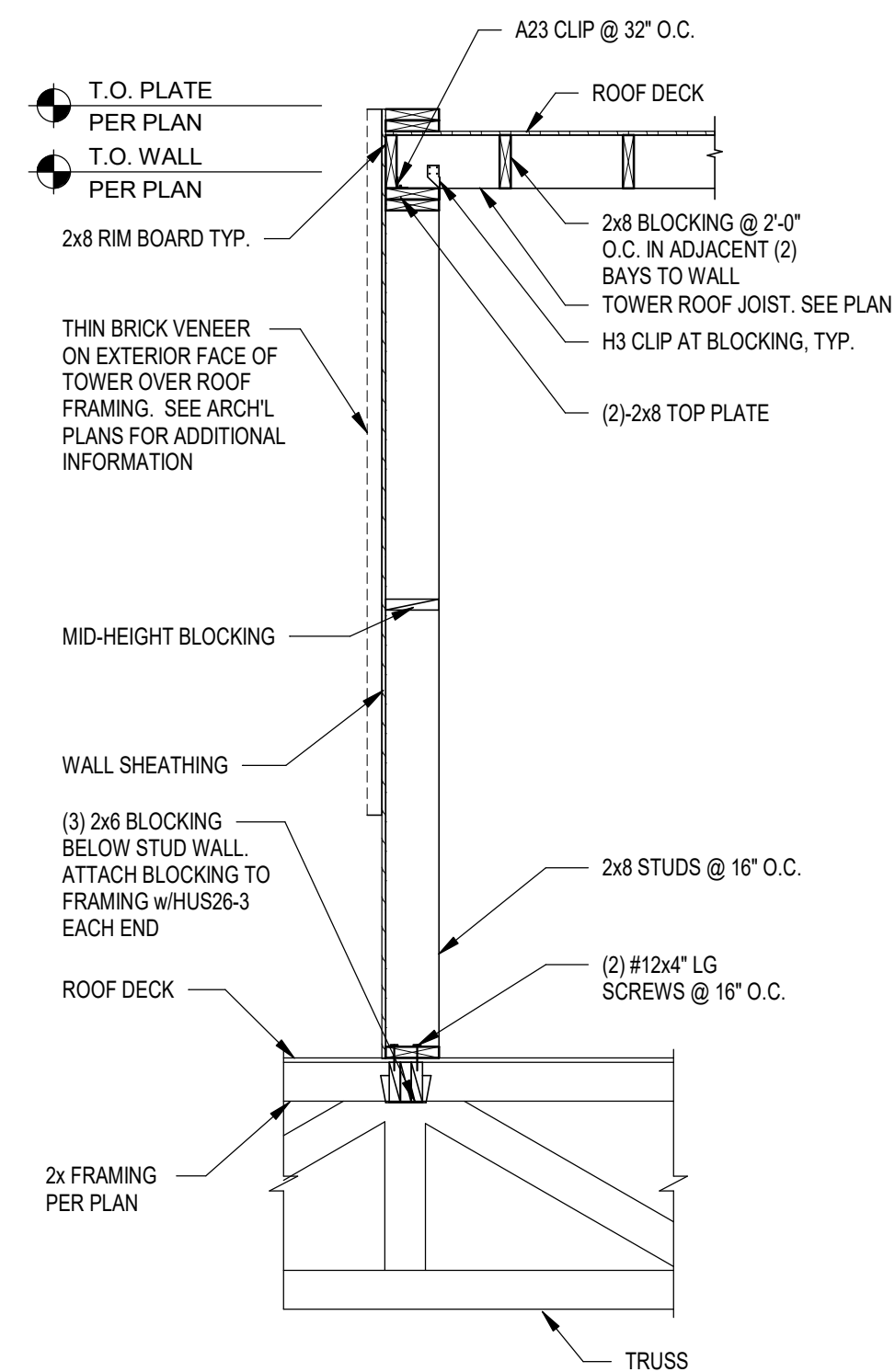




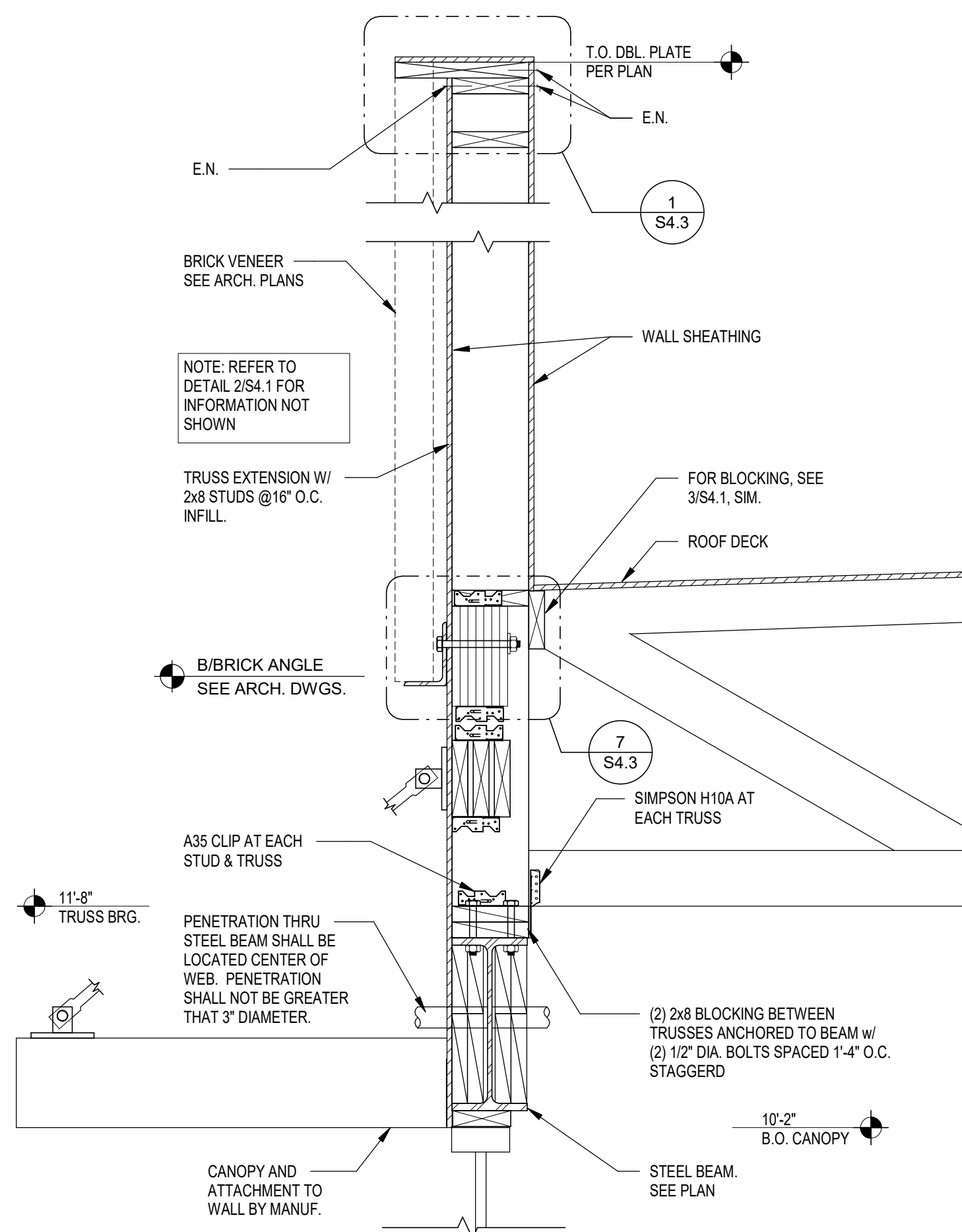
<b>NOT USED</b>	N.T.S.	<b>7</b>	<b>EXTERIOR WALL DETAIL AT TOWER</b> 1 1/2" = 1'-0"	<b>5</b>
-----------------	--------	----------	---	----------



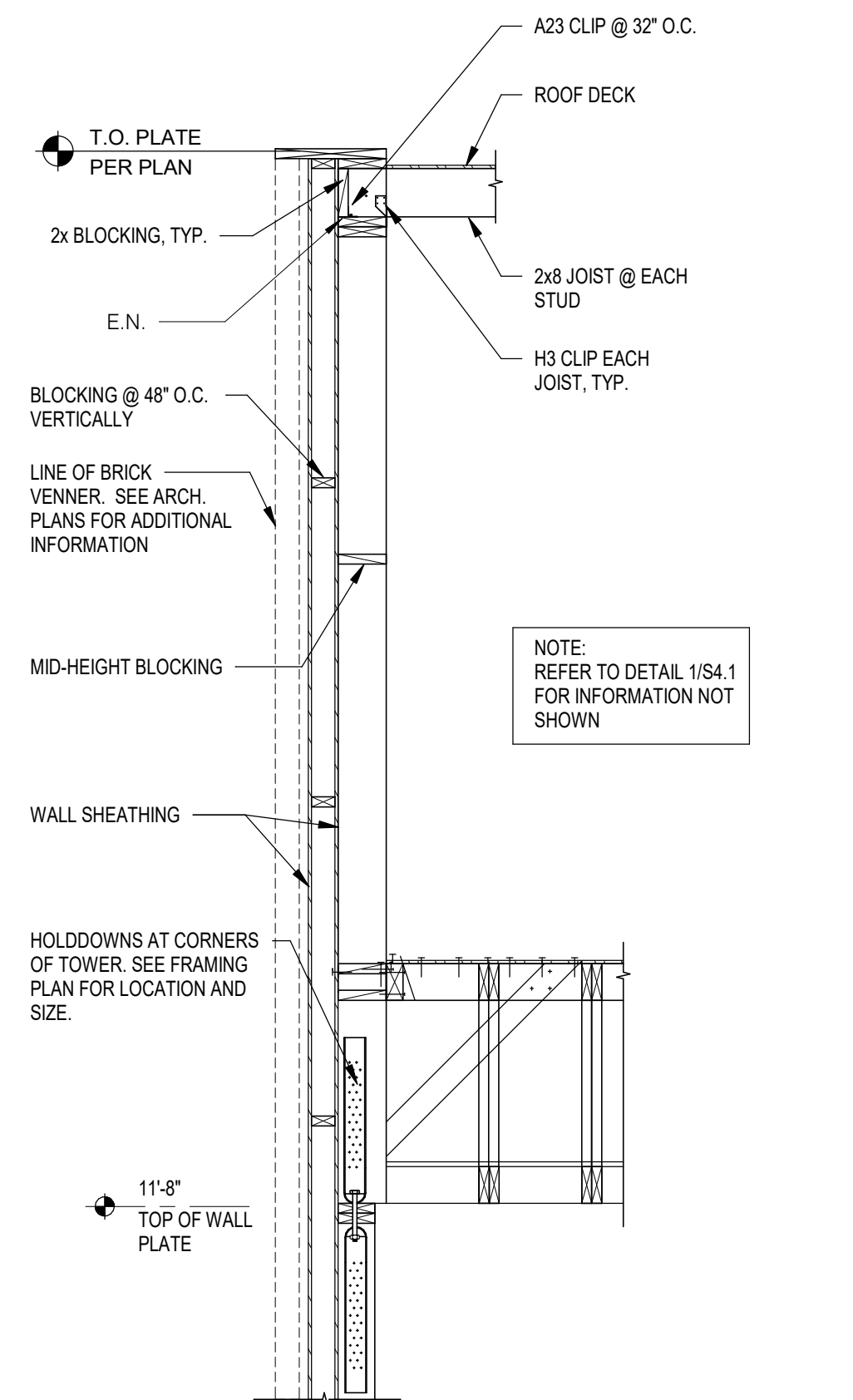
<b>NOT USED</b>	N.T.S.	<b>8</b>	<b>FRONT TOWER FRAMING</b> 3/4" = 1'-0"	<b>6</b>
-----------------	--------	----------	---	----------



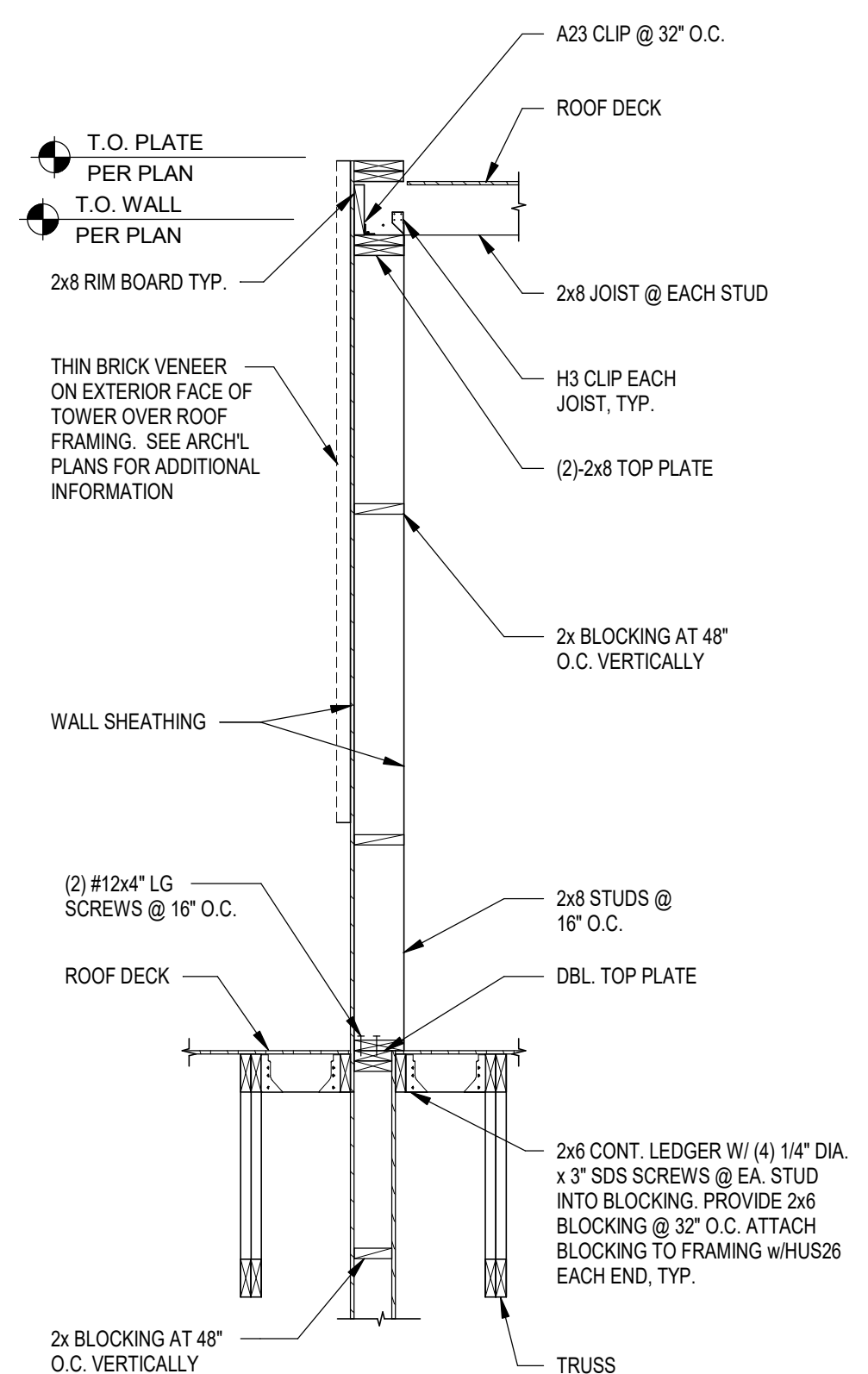
<b>TOWER WALL SECTION</b>	1/2"=1'-0"	<b>3</b>
---------------------------	------------	----------



**SECTION @ DRIVE-THRU WINDOW CANOPY** 1" = 1'-0" **4**



<b>SECTION @ TOWER FRONT</b>	$1/2" = 1'-0"$	<b>1</b>
------------------------------	----------------	----------



<b>TOWER WALL SECTION</b>	$1/2" = 1'-0"$	<b>2</b>
---------------------------	----------------	----------

[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



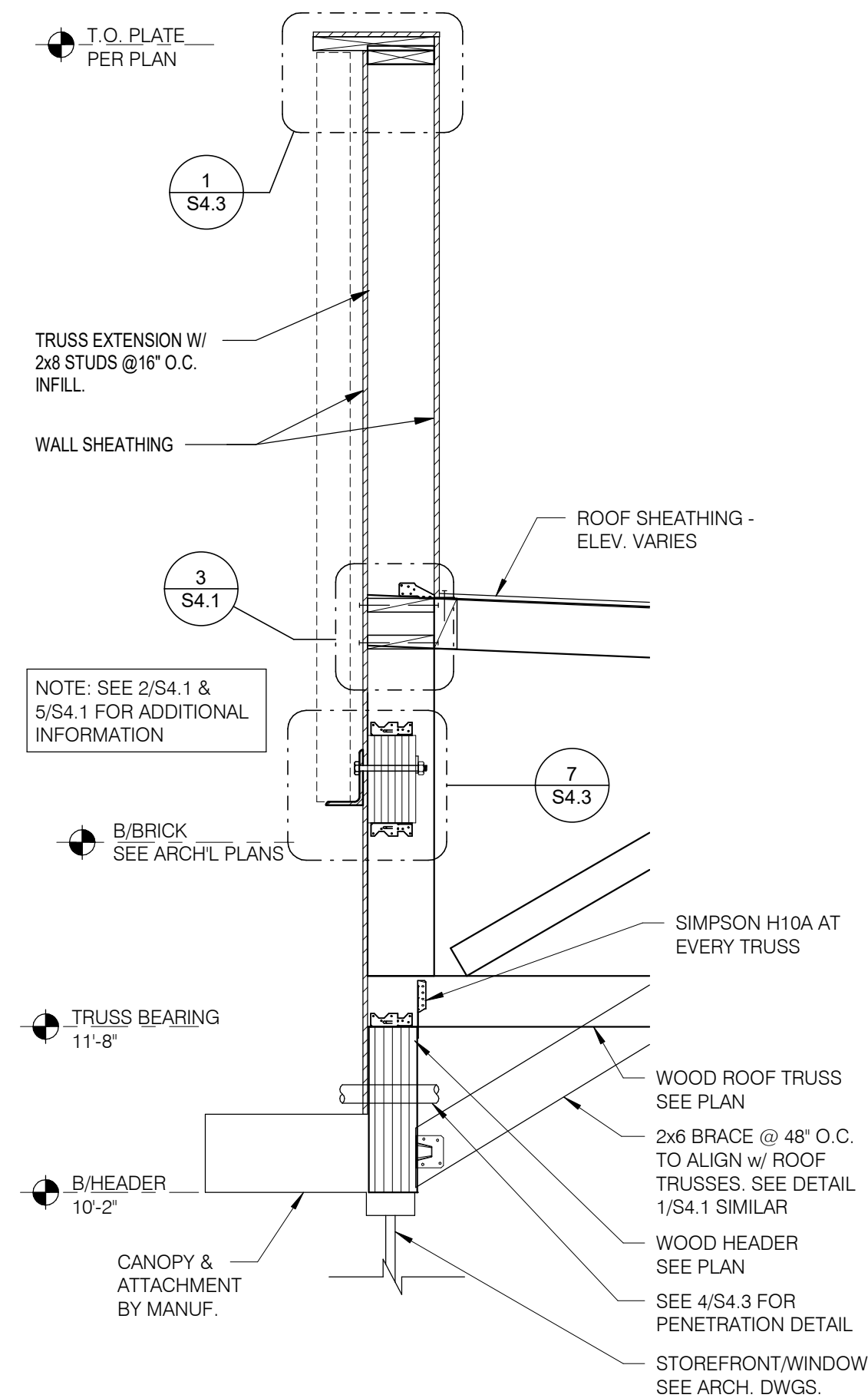
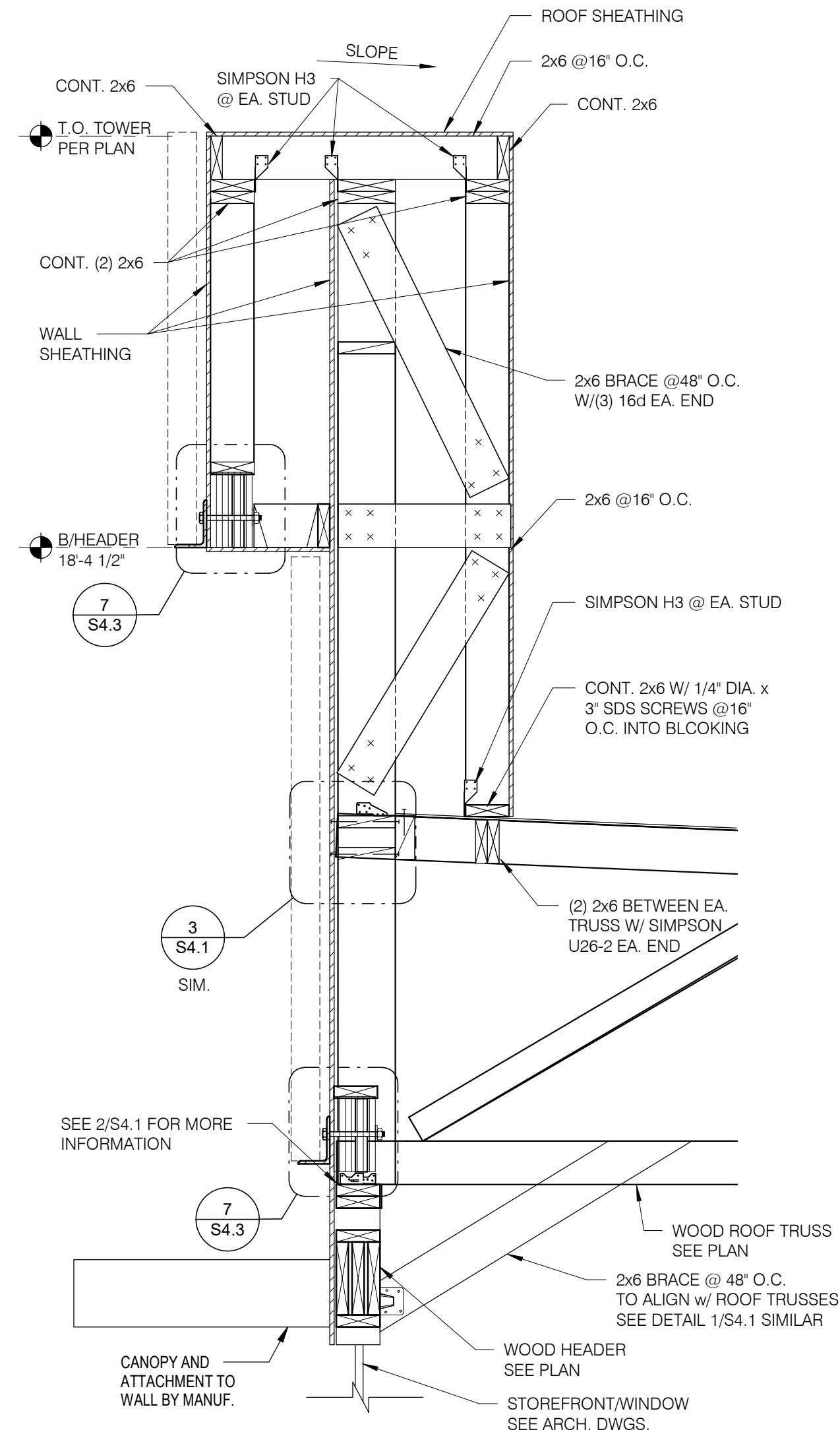
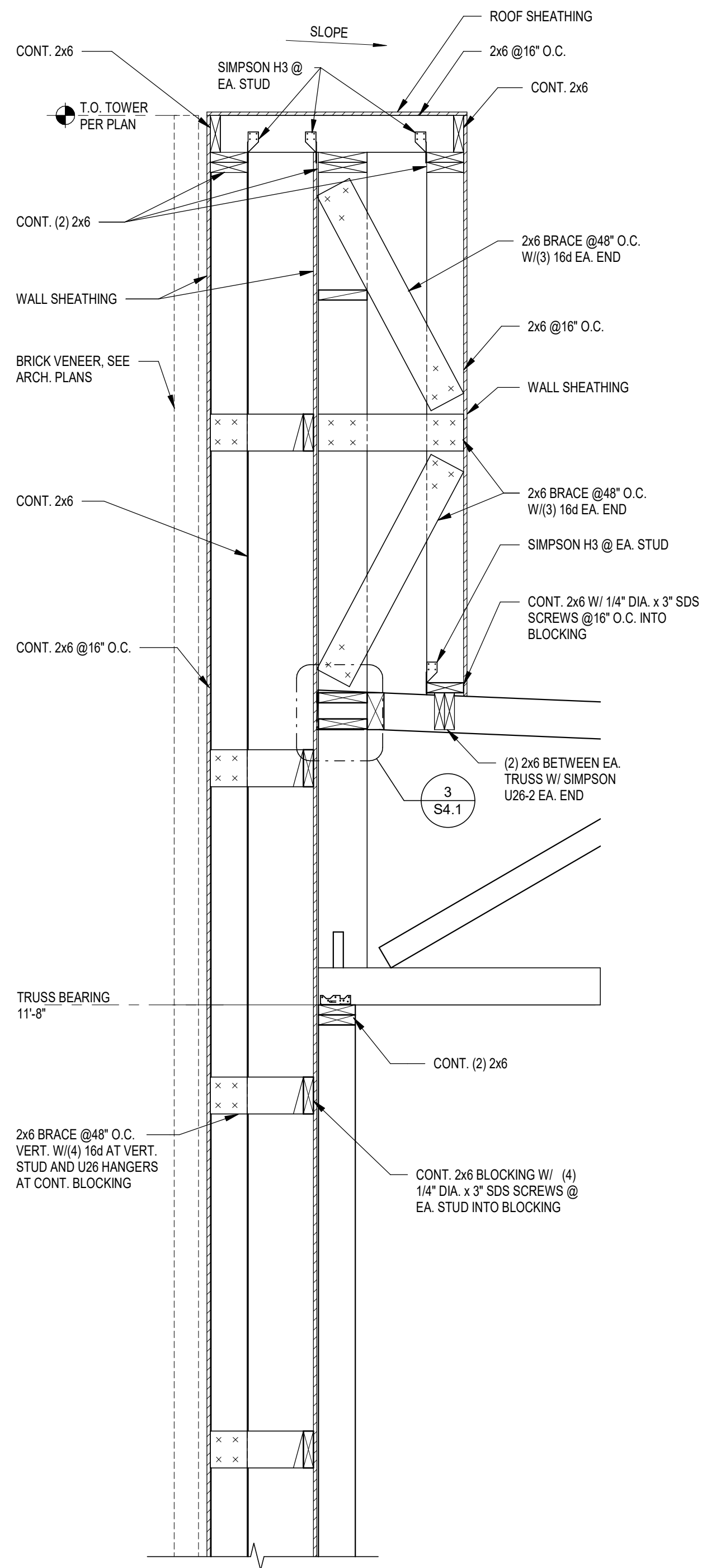
T52  
OPEN KITCHEN  
MODERN EXPLORER

## STRUCTURAL SECTIONS

## S4.4

PLOT DATE: 9/13/2018 4:42:03 PM





NOT USED

N.T.S.

4

SECTION @ ENTRY PIER 3/4" = 1'-0"

3

SECTION @ ENTRY DOOR 3/4" = 1'-0"

2

SECTION @ DINING WINDOW 3/4" = 1'-0"

1

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



**T52**  
OPEN KITCHEN  
MODERN EXPLORER

**STRUCTURAL  
SECTIONS**

**S4.5**

PLOT DATE: 9/13/2018 4:42:04 PM



GENERAL NOTES:

BRICK VENEER:

- ALL BRICK MASONRY SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA AND LOCAL BUILDING CODE REQUIREMENTS).
- VENEER: COMPLY WITH ARCHITECTURAL DRAWINGS.

MASONRY:

ALL CONCRETE MASONRY SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-13/ASCE 5/TMS 402) AND "SPECIFICATION FOR MASONRY STRUCTURES" (ACI 530.1-13/ASCE 6/TMS 602) AND LOCAL BUILDING CODE REQUIREMENTS.

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE I OR II.

ASTM C270, TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI SHALL BE USED FOR ALL MASONRY WALLS.

GROUT TO FILL CORES SHALL BE ASTM C476, COARSE GROUT (3/8" MAXIMUM AGGREGATE) WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

LAY MASONRY UNITS WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. BED WEBS IN MORTAR IN STARTING COURSE OF FOOTINGS AND WHERE ADJACENT TO CELLS OR CAVITIES TO BE REINFORCED OR FILLED WITH CONCRETE OR GROUT.

MASONRY SHALL BE LAID IN RUNNING BOND, UNLESS NOTED OTHERWISE.

VERTICAL REINFORCING LAP SPLICES SHALL BE 48 BAR DIAMETERS.

GROUT SOLID ALL CORES THAT CONTAIN REBAR.

PROVIDE HORIZONTAL LADDER TYPE JOINT REINFORCING WITH 9 GAGE SIDE AND CROSS RODS (GALVANIZED) SPACED AT 16" ON CENTER VERTICALLY. HORIZONTAL JOINT REINFORCING SHALL BE LAPPED A MINIMUM OF (2) CROSS BARS OR 6", WHICHEVER IS GREATER.

MAXIMUM GROUT POUR SHALL BE 5 FEET. CONSOLIDATE BY MECHANICAL VIBRATION.

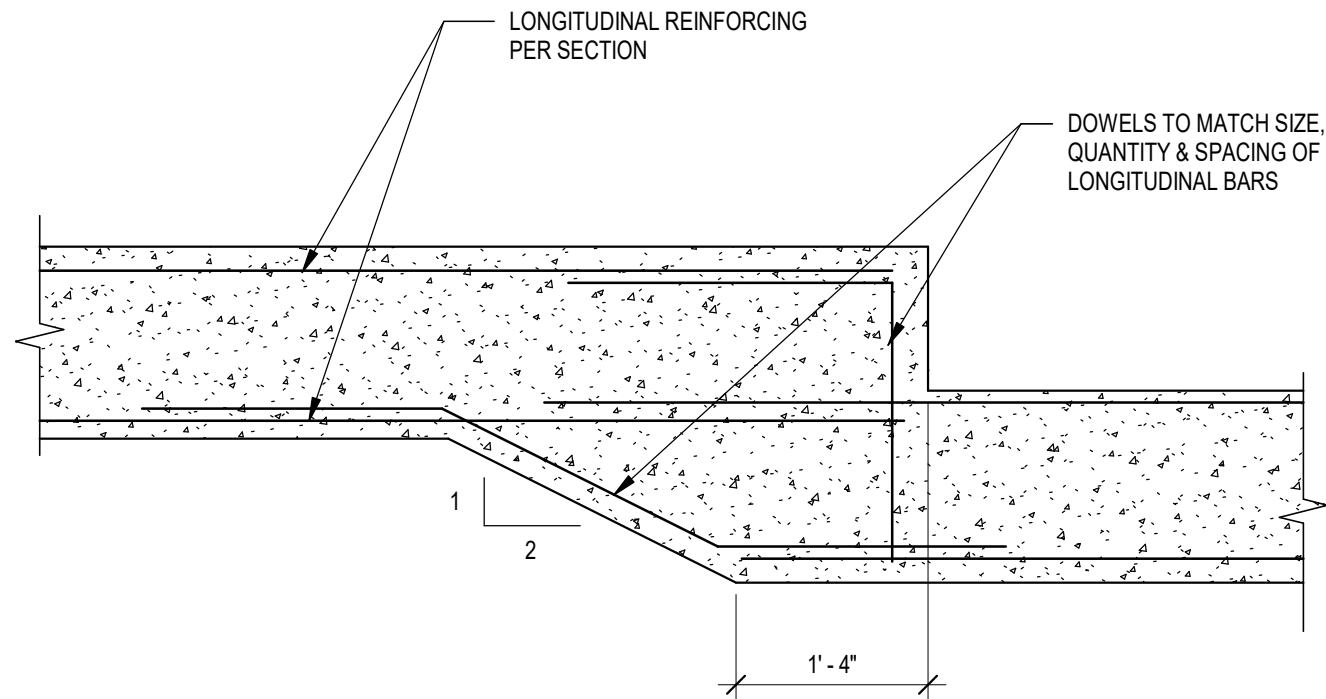
MORTAR PROTRUSIONS, EXTENDING INTO CELLS OR CAVITIES TO BE REINFORCED AND FILLED, SHALL BE REMOVED.

GROUT CORES SOLID A MINIMUM OF ONE COURSE BELOW ANY CHANGE IN WALL THICKNESS.

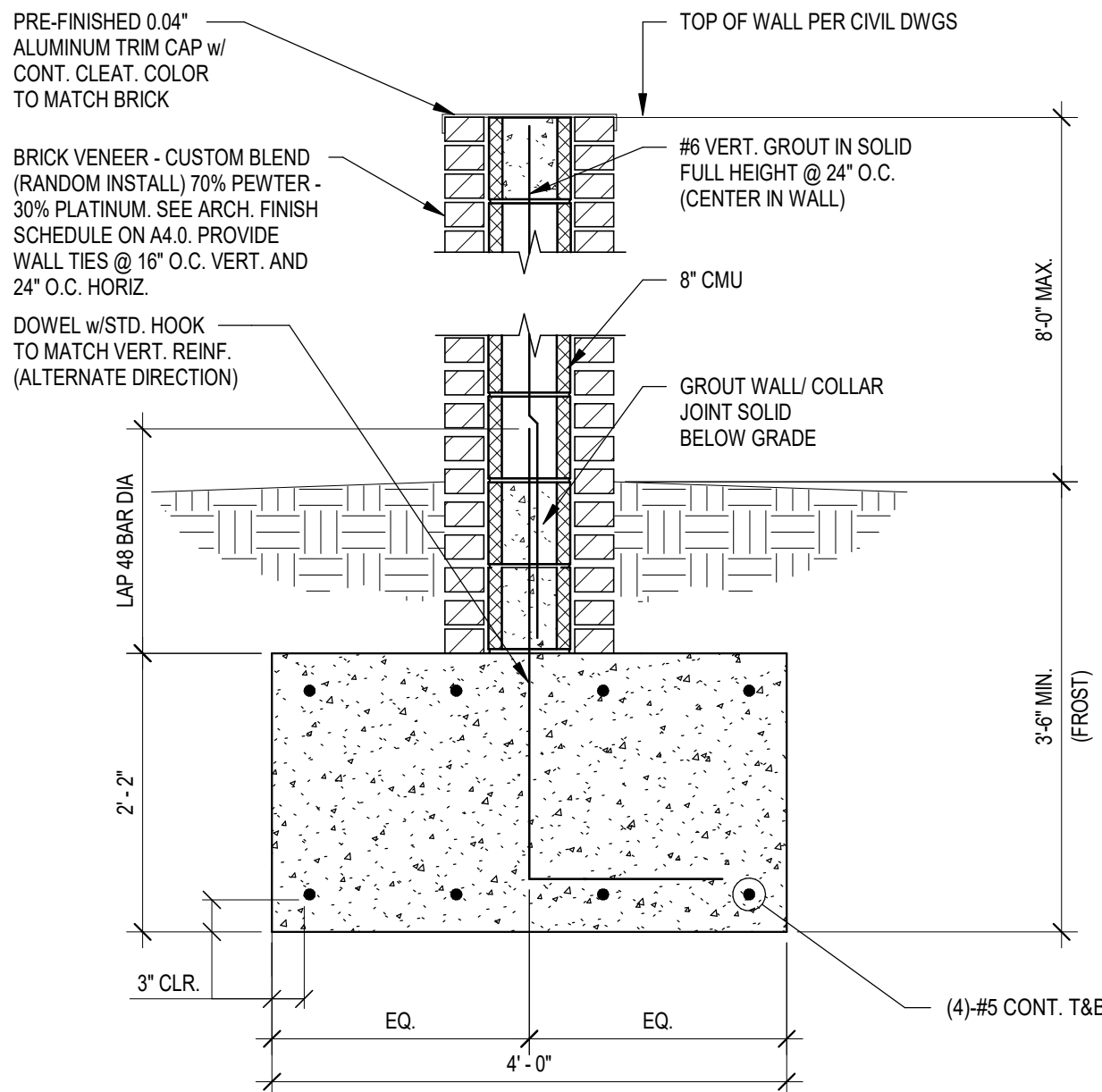
WHERE THERE IS A CHANGE IN BOND BEAM ELEVATION, PROVIDE LAP BETWEEN BONDS BEAMS THROUGH 2 BARS OF VERTICAL REINFORCING OR 4 FEET, WHICHEVER IS GREATER.

ALL CORNERS ARE TO BE TIED BY MASONRY BOND.

MASONRY WALLS MAY HAVE VERTICAL CONTROL JOINTS PER DETAILS THIS SHEET.



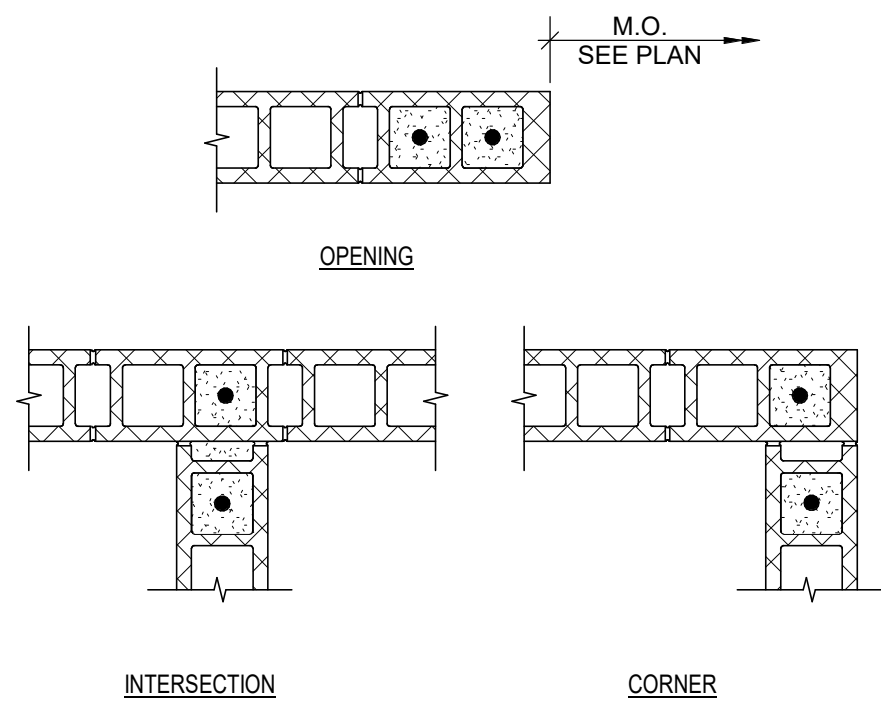
TYPICAL FOOTING STEP DETAIL 3/4"=1'-0" 4



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

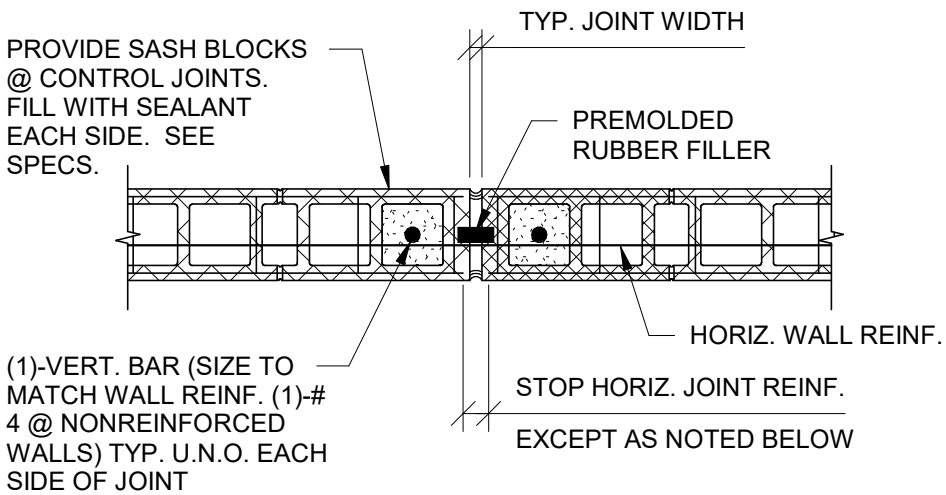
THESE SECTIONS AND DETAILS SHALL BE USED IN CONJUNCTION WITH THE CIVIL DRAWINGS FOR THE PRIVACY WALL. COORDINATE ALL DIMENSIONS AND THE LOCATIONS WITH THESE DRAWINGS.

FOR OTHER INFORMATION NOT SHOWN, SEE THE ARCH'L DWGS.



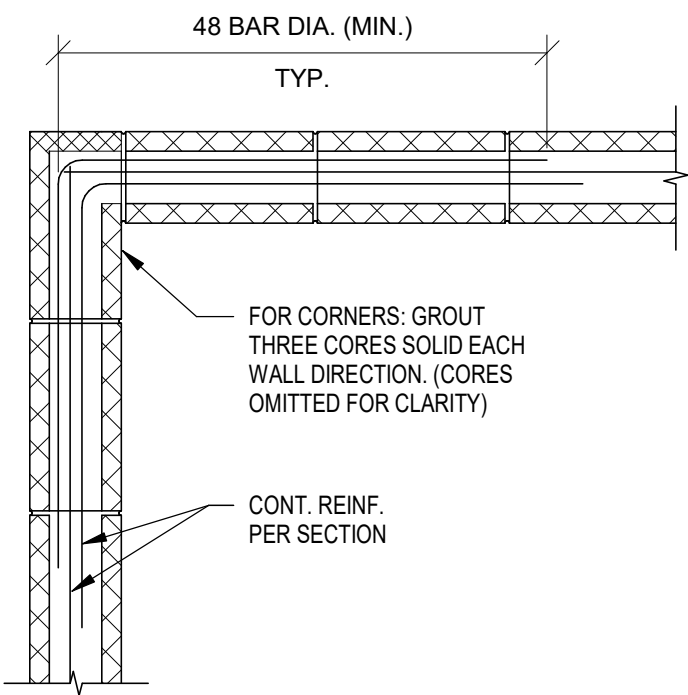
- NOTES:
- PROVIDE (2)- VERTICAL BARS AT ALL CORNERS.
  - ALL INTERSECTING MASONRY CORNERS SHALL BE TIED BY MASONRY BOND BEAM.

TYP. MASONRY REINFORCING DETAIL 3/4"=1'-0" 1



- NOTES:
- OBTAIN ARCHITECT'S APPROVAL OF JOINT LOCATIONS.
  - DO NOT LOCATE JOINT WITHIN REINFORCED ELEMENTS SUCH AS COLUMNS, LINTELS, PIERS, PILASTERS OR OPENING JAMBS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
  - MAX. SPACING OF JOINTS: PANEL LENGTH/HEIGHT = 1.5 MAX., 20'-0" MAX.
  - HORIZONTAL BOND BEAM WALL REINFORCING CONTINUES THROUGH JOINT.

TYP. MASONRY CONTROL JOINT DETAIL 3/4"=1'-0" 2



TYP. MASONRY BOND BEAM AT CORNER DETAIL 3/4"=1'-0" 3

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



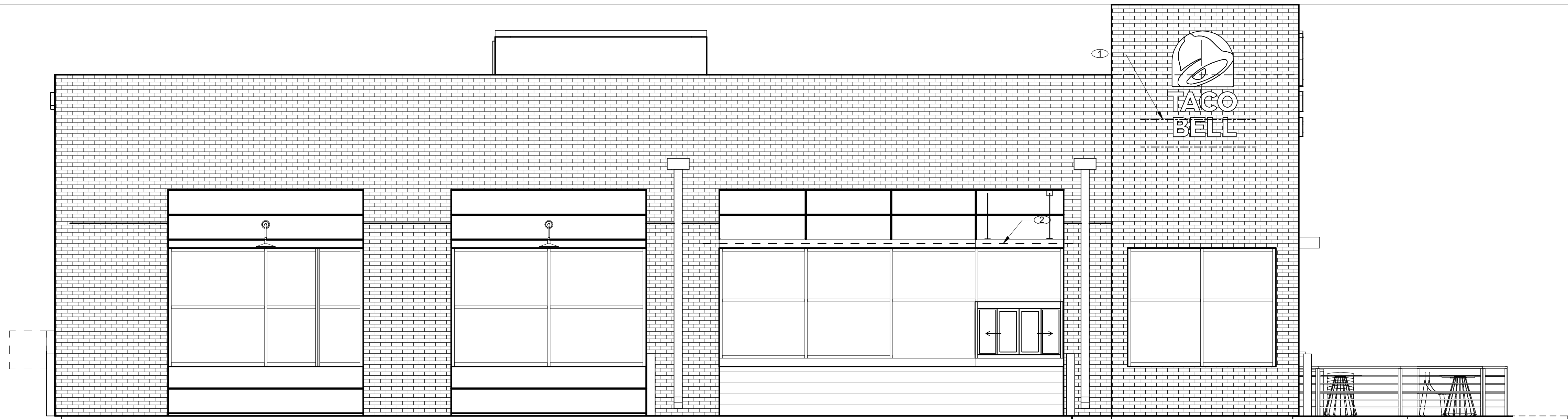
**T52**  
OPEN KITCHEN  
MODERN EXPLORER

**PRIVACY WALL  
SECTIONS AND  
DETAILS**

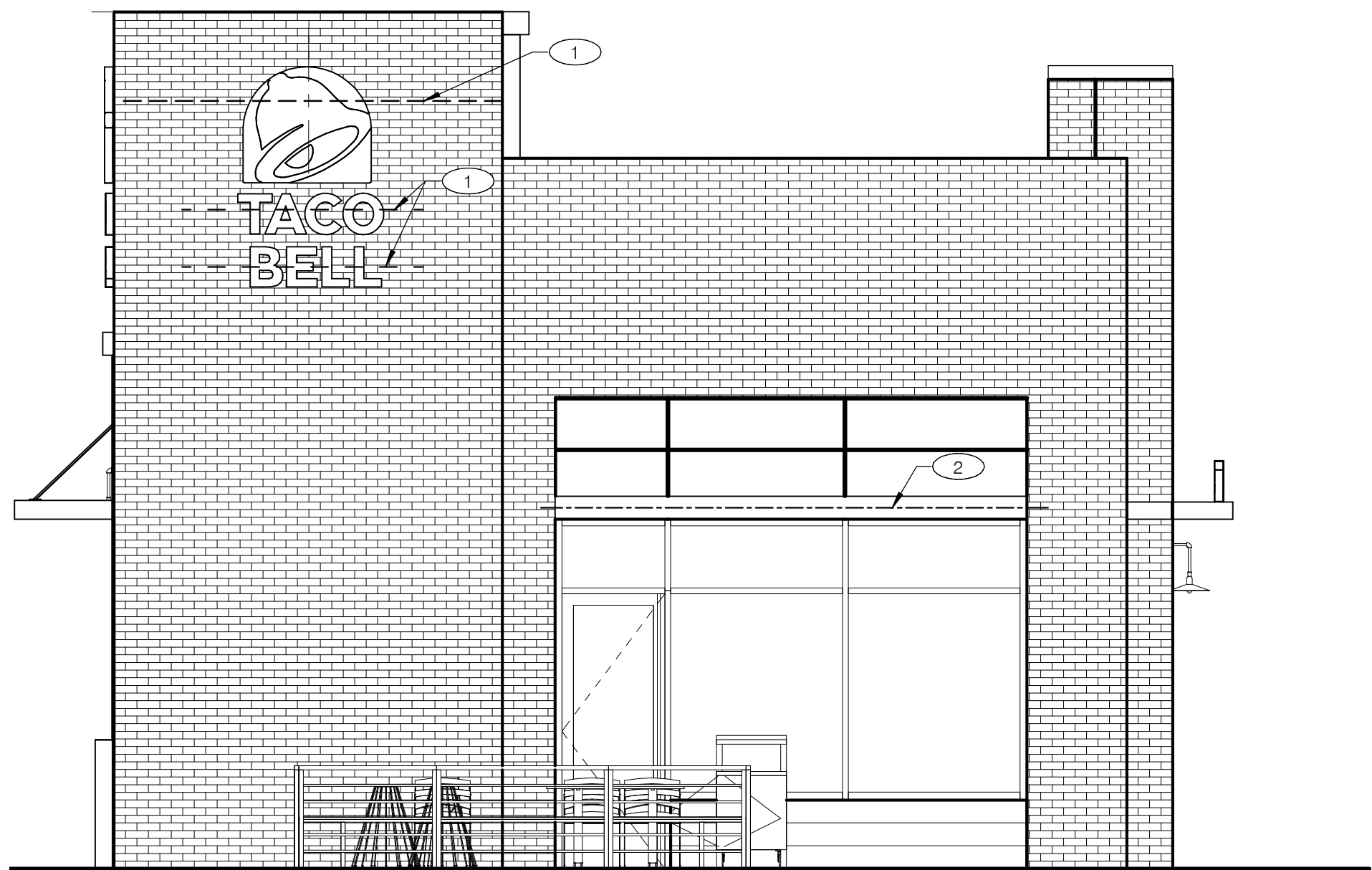
**S4.6**



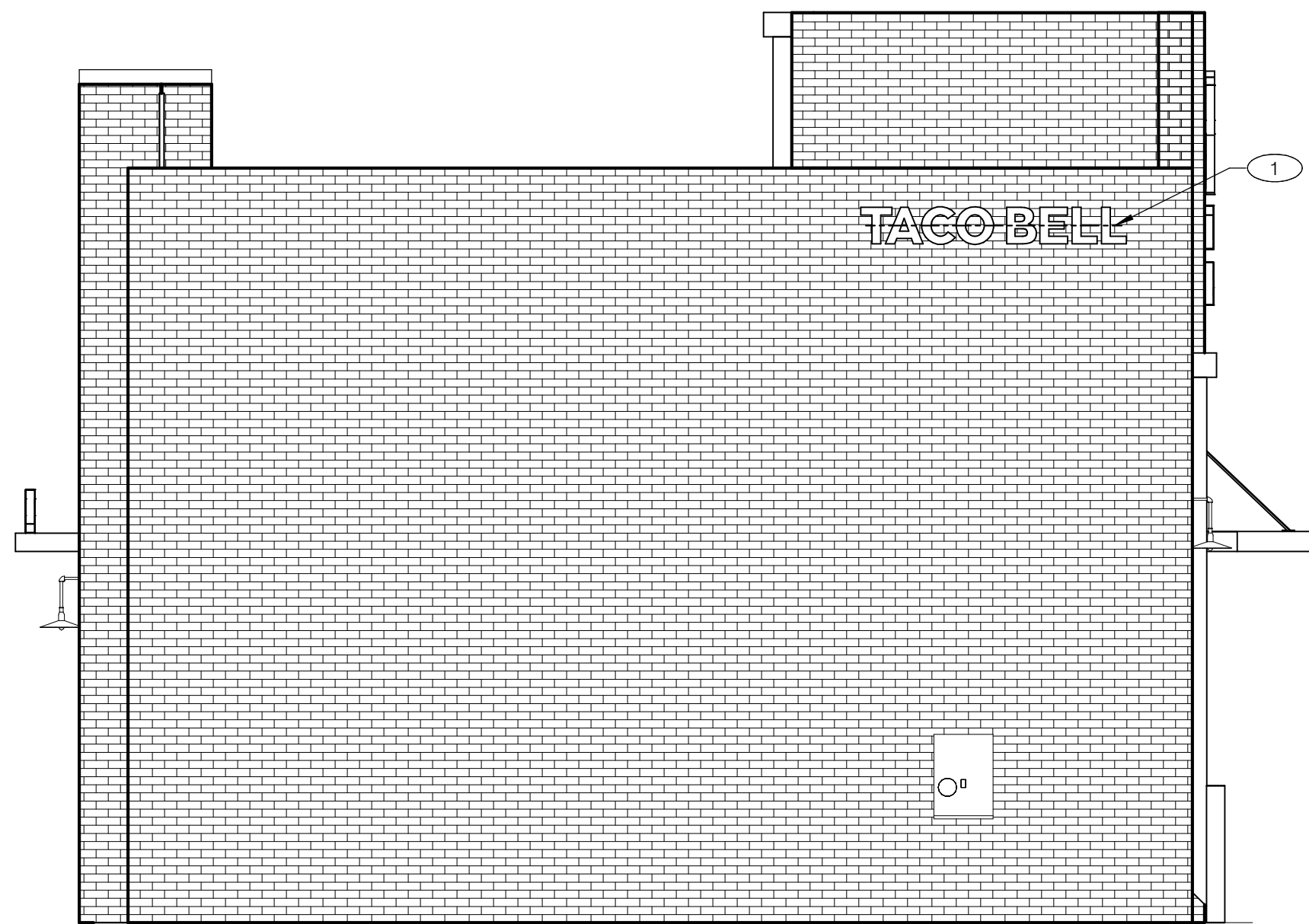
**RIGHT SIDE ELEVATION** 1/4" = 1'-0" **A**



**LEFT SIDE ELEVATION** 1/4" = 1'-0" **B**



**FRONT ELEVATION** 1/4" = 1'-0" **F**



**REAR ELEVATION** 1/4" = 1'-0" **E**

- 1 SOLID BLOCKING FOR FASTENERS AS REQUIRED FOR SIGN MOUNTING.
- 2 PROVIDE BLOCKING FOR CANOPY TIE BACK. SEE DETAIL 3/S4.3

**KEY NOTES** **C**

- EXTEND BLOCKING AS REQUIRED TO FIT BETWEEN STUDS.
- ELEVATION AT BOTTOM OF CANOPIES SHALL BE 10'-2" A.F.F. (U.N.O.).
- COORDINATE SIGNAGE ELEMENTS AND BLOCKING REQUIREMENTS WITH SIGNAGE VENDOR; SEE SCOPE OF WORK.
- THIS SHEET IS TO INDICATE BLOCKING REQUIREMENTS FOR AWNINGS & CANOPIES. ADDITIONAL BLOCKING IS REQUIRED FOR OTHER ITEMS AS SHOWN ON OTHER DRAWINGS.
- COORDINATE ALL LOCATIONS AND ELEVATIONS WITH THE ARCHITECTURAL DWGS.

**GENERAL NOTES** **D**

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



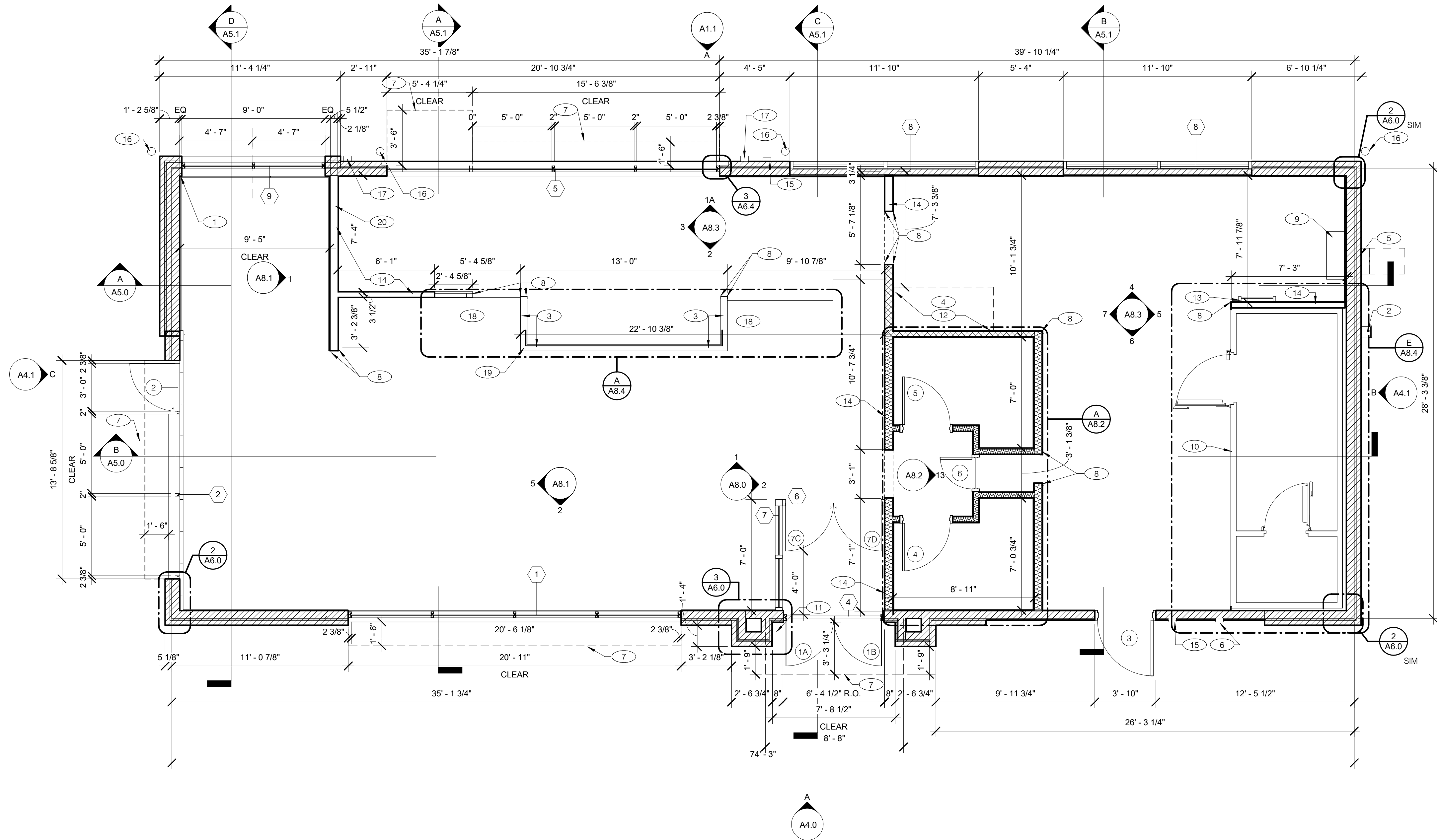
**T52**  
OPEN KITCHEN  
MODERN EXPLORER

**CANOPY/AWNING  
BLOCKING  
ELEVATIONS**

**\$5.0**

PLOT DATE: 9/13/2018 4:42:08 PM





**FLOOR PLAN** 1/4" = 1'-0" **A**

**TYPICAL EXTERIOR WALL:**  
2x6 WD STUDS AT 16" O.C. W/ SHEATHING AS SCHEDULED (SEE STRUCT. DWGS.) AND R-19 KRAFT-FACED FIBERGLASS BATT INSULATION U.O.N. GC SHALL PROVIDE BLUESKIN VP SELF ADHERED AIR BARRIER

**TYPICAL INTERIOR WALL:**  
2x4 WD STUDS AT 16" O.C. (2x6 OR 2x8 WHERE NOTED.) INTERIOR WALLS AND GYP. BD. SEPARATING DINING SPACE WITH OTHER AREAS TO EXTEND TO UNDERSIDE OF TRUSSES U.O.N.

**INTERIOR SOUND-RATED WALL:**  
TYPICAL INTERIOR WALL W/ 3-1/2" UNFACED FIBERGLASS BATT INSULATION.

**HOODWALL:**  
600S162-33 METAL STUD WALL WITH 20 GA. S.S. PANEL BEHIND HOOD. REFER TO DETAIL 1/M3.0 FOR EXTENT OF S.S. PANEL. PROVIDE 3-1/2" UNFACED FIBERGLASS BATT INSULATION.

**WALL SUBSTRATES:**  
- DINING ROOM:  
1/2" GYPSUM WALLBOARD TO 6" ABOVE CEILING OR TO UNDERSIDE OF DECK WHERE EXPOSED SEE 8 & 15 / A6.5. (NOTE: THE CEMENT BOARD SPECIFICATION IS DESIGNED TO ALLOW THE G.C. FLEXIBILITY. )  
- KITCHEN WALLS AND DINING ROOM CLOSET:  
1/2" CEMENT WALLBOARD FROM T.O. SLAB WITH 1/2" CDX PLYWOOD W/FRP SURFACE FINISH TO 6" ABOVE CEILING HEIGHT U.O.N. IF DOUBLE SIDED SHEAR WALL PLYWD IS SPECIFIED THE PLYWOOD SHALL BE CONTINUOUS FROM SILL PLATE TO TOP PLATE. SEE 4 & 11 / A6.5.  
- RESTROOM WALLS:  
5/8" CEMENT WALLBOARD FROM T.O. SLAB TO 48" A.F.F. WITH 5/8" HI-IMPACT BRAND XP WALLBOARD, MOISTURE RESISTANT GYPSUM WALLBOARD FROM T.O. CEMENT BOARD TO 6" ABOVE CEILING HEIGHT U.O.N.. NO SUBSTITUTIONS ALLOWED. FINISH AS SCHEDULED. SEE 12 /A6.5.  
- ALL OTHER FRAME WALL CONDITIONS:  
1/2" CEMENT WALLBOARD FROM T.O. SLAB TO 48" A.F.F., WITH 1/2" GYPSUM WALLBOARD FROM T.O. CEMENT BOARD TO 6" ABOVE CEILING HEIGHT U.O.N. FINISH AS SCHEDULED.

**WALL LEGEND**

**DIMENSIONS:**  
A. ALL DIMENSIONS ARE TO FACE OF STUD U.O.N. REFER TO FOUNDATION PLAN FOR FACE OF CONC. DIMENSIONS  
B. DIMENSIONS NOTED AS "CLEAR" OR "HOLD" ARE MIN. REOD. NET CLEARANCE FROM FACE OF WALL / WAINSCOT FINISH. VERIFY FINAL EQUIPMENT SIZES W/ VENDOR PRIOR TO INT. WALL FRAMING.

**WINDOWS / DOORS:**  
A. SEE SHT. A1.1 FOR WINDOW TYPES AND DOOR SCHEDULE.  
B. ALL DOOR AND WINDOW OPENING DIMENSIONS ARE TO ROUGH OPENING.

**FINISH SUBSTRATES:**  
A. PROVIDE 1/2" THICK CEMENTITIOUS BD. FROM FLOOR SLAB TO 48" A.F.F. MIN. IN LIEU OF GYP. BD. AT ALL WALLS EXCEPT SHEARWALL SURFACES. U.O.N.  
B. ALL JOINTS, GAPS OR SPACES LEADING TO ALL HOLLOW OR INACCESSIBLE SPACES SHALL BE SEALED WITH "NSF INTERNATIONAL" APPROVED SEALANTS.  
C. ALL BACK OF HOUSE AND OFFICE WALLS SHALL HAVE 1/2" CDX PLYWOOD SUBSTRATE, U.O.N.

**GENERAL:**  
A. PROVIDE THREE FIRE EXTINGUISHERS - (2) 10 lb. BC and (1) 10 lb. ABC - TO COMPLY WITH LOCAL FIRE CODE. LOCATE PER DIRECTION OF FIRE MARSHALL OR LOCAL AUTHORIZING AGENT.  
B. DRAWINGS ARE BASED UPON WOOD FRAMING. UTILIZATION OF METAL STUDS ON NON-BEARING INTERIOR PARTITIONS, BULKHEADS AND SOFFITS IS ACCEPTABLE. MAINTAIN DIMENSIONS

**FLOOR PLAN NOTES**

- (1) STARTING POINT. ALL SUB-TRADES SHALL USE THIS POINT AS A BEGINNING LAY-OUT (INSIDE FACE OF EXT. WALL STUDS).
- (2) GAS SERVICE.
- (3) LOW WALL BY G.C., SEE DETAILS ON A8.3. COORDINATE WITH STRUCTURAL DRAWINGS.
- (4) HOOD WALL. SEE EQUIPMENT PLAN A2.0 AND SCHEDULE A2.1
- (5) ELECTRICAL MAIN SWITCH BOARD. REFER TO ELECT. DWGS.
- (6) CO2 FILL BOX LOCATION. SEE DETAIL 5/A6.1
- (7) LINE OF AWNING ABOVE (BY SIGNAGE VENDOR)
- (8) S.S. CORNER GUARD / WALL CAP. TYP. ALL CORNERS IN BACK-OF-HOUSE FROM REAR WALL TO THE KITCHEN SIDE OF THE SERVICE COUNTER. SEE DETAIL 13&14/A6.5
- (9) SWITCHGEAR / ELECTRIC PANELS. SEE ELECTRICAL DRAWINGS.
- (10) PRE-ENGINEERED MODULAR PANEL WALK-IN BOX (COOLER AND FREEZER). SITE ASSEMBLED. SEE EQUIPMENT PLAN A2.0
- (11) KNOX BOX ON SIDE WALL @ 5'-0" A.F.F.
- (12) NON-COMBUSTIBLE METAL STUD CONSTRUCTION WITH TYPE 'X' GYP BOARD BEHIND HOOD. EXTEND MIN. 18" PAST HOOD ON EACH SIDE
- (13) ROOF LADDER. SEE DETAIL 2/A6.2
- (14) FULL HEIGHT WALL TO EXTEND TO BOTTOM OF THE ROOF DECK
- (15) HOSE BIB BOX AT 18" A.F.F. SEE DETAIL 7/A6.1
- (16) PIPE BOLLARD. SEE CIVIL DRAWINGS
- (17) 4"x6" ALUMINUM DOWN SPOUT
- (18) POS COUNTER / V-LINE HALF-WALL AND HAND-OFF PLANE BY GC
- (19) ROUTE 1 1/2" CONDUIT IN LOW WALL FROM CHEESE MELTER LOCATION TO CUSTOMER DRINK STATION FOR FILTERED WATER CONNECTION.
- (20) SEE STRUCTURAL DRAWINGS FOR SHEAR WALL REQUIREMENTS AND DETAILS.

**PLAN KEYNOTES** N.T.S. **B**

09.14.18	ISSUED FOR CONSTRUCTION
08.16.18	BID ADDENDUM 2
06.20.18	ISSUED FOR BID
06.08.18	CLIENT COMMENTS
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52

OPEN KITCHEN  
MODERN EXPLORER

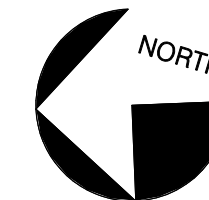
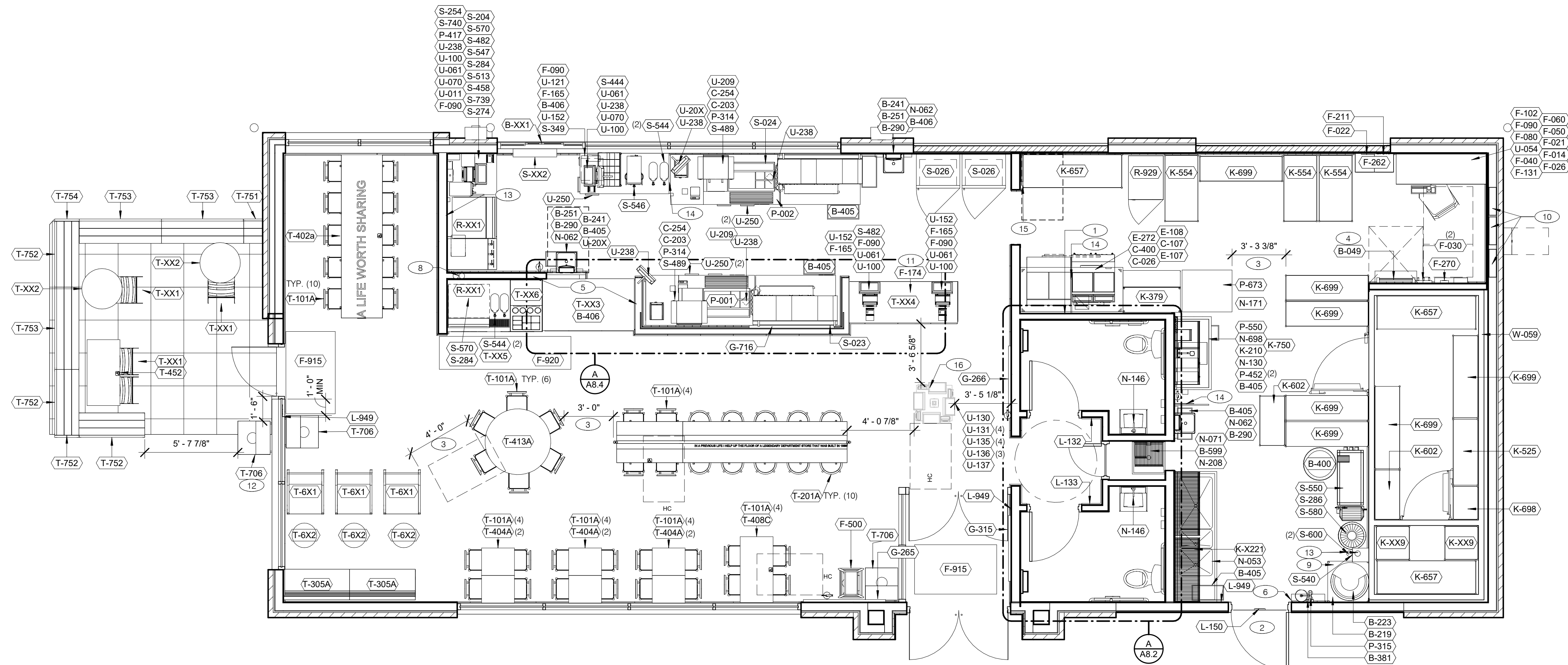
**FLOOR PLAN**

**A1.0**

PLOT DATE: 9/13/2018 4:10:15 PM





[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-C  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52  
OPEN KITCHEN  
MODERN EXPLORE

## EQUIPMENT/ SEATING PLAN

## A2.0

PLOT DATE: 9/13/2018 4:10:19 PM

EQUIPMENT/ SEATING PLAN										1/4" = 1'-0"		A					
SYM.		QTY.	ITEM			EQ#	COUNT	DESCRIPTION		ORDERING NO.							
T-6X1	3		LOUNGE CHAIR			G-265	1	TACOS		G-265-X-01-2BX40							
T-6X2	3		18" DIA. LOUNGE TABLE			G-266	1	TACOS		G-266-X-01-2BX40							
T-101A	36		CHAIR - WOOD SEAT/ METAL BACK			G-315	1	TACO TYPOGRAPHY 54"		G-315-X-00-12X54							
T-201A	10		29" BARREL BARSTOOL			G-716	1	V-LINE ARTWORK - CRUNCH WRAP		G-716-1-N/A-62.375X39.5							
T-305A	2		BANQUETTE SEATS														
T-401A	1		HUB TABLE VENEER (WHITE INLAY)														
T-402a	1		HIGH DINING TABLE														
T-404A	6		24" X 20"TABLE TOP AND ROUND BASE														
T-408C	1		24" X 48" TABLE TOP AND DOUBLE BASE - ADA (CENTER)														
T-413A	1		17" DIA. STYLE TABLE BASE														
T-706	2		SINGLE TRASH ENCLOSURE														
T-XX3	1		55" HAND OFF PLANE														
T-XX4	1		POS COUNTER BY IDX														
T-XX5	1		SAUCE AND SODA TABLE BY IDX														
T-XX6	1		CONDIMENT CONSOLE														
FURNITURE PACKAGE E						ARTWORK SCHEDULE D				GENERAL INFORMATION N.T.S. C				EQUIP SEATING KEYNOTES N.T.S. B			

EQUIPMENT SCHEDULE									
NO.	QTY	G.C. INSTALL	VO	ITEM DESCRIPTION	MFR. & MODEL NUMBER	PLUMB	ELECT	GAS	REMARKS
	169								
S-482	1								
B CONTRACTOR BUILDING ELEMENTS									
B-049	1	X		ROOF LADDER	PRECISION #FL184				15'-4" W/ 8" EXTENSION
B-050	1	X		ROOF HATCH	PRECISION LADDER #PH-G2'-6"X3'-0"				2'-6" X 3'-0" CLEAR OPENING
B-219	1	X		WATER HEATER DUNNAGE RACK	NEW AGE INDUSTRIAL CORP., INC #98147	X		X	
B-223	1	X		GAS WATER HEATER 97% HIGH EFFICIENCY 199 MBH, 100 GALLON	A. O. SMITH BTH 199 CYCLONE Mxi	X		X	
B-241	3	X		SOAP DISPENSER (WALL MOUNT)	KAY 3741				
B-251	3	X		SANITIZER DISPENSER (WALL MOUNT)	KAY 3741				
B-253	2	X		PAPER TOWEL DISPENSER / TRASH 12 GALLON	BOBRICK #B-3944				
B-265	2	X		MIRROR, 18" x 36"	BOBRICK #B-165-1836				
B-275	2	X		TOILET PAPER DISPENSER	BOBRICK #B-2890				
B-290	2	X		PAPER TOWEL DISPENSER	BOBRICK #B-262				
B-300	2	X		GRAB BAR 1-1/2" DIA. x 36" S.S. FIN.	BOBRICK #B6806X36				
B-305	2	X		GRAB BAR 1-1/2" DIA. x 42" S.S. FIN.	BOBRICK #B6806X42				
B-310	2	X		GRAB BAR VERTICAL 1-1/2" DIA. x 18" S.S. FIN.	BOBRICK #B6806X18				
B-381	1	X		CO2 CARBON DIOXIDE SENSOR/WARNING	AMPROBE CO2-200			X	
B-400	1	X		WASTE BASKET - 32' GALLON	RUBBERMAID #2632 (GREY)				
B-405	6	X		WASTE BASKET	RUBBERMAID SLIM JIM #3541 (GREY)				
B-406	3	X		WASTE BASKET	RUBBERMAID 28 QT #2956 (BLACK)				
B-410	1	X		SANITARY NAPKIN RECEPACLE	RUBBERMAID #6140				
B-599	1	X		MOP SINK STATION	ISS #WST806Y				
B-XX1	1			60"W X 36"H DRIVE-THRU WINDOW	QUICKSERV				
C COOKING EQUIPMENT									
C-026	1	X		FRYER	PITCO #TB-SSHLV14-2/FD		X	X	
C-107	1	X		RETHEMALIZER	PITCO #TB-SRTG14-2	X	X	X	
C-203	2	X		SPLIT LID CLAM SHELL TOASTER	DOUGHPRO #SL15775TBA (STAR OPTIONAL)		X		POWERED BY PRODUCTION LINE
C-254	2	X		CHEESE MELTER (SINGLE)	A. J. ANTUNES # CM-100	X	X		POWERED BY PRODUCTION LINE
C-400	1	X		COOK TIMER	FAST #TBZAP12		X		FOR THE RETHERMALIZER
E EXHAUST HOODS/FIRE SUPP.									
E-107	1	X		STRATOVENT 6'-3" EXHAUST HOOD	STRATOVENT MODEL # TBG365OSVBD6FT3IN		X		HOOD IS PRE-PIPED FOR ANSUL SUPPRESSION
E-108	1	X		STRATOVENT 106"H X 111" L BACK SPLASH	STRATOVENT MODEL #BACKSPLASH1106X111FLA				
E-272	1	X		TIMER BRACKET			X		
F OFFICE/EMPLOYEE/MUSIC/MISC.									
F-014	1	X		FILE CABINET (2 DRAWER HIGH) 18" x 36" x 27"H	HON #582LL				IN OFFICE AREA. SEE SHEET A8.2
F-021	1	X		CHAIR - OFFICE	HON #4609AB10				IN OFFICE AREA. SEE SHEET A8.2
F-022	1	X		LICENSE FRAME 8" X 10" (BLACK)	CREATIVE PALETTE TB30				IN OFFICE AREA. SEE SHEET A8.2
F-026	1	X		DESK LAMP	EURL# EL01E				IN OFFICE AREA. SEE SHEET A8.2
F-030	2	X		COAT HOOKS	ISS #HOOK246R2Y				
F-040	1			OFFICE COMPUTER	POS PROVIDED		X		IN OFFICE AREA. SEE SHEET A8.2
F-050	1			CREDIT CARD SATELLITE ROUTER JUNCTION	YUM				
F-060	1			MONITOR - OFFICE	YUM				
F-080	1			OFFICE PRINTER/COPIER/FAX/SCANNER	POS PROVIDED		X		
F-090	5			UPS (UN-INTERRUPTABLE POWER SUPPLY)	POS PROVIDED		X		
F-102	1			MONEY COUNTER	TELLER MATE #TIXR3000		X		
F-131	1			MUSIC SYSTEM	MUZAK #6848				
F-165	3	X		DROP SAFE	PERMA VAULT #PRO-10				
F-174	1	X		SAFE WITH TOUCH SCREEN CONTROLS	BRINKS TIDEL SENTINAL SIDE VAULT		X		
F-211	1	X		CLOCK	B&B SYSTEMS #02100100				IN OFFICE AREA. SEE SHEET A8.2
F-262	1	X		EMPLOYEE LOCKERS - 6 COUNT	12 X 15 X 72 GREY				
F-270	1	X		FIRST AID KIT	PROSTAT FIRST AID LLC #2617				IN OFFICE AREA. SEE SHEET A8.2
F-500	1	X		STACKABLE HIGH CHAIR	KOALA #KOA-KB103-01				
F-915	2	X		FLOOR MAT 3' X 5'	ENTRANCE, INC. #41150012				
F-920	1	X		FLOOR MAT 2' X 8'	ENTRANCE #4-4450				RUBBERIZED, AT DRINK STATION
K WORKSTATIONS/SHELVING/CARTS									
K-210	1	X		PREP SINK WORKSTATION 50" TRACK	ISS #WST255E				
K-221	1	X		3 COMP SINK WORKSTATION 96" TRACK	ISS #DS-1F				
K-379	1			FRY WORKSTATION 42"W x 30"D x 75"H	ISS # WST1710E				
K-525	1			48X18 5-TIER RACK SHELVING	ISS #TBD				
K-554	3			48X24 5-TIER RACK SHELVING	ISS #TBD				
K-602	2			36X18 5-TIER RACK SHELVING	ISS #TBD				
K-657	3			72X24 5-TIER RACK SHELVING	ISS #TBD				
K-698	1			24X18 5-TIER RACK SHELVING	ISS #TBD				
K-699	7			60X18 5-TIER RACK SHELVING	ISS #TBD				
K-750	1	X		WATER SOFTENER UNIT HOLDER 14"X30"X9"	ISS #WATR230Y				OPTIONAL INSTALL
K-XX9	2			24X24 5-TIER RACK SHELVING	ISS #TBD				
L LIGHTING/SIGNAGE/MENUBOARDS									
L-132	1			SIGN- TACO BELL RESTROOM WOMEN WITH BRAILLE 10'X6.5"					
L-133	1			SIGN- TACO BELL RESTROOM MEN WITH BRAILLE 10'X6.5"					
L-150	1	X		SECURITY DOOR DANGER SIGN	ADVERCO #ADVCUSTOM				ORDERED DIRECT FROM YRFS
L-949	3	X		NO SMOKING SIGN	VOLLRATH #4513				
L-XX1	1			INTERIOR MENU BOARD DISPLAYS	LG #TBD				
N SINKS/DISHWASHERS									
N-053	1	X		3-COMP POWER SOAK 95"L x 31"D (L TO R)	METCRAFT #TBD	X	X		W/ PRE-RINSE, CLICK & CLEAN SYSTEM & (2) T & SB-2466 FAUCETS OPTIONAL - N-706, N-075, N-076, N-077, N-078
N-062	3	X		HAND SINK WITH FAUCET	AERO #HSK-A	X			
N-071	1	X		MOP SINK FAUCET	T&S #B-2465	X			
N-130	1	X		1 COMP SINK FAUCET	T&S FAUCET B-2465	X			
N-146	2	X		FAUCET (RESTROOMS)	SLOAN # SF-2350	X			FRANCHISE OPTION N-164 T&S B-2460
N-171	1	X		1 COMP. SINK WASTE DRAIN LEVER	T&S FAUCET S-20	X			2" TWIST TYPE, FOR N-698
N-208	1	X		MOP SINK 24"X24" FLOOR MOUNT SINK	AERO MANUF. CO., INC. #3MP-2121-6/1P	X			INCLUDES (2) 24"X36" WALL PANELS
N-698	1	X		1 COMP PREP SINK 53"W X 27"D X 35 1/2"H	AERO #2F1211617LR	X			
P FOOD PREPARATION									
P-001	1	X		V-LINE					
P-002	1	X		V-LINE					
P-314	2	X		WATER PRESSURE REGULATOR KIT	A.J. ANTUNES & CO #7000314	X			FOR PRODUCTION LINE
P-315	1	X		REVERSE OSMOSIS SYSTEM	CUNO #FSTM-07	X			REQUIRES FLOOR SINK
P-417	1	X		8 CHANNEL TIMER	FAST # KTRACK 2X4 TB			X	ALTERNATE- PRINCE CASTLE # 755HM8TB
P-452	2	X		HOT WATER SYSTEM	BUNN-MACHINE #43600.0014	X	X		
P-550	1	X		KNIFE RACK	EDLUND #KR-699				
P-673	1			WORKTABLE, 36" x 30"	ISS #WST908YA				

EQUIPMENT SCHEDULE									
NO.	QTY	G.C. INSTALL	NO	ITEM DESCRIPTION	MFR. & MODEL NUMBER	PLUMB	ELECT	GAS	REMARKS
PATIO									
T-452	1			EXTERIOR TUCCI UMBRELLA 10X10					MEDIUM
T-706	1			SINGLE TRASH RECEPTACLE	FURNITURE DESIGN STUDIOS				MEDIUM
T-752	2			60" FENCH					MEDIUM
T-753	4								MEDIUM
T-754	2			16" RAILING					MEDIUM
T-XX1	4			VEKINAS SIDE CHAIR BY KIAN					MEDIUM
T-XX2	2			INTERLACE DINING TABLE BY KIAN					MEDIUM
R REFRIGERATION									
R-929	1	X		FULL HT FREEZER (RH HINGED)	DELFIELD #GBF1P-SH		X		OPTIONAL: R-038 U/C FREEZER - DELFIELD #407CA-DHL-TB3
R-XX1	2	X		REMOTE ICE CUBE MACHINE	MANITOWOC	X	X		
S SERVING/DRIVE-THRU									
S-023	1	X		WARMER EVO TACO TOWER TB 208V - R TO L UNIT	CARTER HOFFMAN # EVOL208		X		MOUNT TO PRODUCTION LINE
S-024	1	X		WARMER EVO TACO TOWER TB 208V - L TO R UNIT	CARTER HOFFMAN # EVOR208		X		MOUNT TO PRODUCTION LINE
S-026	2	X		HEAT CABINET - FULL HEIGHT - (1) RH	CRESCOR #H137S27D1TB		X		
S-204	1	X		DRIVE-THRU TIMER SYSTEM	HME #C11422TB		X		
S-254	1			CONDIMENT RACK	PRONTO PRODUCTS #CHPW0446				
S-274	1	X		61" (W) X 36"(D) DRIVE-THRU DRINK / POS TABLE	SPG WST1242YA				
S-284	1	X		BEVERAGE DISPENSER		X	X		
S-285	1	X		BEVERAGE DISPENSER		X	X		OR CORNELIUS IDC255 PROGATE 5 (BY PEPSI)
S-286	1	X		WATER FILTER SYSTEM	SHURFLO #WB6-M3-22-003	X	X		FRANCHISEES CAN USE SELECTO #TB5/620-5
S-349 / S-277	1			PICK-UP DRIVE-THRU COUNTER (30' x 42") WITH 24" CONDIMENT STAND	LPSPG #WST 1344Y				
S-444	1			NAPKIN DISPENSER	SCA TISSUE #5555100				
S-458	1	X		24" (W) X 36"(D) FRUTISTA TABLE	SPG WST1343Y				
S-481	1			4-CUP DISPENSER	A.J. ANTUNES				
S-482	1	X		6-CUP DISPENSER	A.J. ANTUNES #DAC560				W/ ANGLED MOUNTING BRCKET OMNITEAM CDB-DTA
S-489	2			DIGITAL SCALE	EDLUND DS-10				FRANCHISEES CAN USE HOSHISAKI KMS-1230
S-513	1	X		ICE MAKER PLACED ON TOP OF DRINK MACHINE	MANITOWOC # IY-1474C	X	X		WITH REMOTE MOUNTED CONDENSORS
S-540	1	X		PEPSI BOOSTER TANK		X	X		SEE SCOPE OF WORK (PEPSI)
S-544	4			TEA URNS	BUNN TDO-N-3.5				
S-546	1	X		ICED TEA BREWER	TETLEY TB3Q		X		
S-547	1			BUNN POD BREWER	MY CAFE AP AUTOPOD # 42300.0008		X		
S-550	1			BAG-IN-BOX SYRUP RACK	CORNELIUS/REMCOR BNB1288P	X			FLO-3REG-2CRB (BY PEPSI)
S-570	2			CARBONATOR	CORNELIUS/REMCOR	X	X		SHELF MOUNTED BELOW EACH DRINK (BY PEPSI)
S-580	1			CO2 (BULK) TANK	MVE #11805373				
S-600	2	X		BUNDLED SYRUP LINES	CORNELIUS/REMCOR TUBE BUNDLE	X			
S-739	1	X		FROZEN BEVERAGE DISPENSER	FBD #1273610021	X	X		
S-740	1			REMOTE CONDENSOR FOR FROZEN BEVERAGE DISPENSER	FBD #12-3003-0006	X	X		
S-XX2	1	X		FLY FAN	TBD				
U SECURITY/COMM/FIRE PROTS/POS									
	1			STORM AUDIO - NAV KEYPAD			X		1 PER STORE. FOR CALIFORNIA STORES 50% OF TOTAL NUMBER OF SCREENS
U-011	1			BASE STATION - D/T COMM. SYSTEM	HME-HEADSET SYSTEM,FIVE,#C40000-5-HS3-TB				
U-20X	2			VERTICAL MONITOR SUPPORT ARM					
U-052	1	X		SECURITY SYSTEM	ADT #3BCZTB		X		
U-054	1	X		CCTV DVR & MONITOR	MARTCO - NUVICO DVR		X		
U-061	4			CREDIT CARD READER (VSAT)			X		
U-070	2			RECEIPT PRINTER	IBM, NCR & PAR		X		
U-100	4			POS/ORDER ENTRY TERMINAL	IBM, NCR & PAR		X		
U-121	1			CASH DRAWER BRACKETS	IBM, NCR & PAR				SEE SCOPE OF WORK
U-130	1			KIOSK TOWER					1 PER STORE. FOR KIOSK COUNT REFER TO DIGITAL PLAYBOOK. PLAYBOOK CAN BE DOWNLOADED FROM TACOBELLPLANS.COM
U-131	4			MOUNTING PLATE					1 PER KIOSK TABLET
U-135	4			KIOSK TABLET			X		PROVIDE DEDICATED CIRCUIT AND (2) TWO CAT5 CABLES PER TABLET
U-136	3			VERIFONE (CREDIT CARD MACHINE)			X		1 PER KIOSK TABLET
U-137	1			VERIFONE (CREDIT CARD MACHINE) - ADA			X		1 PER KIOSK TABLET
U-152	3			CASH DRAWER	IBM, NCR & PAR				
U-209	2			EVO MONITOR SUPPORT ARM	FACILITIES SOLUTIONS #SW550340-24				
U-238	6			KITCHEN MONITOR	IBM, NCR & PAR			X	
U-250	5			BUMP BAR	IBM, NCR & PAR				WITH MOUNTING PLATE



**GPD GROUP**  
Professional Corporation

520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



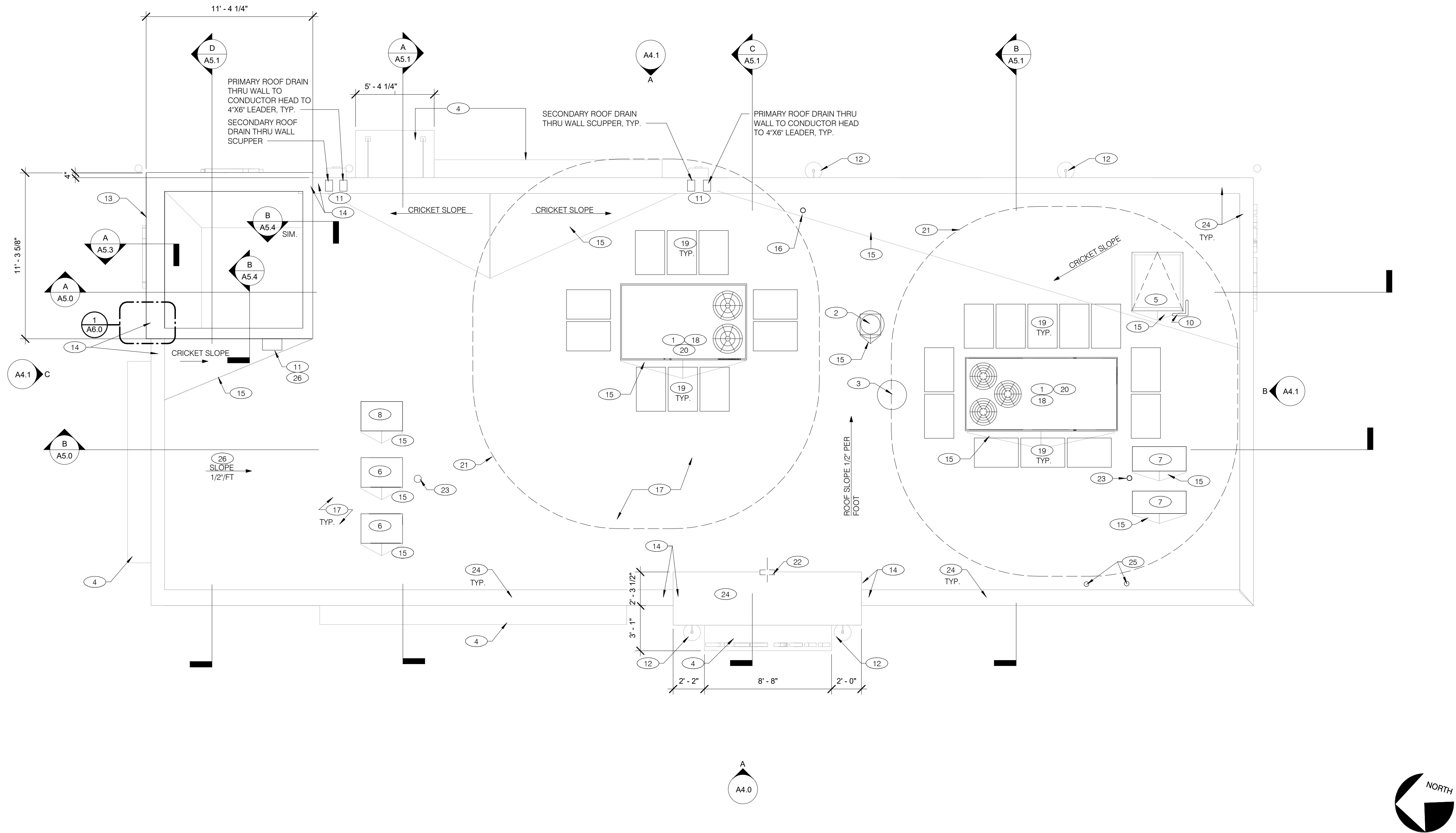
TACO BELL  
T52  
OPEN KITCHEN  
MODERN EXPLORER

## EQUIPMENT SCHEDULE

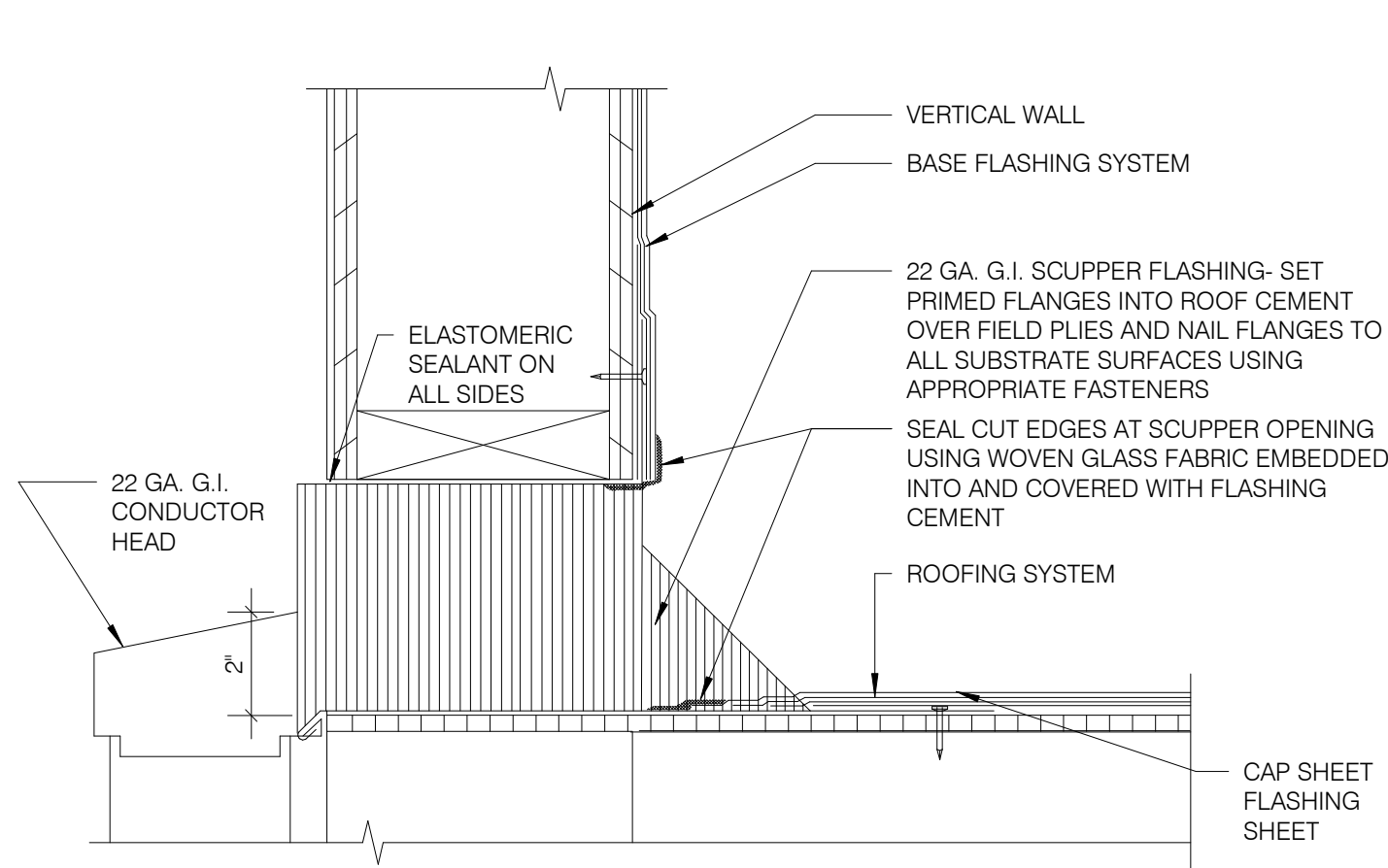
## A2.1

PLOT DATE: 9/13/2018 4:10:19 PM

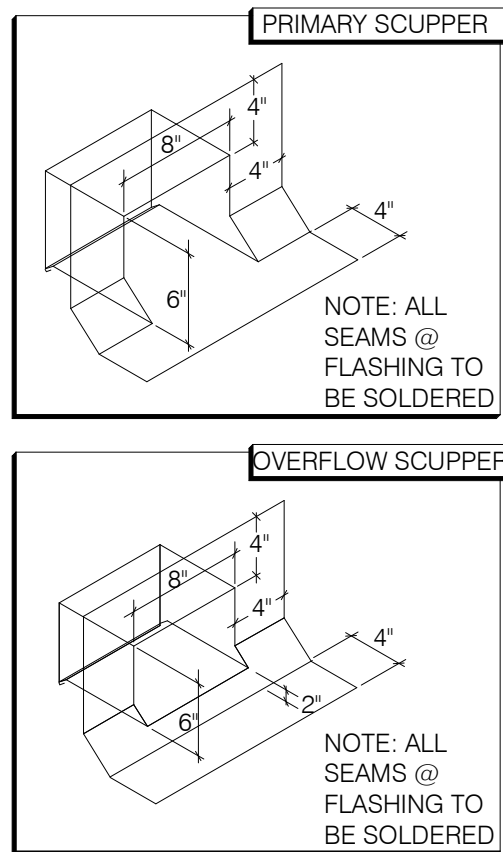




**ROOF PLAN** 1/4" = 1'-0" **A**



**SCUPPER FLASHING** N.T.S. **D**



- WATERPROOFING:**  
A. PAINT UNDERSIDE OF PARAPET CAP FLASHING WITH FACTORY BONDED PAINT GRIP OR PRIMER.  
B. TOP NAILING AT PARAPET CAP FLASHING WILL NOT BE ACCEPTED.  
C. PENETRATIONS IN ROOFING MEMBRANE AND FLASHING SHALL ONLY BE MADE AS INDICATED ON THE DRAWINGS OR SPECS.  
D. SEE SPECIFICATIONS FOR SEALANT SPECS.  
E. ALL SHEET MTL FLASHING SHALL BE 22 GA MIN.
- MISCELLANEOUS:**  
A. ROOF PENETRATIONS CLOSER THAN 12" FROM ANOTHER WILL NOT BE ALLOWED.  
B. EXHAUST FANS MIN. 10'-0" AWAY FROM ALL AIR INTAKE / SUPPLY.  
C. LOCATE WALK-IN CONDENSERS ON ROOF ONLY IF REQUIRED BY CODE.

**ROOF PLAN NOTES** **C**

- (1) ROOFTOP UNIT. INSTALL PLUMB AND LEVEL.  
(2) KITCHEN HOOD EXHAUST FAN. SEE SHEETS M3.0 & DETAIL 7/A6.2  
(3) RESTROOM EXHAUST FAN. SEE DETAIL M2.1  
(4) CANOPY BELOW  
(5) ROOF HATCH. SEE DETAIL 4/A6.2  
(6) ICE MACHINE CONDENSERS ON EQUIPMENT PLATFORM, REF. 10/A6.2  
(7) WALK-IN COOLER / FREEZER CONDENSERS. SEE SCOPE OF WORK SHEET  
(8) FROZEN BEVERAGE MACHINE CONDENSER ON EQUIPMENT PLATFORM, REF. 10/A6.2  
(9) NOT USED.  
(10) ROOF LADDER EXTENSION HANDLE BY MANUFACTURER OF ROOF HATCH  
(11) SCUPPER AND DOWNSPOUT. SEE DETAIL D/A3.0  
(12) EXTERIOR LIGHT FIXTURES  
(13) BRICK TOWER  
(14) CHANGE IN PARAPET ELEVATION SEE DETAIL 2/A6.1  
(15) ROOF CRICKET, SEE DETAIL 11/A6.2  
(16) WASTE VENT THROUGH ROOF. THE TOP OF THE WASTE VENTS SHALL BE 12" HIGHER THAN THE CLOSEST PARAPET CAP U.N.O. OR NOT ALLOWED BY LOCAL JURISDICTION. SEE 5/A6.2 FOR FLASHING ASSEMBLY.

- (17) "DURO-LAST" SINGLE PLY ROOF MEMBRANE OVER R-30 MIN. RIGID INSULATION BOARD ON 5/8" EXTERIOR GRADE PLYWOOD OVER TRUSSES. INSTALL PER MANUFACTURERS SPECIFICATIONS  
(18) POWER / GAS / CONDENSATE ENTRY UNDER HVAC UNIT (PER HVAC MFR. SPECS.) REFER TO MECH. AND PLUMB DWGS. UTILITY ACCESS FROM WITHIN CURB - NO ROOF PENETRATIONS. DO NOT RUN ON ROOF SURFACE. SEE PLUMBING DRAWINGS.  
(19) 24X36 WALK MATS. SEE ROOF SPECS.  
(20) MAINTAIN MANUFACTURERS ROOFTOP MAINTAINANCE CLEARANCES  
(21) OUTSIDE AIR INTAKE FOR ROOFTOP UNIT. MAINTAIN MIN 10'-0" SEPARATION FROM PLUMBING VENTS, FLUES, AND BUILDING EXHAUST  
(22) 12" X 12" WHITE ALUMINUM LOUVER STYLE GABLE VENT WITH FIBERGLASS INSECT SCREEN, MOUNT HIGH  
(23) PIPE HOOD, SEE DETAIL 6/A6.2  
(24) FACTORY PAINTED METAL PARAPET CAP. SEE DETAIL 3/A6.2. GC TO ENSURE PARAPET CAP IS WEATHER PROTECTED  
(25) WATER HEATER EXHAUST/INTAKE COMBO. SEE DETAIL 8/A6.2 FOR BRACING. MAINTAIN MIN. 10'-0" FROM NEAREST POINT OF RTU INTAKE  
(26) COORDINATE ROOF CRICKETS AND DRAINAGE WITH SCUPPER AND DRAIN TO MAIN ROOF

**ROOF PLAN KEY NOTES** N.T.S. **B**

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



**T52**  
OPEN KITCHEN  
MODERN EXPLORER

**ROOF PLAN**

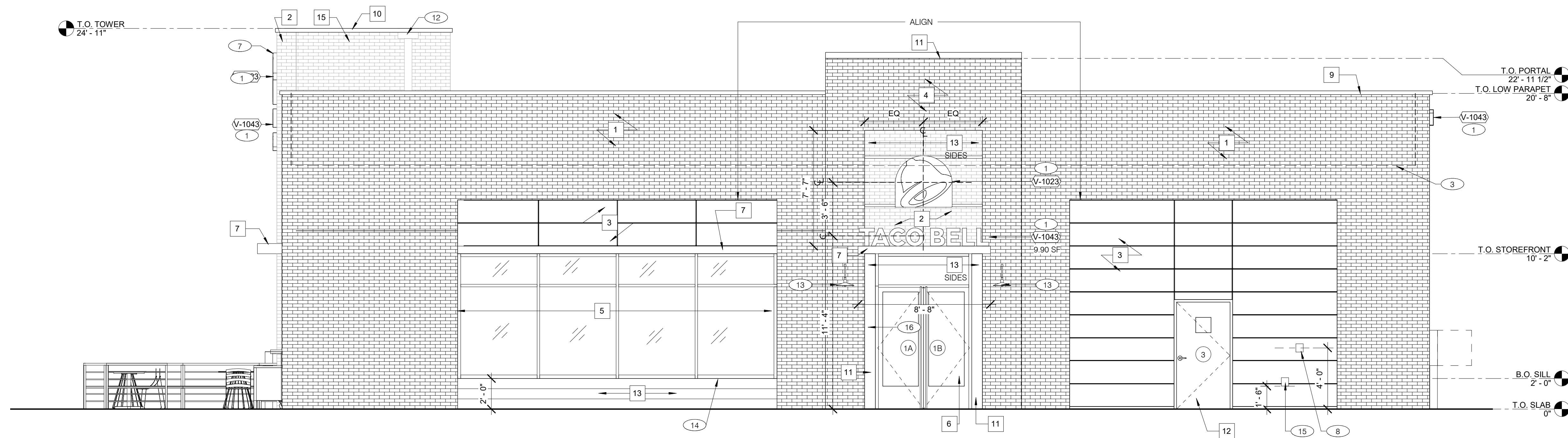
**A3.0**

PLOT DATE: 9/13/2018 4:10:20 PM



## A4.0

PLOT DATE: 9/13/2018 4:10:23 PM



**WEST ELEVATION**  $1/4'' = 1'-0''$

A

NO.	QTY	ITEM DESCRIPTION
V-1023	3	SWINGING BELL - PURPLR LOGO - FACE LIT - 3' 6" X 3' 10"
V-1043	4	TB 14" CHANNEL LETTER WHITE - (2) STACKED AND (2) LINEAR

MISCELLANEOUS:

A. SEE SHT A1.1 "WINDOW TYPES" FOR WINDOW ELEVATIONS.

SEALERS (REFER TO SPECS):

A. SEALANT AT ALL WALL AND ROOF PENETRATIONS.

B. SEALANT AT ALL WINDOW AND DOOR FRAMES AT HEAD AND JAMB. DO NOT SEAL SILL @ WINDOWS.

C. APPLY NEOPRENE GASKET (CONT.) BETWEEN BUILDING & CANOPY.

NOTE: NO EXTERIOR SIGNS ARE WITHIN THE SCOPE OF WORK COVERED BY THE BUILDING PERMIT APPLICATION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL EXTERIOR SIGNS AND INSTALLATION OF REQUIRED BLOCKING AND ELECTRICAL CONNECTIONS FOR FINAL APPROVED SIGNS.

- 1 BUILDING SIGN, BY SIGN VENDOR. REQUIRE ELECTRICAL PLANS.
- 2 DRIVE THRU WINDOW. SEE SHEET A1.0 AND A1.1.
- 3 DASHED LINE INDICATES ROOF LINE BEYOND.
- 4 4" DIA. BOLLARD. SEE CIVIL DRAWINGS.
- 5 GAS METER.
- 6 ELECTRIC METER.
- 7 INTEGRAL SIGNAGE BY SIGN VENDOR. GC TO COORDINATE BLOCKING LOCATIONS.
- 8 CO2 FILLER VALVE & COVER. SEE DETAIL 5/A6.1.
- 9 NOT USED.
- 10 NOT USED.
- 11 CONCRETE CURB.
- 12 SCUPPER, COLLECTOR, AND VERTICAL DOWNSPOUT 6" MIN. PAINT TO MATCH 1
- 13 EXTERIOR LIGHT FIXTURE. COORDINATE WITH ELECTRICAL DRAWINGS.
- 14 FLASHING AT STOREFRONT PER G.C. TO MATCH STOREFRONT FINISH. SEE 8/A6.4.
- 15 HOSE BIB BOX AT 18" A.F.F. SEE DETAIL 7/A6.1.
- 16 KNOX BOX. FINAL LOCATION TO BE APPROVED BY LOCAL AUTHORITY HAVING JURISDICTION.
- 17 BRICK COLOR TRANSITION LINE.

SYMBOL	AREA	MANUFACTURER	MATERIAL SPEC	COLOR	ALTERNATE MFR.	ALTERNATE MATERIAL SPEC	ALTERNATE MATERIAL COLOR	CONTACT INFORMATION	
1	MAIN BUILDING BRICK	INTERSTATE BRICK	2-1/4" MODULAR BRICK	CUSTOM BLEND (RANDOM INSTALL) 70% PEWTER - 30% PLATINUM	-	-	-	NICHIHA:	MATT STEPHENSON 770-789-8228 MSTEPHENSON@NICHIHA.COM
2	TOWER & OVER ENTRANCE BRICK	INTERSTATE BRICK	2-1/4" MODULAR BRICK	COPPERSTONE	INTERSTATE BRICK	2-1/4" MODULAR BRICK	COPPERSTONE	HARDIE:	LEVI STAUFFER 562-243-8974 LEVI.STAUFFER@JAMESHARDIE.COM
3	EXTERIOR FIBER CEMENT PANELS	JAMES HARDIE	REVEAL PANEL SYSTEM	PAINTED SW7048 URBANE BRONZE	NICHIHA	ILLUMINATION	SW7048 URBANE BRONZE		
4	ENTRANCE PORTAL	INTERSTATE BRICK	2-1/4" MODULAR BRICK	MIDNIGHT BLACK	-	-	-		
5	STOREFRONT WINDOWS	OLD CASTLE	SERIES 3000 - CENTER SET	DK BRONZE	-	-	-	BY SIGN VENDOR	
6	STOREFRONT DOORS	OLD CASTLE	SERIES 500 - WIDE STILE	DK BRONZE	-	-	-		
7	METAL CANOPIES	BY SIGNAGE VENDOR		DARK BRONZE TO MATCH STOREFRONT	-	RAL	RAL		
8	LOWER ENTRANCE	-	-	-	-	-	-		
9	EXTERIOR METAL TRIM - BUILDING	AEP SPAN	VINTAGE	VINTAGE	-	-	-		
10	EXTERIOR METAL TRIM - TOWER	AEP SPAN	TBD	TBD	-	-	-		
11	EXTERIOR METAL TRIM - ENTRY	AEP SPAN	TBD	DARK BRONZE TO MATCH STOREFRONT	-	-	-		
12	EXTERIOR HOLLOW METAL SERVICE DOOR	-		SW7048 URBANE BRONZE	-	-	-		
13	LOCAL RECLAIMED WOOD	BY GC	BARNWOOD	AS-IS / GRAY	-	-	-	MATERIALS SOURCED LOCALLY BY GC - MIN. 3/4" THICK X 8" WIDE PLANKS, ASSORTED/RANDOM LENGTHS COLOR RANGE - WHITE - DK GRAY	
14	SPANDREL GLASS	TBD	TBD	DARK BRONZE	-	-	-		
15	THIN BRICK VENEER	INTERSTATE BRICK	THIN BRICK VENEER	COPPERSTONE	-	-	-		

## EXTERIOR FINISH SCHEDULE N.T.S.

D

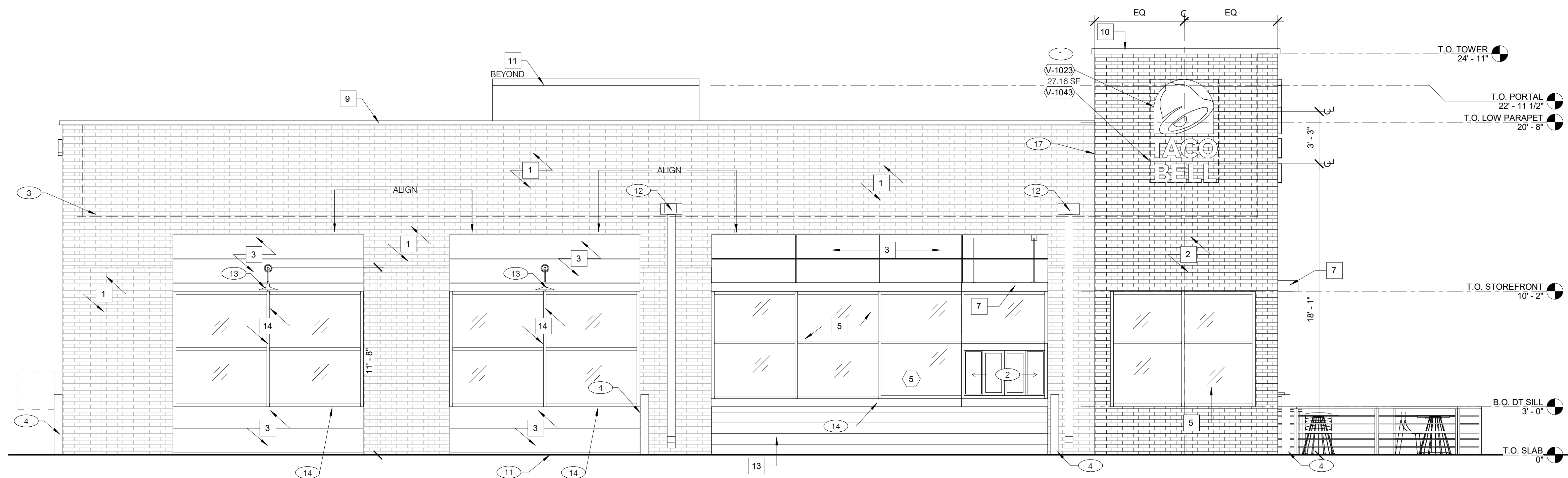
D

## ELEVATION KEYNOTES

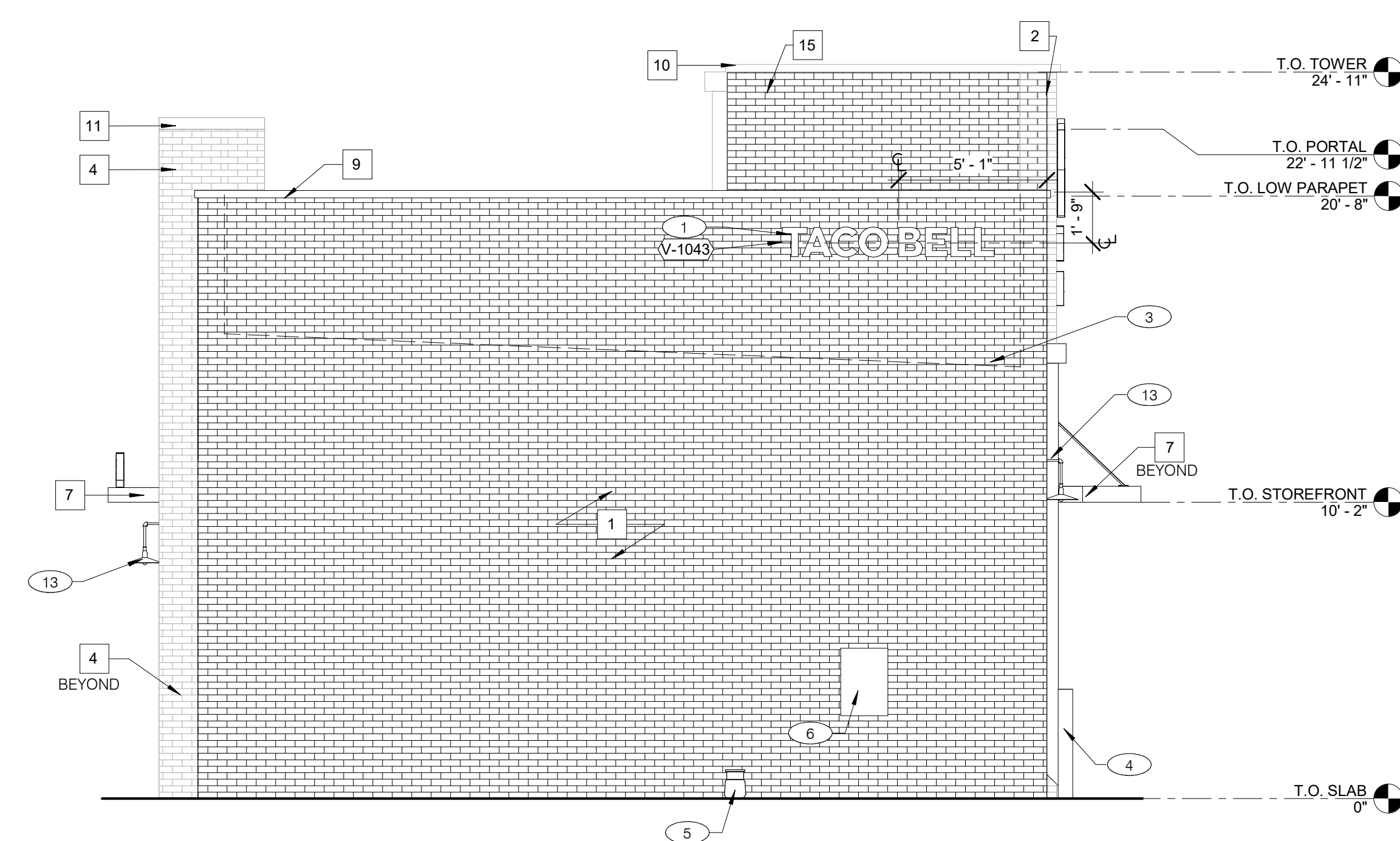
N.T.S.

B





	A
--	---

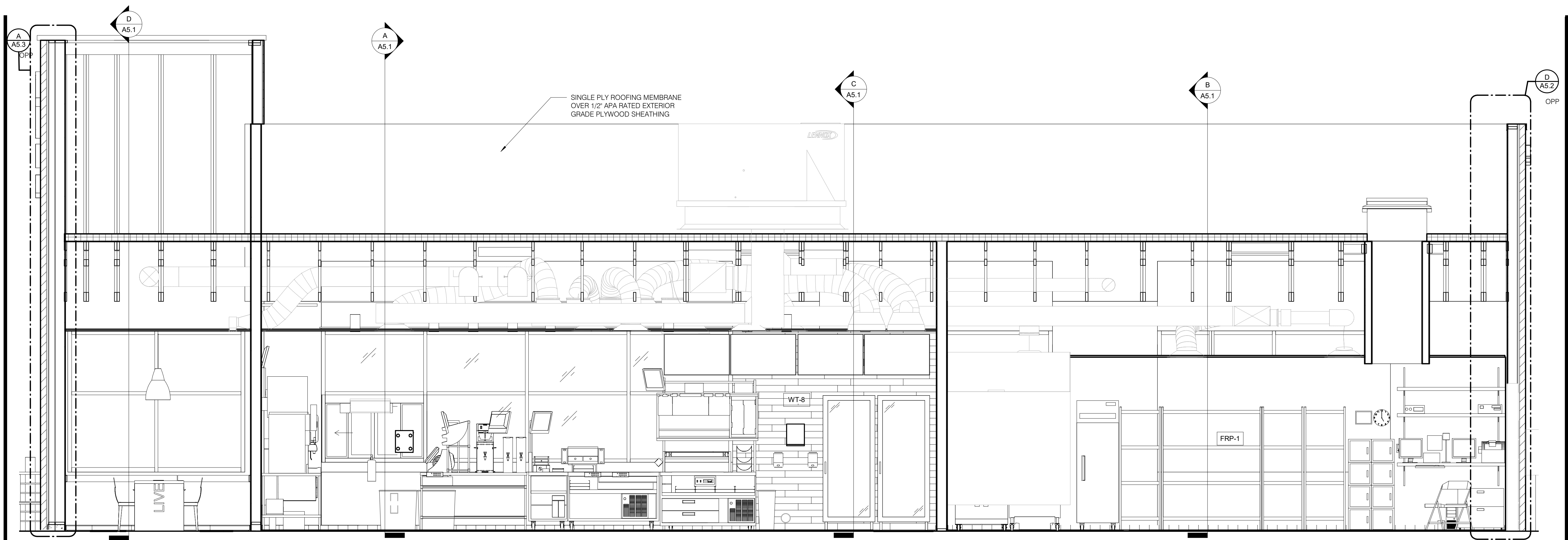


--	--

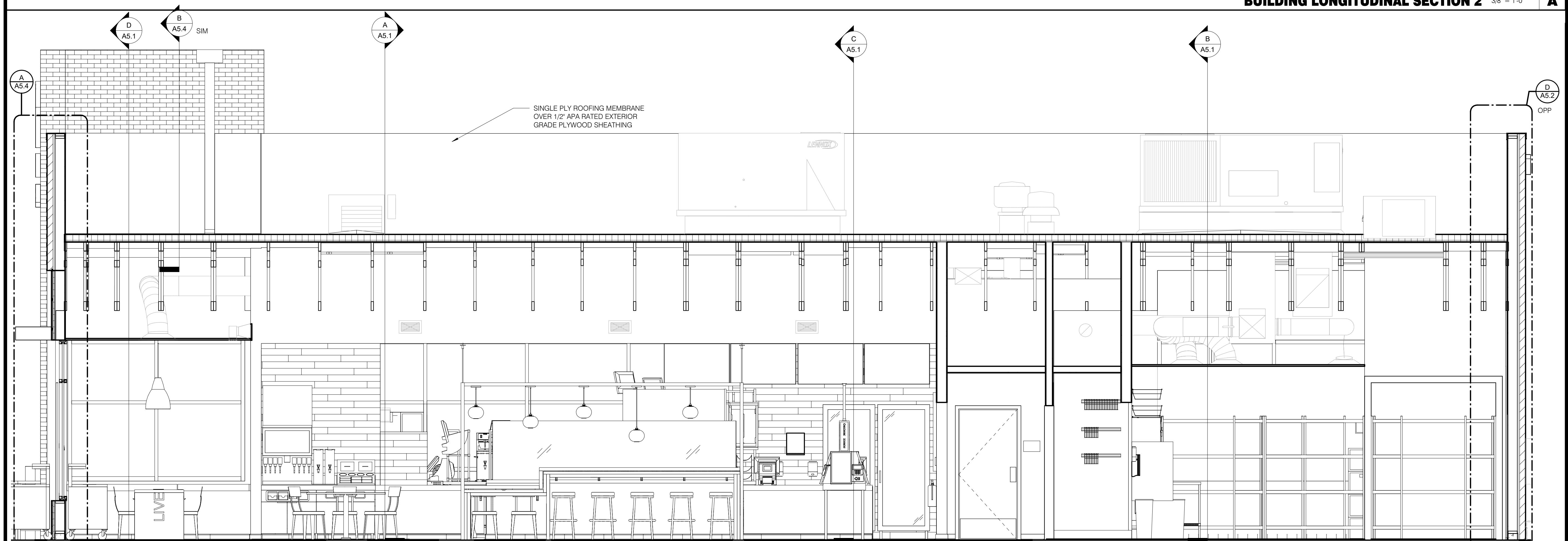
PLOT DATE: 9/13/2018 4:10:29 PM



20 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102



## BUILDING LONGITUDINAL SECTION 2 3/8" = 1'-0" A



**BUILDING LONGITUDINAL SECTION 1**  $3/8" = 1'-0"$  **B**

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-C  
PLAN VERSION: DEC 2017  
LAND DESIGNER:  
SITE NUMBER: 283405/445231  
FORE NUMBER: 2017088.46

TACO BELL  
2306 DIX HIGHWAY  
NORFOLK PARK, MI 48146



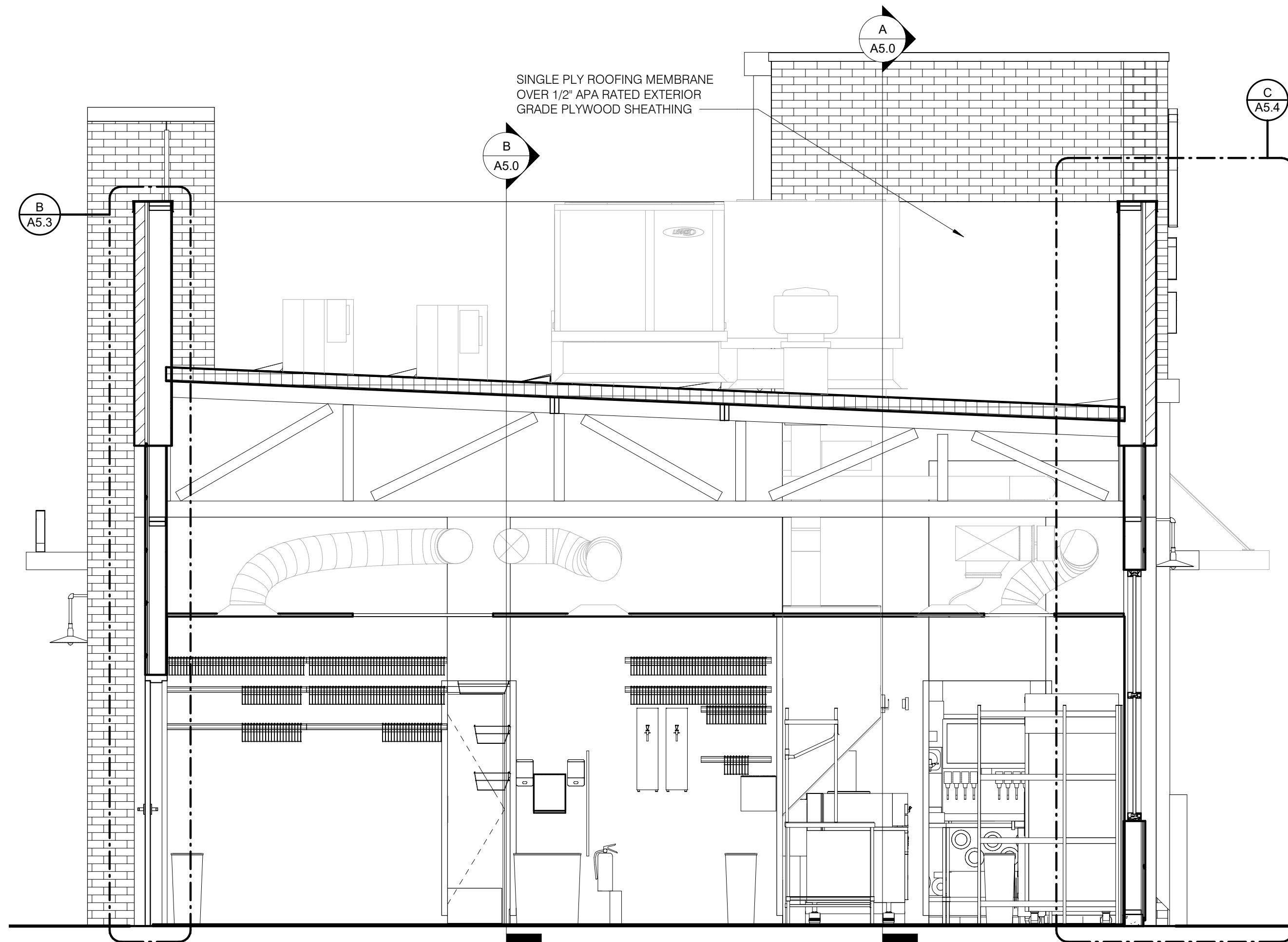
T52  
OPEN KITCHEN  
MODERN EXPLORER

## BUILDING SECTIONS

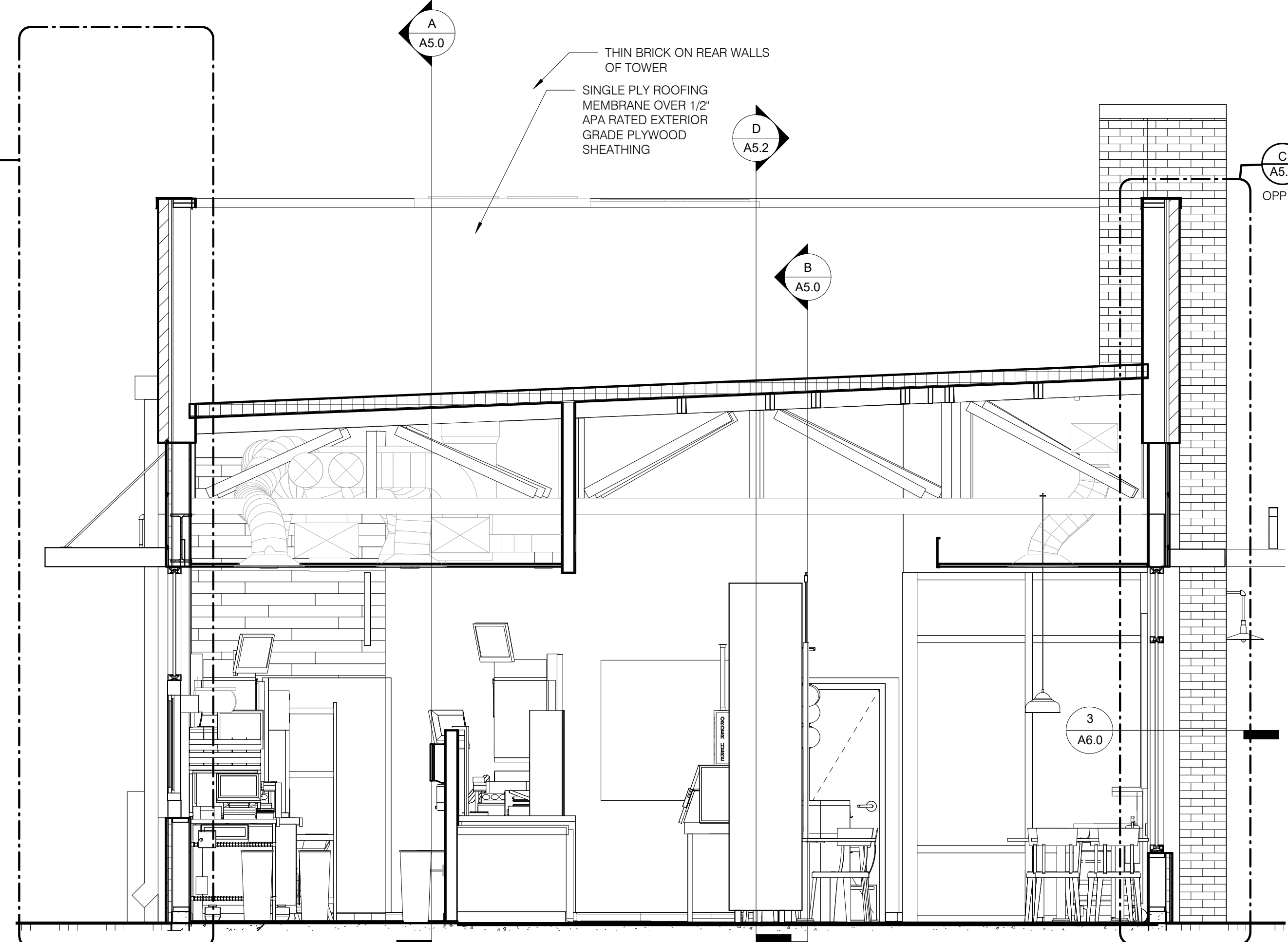
## A5.0

OT DATE: 9/13/2018 4:10:33 PM

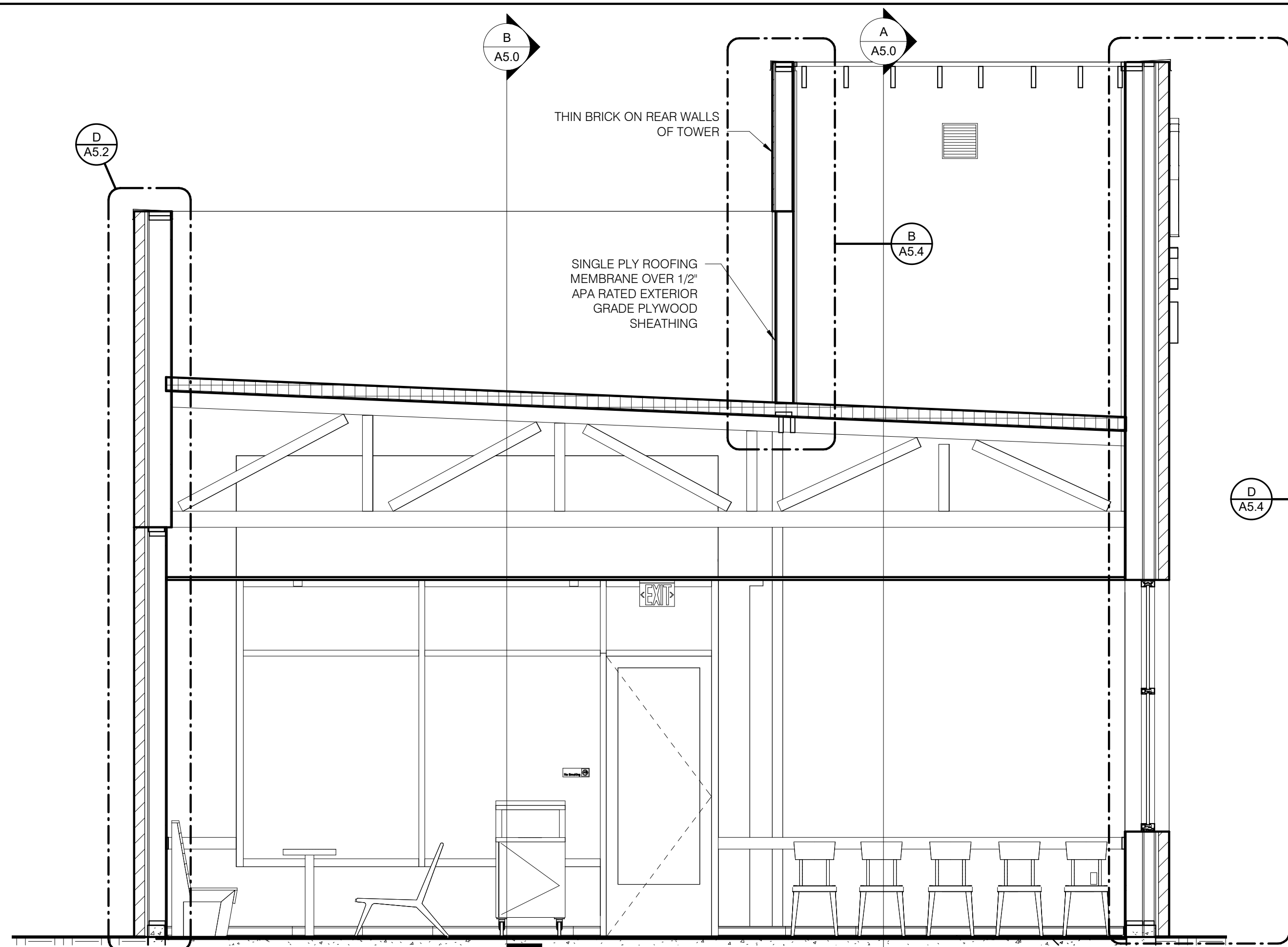




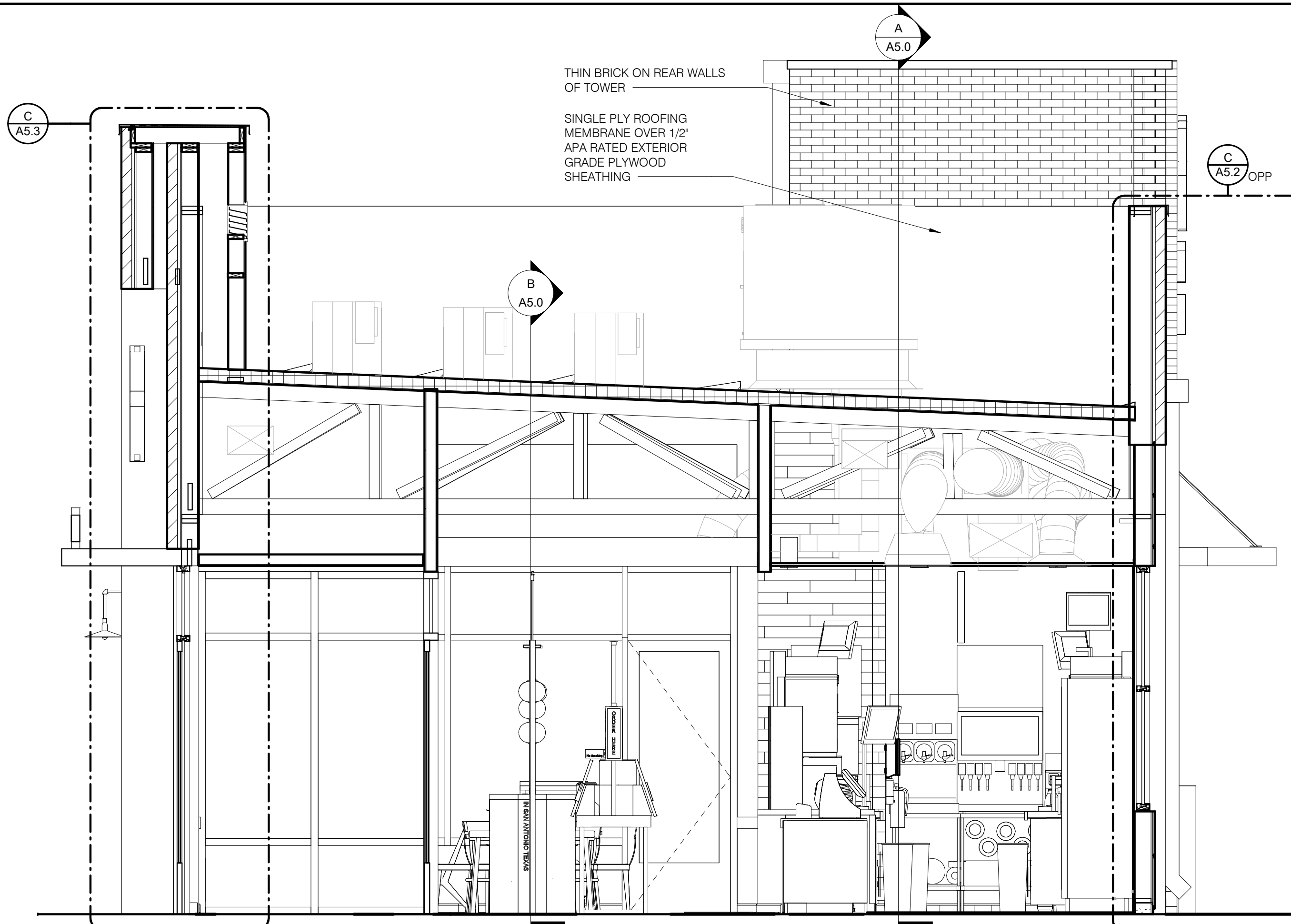
**BUILDING CROSS SECTION 3** 3/8" = 1'-0" **B**



**BUILDING CROSS SECTION 5** 3/8" = 1'-0" **A**



**BUILDING CROSS SECTION AT TOWER** 3/8" = 1'-0" **D**



**BUILDING CROSS SECTION 4** 3/8" = 1'-0" **C**

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**  
T52  
OPEN KITCHEN  
MODERN EXPLORER

**BUILDING SECTIONS**

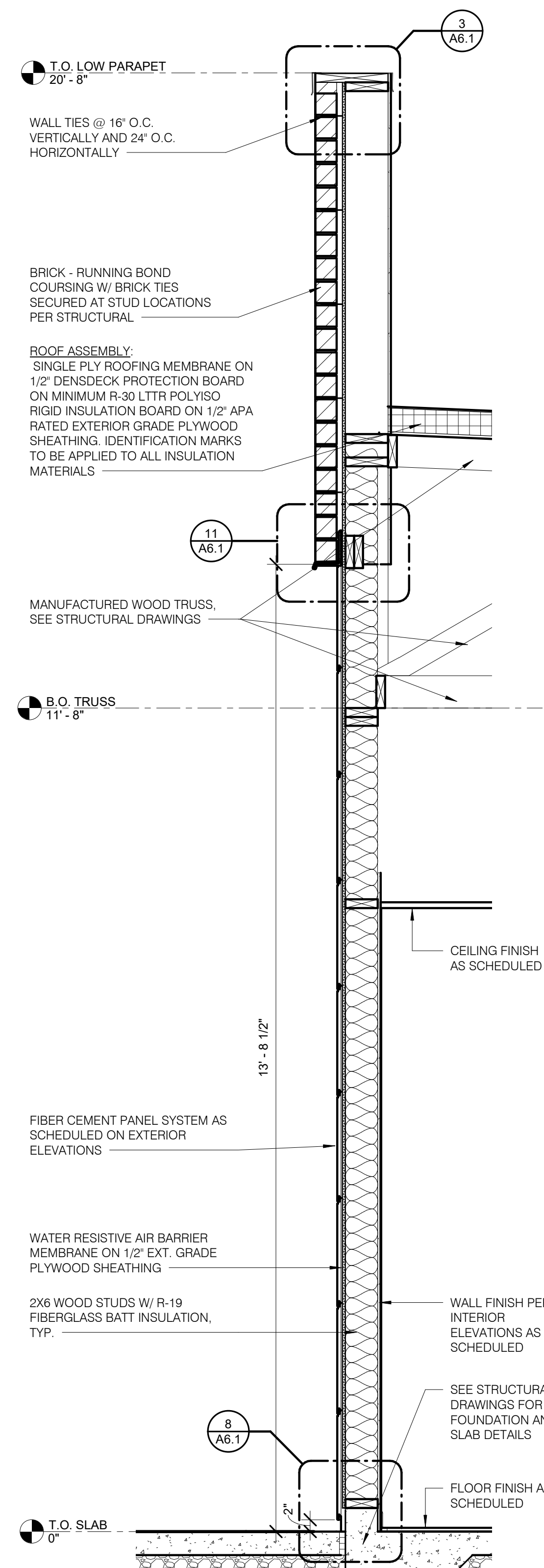
**A5.1**

PLOT DATE: 9/13/2018 4:10:38 PM

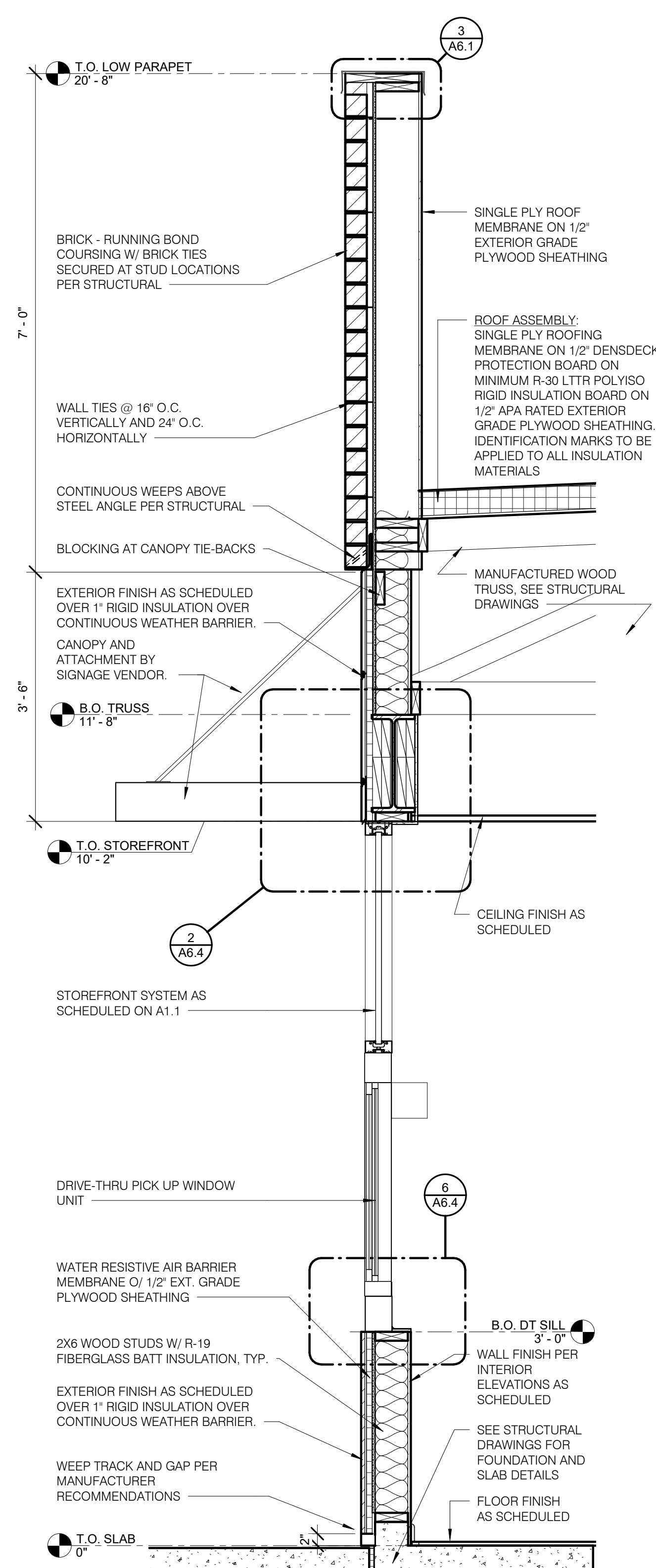


## A5.2

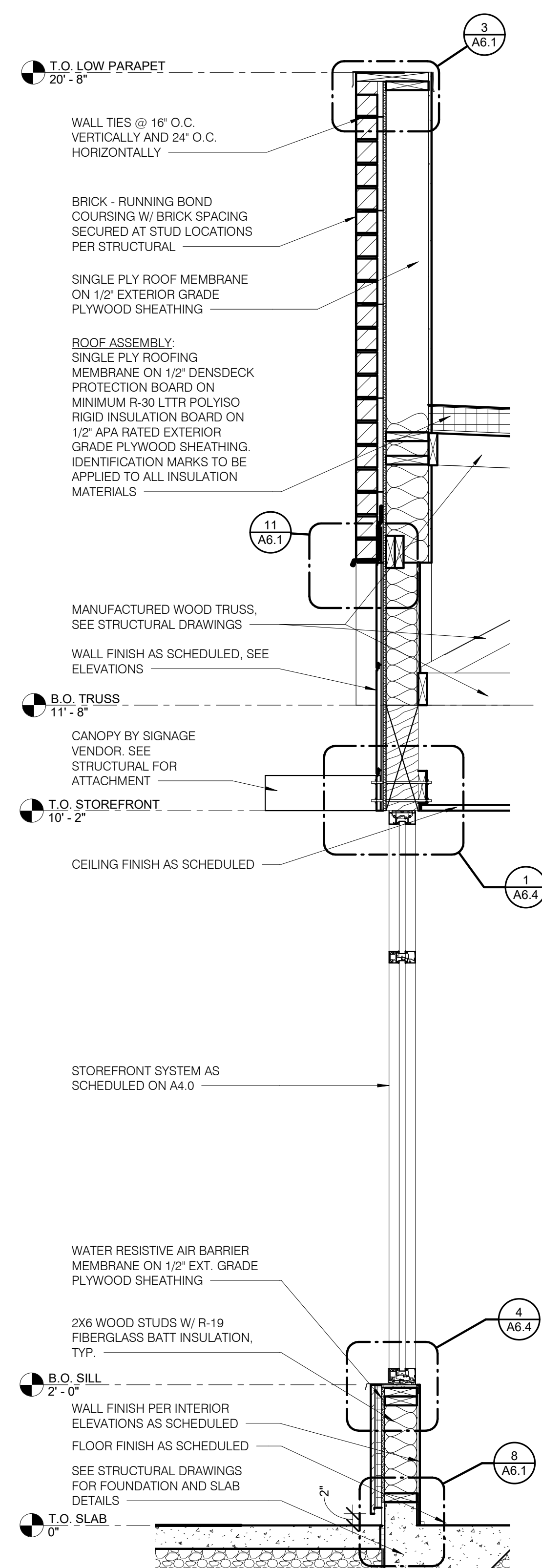
PLOT DATE: 9/13/2018 4:10:38 PM



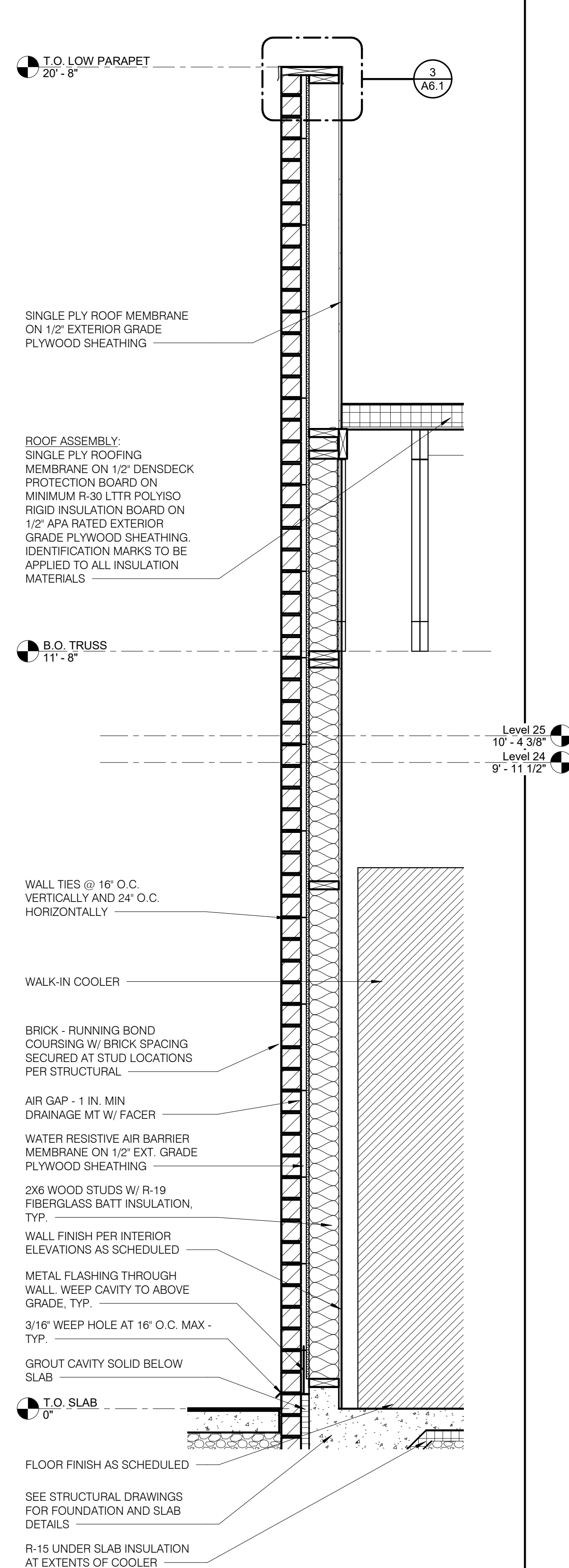
**TYPICAL WALL SECTION** 3/4" = 1'-0"



**WALL SECTION AT DRIVE THRU WINDOW** 3/4" = 1'-0"

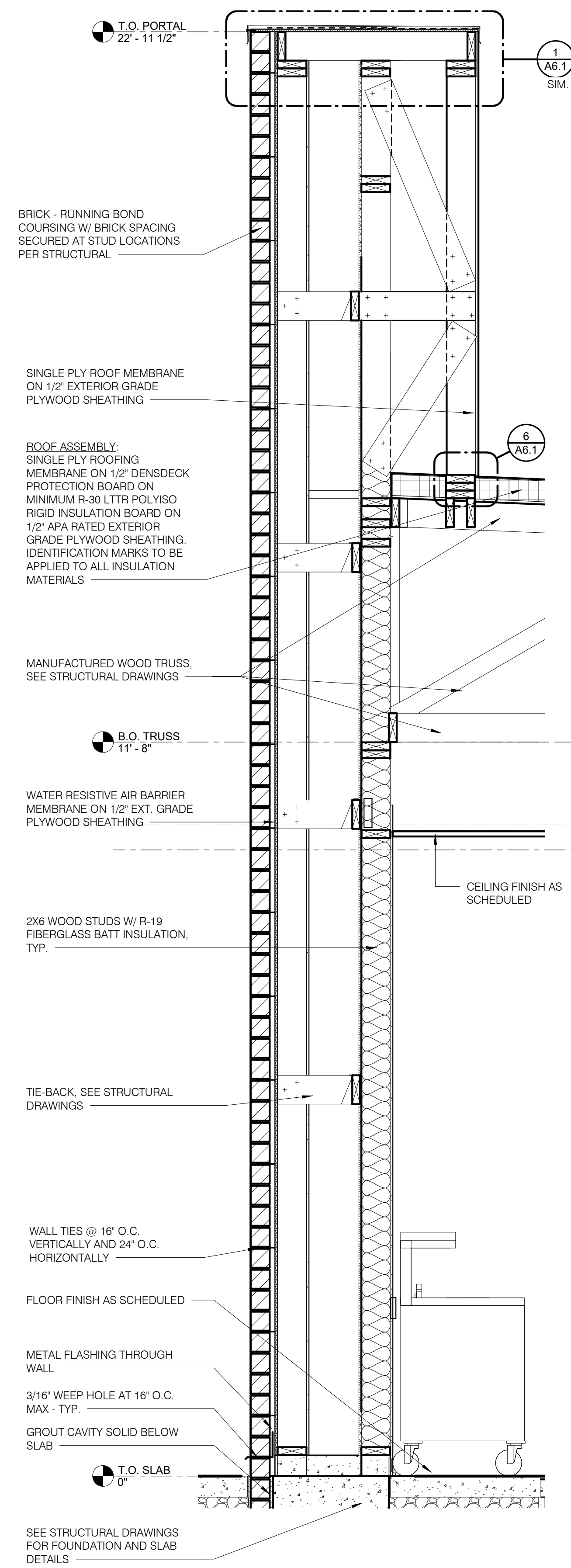


**WALL SECTION AT DINING WINDOWS**  $3/4" = 1'-0"$

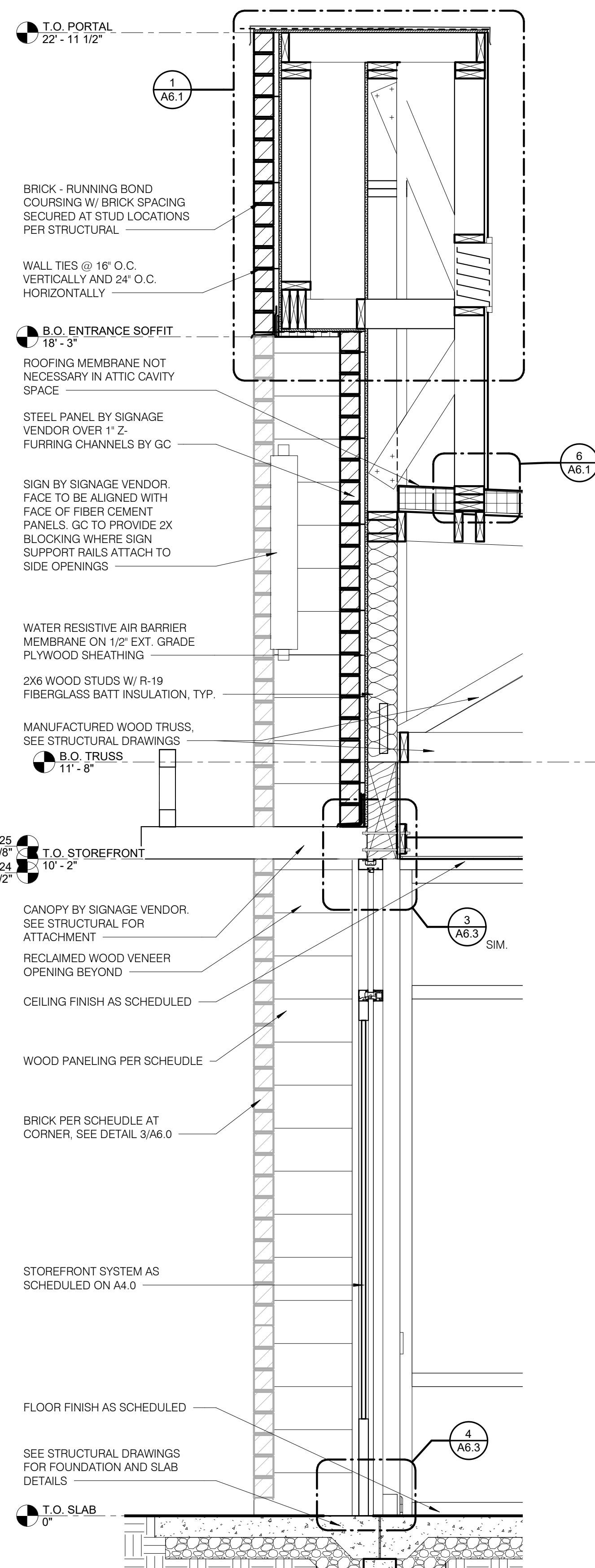


**WALL SECTION AT COOLER WALL**  $3/4" = 1'-0"$

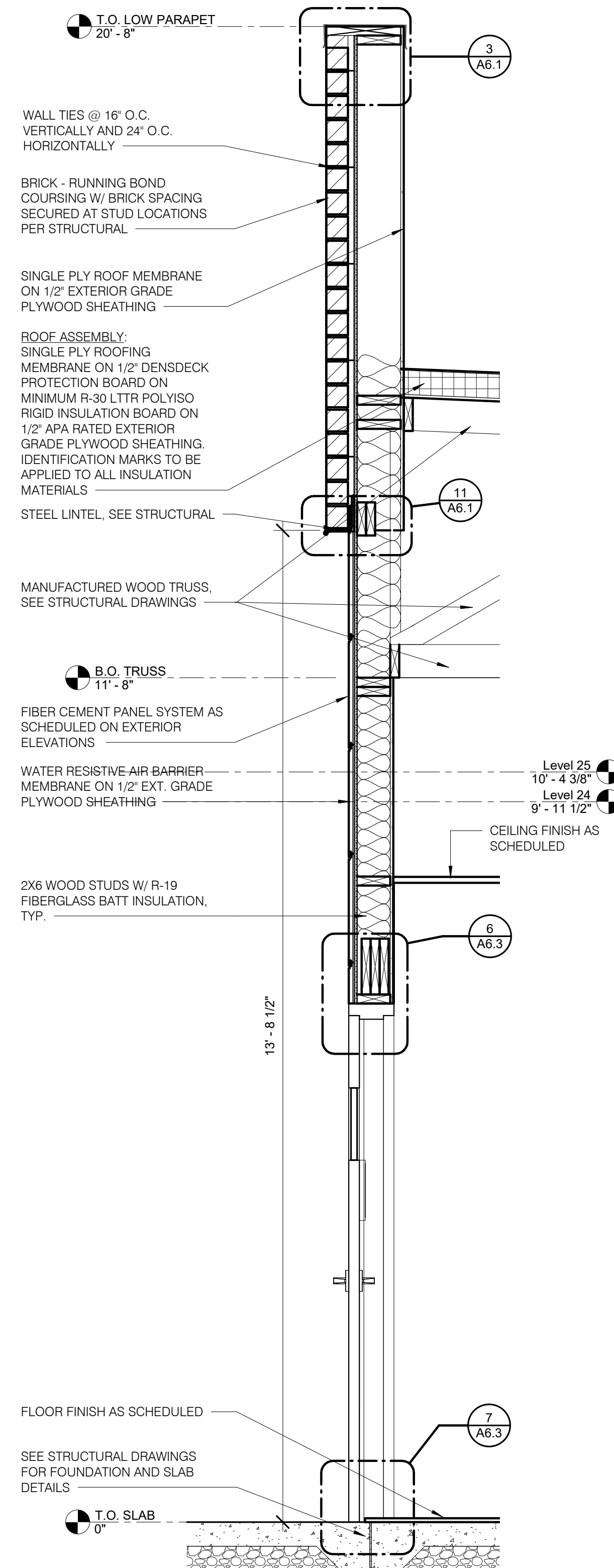




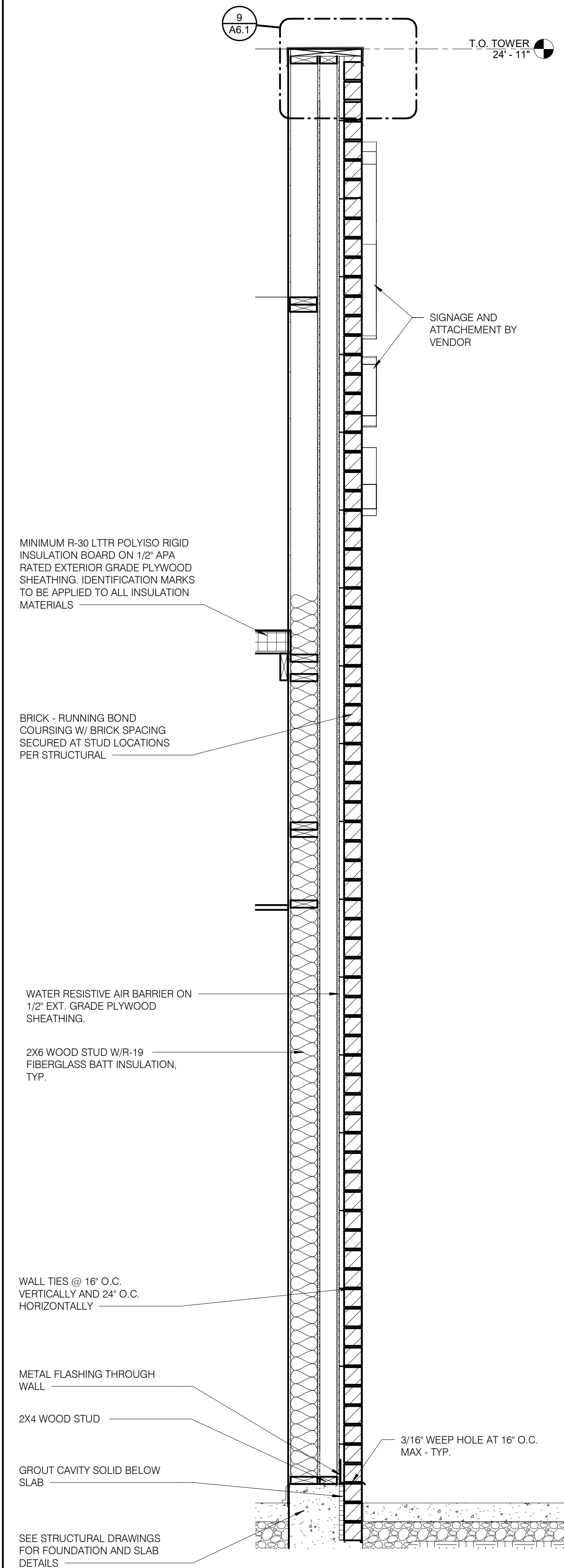
**WALL SECTION AT ENTRANCE PORTAL**  $3/4" = 1'-0"$



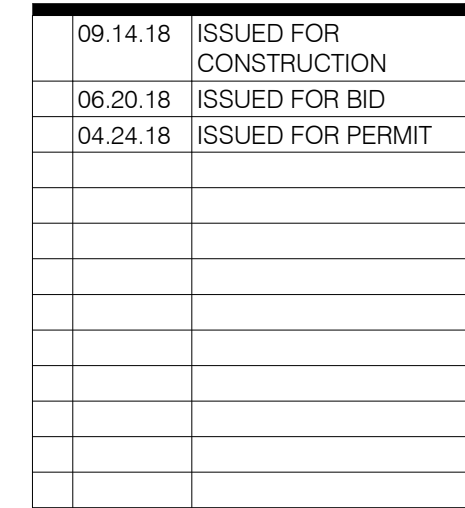
<b>WALL SECTION AT ENTRANCE DOORS</b>	$3/4" = 1'-0"$	<b>C</b>
---------------------------------------	----------------	----------



<b>WALL SECTION AT SERVICE DOOR</b>	$3/4" = 1'-0"$	<b>B</b>
-------------------------------------	----------------	----------



**WALL SECTION @ TOWER**  $3/4" = 1'-0"$



TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

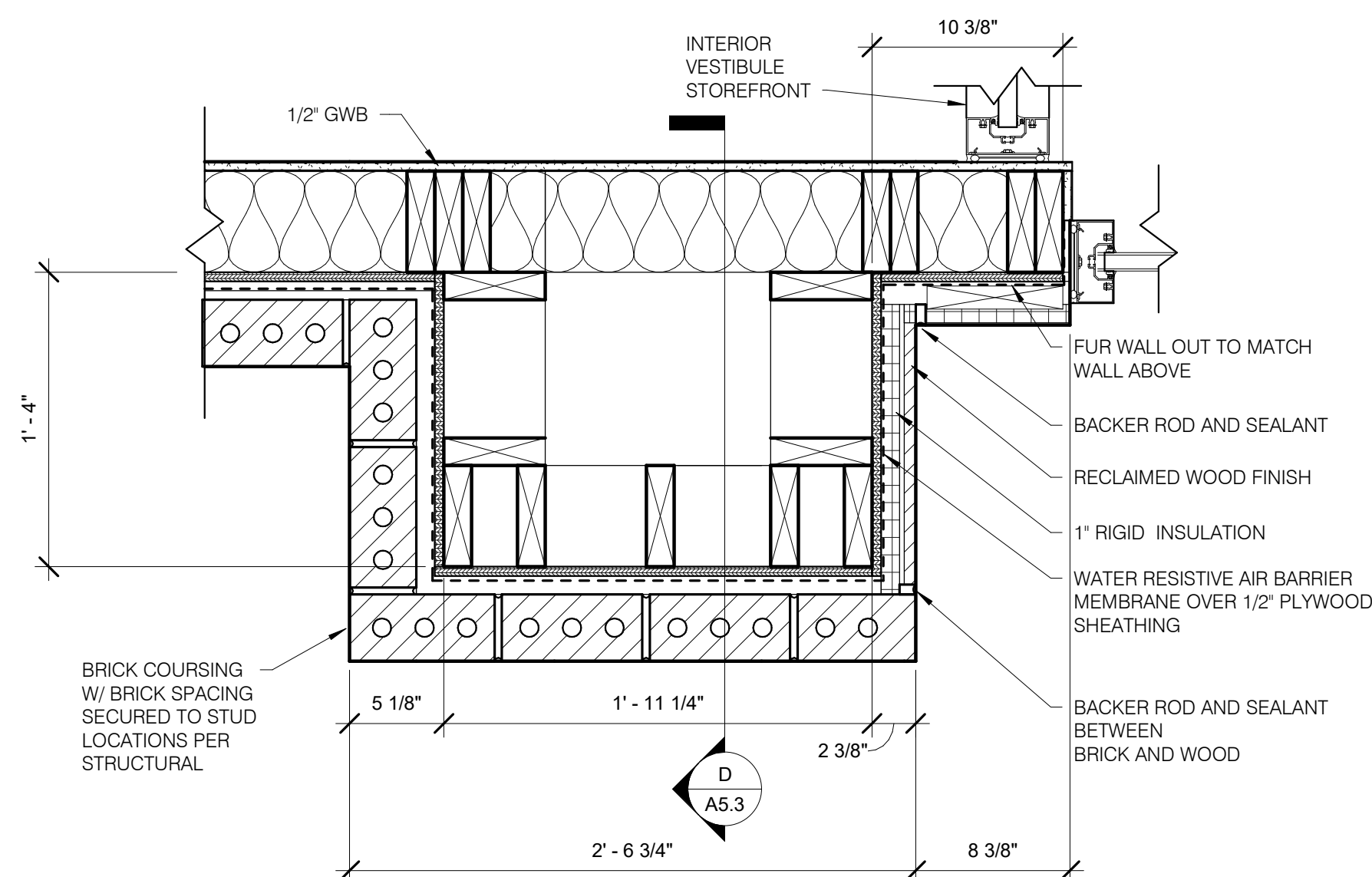


## A5.4

PLOT DATE: 9/13/2018 4:10:40 PM







Technical cross-section diagram of a wall assembly. The diagram shows a vertical wall section with various layers and components. At the top, a window or door frame is shown with a label 'STOREFRONT SYSTEM' pointing to it. Below the frame, a 'BACKER ROD AND SEALANT, TYP.' is indicated. The main wall body consists of several layers: 'R-19 FIBERGLASS BATT INSULATION' (represented by wavy lines), 'WATER RESISTIVE AIR BARRIER MEMBRANE OVER 1/2" PLYWOOD SHEATHING' (a thin line), and 'BRICK COURSING W/ BRICK SPACING SECURED TO STUD LOCATIONS PER STRUCTURAL' (represented by circles and diagonal hatching). A '1/2" GWB' (Gypsum Wall Board) is shown on the right side of the wall. The bottom of the wall is shown with a foundation or base layer, also with hatching and circles.

STOREFRONT SYSTEM

BACKER ROD AND SEALANT, TYP.

R-19 FIBERGLASS BATT INSULATION

WATER RESISTIVE AIR BARRIER MEMBRANE OVER 1/2" PLYWOOD SHEATHING

BRICK COURSING W/ BRICK SPACING SECURED TO STUD LOCATIONS PER STRUCTURAL

1/2" GWB

WATER RESISTIVE AIR BARRIER  
MEMBRANE OVER 1/2  
PLYWOOD SHEATHING

BRICK COURSING W/  
BRICK SPACING SECURED TO  
STUD LOCATIONS PER  
STRUCTURAL

THIN BRICK AT BACK TOWER

TOWER CORNER AT THIN BRICK N.T.S.

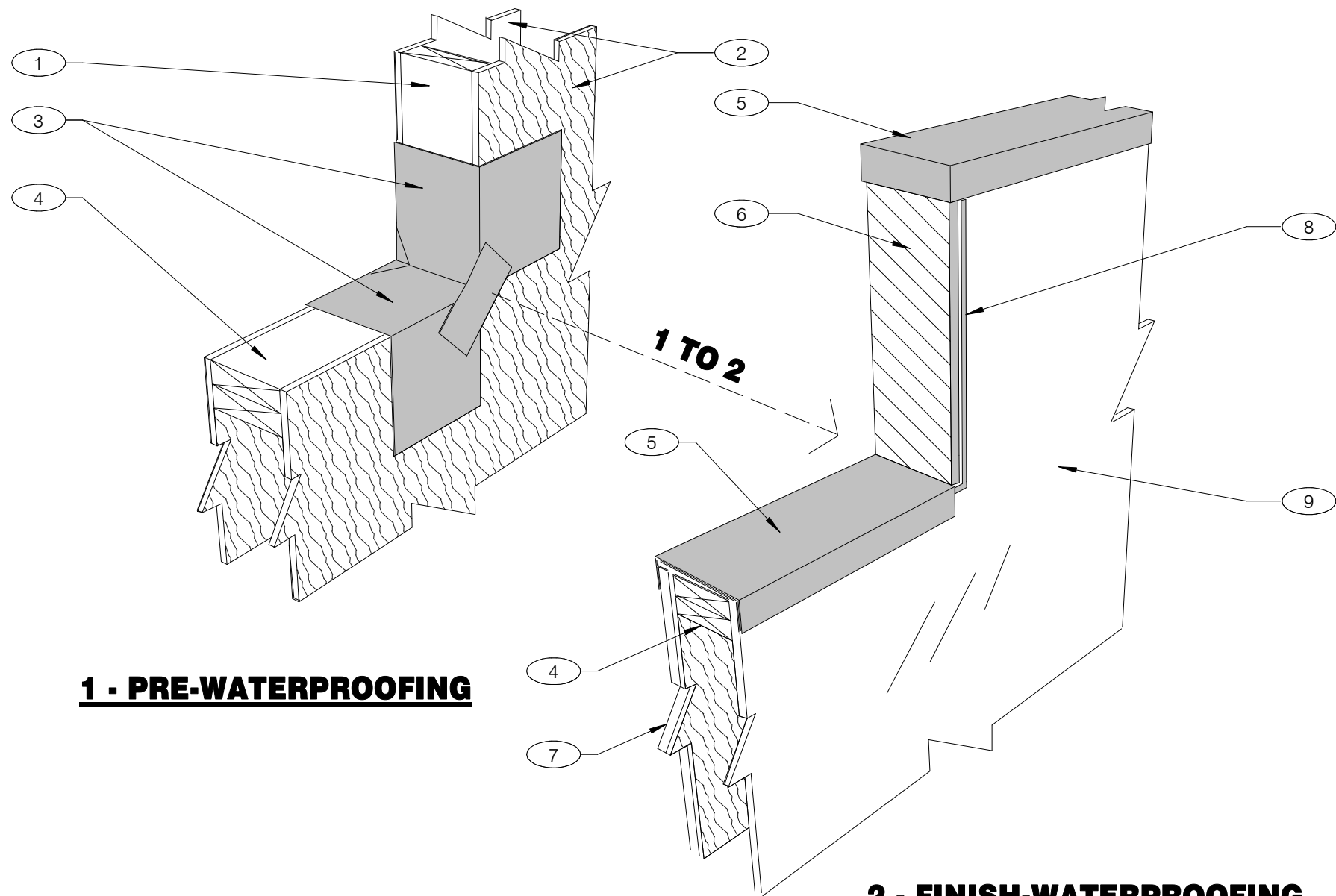
CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



## A6.0

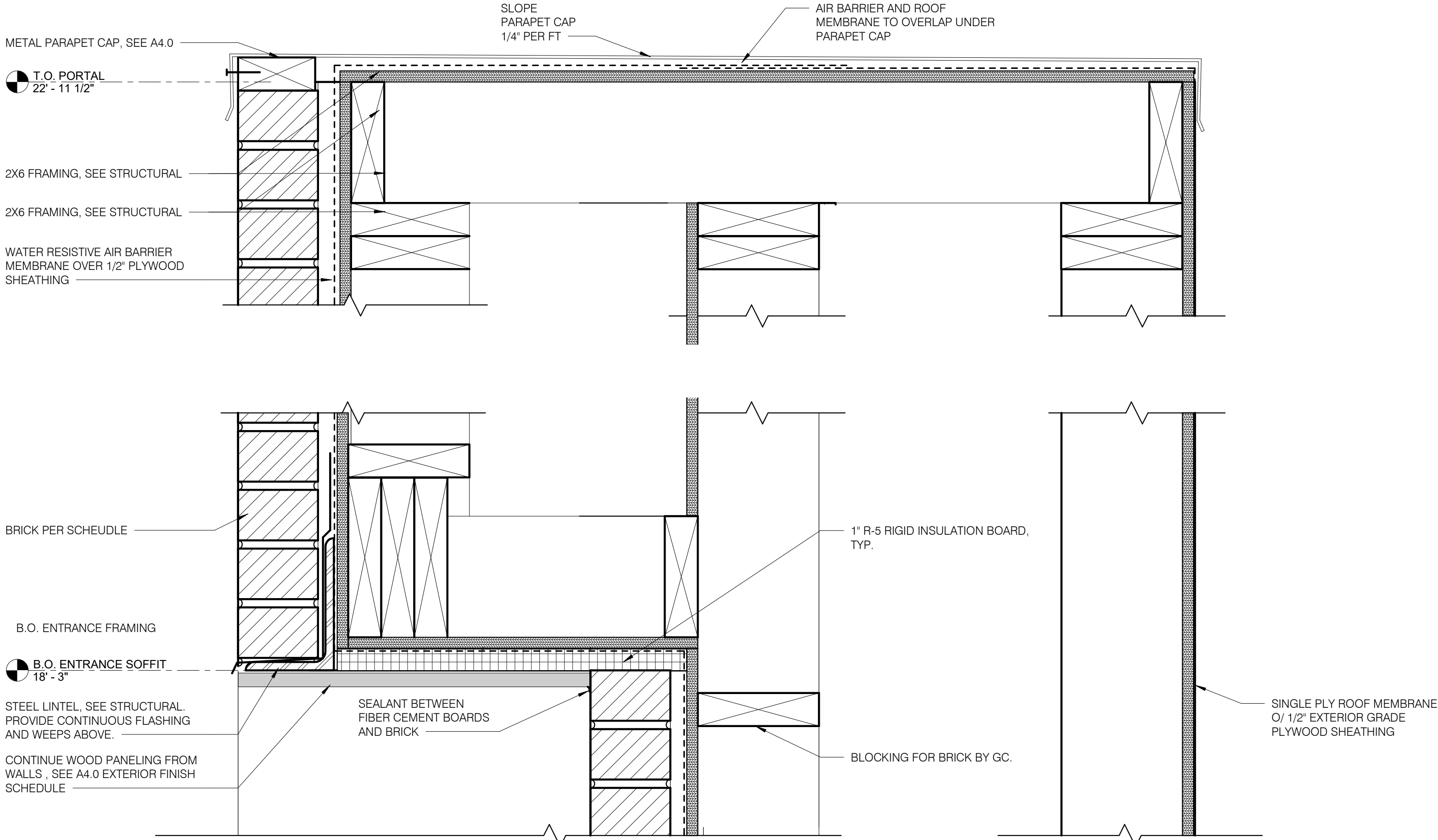
PLOT DATE: 9/13/2018 4:10:40 PM



### NOTES

- 2X WOOD STUDS
- PLYWOOD SUBSTRATE FOR EXTERIOR WALLS
- FLASHING TAPE AT ALL VERTICAL PARAPET TRANSITIONS. EXTEND TAPE 12" OUTWARD AND UPWARD FROM CORNER AS SHOWN. LAP CORNERS WITH ANGLED TAPE AS SHOWN TO INSURE FULL COVERAGE AT CORNERS
- DOUBLE 2X TOP PLATE.
- PAINTED 24 GAUGE PARAPET COPING. SLOPE 1/4:1 TOWARDS ROOF WITH FIBER CANT STRIPS UNDER COPING. LAP FRONT AND BACK EDGE 2" DOWN VERTICAL FACE. LAP EXPOSED COPING EDGE EXPOSED ENDS AT VERTICAL PARAPET TRANSITION.
- WRAP 1" THICK EIFS ONTO VERTICAL FACE OF PARAPET TRANSITION
- BRICK FINISH ON OUTER SURFACE OF EXTERIOR WALL. THICKNESS PER THE EXTERIOR ELEVATIONS ON SHEET A4.0
- TERMINATION BAR AT VERTICAL TRANSITION OF EIFS AND MEMBRANE ROOFING. SEAL VERTICAL GAP BETWEEN TERMINATION BAR AND EIFS PER ROOFING MANUFACTURER SPECIFICATIONS.
- PVC ROOFING MEMBRANE ON BACKSIDE OF PARAPET.

IMPORTANT: ONLY FASTEN PARAPET COPING ALONG THE FRONT AND BACK VERTICAL EDGE. NEVER ON TOP OF COPING.



### PARAPET CAP & TRANSITION

N.T.S.

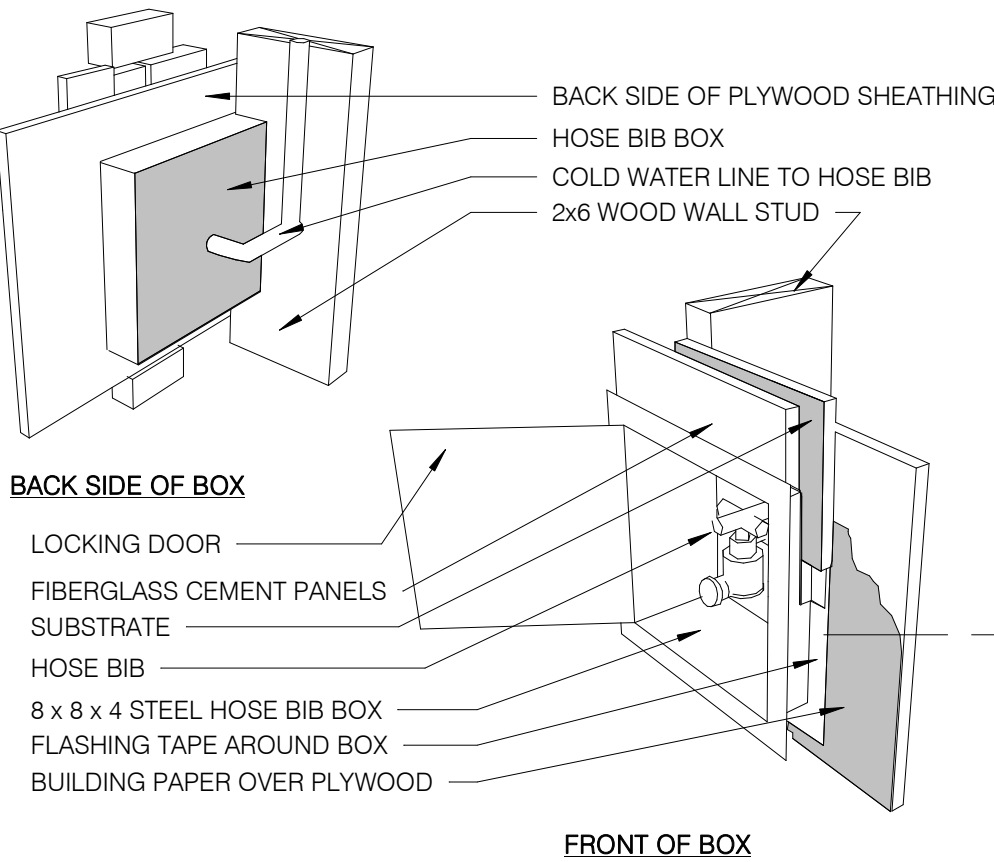
2

### ENTRANCE PORTAL HEAD DETAIL

3" = 1'-0"

1

NOTE: HOSE BIB BOX SHALL BE ACUDOR-ARVB OR EQUAL



### HOSE BIB BOX

N.T.S.

7

### ENTRANCE PORTAL ROOF

3" = 1'-0"

6

### CO2 FILL / J-BOX

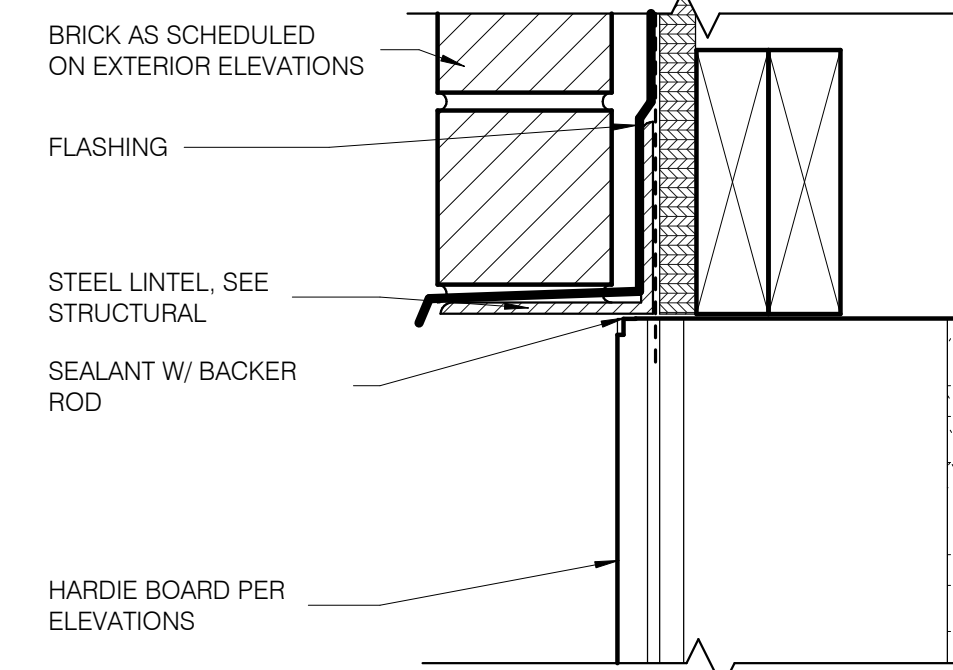
N.T.S.

5

### HEAD AT BRICK SIDING

3" = 1'-0"

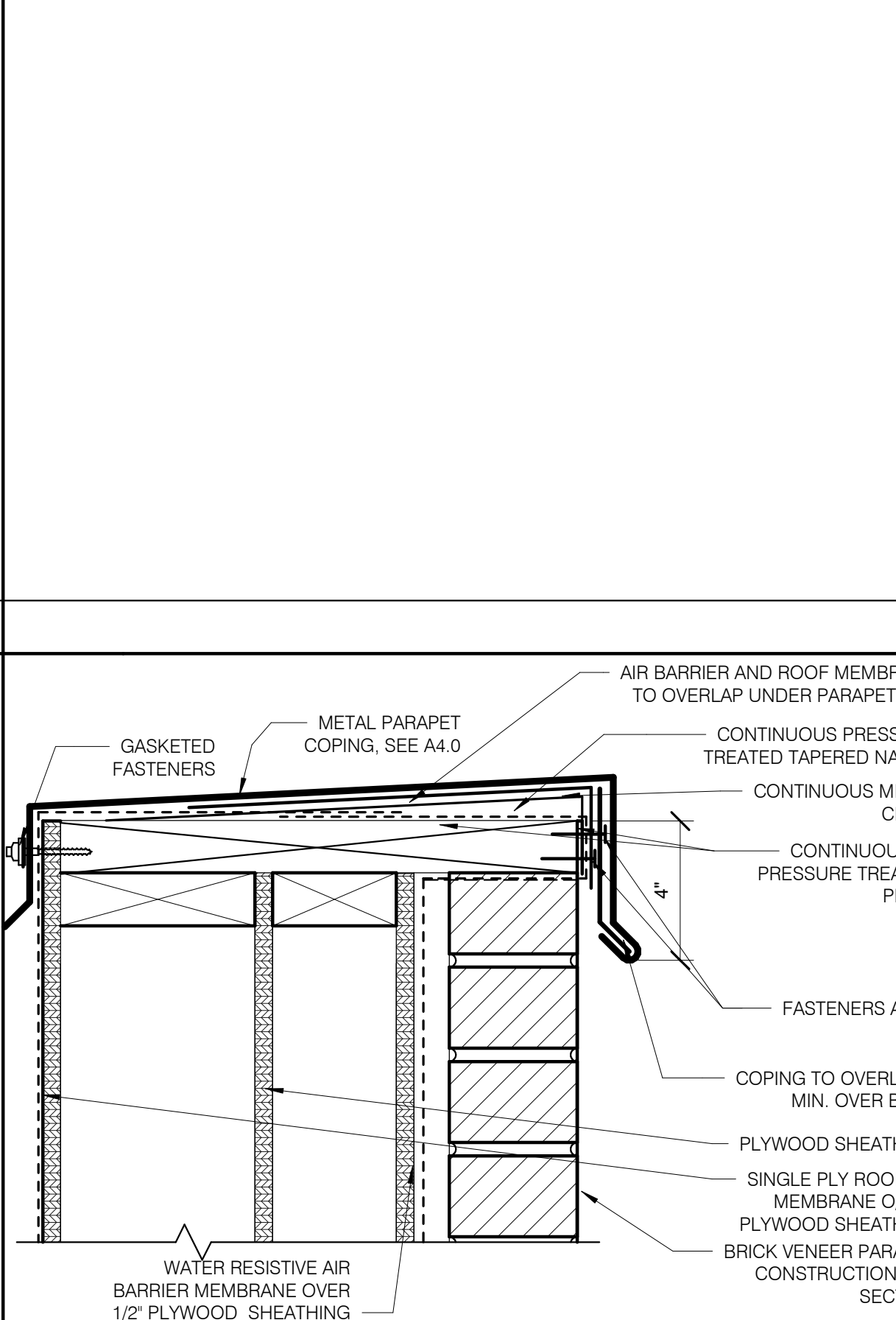
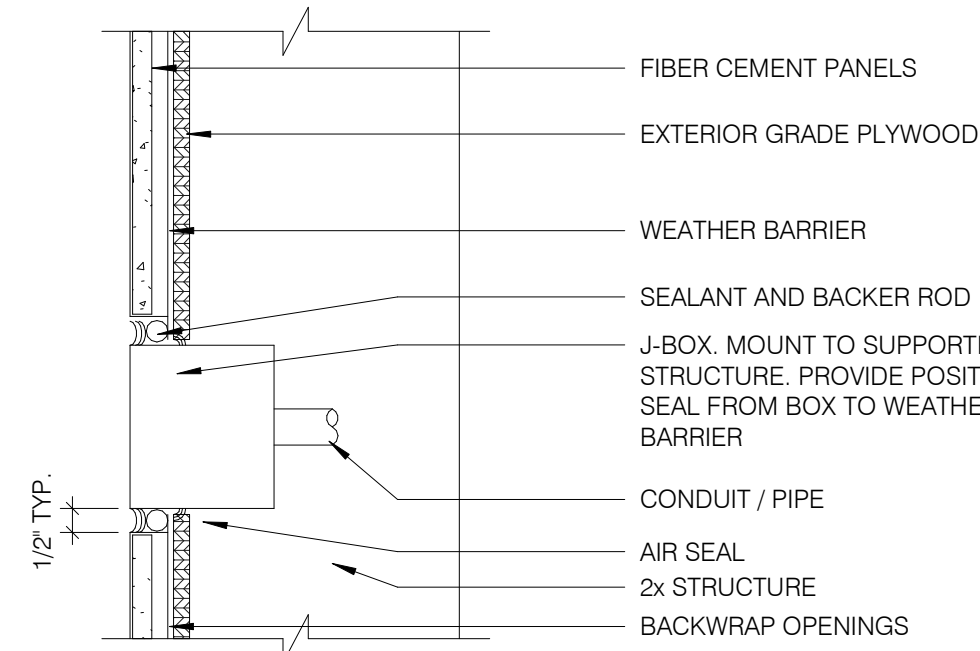
3



### BRICK TO HARDIE TRANSITION

3" = 1'-0"

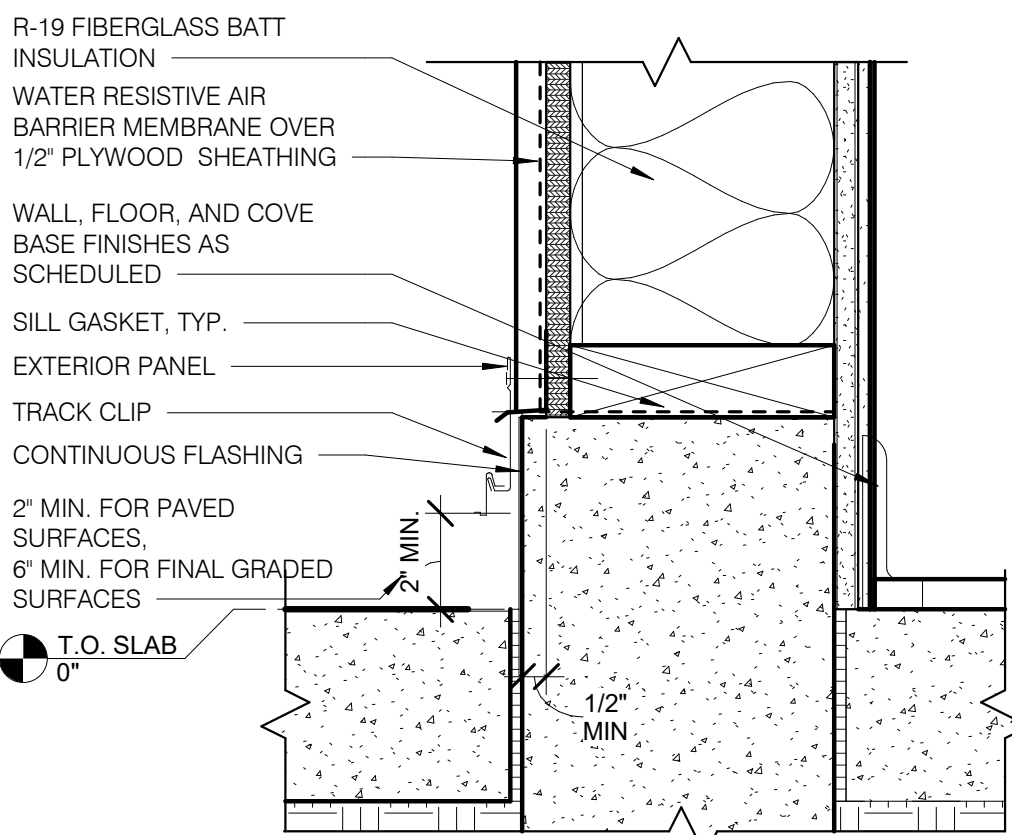
11



### HEAD TO TOWER

N.T.S.

9



### BASE AT WOOD SIDING

3" = 1'-0"

8

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

### TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



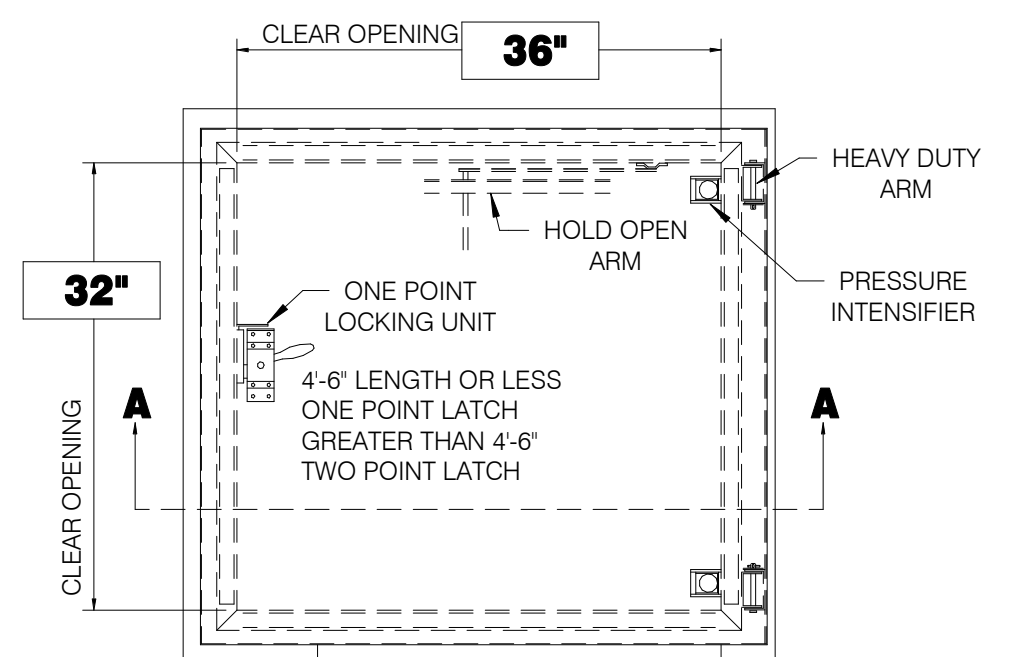
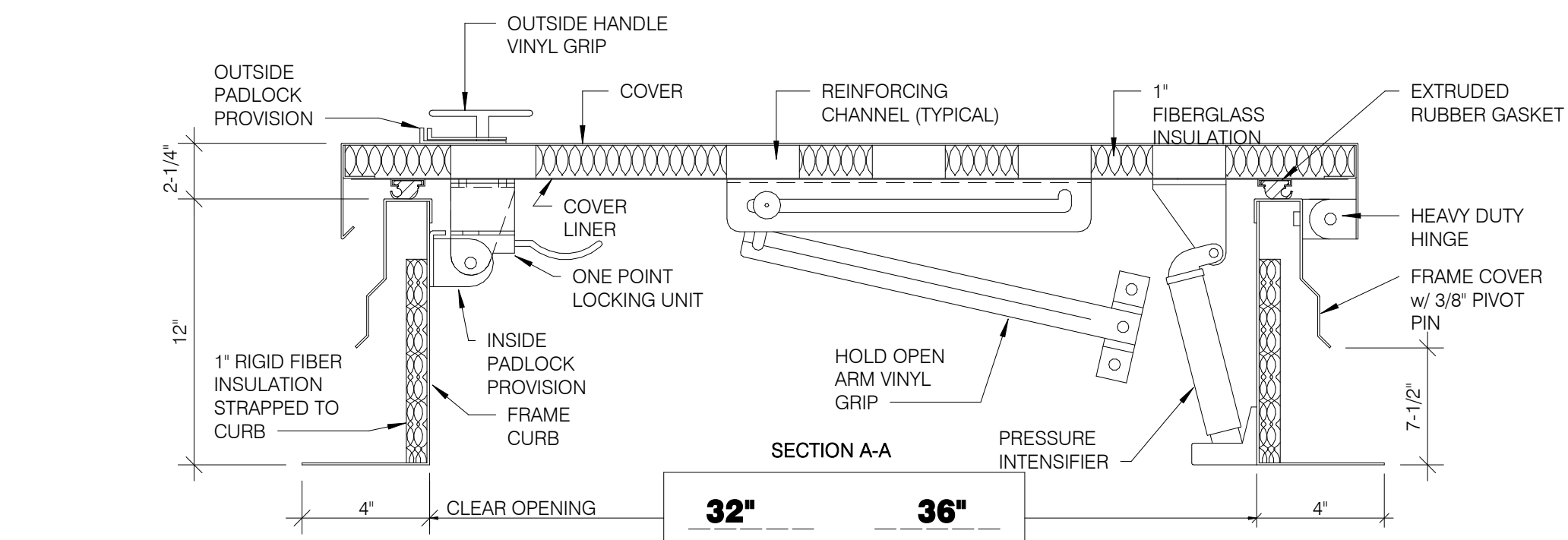
T52  
OPEN KITCHEN  
MODERN EXPLORER

### CONSTRUCTION DETAILS WALL

# A6.1

PLOT DATE: 9/13/2018 4:10:41 PM

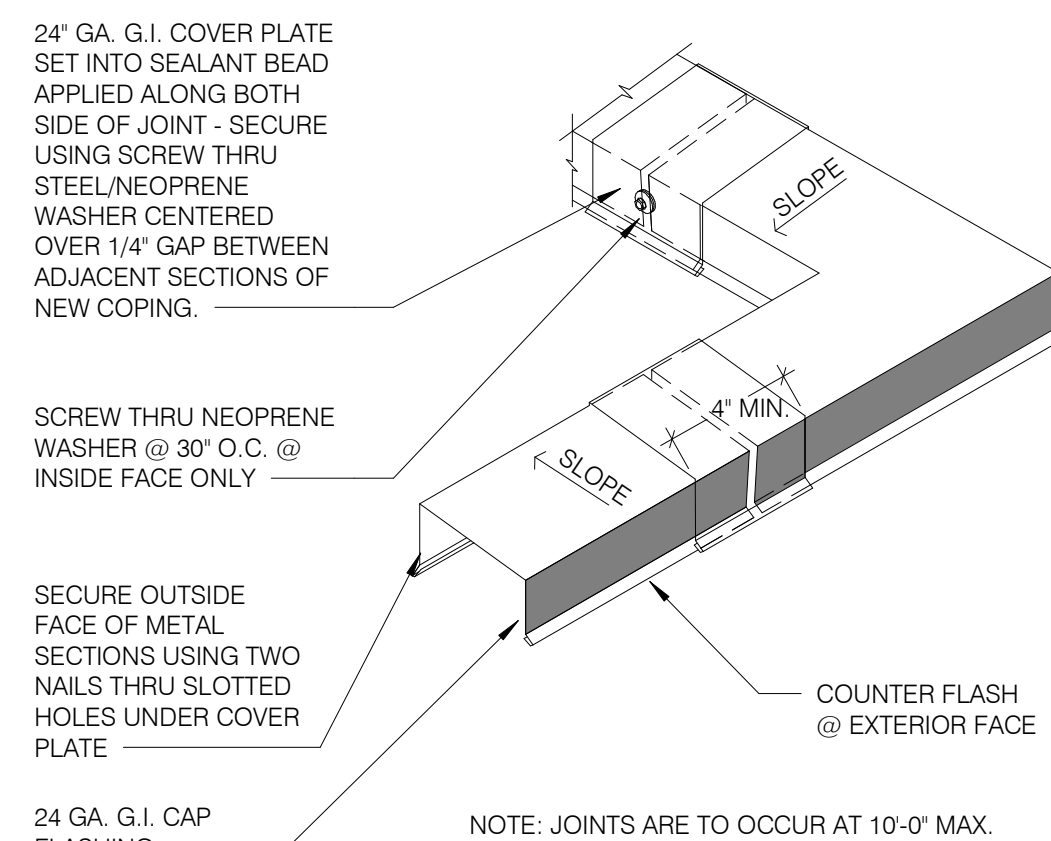




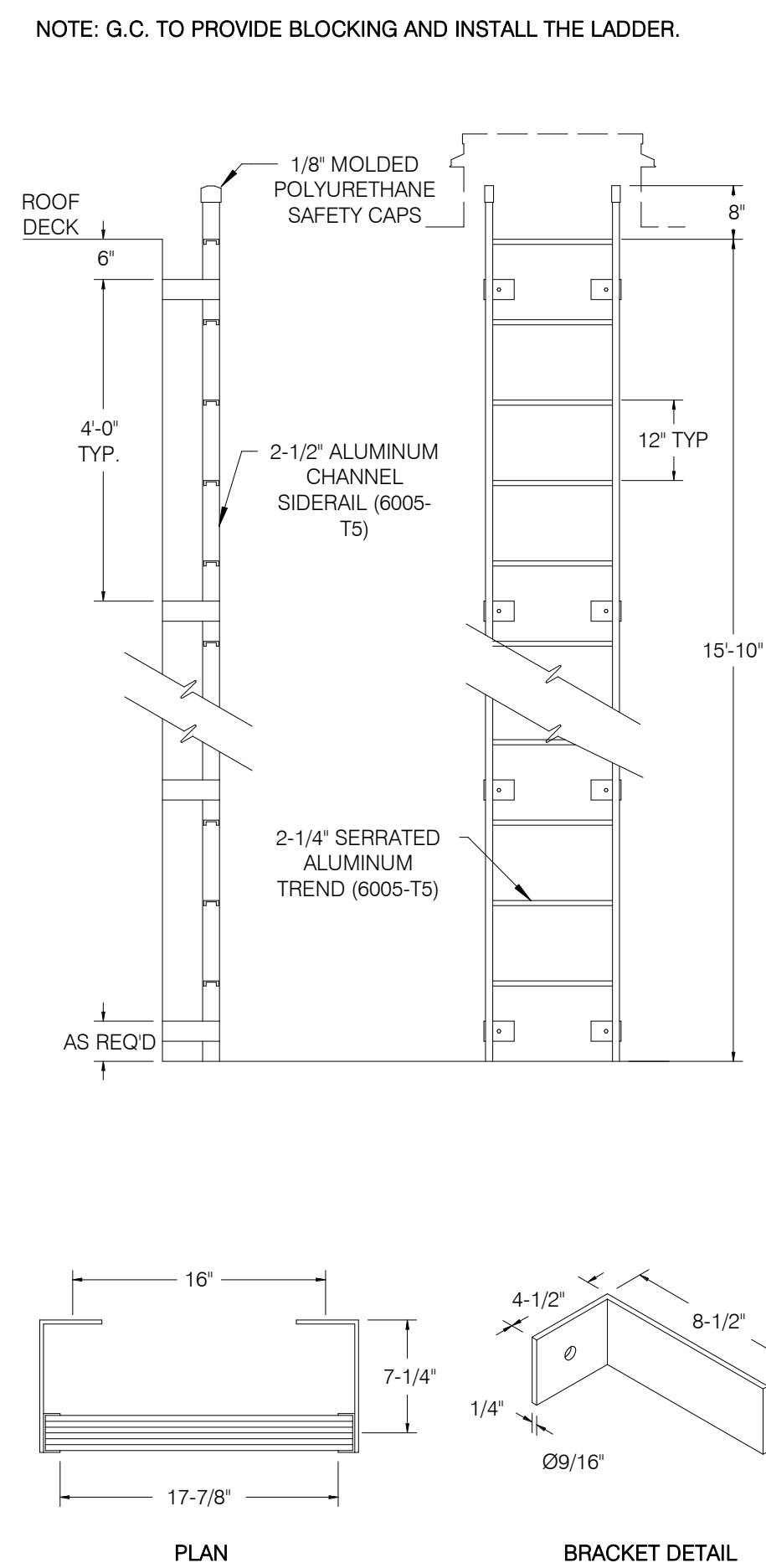
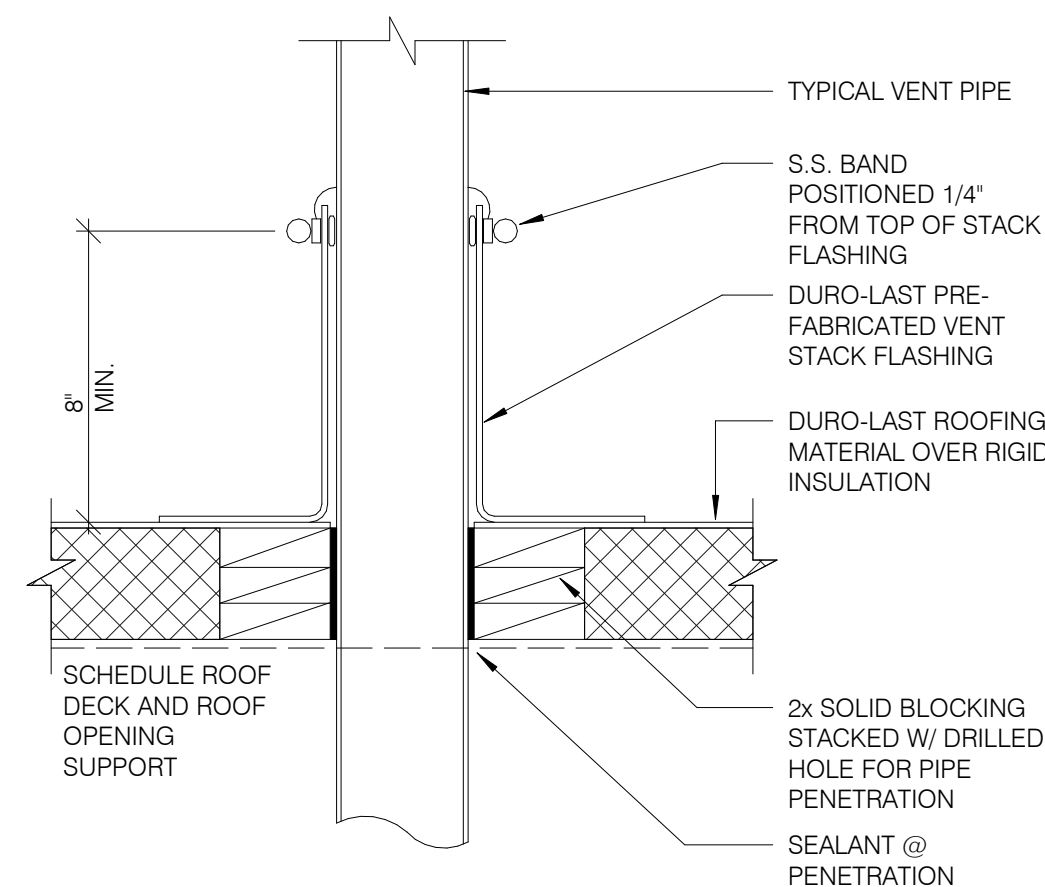
NOTES:

- (1) ALL MOUNTING HARDWARE TO BE SUPPLIED BY OTHERS.  
(2) FOR OPERATING EFFICIENCY, HATCH HARDWARE VARIES BY SIZE.

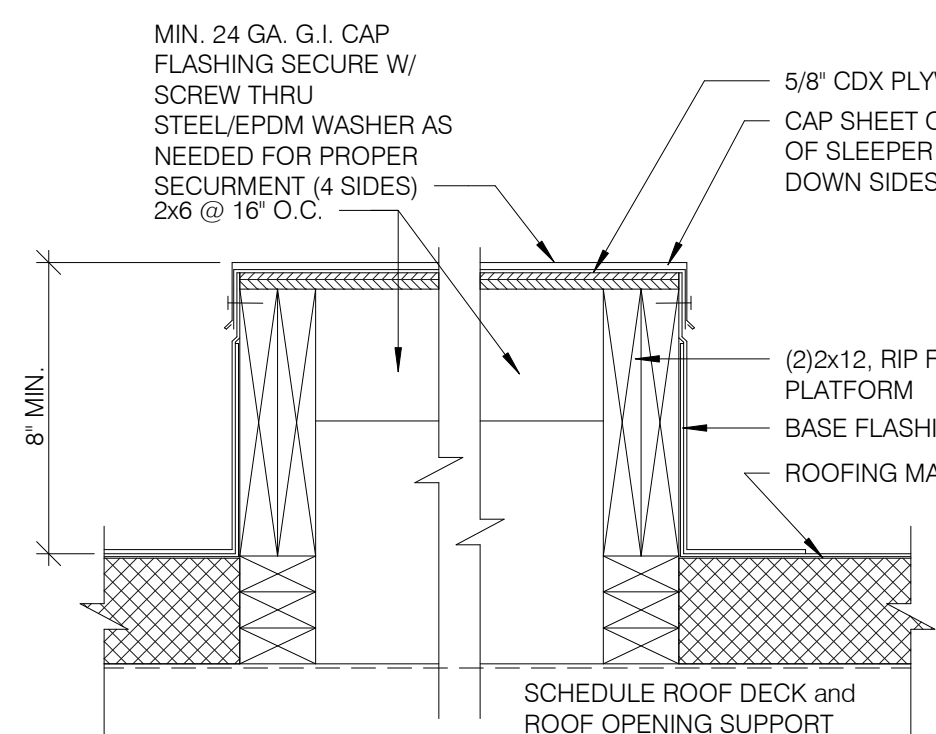
EXAMPLE MODEL#: PH- A/G OPENING SIZE IN FEET-INCHES (PH-G2630)



<b>COPING JOINT</b>	N.T.S.	<b>3</b>
---------------------	--------	----------

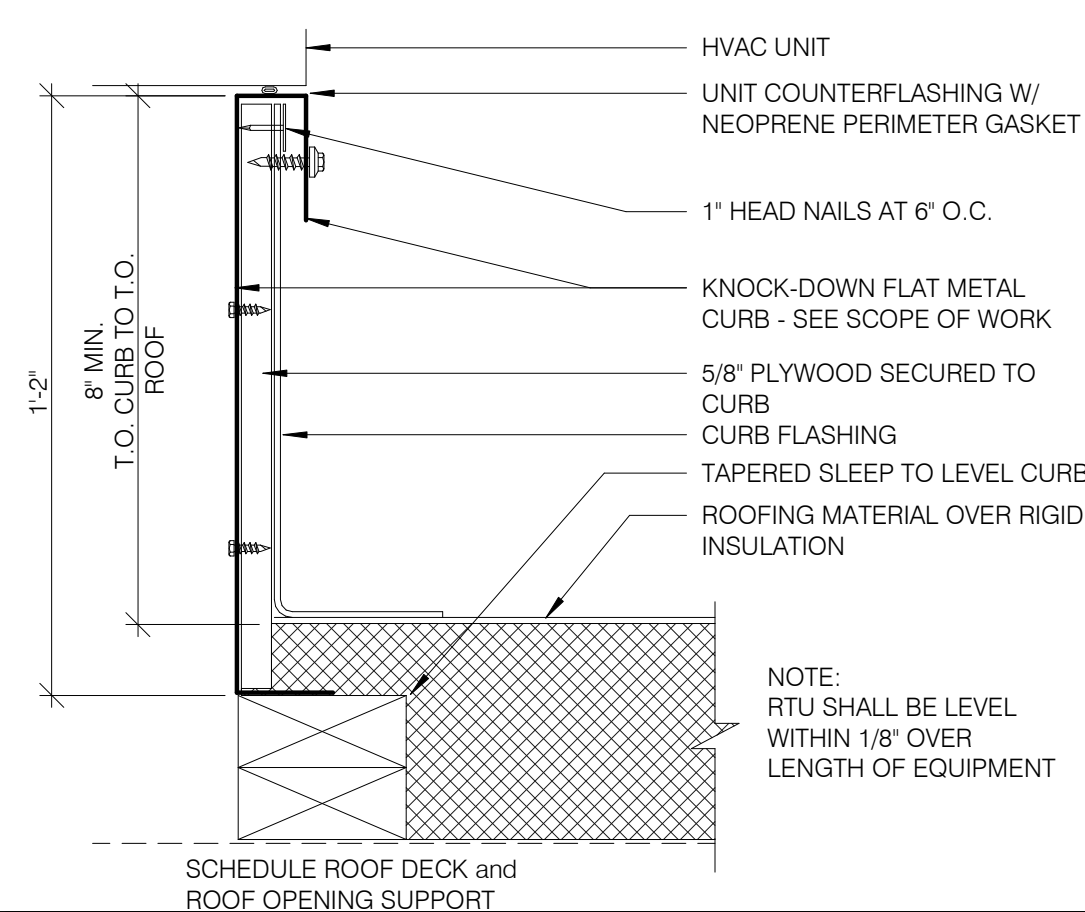


<b>ROOF LADDER</b>	N.T.S.	<b>2</b>
--------------------	--------	----------



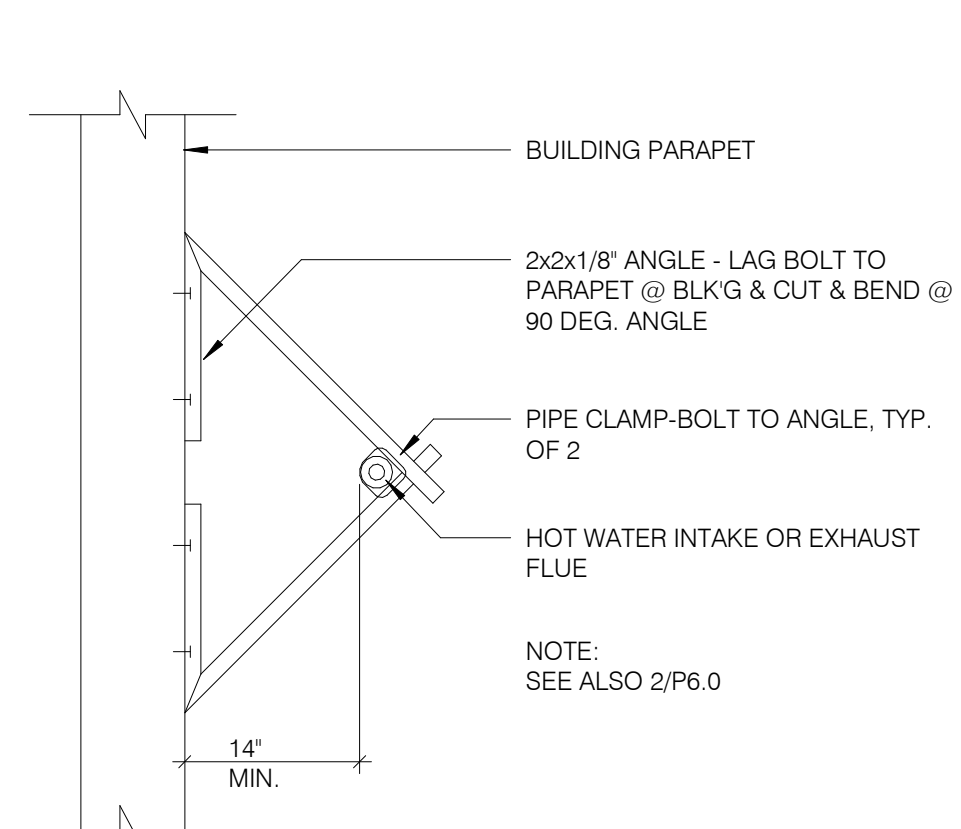
NOTE:  
SET SUPPORTS ON SOLID NON-  
RIBBED NEOPRENE, AND SECURE  
LAG BOLTS THROUGH  
STEEL/NEOPRENE WASHER

<b>EQUIPMENT PLATFORM SUPPORT</b>	3" = 1'-0"	<b>10</b>
-----------------------------------	------------	-----------



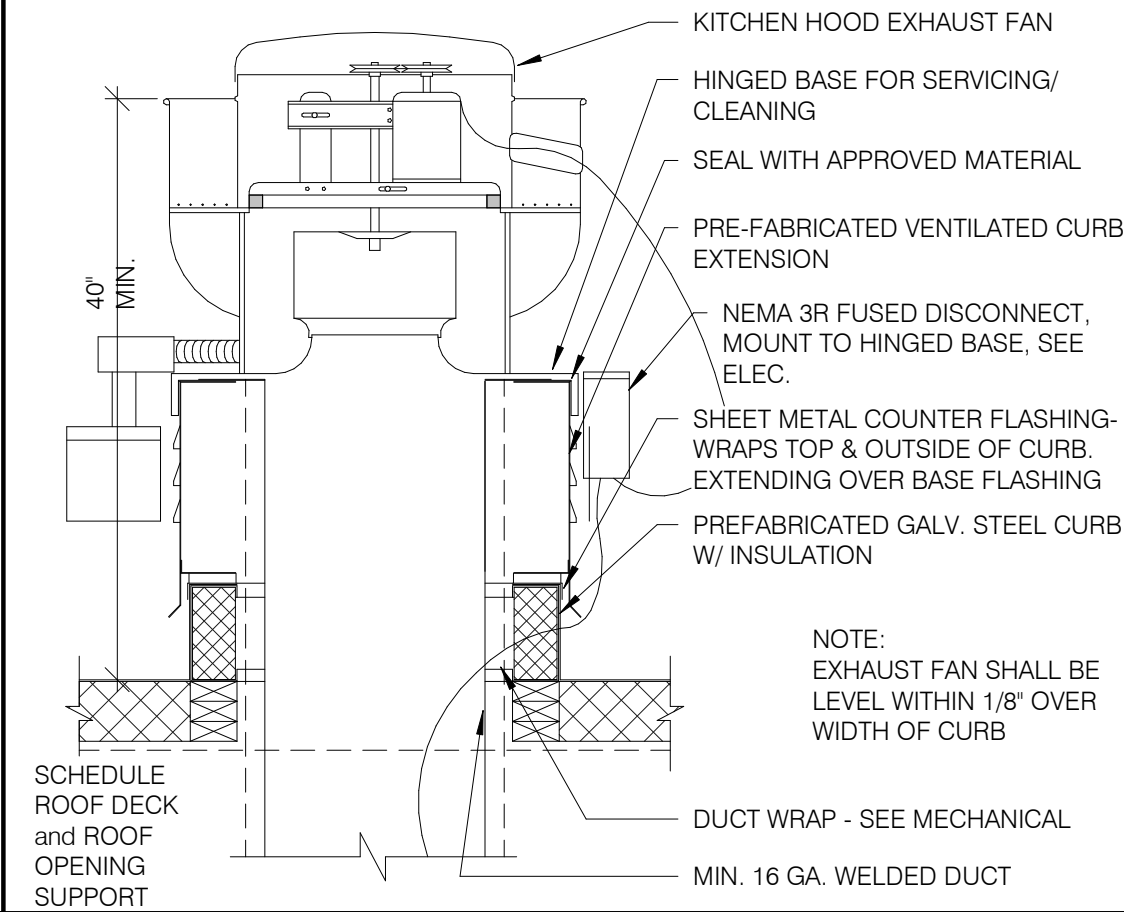
NOTE:  
RTU SHALL BE LEVEL  
WITHIN 1/8" OVER  
LENGTH OF EQUIPMENT

<b>HVAC CURB</b>	3" = 1'-0"	<b>9</b>
------------------	------------	----------



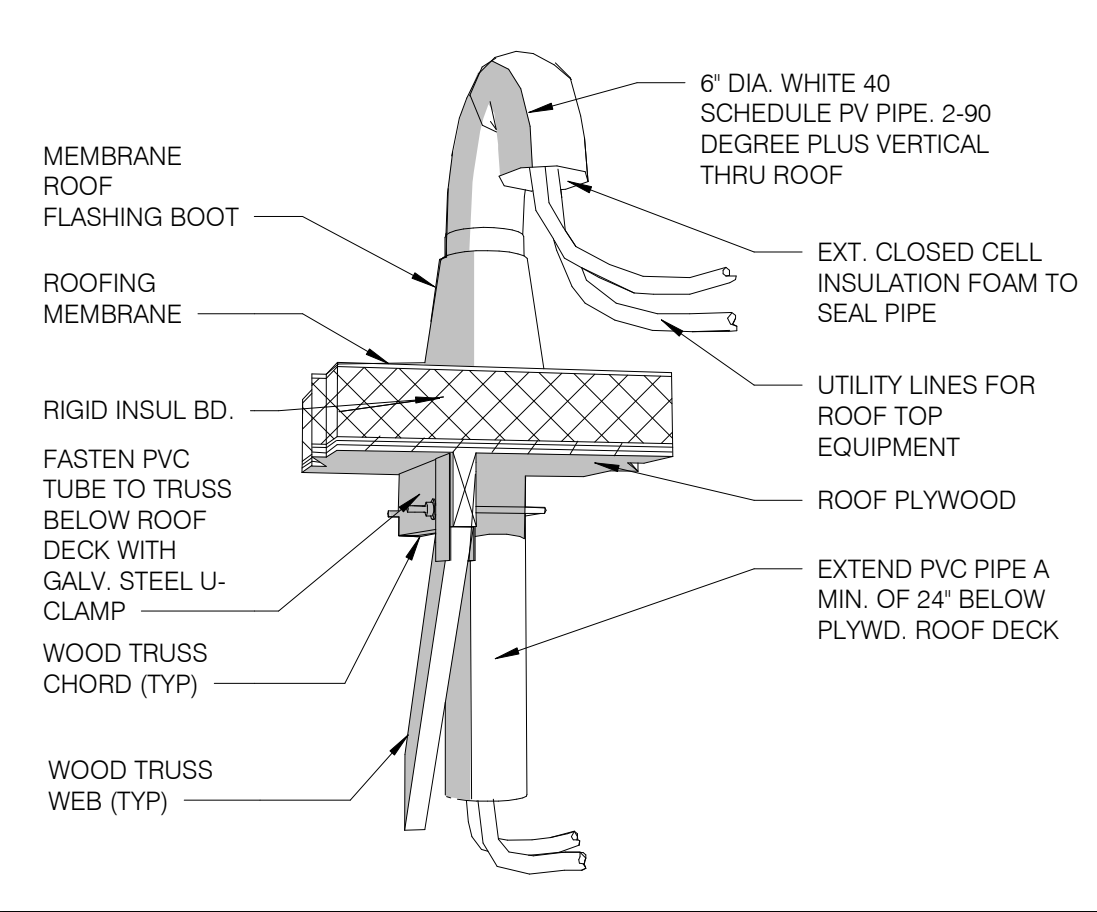
NOTE:  
SEE ALSO 2/P6.0

<b>/ INTAKE PIPE SUPPORT</b>	N.T.S.	<b>8</b>
------------------------------	--------	----------

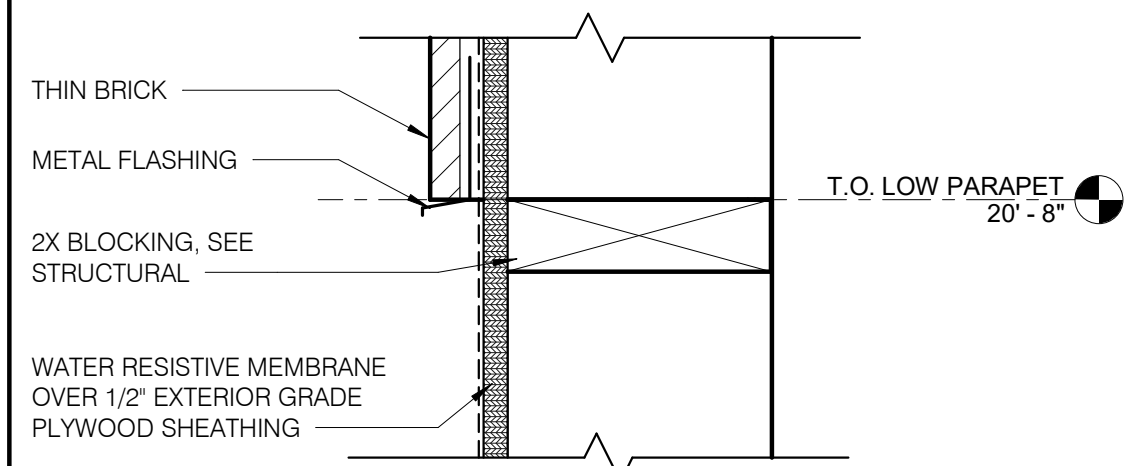
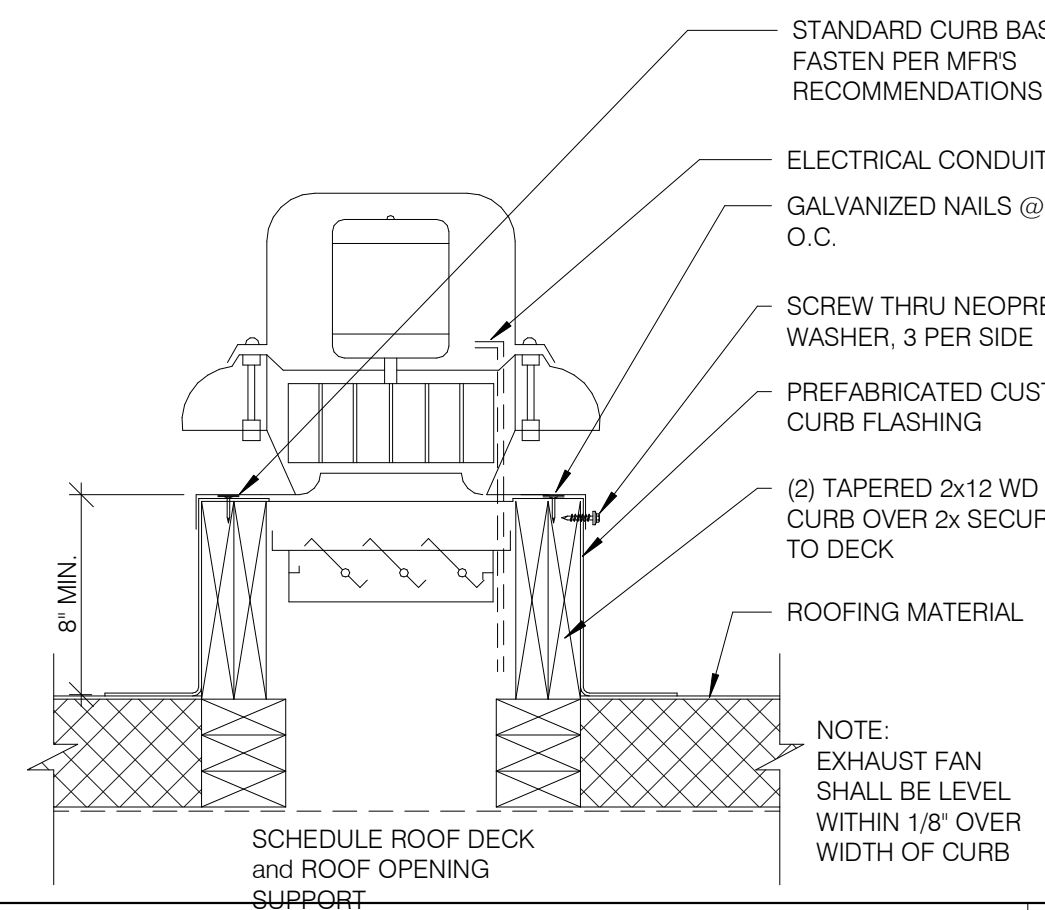


NOTE:  
EXHAUST FAN SHALL BE  
LEVEL WITHIN 1/8" OVER

<b>EXHAUST FAN CURB</b>	N.T.S.	<b>7</b>
-------------------------	--------	----------

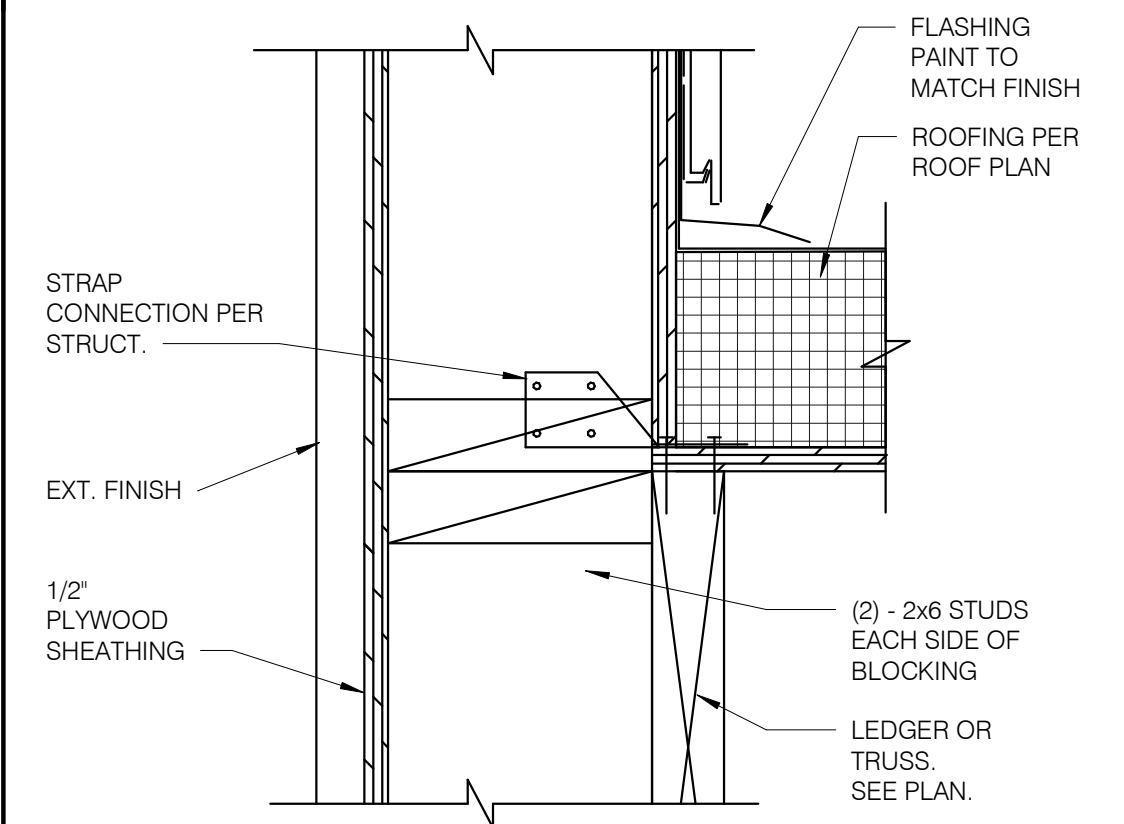


<b>PIPE HOOD</b>	N.T.S.	<b>6</b>
------------------	--------	----------

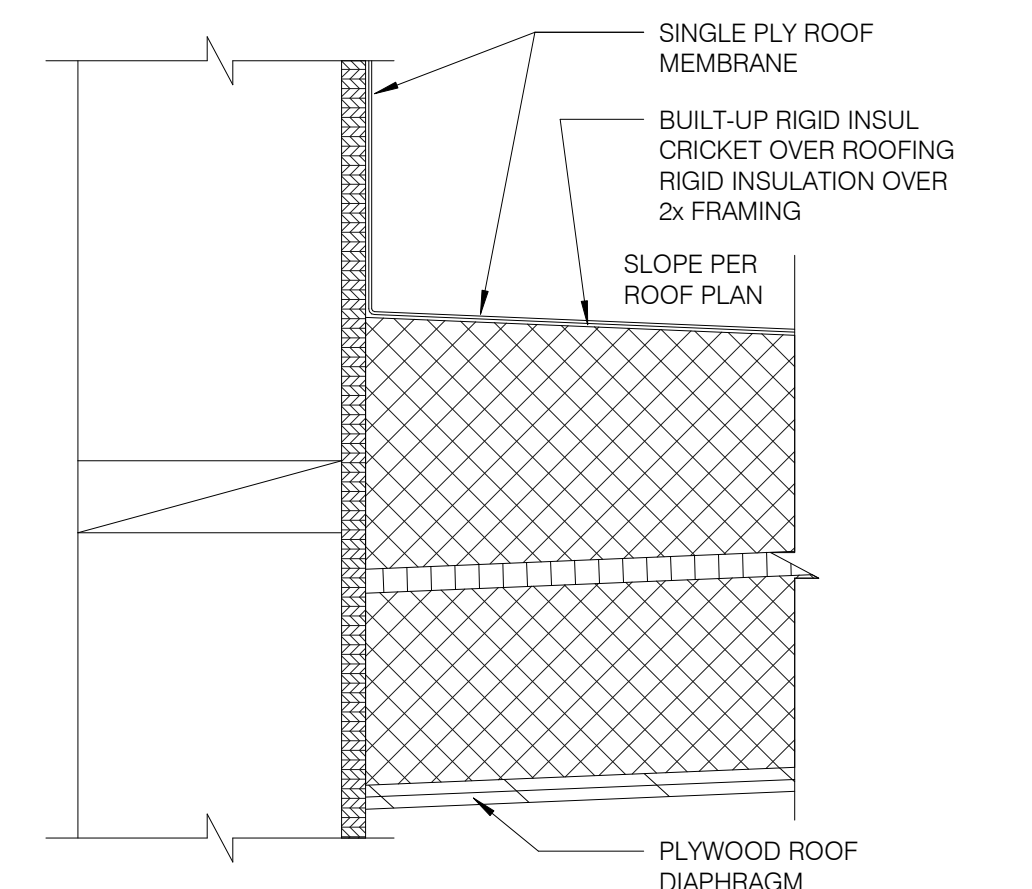
**TOWER THIN BRICK TRANSITION**  $3^{\circ} = 1^{\circ}-0''$  **14**

NOTE:  
EXHAUST FAN  
SHALL BE LEVEL  
WITHIN 1/8" OVER  
WIDTH OF CURB

<b>EXHAUST FAN CURB</b>	N.T.S.	<b>13</b>
-------------------------	--------	-----------



<b>CON. @ STUD AND @ BLOCKING</b>	12" = 1'-0"	<b>12</b>
-----------------------------------	-------------	-----------



<b>CRICKET</b>	3' = 1'-0"	<b>11</b>
----------------	------------	-----------

[illegible]

CONTRACT DATE: 04.02.1

BUILDING TYPE: T52M-

PLAN VERSION: DEC 201

BRAND DESIGNER:

SITE NUMBER: 283405/44523

TORE NUMBER: 2017088.4

TACO BELL

2306 DIX HIGHWAY  
NORCOLN PARK, MI 48146



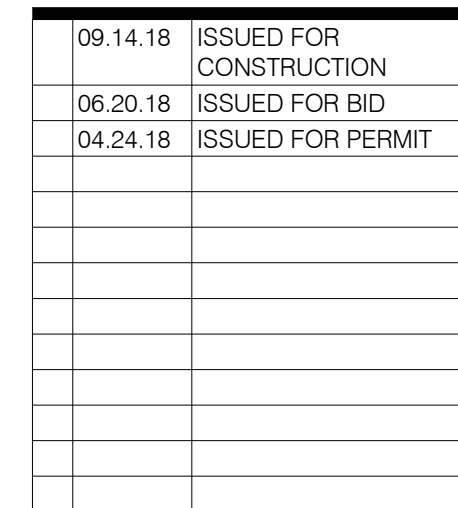
T52

OPEN KITCHEN  
MODERN EXPLORER

## CONSTRUCTION DETAILS ROOF

## A6.2

LOT DATE: 9/13/2018 4:10:42 P



TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

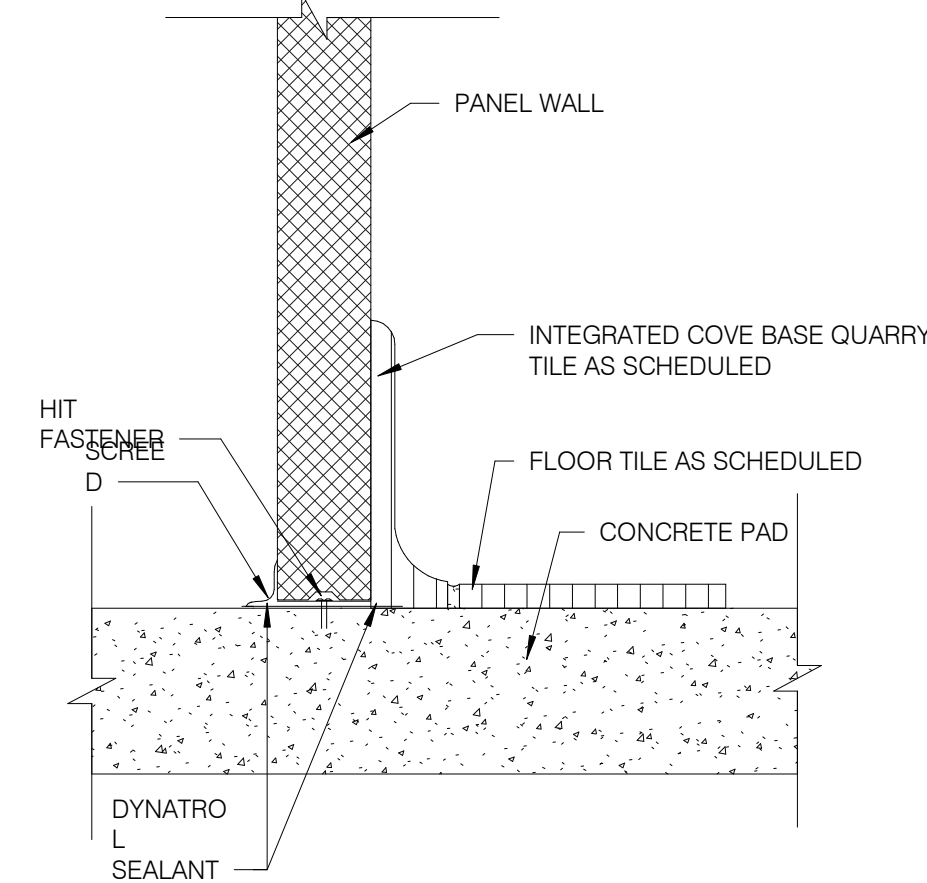
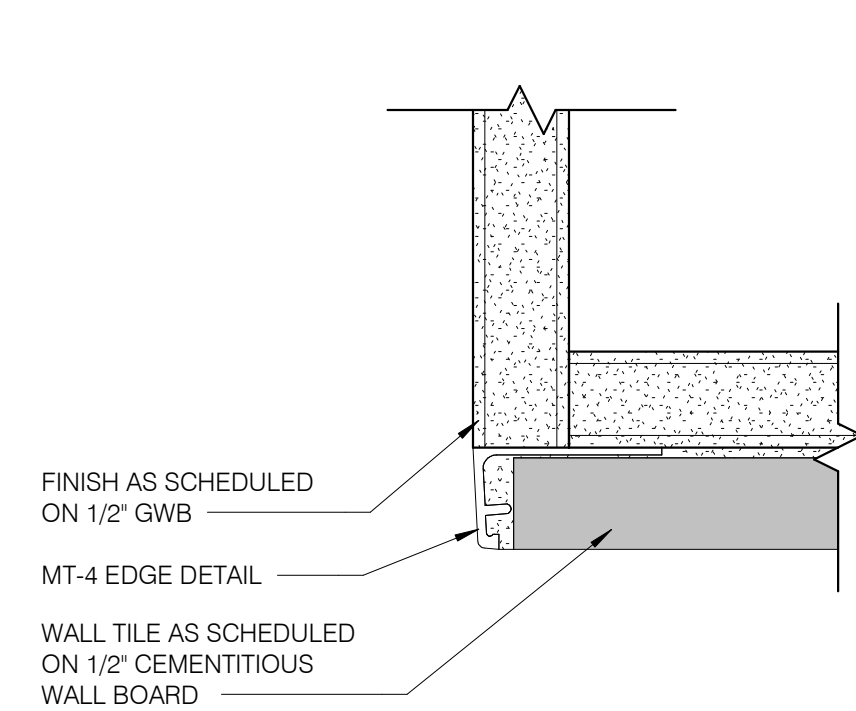
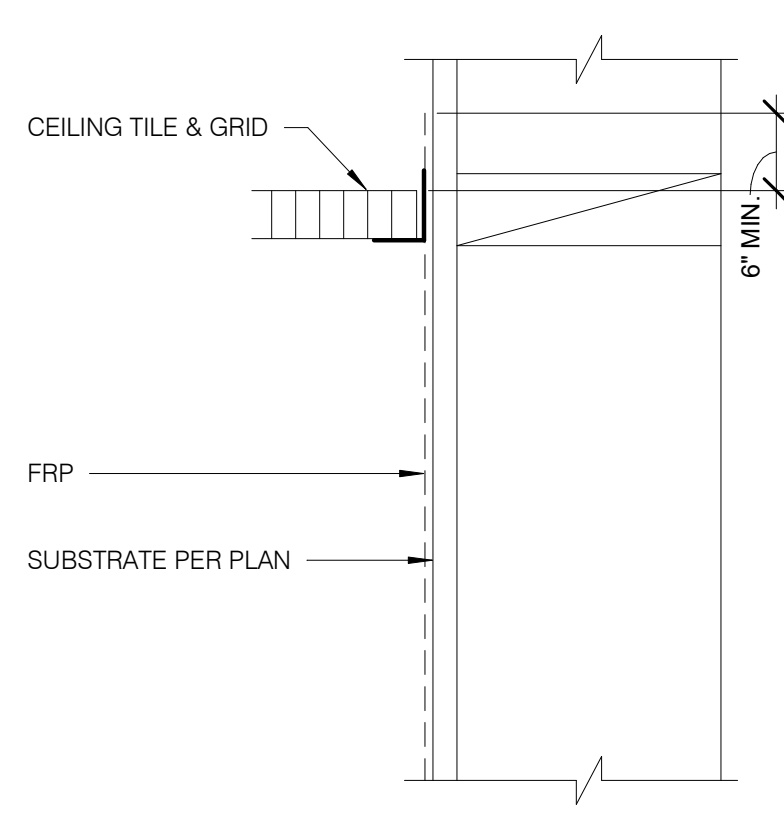
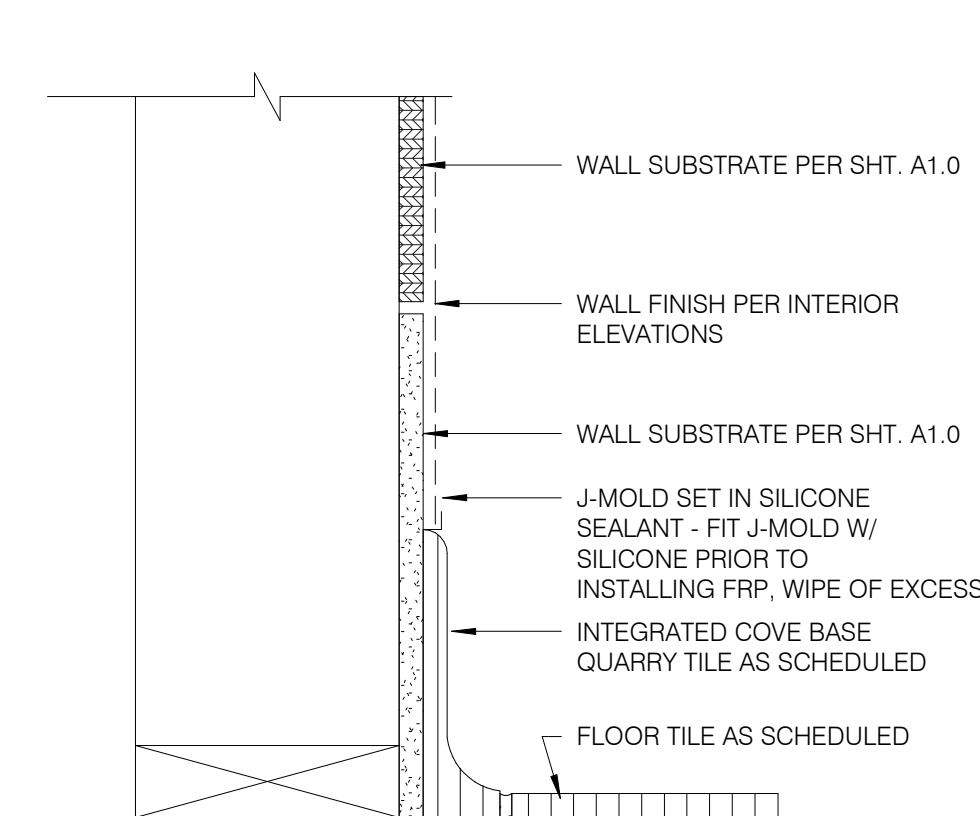
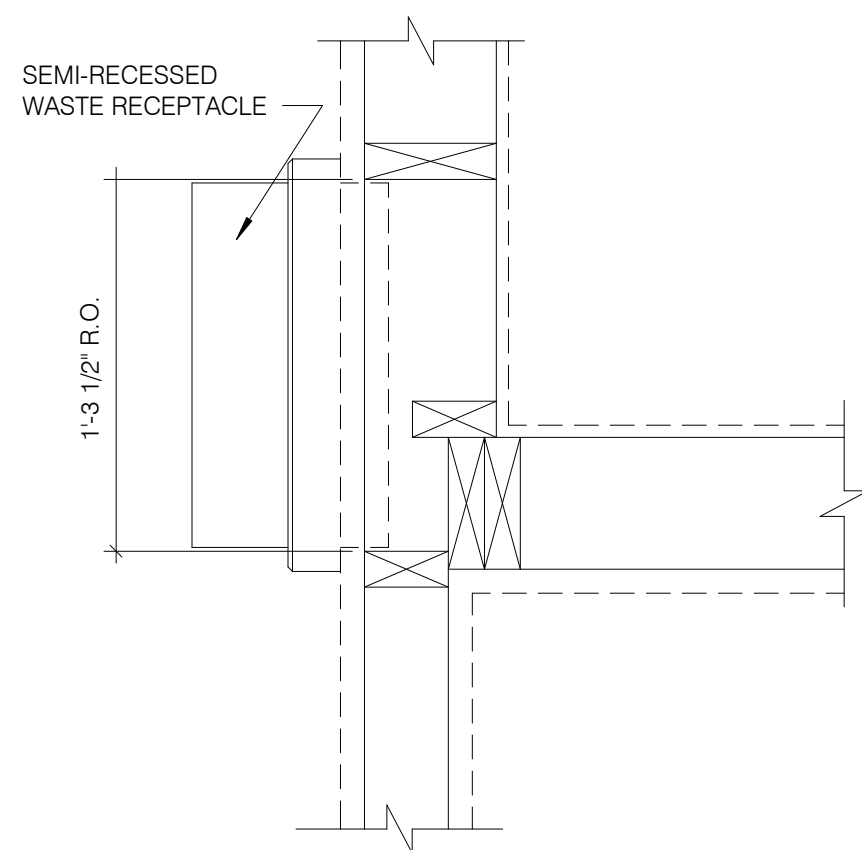


## A6.3

PLOT DATE: 9/13/2018 4:10:42 PM







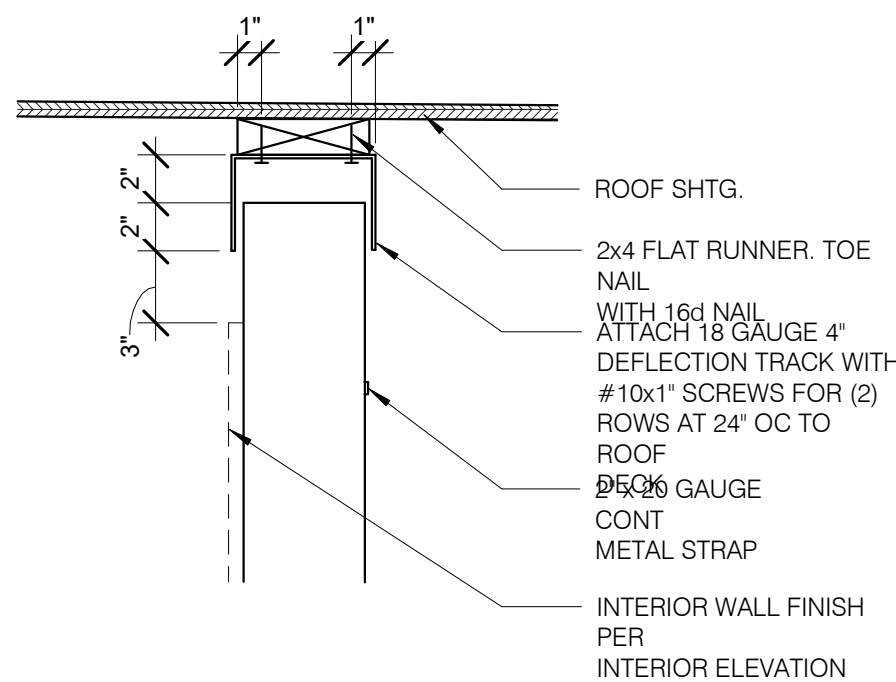
<b>SEMI-RECESSED WASTE RECEIPT</b>	N.T.S.	<b>5</b>
------------------------------------	--------	----------

<b>KITCHEN FINISH @ BASE</b>	N.T.S.	<b>4</b>
------------------------------	--------	----------

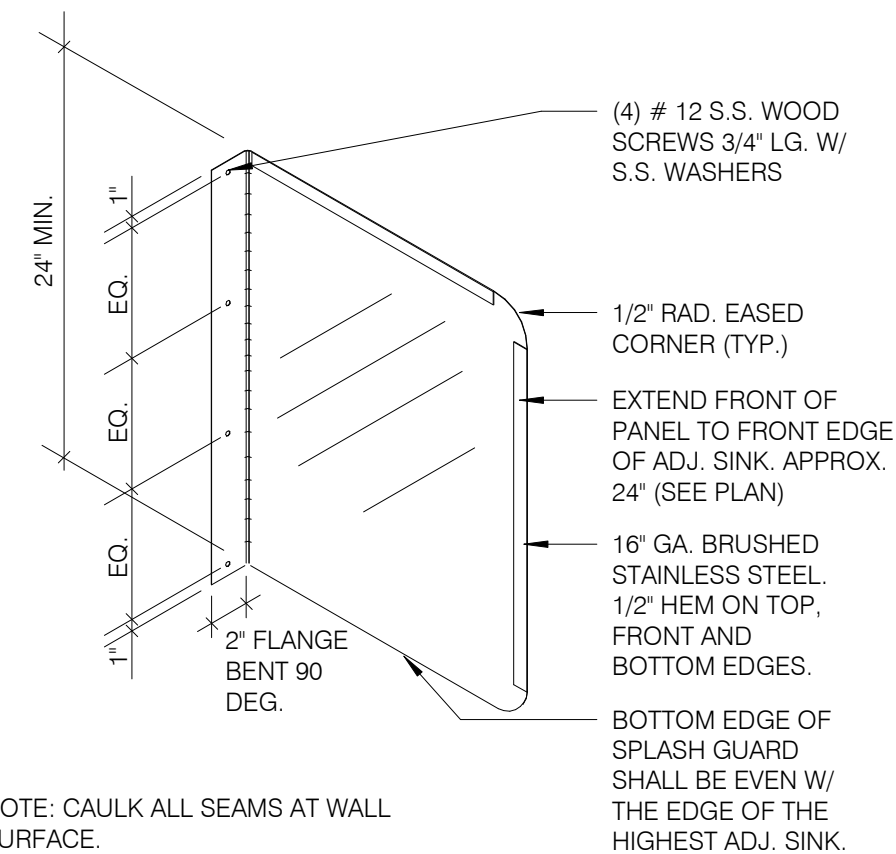
<b>KITCHEN FINISH @ CEILING</b>	N.T.S.	<b>3</b>
---------------------------------	--------	----------

<b>DETAIL AT EDGE OF TILE WALL</b>	12" = 1'-0"	<b>2</b>
------------------------------------	-------------	----------

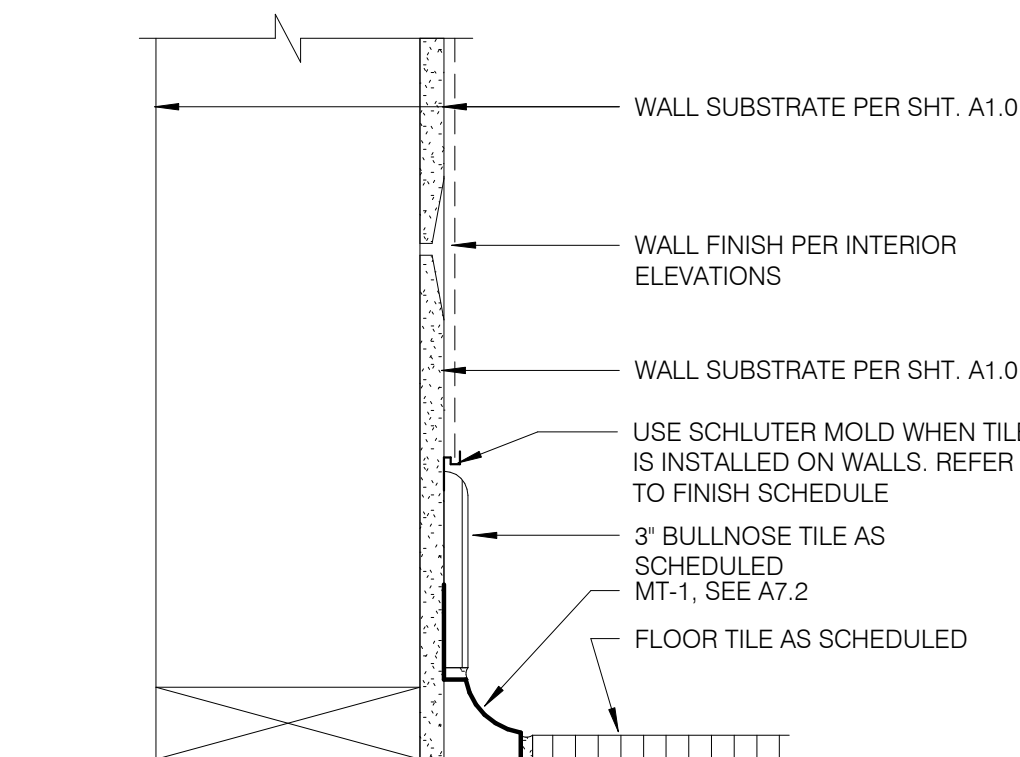
<b>WALK-IN BASE</b>	N.T.S.	<b>1</b>
---------------------	--------	----------



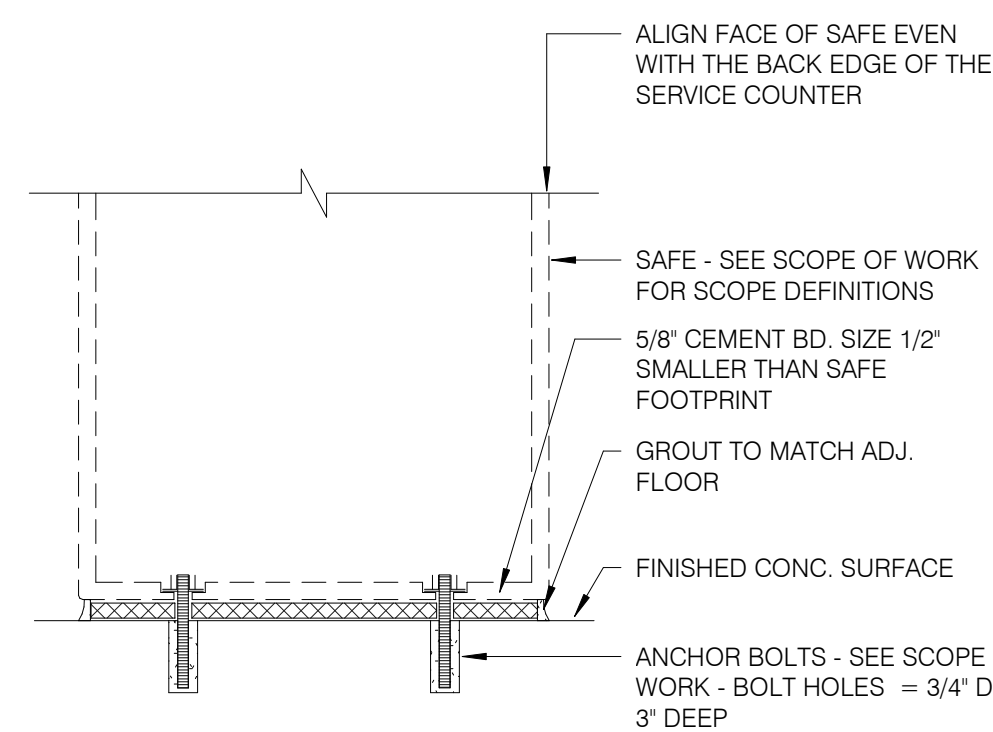
<b>DEFLECTION TRACK DETAIL</b>	N.T.S.	<b>10</b>
--------------------------------	--------	-----------



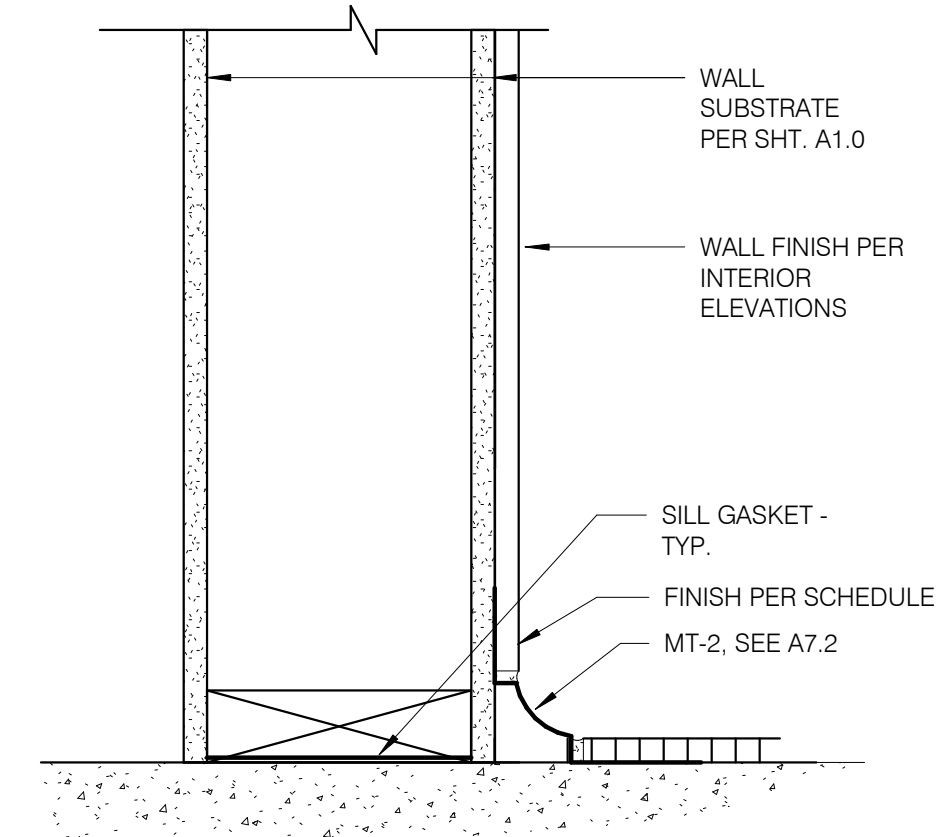
<b>SPLASH GUARD</b>	N.T.S.	<b>9</b>
---------------------	--------	----------



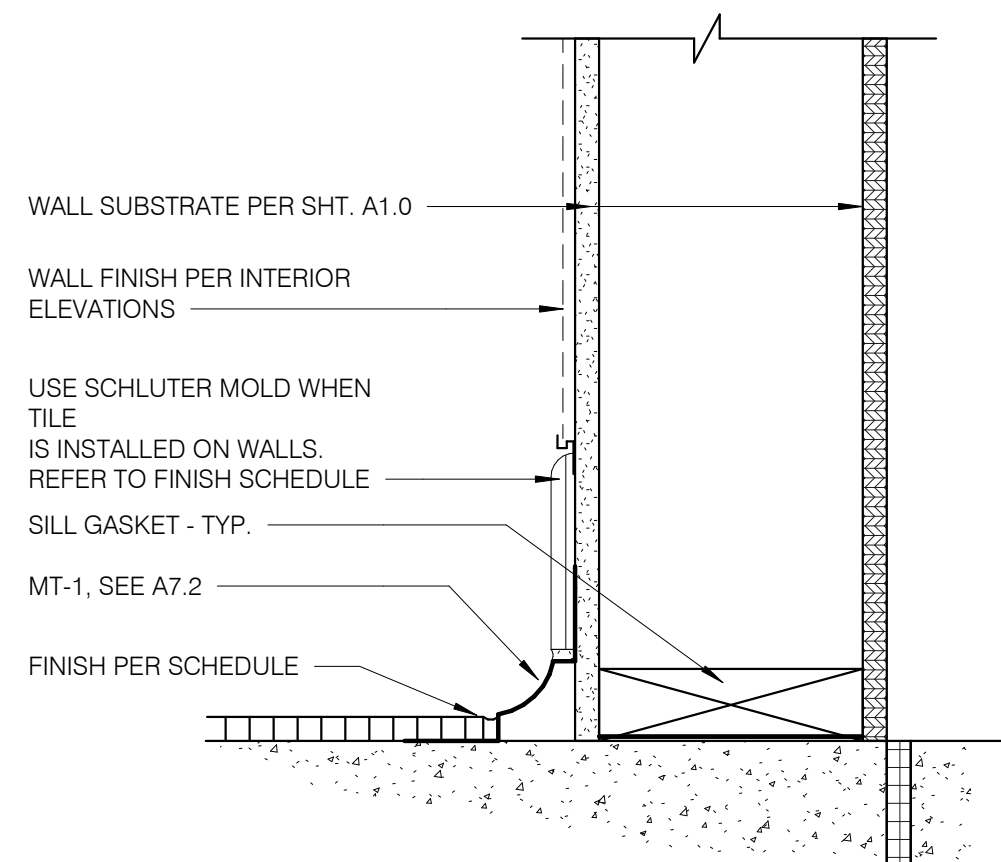
<b>BASE @ DINING ROOM INT. WALL</b>	N.T.S.	<b>8</b>
-------------------------------------	--------	----------



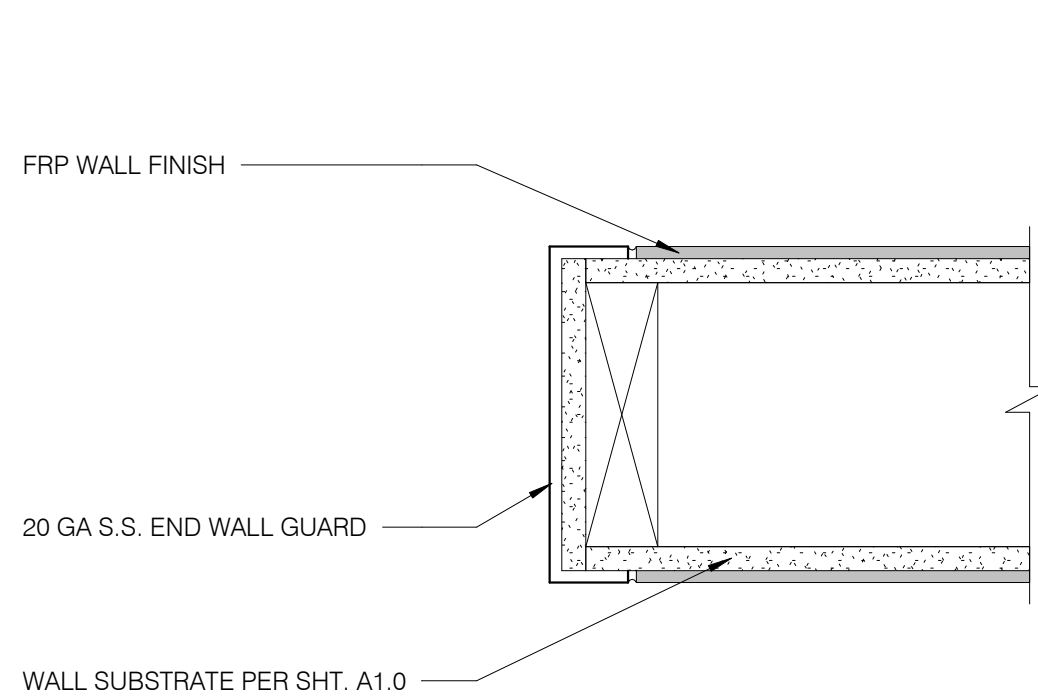
<b>SAFE PEDESTAL</b>	N.T.S.	<b>7</b>
----------------------	--------	----------



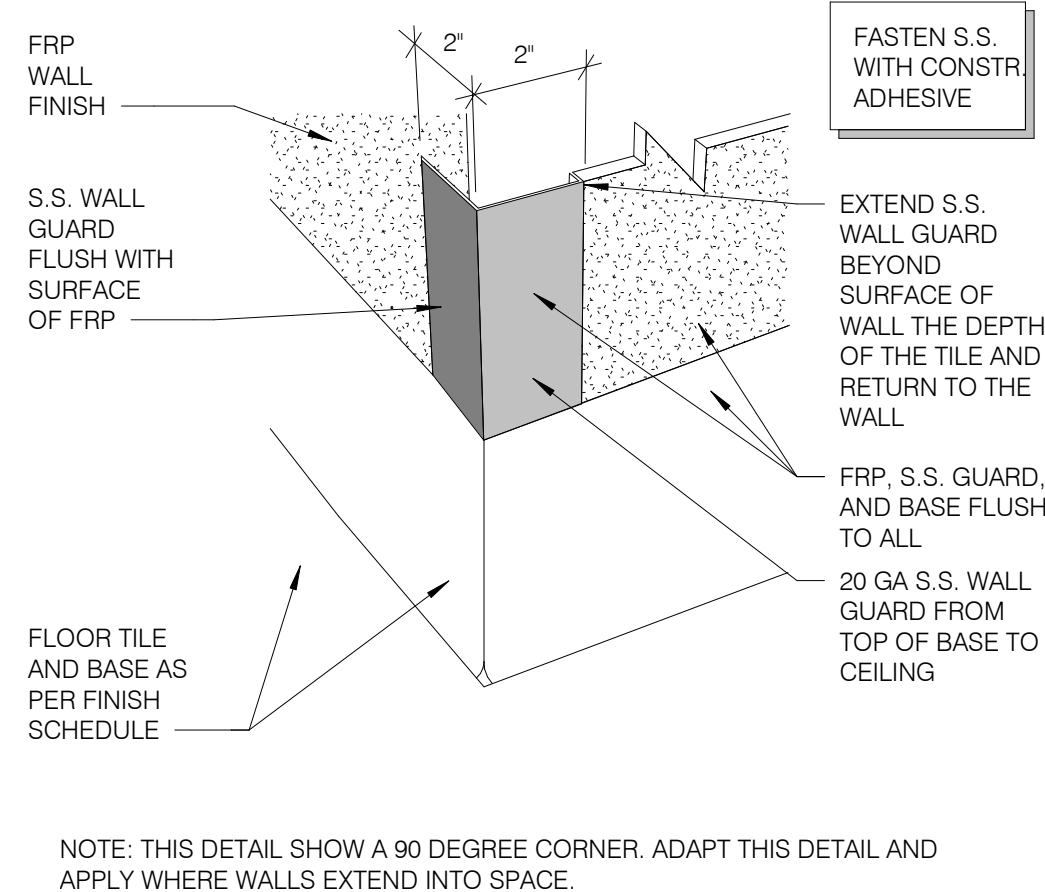
<b>BASE @ SAUCE AND SODA WALL</b>	N.T.S.	<b>6</b>
-----------------------------------	--------	----------



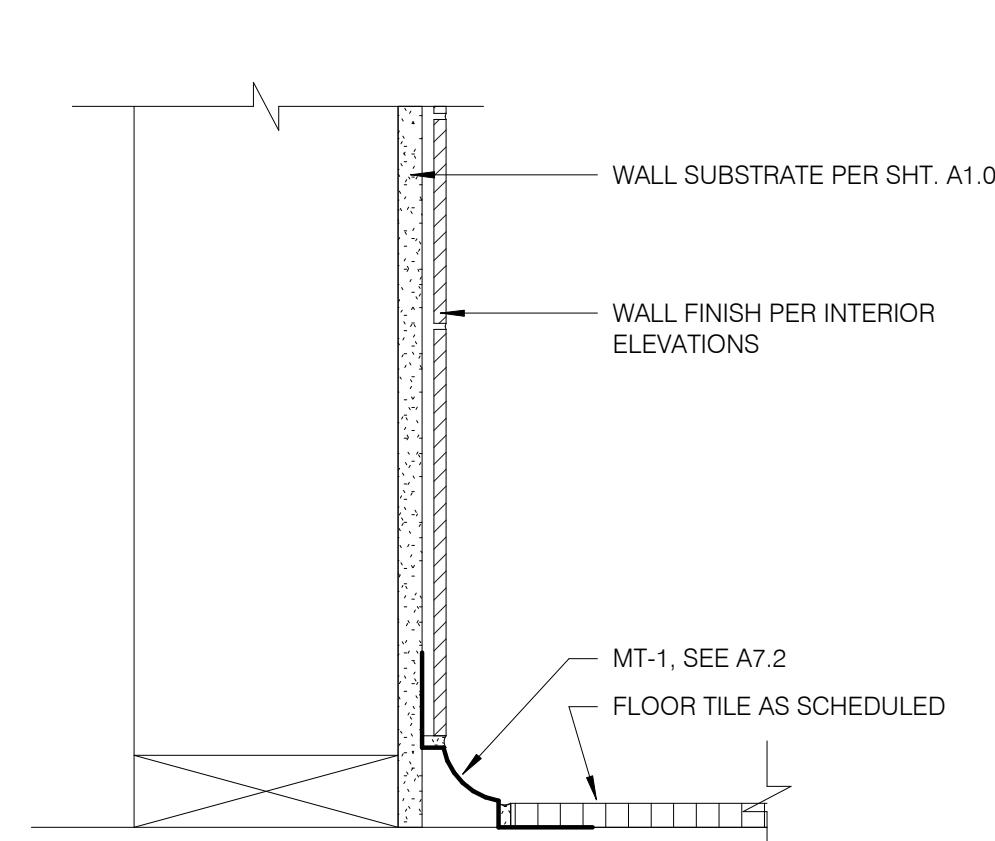
<b>BASE @ DINING EXT. SIDE WALLS</b>	N.T.S.	<b>15</b>
--------------------------------------	--------	-----------



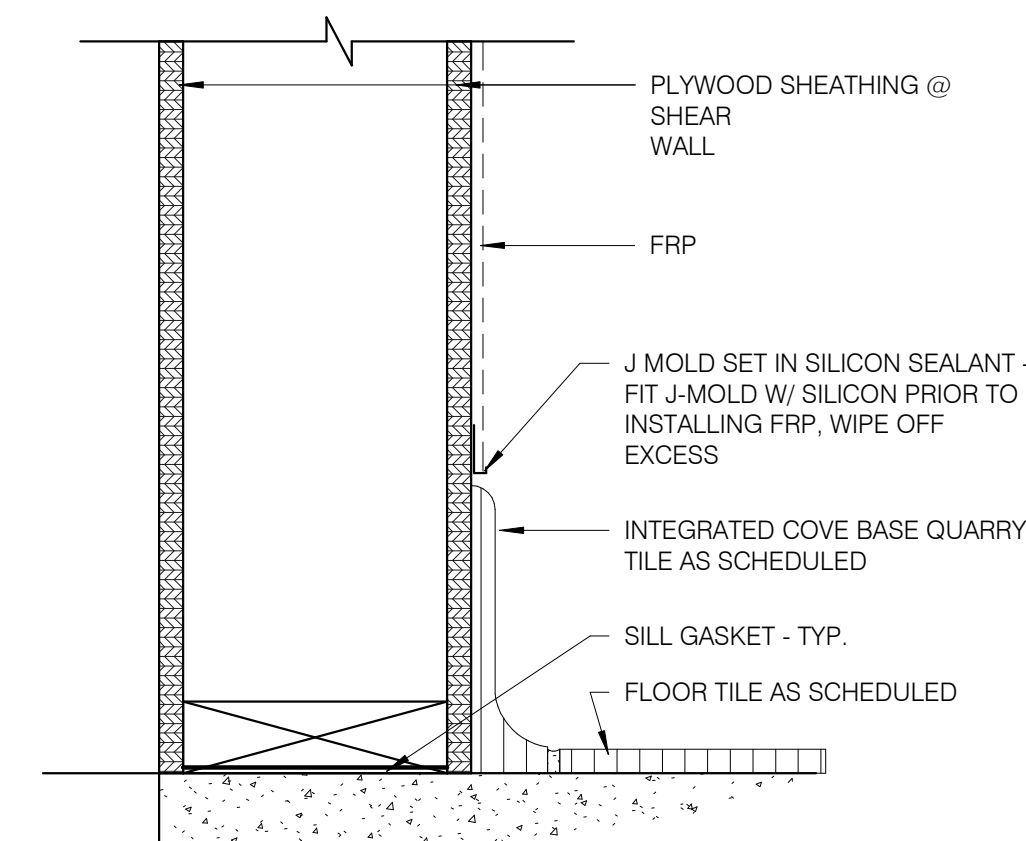
<b>S.S. END WALL GUARD</b>	N.T.S.	<b>14</b>
----------------------------	--------	-----------



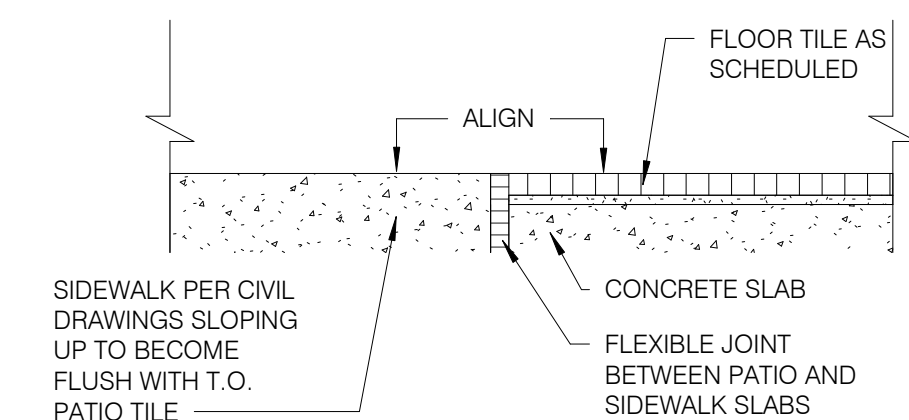
<b>S.S. CORNER &amp; END WALL GUARD</b>	N.T.S.	<b>13</b>
---	--------	-----------



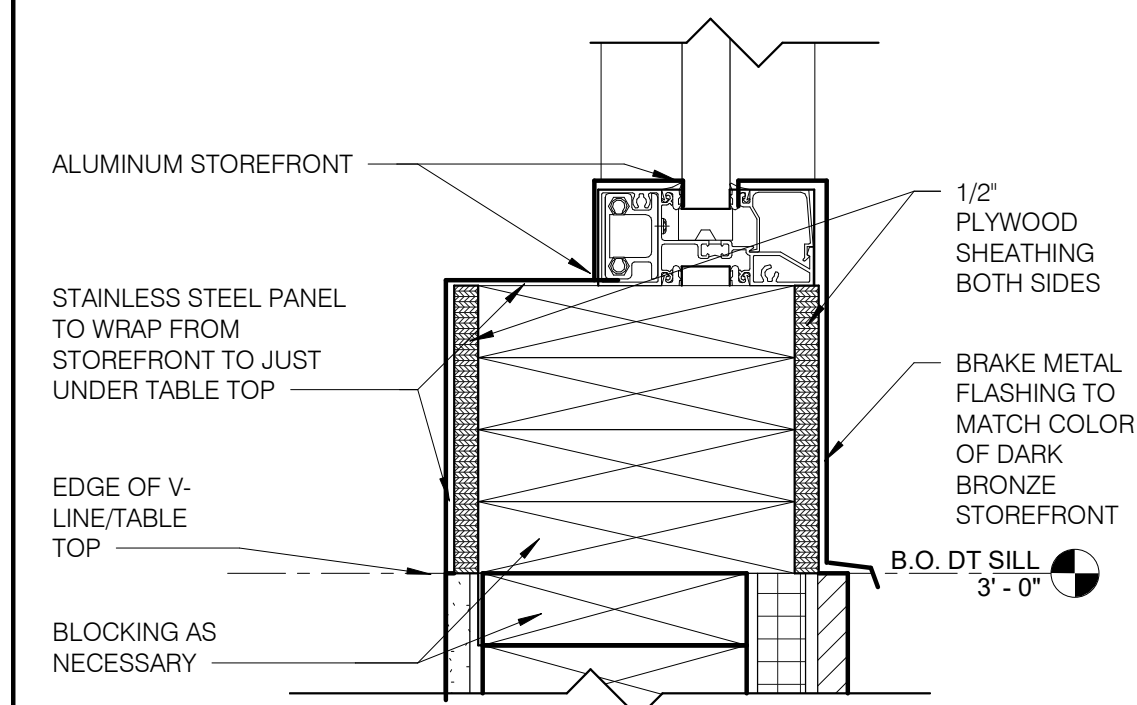
<b>BASE IN RESTROOM</b>	N.T.S.	<b>12</b>
-------------------------	--------	-----------



<b>BASE @ KITCHEN EXT. REAR WALL</b>	N.T.S.	<b>11</b>
--------------------------------------	--------	-----------



<b>TILE TO CONCRETE SIDEWALK</b>	N.T.S.	<b>17</b>
----------------------------------	--------	-----------



<b>S.S. DTL. @ KITCHEN STOREFRONT</b>	3' = 1'-0"	<b>10</b>
---------------------------------------	------------	-----------

[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-C  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



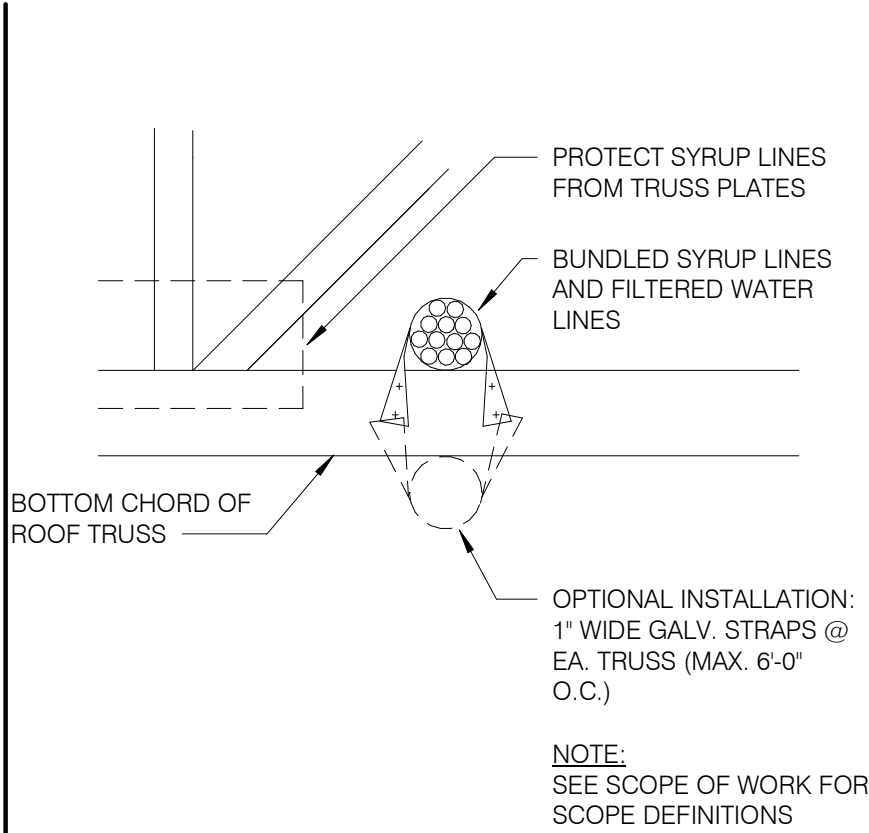
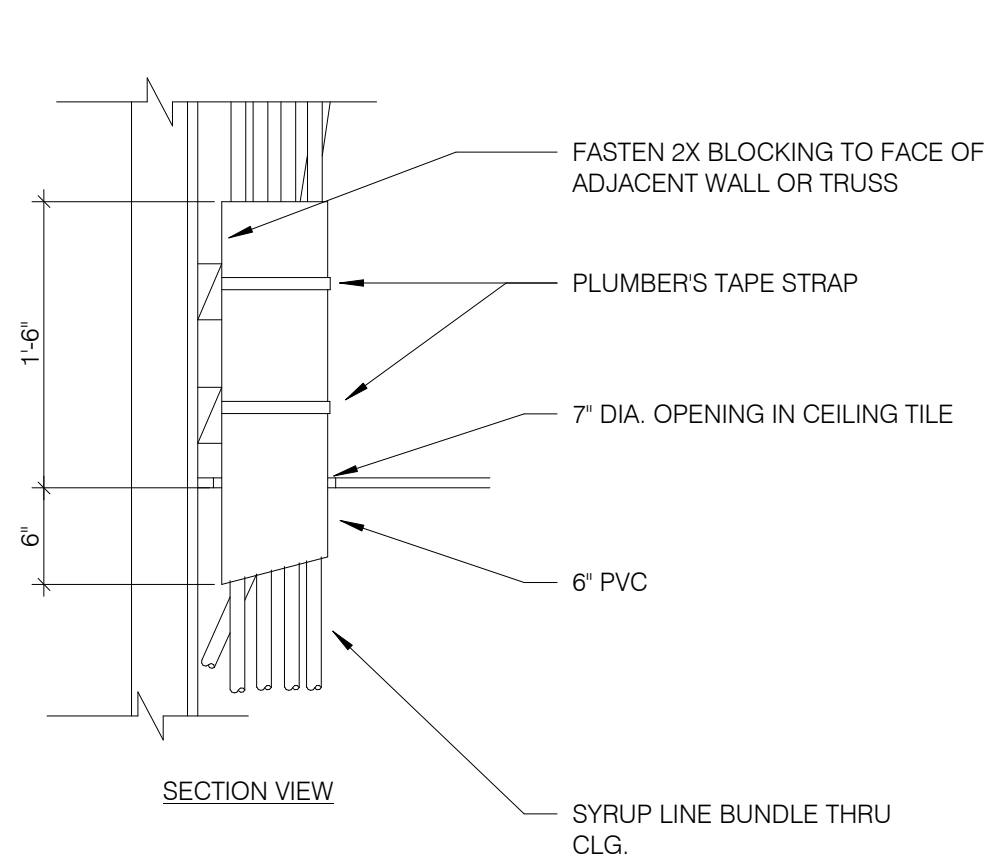
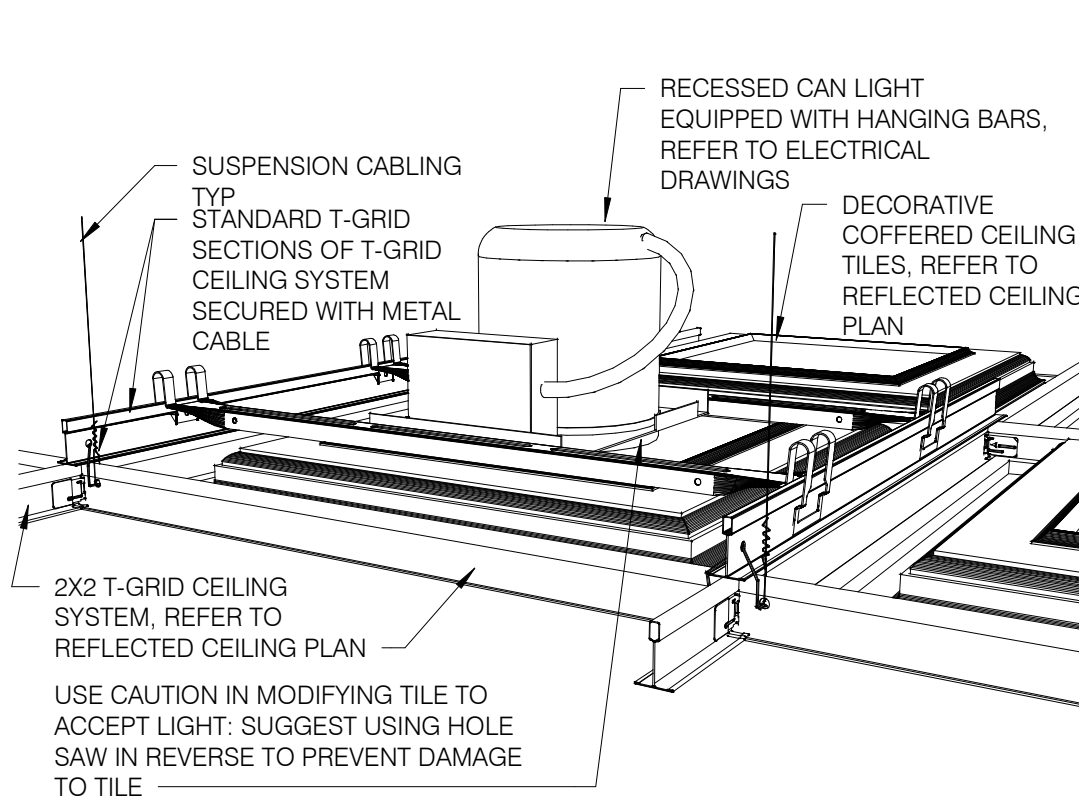
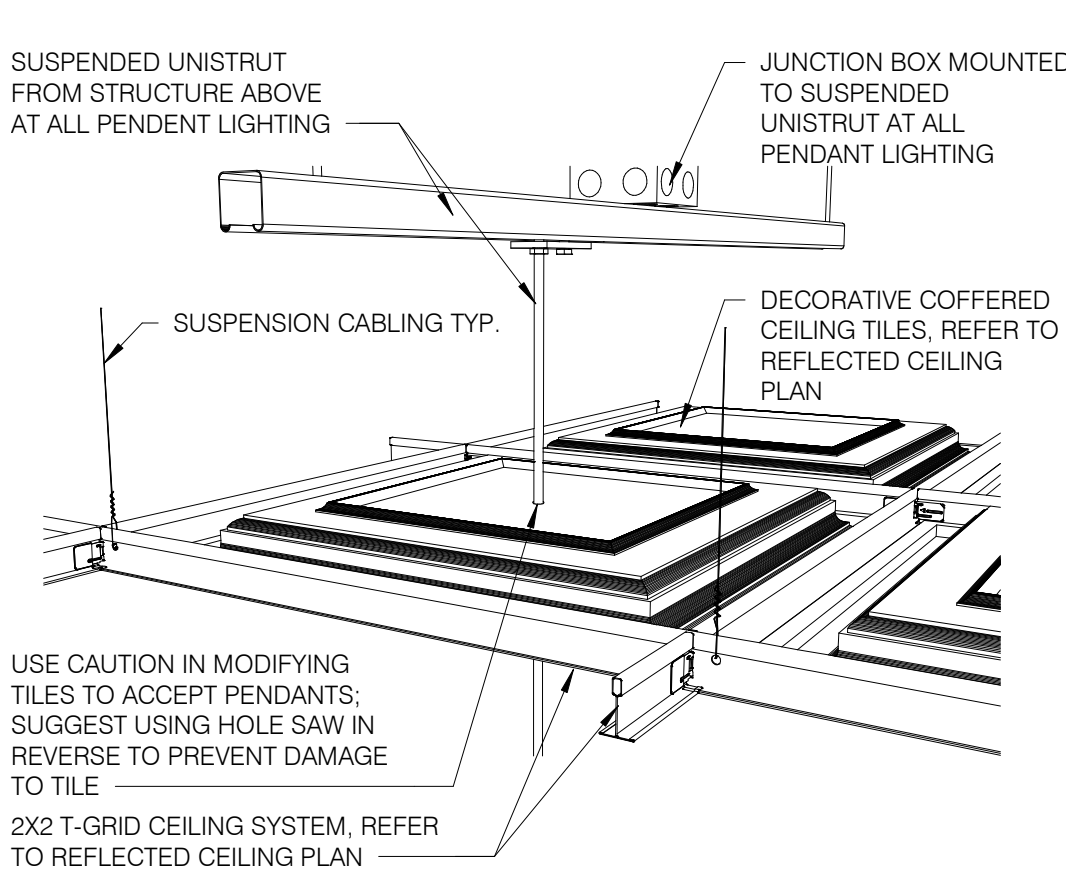
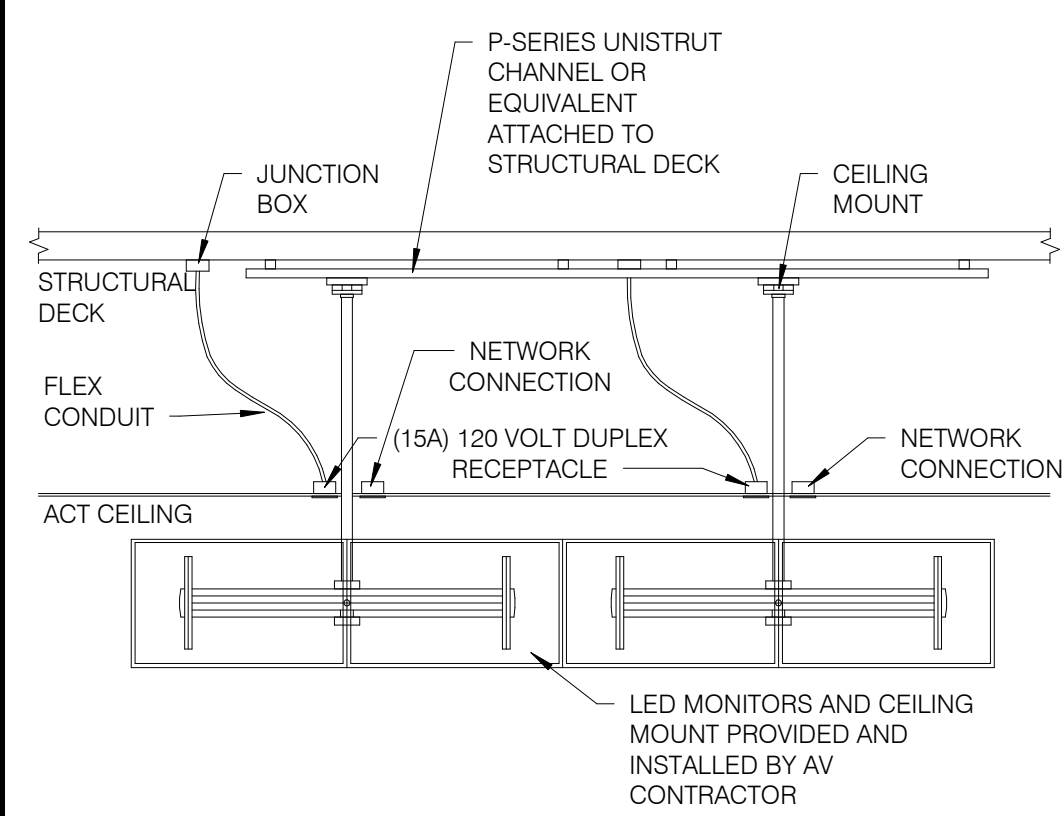
T52  
OPEN KITCHEN  
MODERN EXPLORER

## FINISH DETAILS

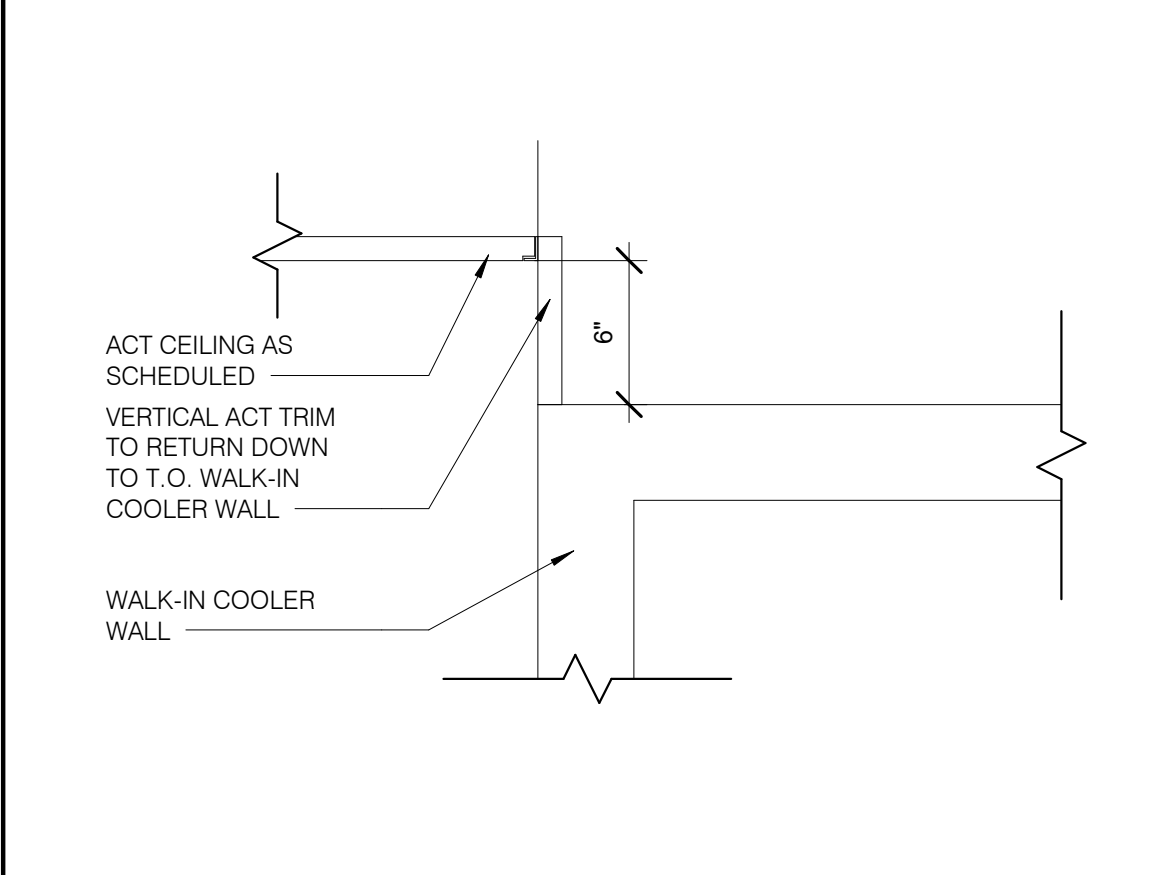
## A6.5

PLOT DATE: 9/13/2018 4:10:43 PM

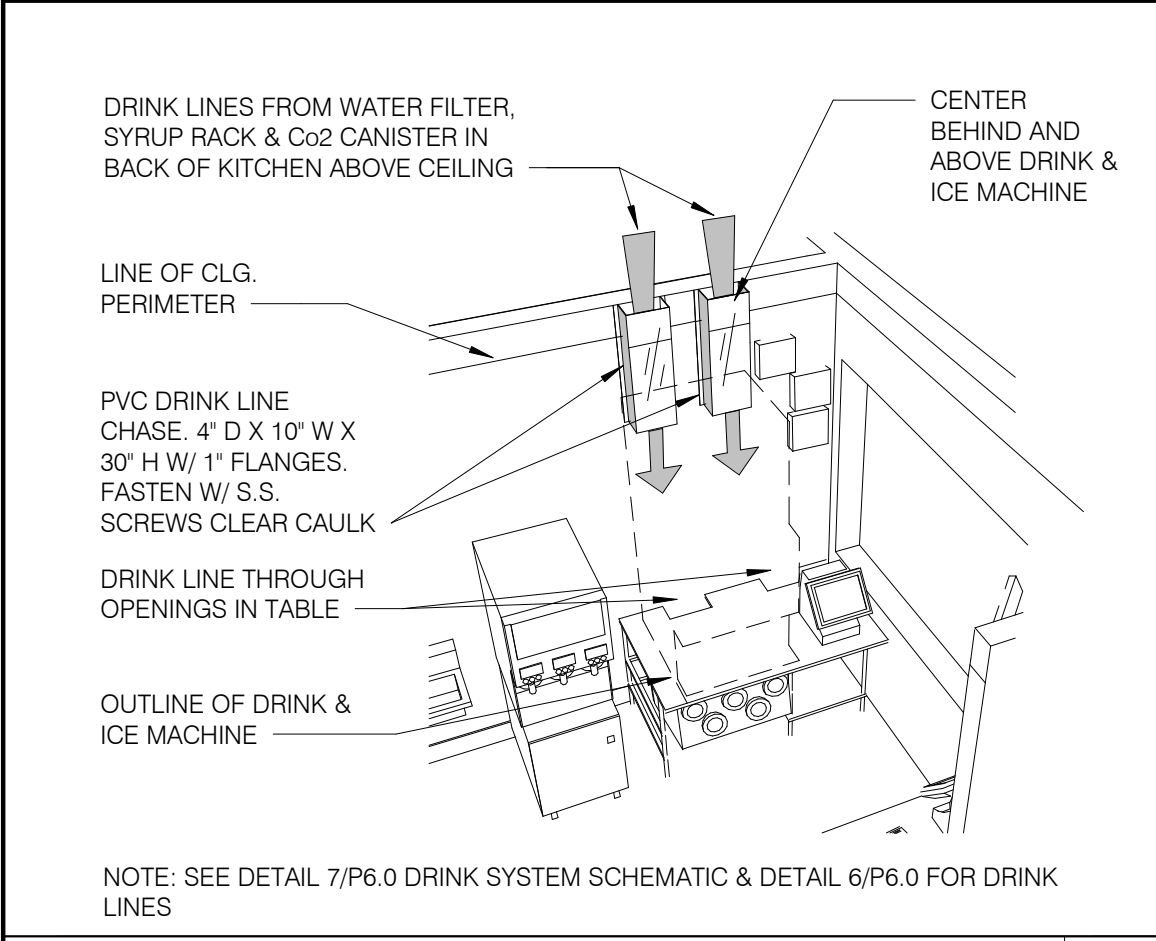




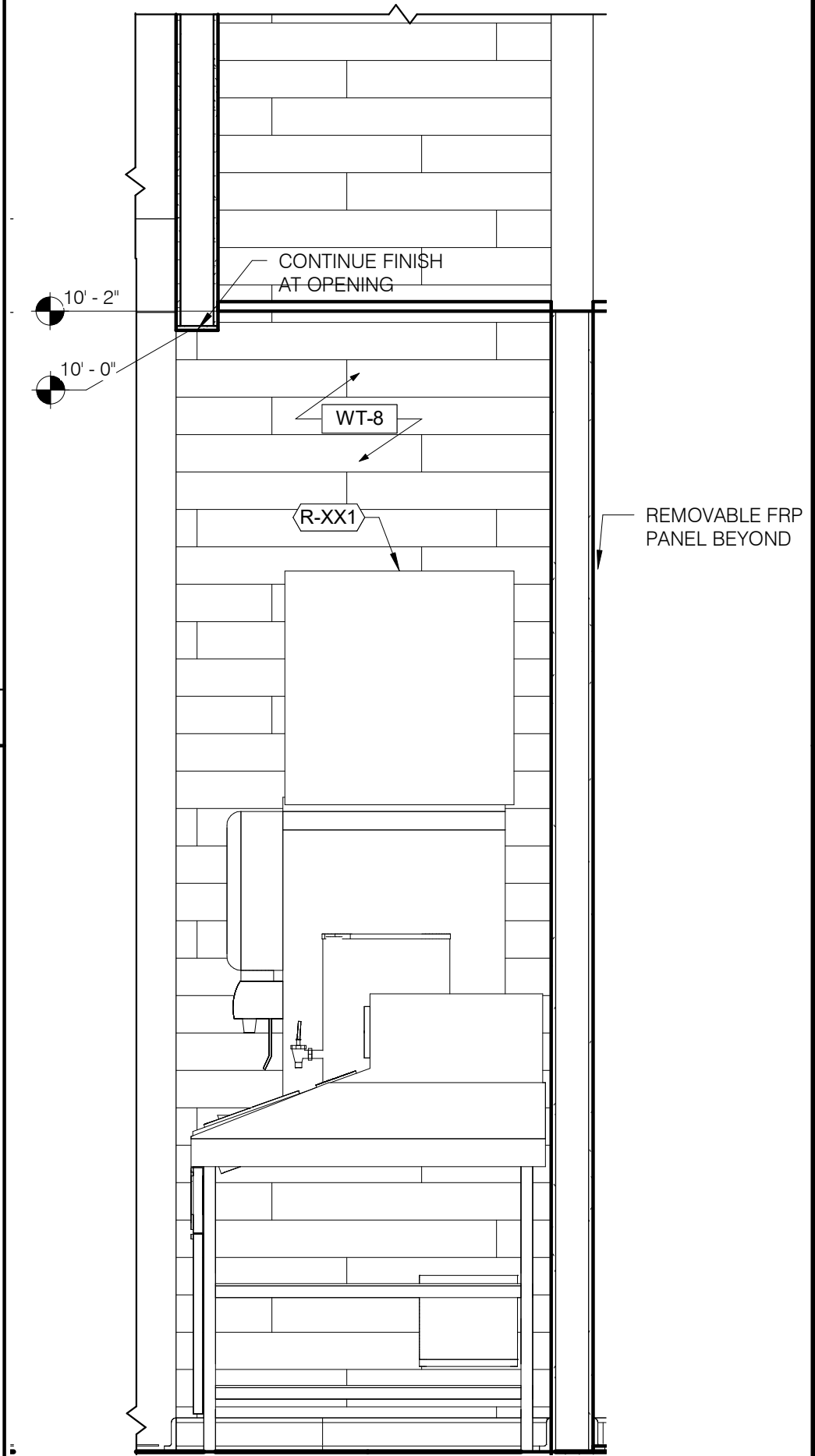
**5 MENU BOARD MOUNTING DETAIL** N.T.S. **5** **4 CEILUME DTL @ PENDANT FIXTURE** N.T.S. **4** **3 CELIUME DTL @ RECESSED FIXTURE** N.T.S. **3** **2 SYRUP BUNDLE CLG. PENETRATION** N.T.S. **2** **1 SYRUP LINE IN CEILING** N.T.S. **1**



**ACT DETAIL AT COOLER** 1 1/2" = 1'-0" **7**



**SYRUP CHASE ON WALL** N.T.S. **8**



**SECTION AT DRINK MILLWORK** 3/4" = 1'-0" **6**

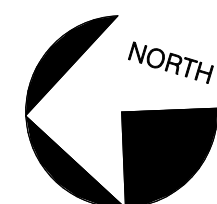
09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**  
T52  
OPEN KITCHEN  
MODERN EXPLORER

**MISCELLANEOUS**

[illegible]

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 4814

**A**

- 1 HUB DRAIN
- 2 4" COVE TILE BASE. SEE DETAIL 8/A6.5 FOR INSTALLATION
- 3 6" SANITARY COVE TILE BASE, REF 4/A6.5
- 4 FLOAT TILE FOR FLUSH TRANSITION
- 5 PEDESTAL SAFE. COORDINATE THE LOCATION WITH CONSTRUCTION MANAGER
- 6 FLOOR SINK
- 7 FLOOR DRAIN
- 8 START POINT FOR FLOOR TILE, CENTERED ON DOOR
- 9 BASE IN COOLER; REF. DETAIL 1/A6.5
- 10 REFER TO STRUCTURAL DRAWINGS FOR CONC FLOOR SLOPES AROUND FLOOR DRAINS
- 11 NO BASE BEHIND WALK-IN COOLER/FREEZER
- 12 ALUMINUM COVE BASE TRANSITION. SEE DETAIL 12/A6.5 FOR INSTALLATION
- 13 ADA COMPLIANT ALUMINUM THRESHOLD. SEE DETAIL 7/ADA.1.1, 4/A6.3 AND 7/A6.3
- 14 FACTORY FLOOR FINISH (GALV. ST.) W/ INTEGRAL COVE BASE
- 15 TILE AND BASE TO CONTINUE UNDER MILLWORK COUNTER TOP.
- 16 PROVIDE FLOOR TILE INSIDE WALK-IN COOLER. (NO TILE BASE IN FREEZER). FLOAT FLOOR TILE IN COOLER TO DRAIN TO KITCHEN. COORDINATE WITH COOLER MANUFACTURER.
- 17 STEP-UP AT FLOOR TRANSITION

**C**

N.T.S.

**B**

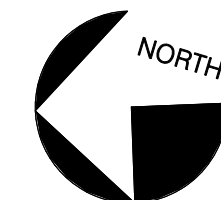


TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



## A7.1

PLOT DATE: 9/13/2018 4:10:45 PM



## A

- RCP LEGEND** N.T.S.

N.T.S.

D

- 15 PAINT ALL EXPOSED DUCTWORK, ELECTRICAL WIRING, ROOF DECK, AND WALL SURFACES ABOVE TRUSS BEARING P-8. TRUSSES AND BRIDGING TO REMAIN UNPAINTED.
- 16 PVC SYRUP CHASE IN WALL.
- 17 RESTROOM CEILINGS TO BE FRAMED W/ 2" X 6" WOOD STUDS @ 16" O.C.
- 18 CENTER RECESSED LIGHT IN ROOM, BOTH DIRECTIONS
- 19 STAINLESS STEEL SYRUP CHASE ON WALL. SEE DETAIL B/A6.6
- 20 CENTER PENDANT LIGHT ON CENTER OF WINDOW AND SPACE EQUALLY OVER TABLE

	QTY	MANUFACTURER	TYPE	COLOR	SIZE	GROUT	Comments	ALTERNATE MANUFACTURER	ALTERNATE COLOR
CEILING									
CL-3	469 SF	CEILUME	STRATFORD	LATTE	2X2	N/A	SUSPENDED GRID W/ALUMINIUM, KITCHEN FLAME SPREAD RATING 0-25, CLASS A, PAINT GRID SW6080 UTTERLY BEIGE		
CL-5	363 SF	CERTAINTEED	CEILING TILE	ACT VINYL ROCK #1140 WASHABLE NON PERFORATED, COLOR MATCH CL-3	2X2X1/2"	N/A	WHITE FLAME SPREAD RATING 0-25, CLASS A		
CL-6	470 SF	CERTAINTEED	CEILING TILE	ACT VINYL ROCK #1140 WASHABLE NON PERFORATED	2X4X1/2"	N/A	WHITE SUSPENDED GRID W/ALUMINIUM, BOH FLAME SPREAD RATING 0-25, CLASS A		
CL-9	45' - 5" LF	ARMSTRONG	AXIOM CLASSIC TRIM	MATCH CL-3	10"H PROFILE	N/A			
CHAIR RAIL									
CR-1	46 LF		STAINED MAPLE CHAIR RAIL	MEGA GREIGE # SW 7031	1X4				
FLOOR BASE									
B-1	140' - 8" LF	EUROWEST	TILE	URBAN GREY WEAVE	3X24	MAPEI # 47 CHARCOAL	DINING ROOM, ALCOVE	CREATIVE MATERIALS	METROPOLITAN 6"X12" COVE BASE
B-5	182' - 4" LF	EUROWEST	TILE	QUARRY NON ABRASIVE PURITAN GRAY COVE BASE	4X24	MAPEI # 106 WALNUT	B.O.H, KITCHEN	CREATIVE MATERIALS	QUARRY #507, 6"X8" NATURAL, GROUT: MAPEI KERAPOXY IEG CQ W/ PART C GREY
FLOORING									
T-1	1043 SF	EUROWEST	TILE	URBAN GREY WEAVE # V606292X8	24X24	MAPEI # 47 CHARCOAL	DINING ROOM, ALCOVE, RESTROOMS	CREATIVE MATERIALS	METROPOLITAN GREIGE 24X24 NATURAL, GROUT: MAPEI ULTRA COLOR PLUS
T-5	875 SF	EUROWEST	TILE	QUARRY #507 NON ABRASIVE PURITAN GRAY	6X6	MAPEI # 106 WALNUT	B.O.H, KITCHEN	CREATIVE MATERIALS	QUARRY #507, 6"X6" NATURAL, GROUT: MAPEI KERAPOXY IEG CQ W/ PART C GREY
LAMINATE									
DL-1		NEVAMAR	LAMINATE	BAILEY # WK0027T			DOOR EDGES TO BE FINISHED SIMILAR TO FACES		
FRP-1		MARLITE	FIBERGLASS REINFORCED PANEL	FP-100 WHITE (PEBBLE FINISH) - NO COLOR VARIATIONS ACCEPTED			B.O.H WALLS		
L-1		WILSONART	LAMINATE	RUSTIC SLATE 4888-38			POS / PICK UP COUNTER FACE		
L-2		WILSONART	LAMINATE	FIRED STEEL #4994-60			OPEN KITCHEN WALL / SHROUD		
L-9		NEVAMAR	LAMINATE	SMOKEY WHITE # 27027T			LAMINATE FOR OFFICE SHELVING		
SS-1		WILSONART	SOLID SURFACE	STARON BRIGHT WHITE SS-3 GLOSS 15			1/2" SS GLUED TO 3/4" PLYWOOD BACKING		
WC-1	190 SF	WILSONART	WAINSCOT LAMINATE	PEPPERDUST, MATTE FINISH D327-60					
METAL TRANSITION									
MT-1		SCHLUTER	DILEX AHK	NICKEL ANODIZED ALUMINUM	23/32"	MAPEI # 47 CHARCOAL	COVE BASE		FOR ALL CALIFORNIA STORES, USE AF: SATIN ANODIZED ALUMINUM
MT-2		SCHLUTER	DILEX AHK	EB: BRUSHED STAINLESS STEEL			TILE WALL @ KITCHEN AND DINING - COVE BASE		
MT-3				SATIN ALUMINUM ANODIZED			METAL SILVER TRIM AT VERTICAL WAINSCOT SEAMS		
MT-4		SCHLUTER	JOLLY	SATIN ALUMINUM ANODIZED	1/2" PROFILE	MAPEI #01 ALABASTER	TILE WALL EDGE TRANSITION		
PAINT									
P-3		SHERWIN WILLIAMS	PAINT	GRIFFIN SW7026- SEMI GLOSS					
P-5		SHERWIN WILLIAMS	PAINT	WORLDLY GRAY SW 7043	N/A	N/A			
P-8		SHERWIN WILLIAMS	PAINT	GRIFFIN SW7026 - FLAT FINISH	N/A	N/A			
WALL TILE									
WT-1	908 SF	EUROWEST	TILE	TERRE NERO - #563474	8X8	MAPEI # 47 CHARCOAL	RESTROOM WALLS	CREATIVE MATERIALS	TERRA ANTHRACITE 8X8 NATURAL, GROUT: MAPEI ULTRACOLOR PLUS
WT-2	151 SF	EUROWEST	TILE	TERRECOTTE DECO MIX - #563495	8X8	MAPEI # 47 CHARCOAL	ACCENT WALL TILE , INSTALL ON WALL OPPOSITE DOOR OPENING	CREATIVE MATERIALS	TERRA DECO MIX 8X8, GROUT: MAPEI ULTRACOLOR PLUS
WT-8	295 SF	EUROWEST	TILE	ARCTIC ANTICATO	3X30	MAPEI # 01 ALABASTER	RUNNING BOND PATTERN OFFSET 25%	CREATIVE MATERIALS	CMC SALVAGE WOOD WHITE WASH 3X36 NATURAL, GROUT: MAPEI ULTRACOLOR PLUS

ROOM SCHEDULE

D

FINISH NOTES

C

CONTACTS

B

	09.14.18	ISSUED FOR CONSTRUCTION
D	08.16.18	BID ADDENDUM 2
	06.20.18	ISSUED FOR BID
	04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52

OPEN KITCHEN  
MODERN EXPLORER

FINISH LEGEND  
AND SCHEDULE

A7.2

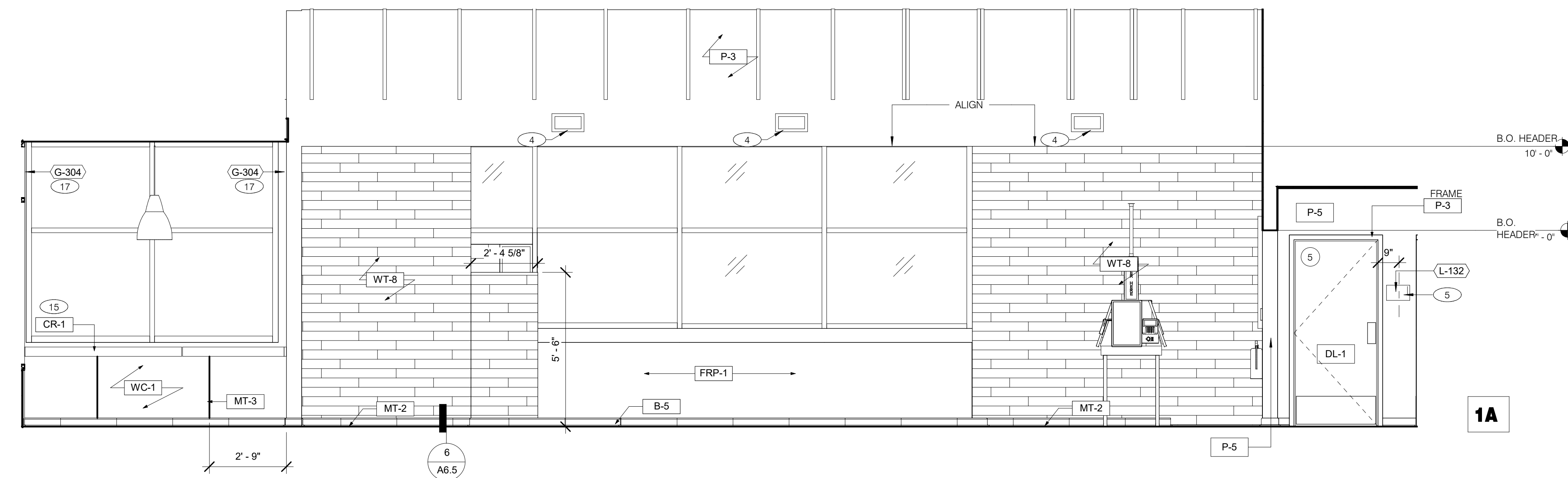
PLOT DATE: 9/13/2018 4:10:45 PM





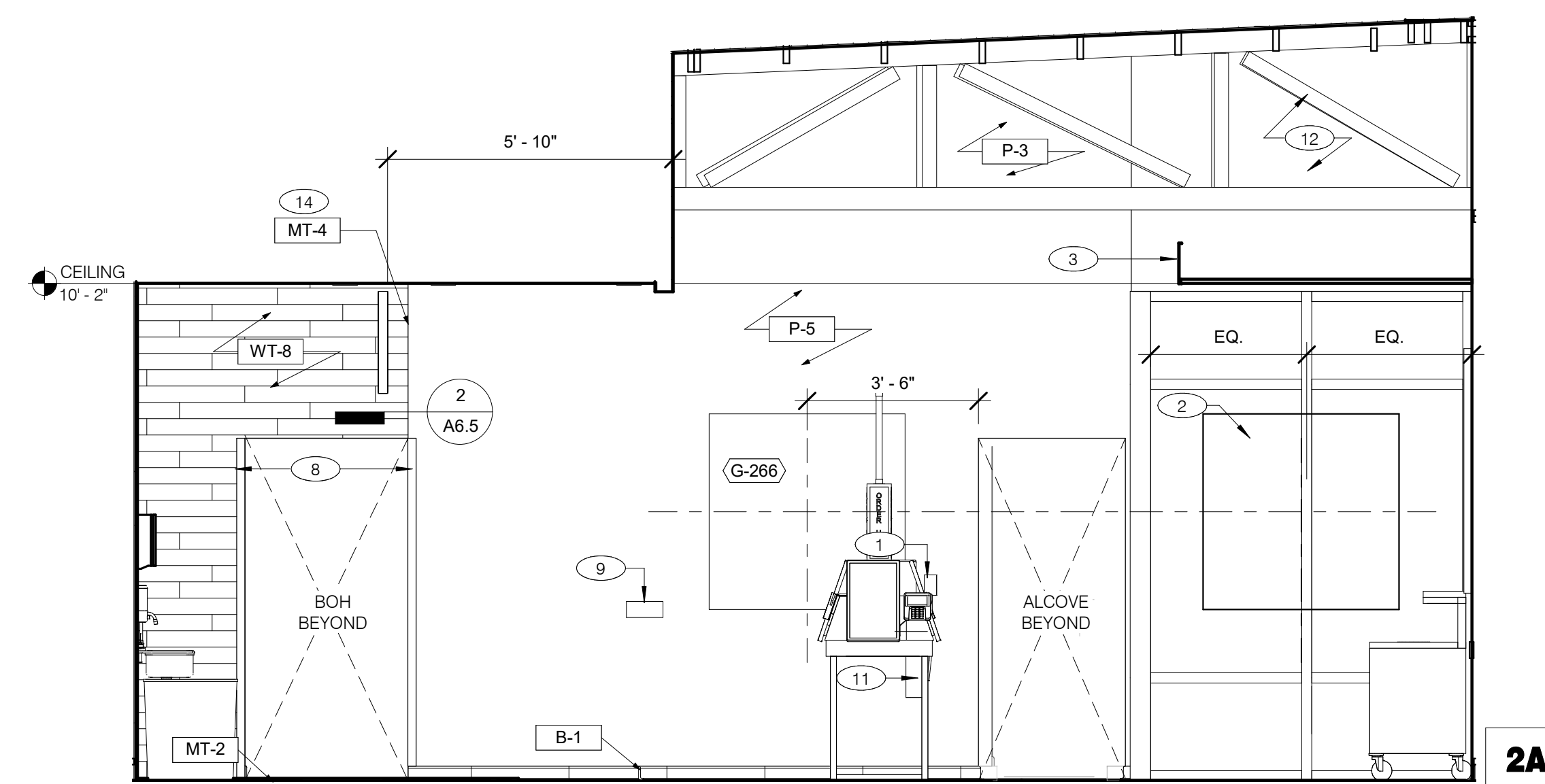
## A8.0

TACO BELL  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

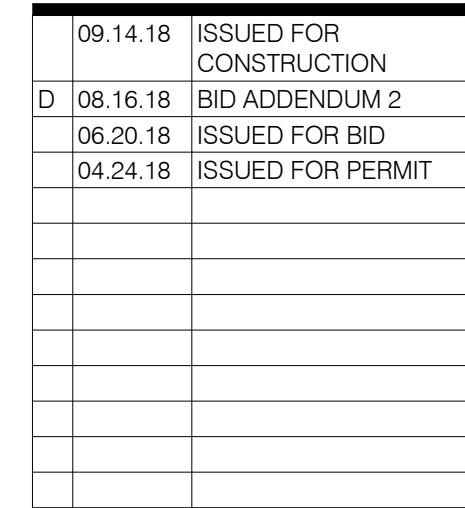
[illegible]

- NOT ALL KEY NOTES APPEAR ON  
THIS SHEET. SEE SHEET A8.1  
FOR ADDITIONAL ELEVATIONS.

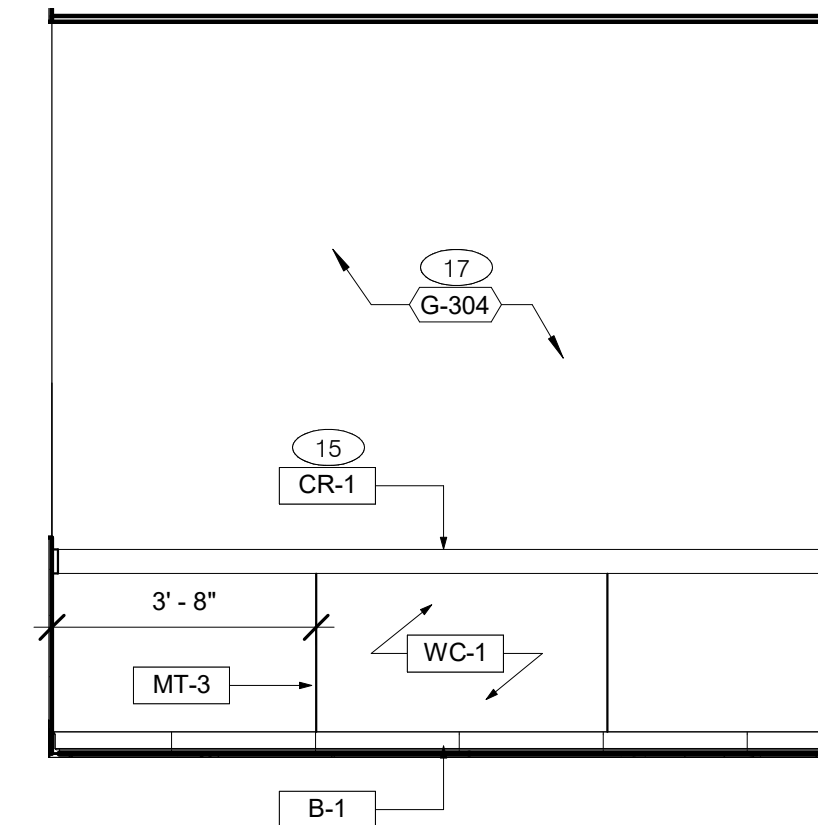
	<b>A</b>
--	----------



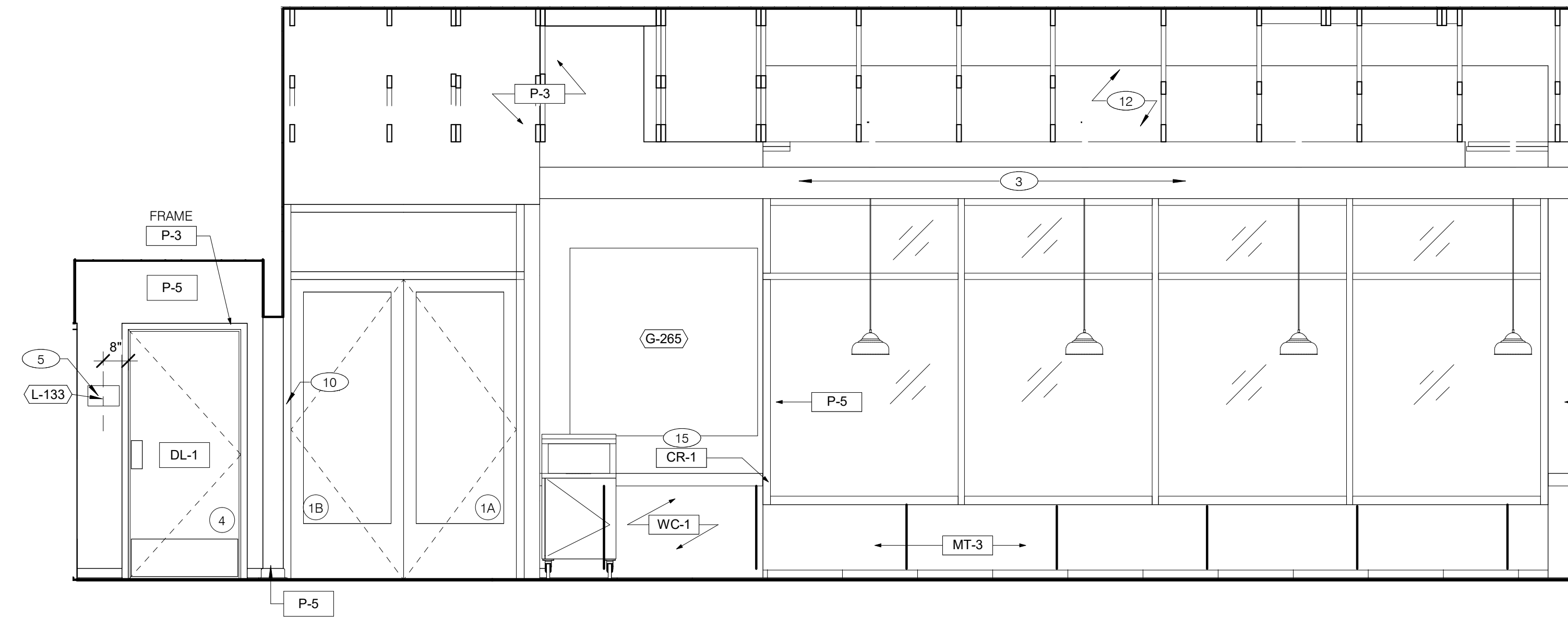
2



PLOT DATE: 9/13/2018 4:10:49 PM

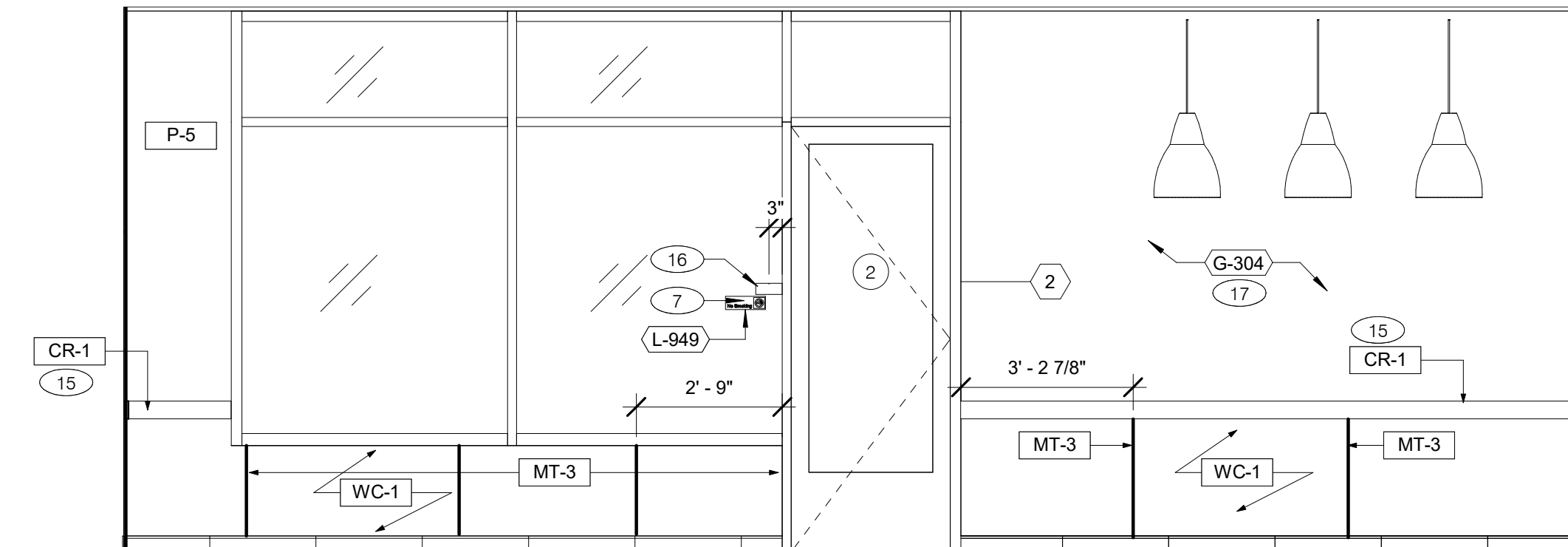


**1A**



2A

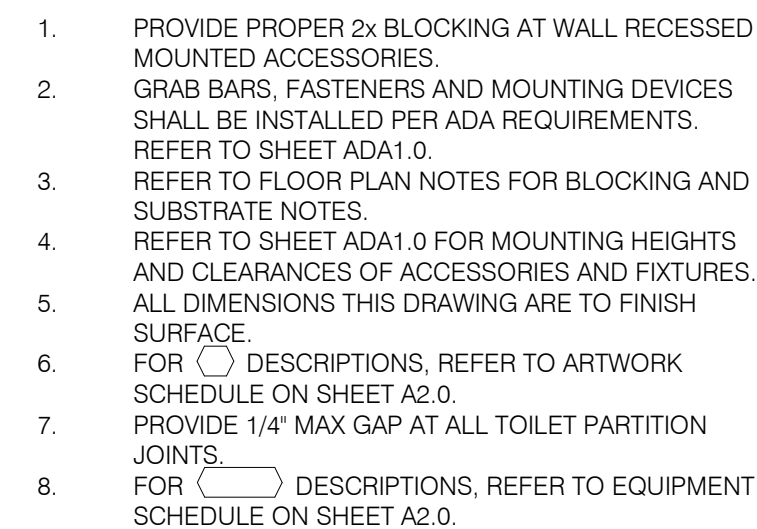
	<b>2</b>
--	----------



**3A**

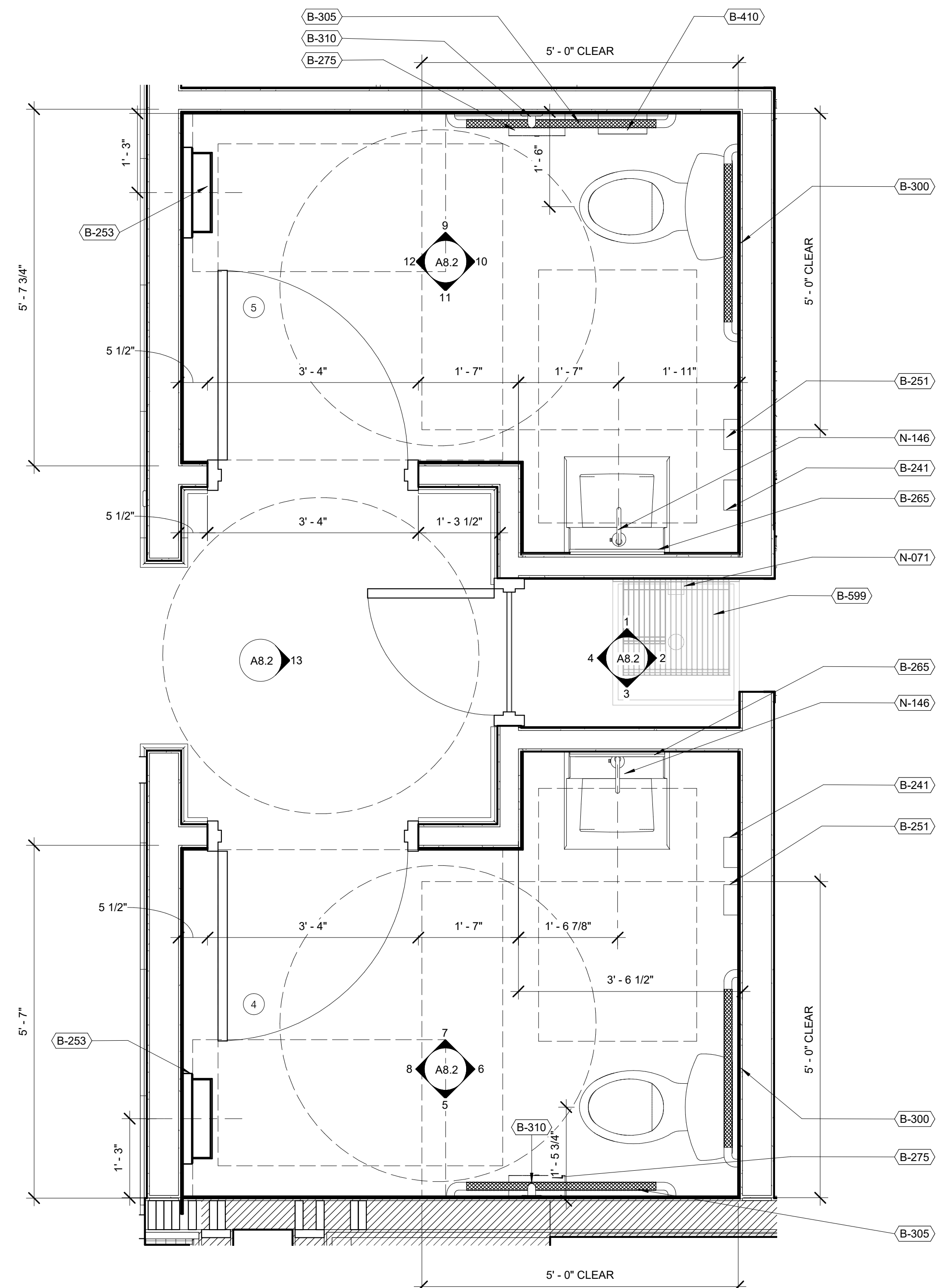
3



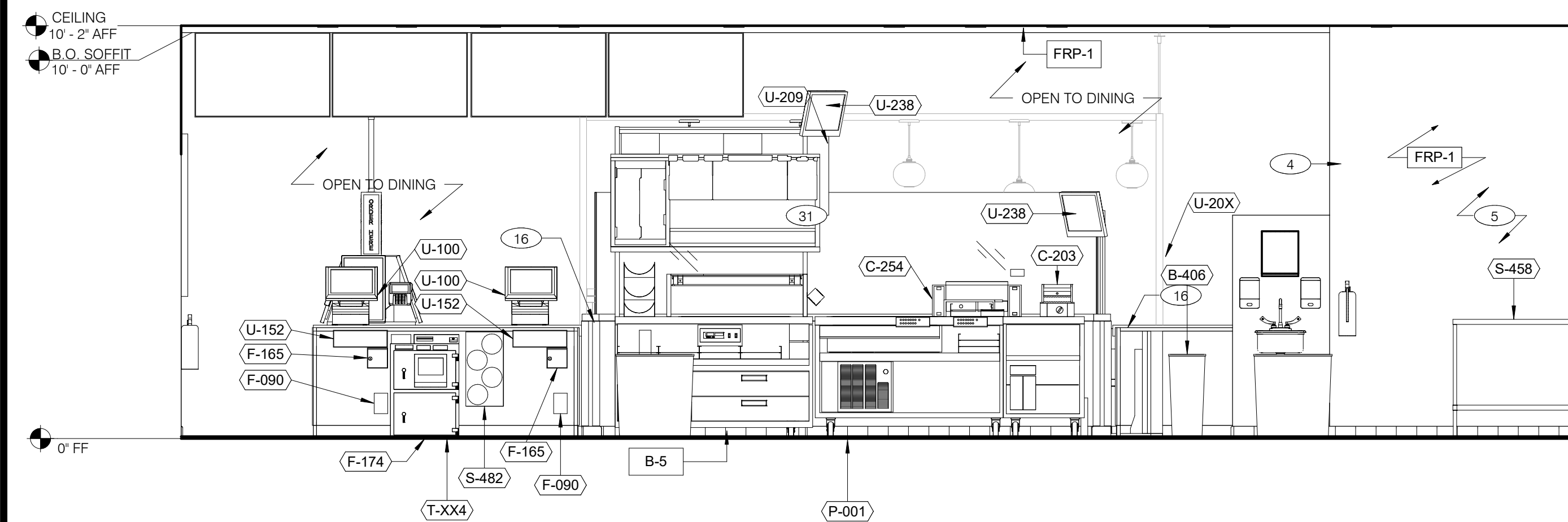


**GPD GROUP**  
Professional Corporation

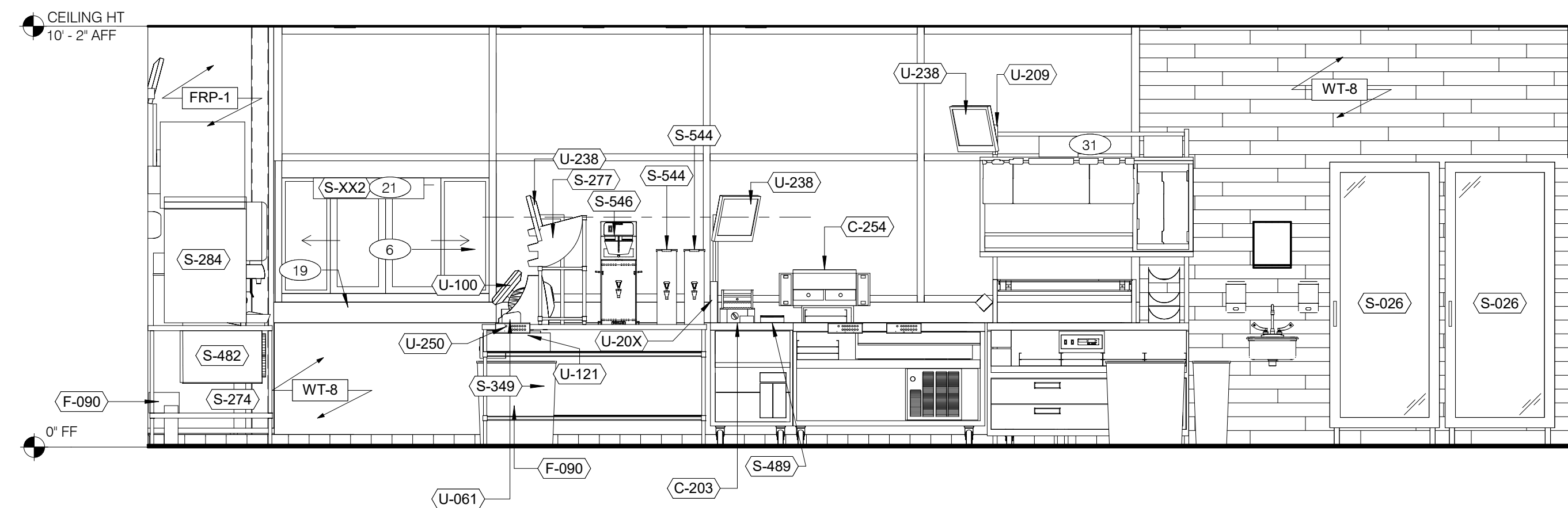
520 South Main Street, Suite 2531  
Akrón, OH 44311  
330.572.2100 Fax: 330.572.2102

[illegible]

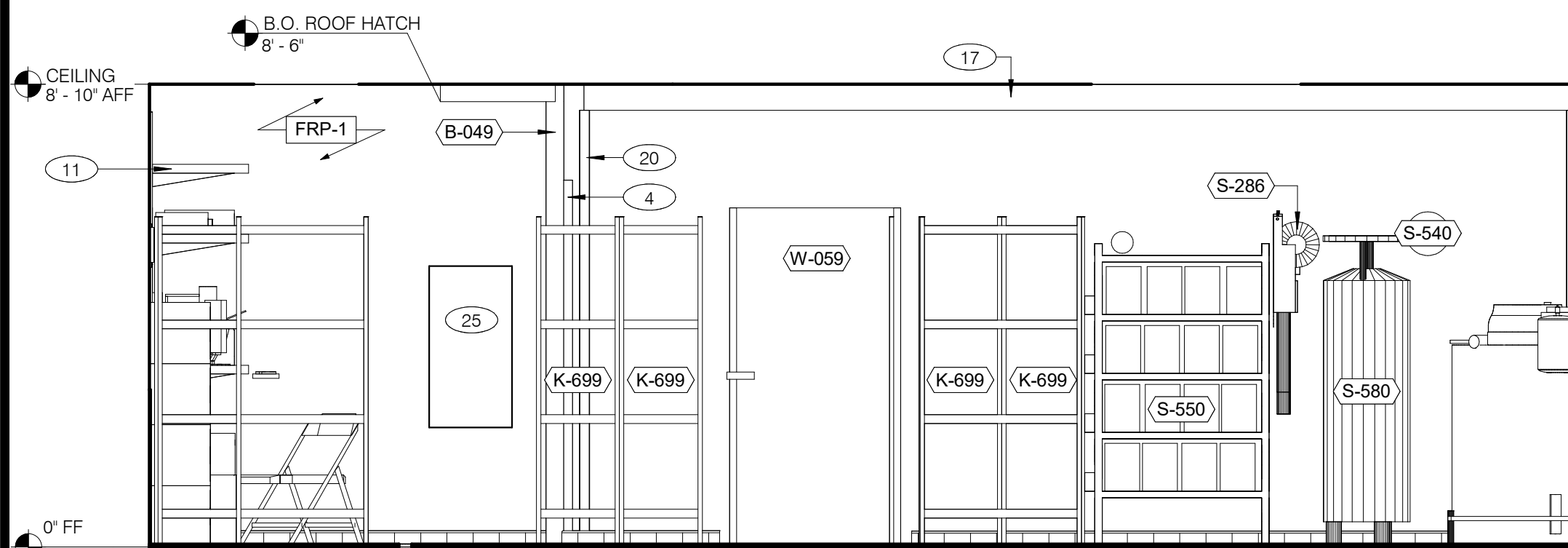
PLOT DATE: 9/13/2018 4:10:55 PM



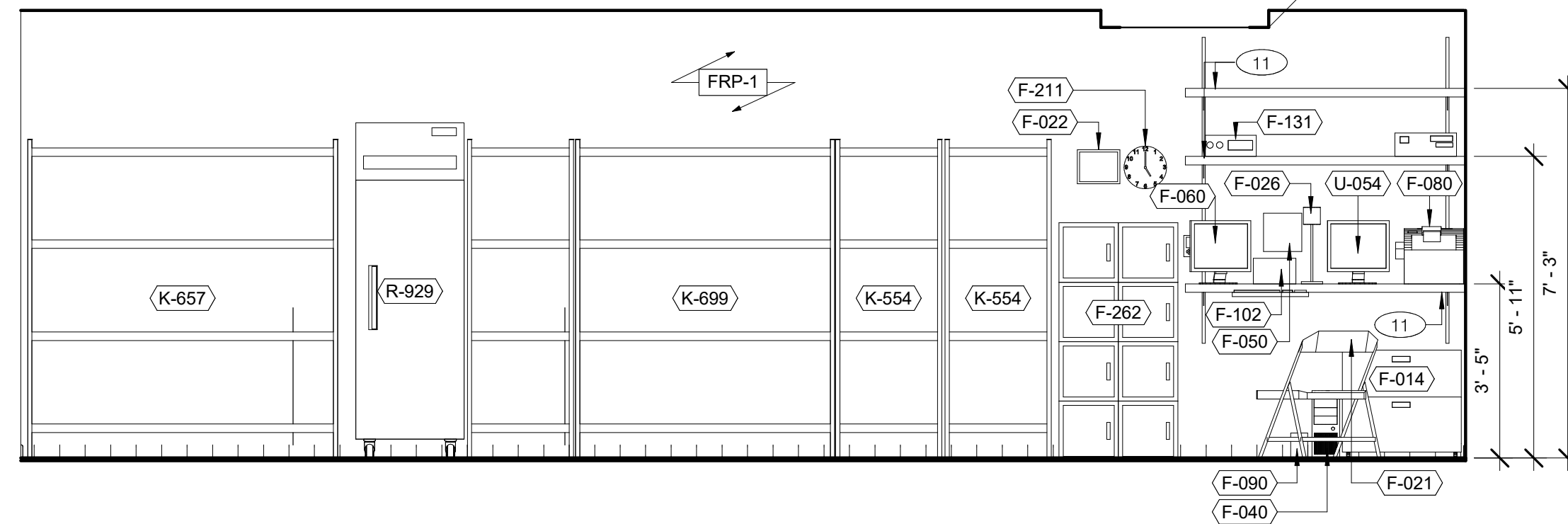
**DRIVE-THRU / PREP** 3/8" = 1'-0" **2**



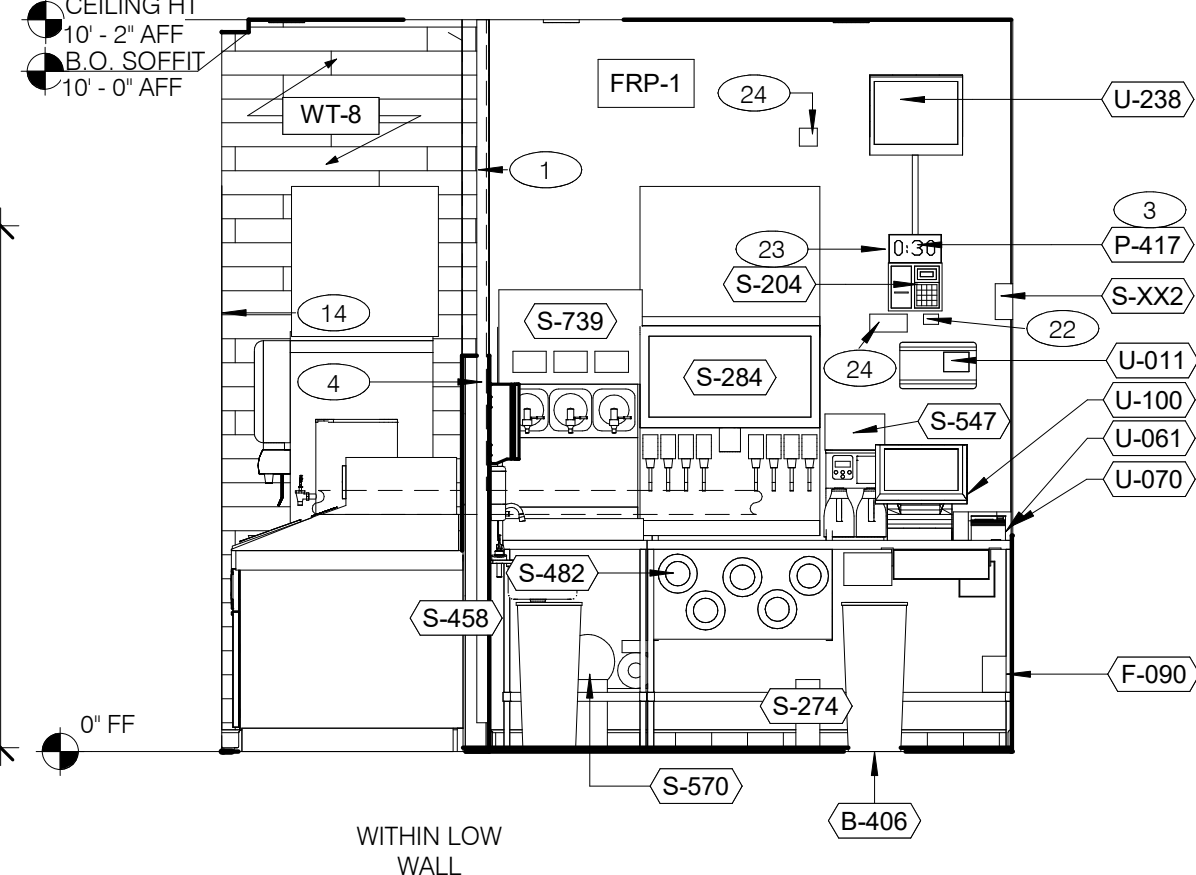
**DRIVE-THRU / PREP** 3/8" = 1'-0" **1A**



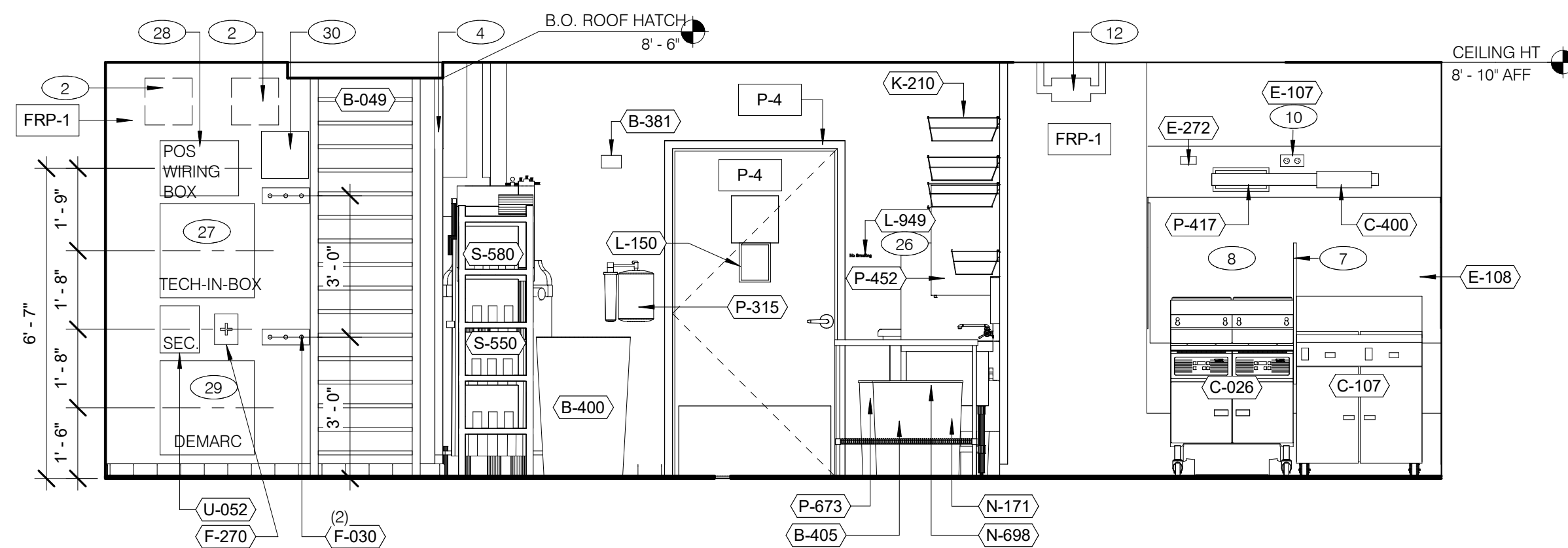
**DRY STORAGE / UTILITY / OFFICE** 3/8" = 1'-0" **5**



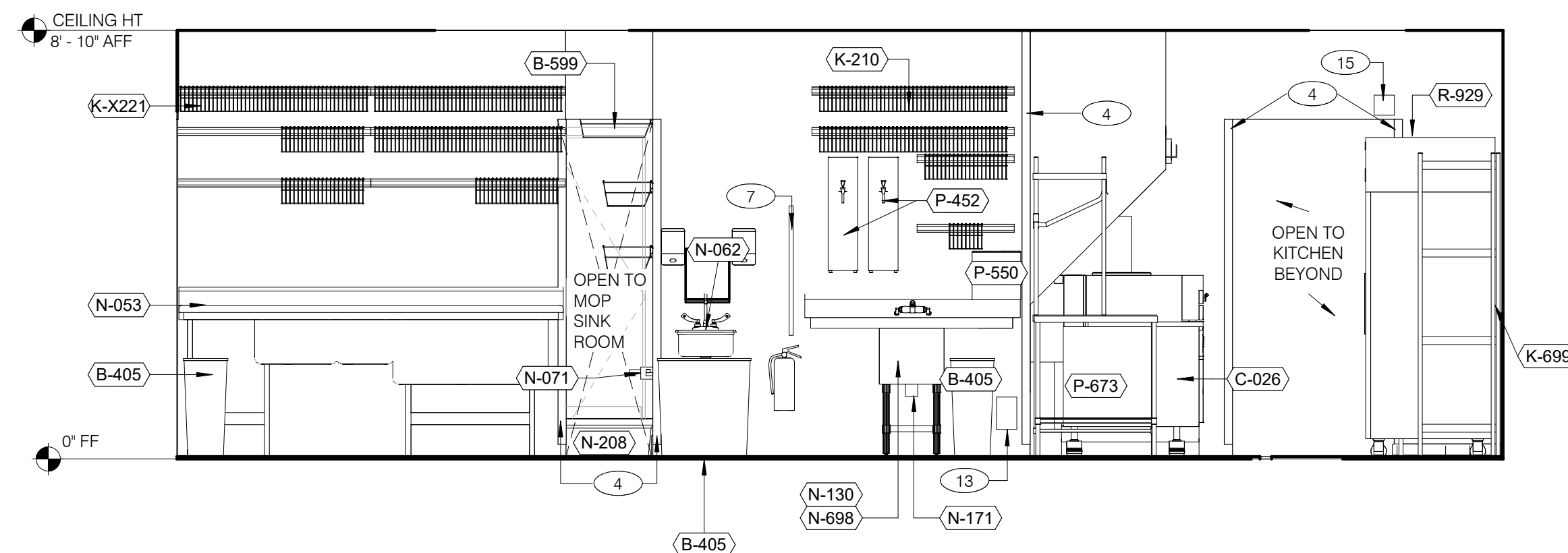
**DRY STORAGE / UTILITY / OFFICE** 3/8" = 1'-0" **4**



**DRIVE-THRU** 3/8" = 1'-0" **3**



**TB COOK / UTILITY** 3/8" = 1'-0" **6**



**PREP** 3/8" = 1'-0" **7**

- 1 BUNDLED PVC SYRUP LINES & ICE MACHINE REFRIGERANT LINES
- 2 FAN MOTOR STARTERS, SURFACE MOUNTED. (2) TYP.
- 3 DRIVE-THRU TIMER DISPLAY UNIT.
- 4 SS CORNER / END WALL CHANNEL GUARD, FULL HEIGHT. SEE DETAIL 13/A6.5.
- 5 REMOVABLE FRP PANEL AT DRINK STATION.
- 6 SS CORNER GUARDS AT PERIMETER OF D/T WINDOW. SEE DETAIL 10/A6.4 AND SCOPE OF WORK FOR RESPONSIBILITIES.
- 7 SPLASHGUARD. SEE DETAIL 9/A6.5.
- 8 SS PANEL BEHIND HOOD.
- 9 ANSUL PULL STATION.
- 10 J-BOX AND OUTLET INCLUDED WITH HOOD. INSET WITH FLUSH WITH FACE OF HOOD.
- 11 SHELF-BY G.C. FINISH WITH PLASTIC LAMINATE DL-3.
- 12 GAS SHUT-OFF VALVE.
- 13 FILTER FOR HOT WATER SYSTEM.
- 14 METAL TILE EDGE DETAIL AT CORNER. SEE DETAIL 20/A6.5
- 15 ALERT LIGHT BOX FOR POWER SOAK
- 16 COUNTER BY G.C.
- 17 VERTICAL ACT BORDER ABOVE WALK-IN/ BELOW CEILING. SEE DETAIL 9/A6.6.
- 18 NOT USED.
- 19 S.S. EDGE BELOW STOREFRONT AND ABOVE COUNTER TOP. SEE DETAIL 19/A6.5.
- 20 VERTICAL S.S. BORDERS AT GAP BETWEEN WALK-IN COOLER WALLS AND FRAMED WALLS.
- 21 FLY FAN.
- 22 DT TIMER SIGNAL PROCESSOR.
- 23 DT TIMER MONITOR AND CONTROL UNIT.
- 24 DT TIMER ETHERNET SWITCH.
- 25 ELECTRIC PANELS.
- 26 NO SMOKING SIGN
- 27 TECH-IN-A-BOX: REFER TO E3.1. G.C. TO PROVIDE BLOCKING WHERE REQUIRED.
- 28 WIRING CABINET BY POS PROVIDER
- 29 TELEPHONE TERMINAL BOARD
- 30 12"X12" PHONE DISTRIBUTION BOX: OWNER PROVIDED AND INSTALLED.
- 31 COORDINATE W/ OWNER ON EQUIPMENT FIT

**KEY NOTES**

**A**

09.14.18	ISSUED FOR CONSTRUCTION
C 07.11.18	HEALTH COMMENTS
06.20.18	ISSUED FOR BID
B 06.08.18	CLIENT COMMENTS
A 05.24.18	HEALTH COMMENTS
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**TACO BELL**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

**TACO BELL**  
T52  
OPEN KITCHEN  
MODERN EXPLORER

**INTERIOR  
ELEVATIONS  
KITCHEN**

**A8.3**

PLOT DATE: 9/13/2018 4:11:01 PM





NUMBER OF ACCESSIBLE SEATS

- 
- Diagram illustrating the side elevation of a public restroom stall, showing various fixtures and their dimensions:
- Grab Bars:**
    - 36" S.S. GRAB BAR
    - 48" S.S. GRAB BAR
    - VERTICAL S.S. GRAB BAR (IF ROD)
  - Toilet:**
    - 33" (EXCEPT @ TANK TOILETS, WHICH SHALL BE 36")
    - 17" TO 19"
    - 7'-9"
    - 19" TO 48" A.F.F. FOR OPERABLE OPENING W/O OBSTRUCTION FROM GRAB BAR
  - Vanity/Mirror:**
    - MIRROR MTD @ 40" A.F.F. MAX TO BOTTOM OF REFLECTING SURFACE
    - 40" MAX TO HIGHEST OPERABLE PART (CALIFORNIA)
    - 17" MAX
    - 9" MIN
    - 6" MAX. DEPTH x 30" MIN. WIDTH TOE CLEARANCE
    - 8" MIN. DEPTH x 30" MIN. WIDTH KNEE SPACE
  - Lavatory:**
    - LAV.
    - INSULATE HOT WATER & DRAIN PIPES
    - 14" MIN. / 17" MAX. PROJECTION FROM WALL URINAL
    - 40" MAX. CALIF
    - 48" MAX. ADA
    - TO OPERABLE POINT
  - Urinal:**
    - 17" MAX
    - 9" MIN
    - 40" MAX. CALIF
    - 48" MAX. ADA
  - Dispensers:**
    - T.S. COVER DISPENSER SHALL BE MOUNTED 1 1/2" (MIN.) BELOW GRAB RAIL
    - 1 1/2" MIN
    - 39" TO 41"
    - 2'-0"
    - 34" MAX.
    - 29" MIN.
    - 27" MIN.
    - 1'-0" MIN
    - 8" MIN
    - 17'-19"
    - 40" MAX. CALIF
    - 48" MAX. ADA
  - Controls:**
    - CONTROLS MOUNTED ON WIDE SIDE OF TOILET AREA
    - 19" TO 48" A.F.F. FOR OPERABLE OPENING W/O OBSTRUCTION FROM GRAB BAR
  - Other Features:**
    - DRYER PAPER TOWEL DISPENSER PULL STATION
    - SWITCHES
    - THERMOSTAT
    - FIRE ALARM

## **MOUNTING HTS. & CLEARANCE FOR ACCESSIBILITY BY THE DISABLED**

N.T.S.

YAM016



NOTE: SEE DOOR SCHEDULE. AND DOOR SCHEDULE NOTES

## COAT HOOK



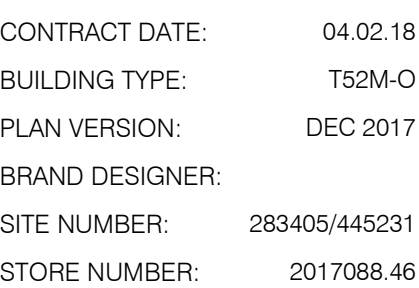
### PARTITION DOOR LATCH @ PULL



## DINING ROOM SEATING CLEARANCES

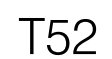
1. INDICATED DIMENSIONS, HEIGHTS, DEPTHS, AREAS AND OTHER GRAPHIC INFORMATION ARE PROVIDED AS MINIMUMS THAT MUST BE MAINTAINED. THESE MINIMUMS ARE BASED UPON YUM STANDARDS AND MAY EXCEED ADA REQUIREMENTS.
2. THE DETAILS SHOWN ARE CONCEPTUAL ONLY AND INTENDED TO SHOW ABSOLUTE MINIMUMS AND SHALL BE COORDINATED WITH THE OTHER CONSTRUCTION DOCUMENTS ASSOCIATED WITH THIS PROJECT.
3. 60" TURNING SPACE
  - PERMITTED OVERLAP LIMITED TO 1' ARM OF T-SHAPED SPACE
  - CAN OVERLAP FIXTURE & DOOR CLEARANCE
  - DOOR CAN SWING INTO TURNING SPACE A MAXIMUM OF 12"
4. RESTROOM, IN GENERAL, DOOR SWING MUST BE OUTSIDE OF THE FIXTURE CLEAR FLOOR SPACE HOWEVER A DOOR CAN SWING INTO FIXTURE CLEAR FLOOR SPACE IF WHEELCHAIR SPACE 30"x48" IS PROVIDED BEYOND THE DOOR SWING.
5. TOILET ROOM ALLOWED FOR SIDE TRANSFER - 42" BETWEEN FIXTURES
6. ALL BARRIER FREE SIGNS SHALL BE WHITE ON A BLUE BACKGROUND.

## GENERAL NOTES



TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



OPEN KITCHEN  
MODERN EXPLORER

## ACCESSIBILITY REQUIREMENTS

# ADA1.0

PLOT DATE: 9/13/2018 4:13:57 PM



<div><div><div>DOOR CLOSER IF PROVIDED, SHALL HAVE AT LEAST A 5-SECOND CLOSING TIME PERIOD FROM 90° OPEN POSITION TO 12° FROM LATCH</div><div>PROVIDE ISA DECAL @ ALL PUBLIC ACCESSIBLE ENTRANCES</div><div>DOOR HANDLE, SEE HARDWARE NOTES</div></div><div><div><div>34" TO 44"</div><div>60"</div><div>3'-0" DOOR WIDTH</div><div>10" MIN</div></div></div></div>		<div><div><div>CLEAR FLOOR SPACE AT DOOR STRIKE SIDE</div><div>THRESHOLD - SEE DETAILS 12, 14 / A6.1</div><div>DOOR AND HARDWARE PER SHEET A1.1</div><div>CLEAR SPACE FINISH ELEVATION TO MATCH FINISH FLOOR ELEVATION AT DOOR</div><div>SLIP RESISTANT SURFACE (MEDIUM BROOM FINISH)</div><div>CROSS SLOPE 1:50 OR 2% MAX. IN ALL DIRECTIONS.</div></div><div><div>32" MIN. CLR. OPENING</div><div>18"</div><div>24" REQ. IN CA. FOR EXTERIOR DOORS</div><div>60"</div></div><div><div>NOTE:</div><div>1. INTERIOR DOOR PRESSURE CANNOT EXCEED 5 LBS.</div><div>2. 60% OF PUBLIC ENTRANCES MUST BE ACCESSIBLE. (100% IN CA)</div></div></div>	
<b>TYP. ENTRANCE / EXIT DOOR</b> 12" = 1'-0"		<b>EXTERIOR DOOR REQUIREMENT</b> 12" = 1'-0"	
		<div><div><div>MIN. 60 DEGREE SLOPE</div><div>BOTTOM RAIL OF DOOR</div><div>ALUMINUM THRESHOLD</div><div>#10 S.M. IN PLASTIC EXPANSION ANCHOR</div></div><div><div>SEE DETAIL 12 / ADA1.0</div><div>1/2" MAX.</div></div></div>	
		<b>BOTTOM RAIL ( EXTERIOR DOOR)</b> 3" = 1'-0"	

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

TACO BELL

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

TACO BELL

T52  
OPEN KITCHEN  
MODERN EXPLORER

ACCESSIBILITY REQUIREMENTS

**GENERAL:**




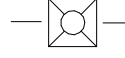


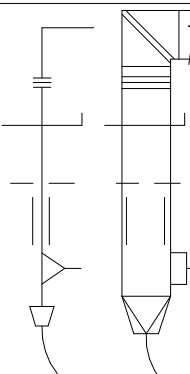








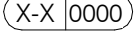

1. LOCATE, CUT AND FRAME ROOF OPENINGS AS SHOWN FOR ALL HVAC EQUIPMENT AND EXHAUST FANS.
2. IT IS VERY IMPORTANT THAT ACCURATE MEASUREMENTS ARE USED WHEN LOCATING EXHAUST FAN ROOF OPENINGS TO ENSURE THAT NO ADDITIONAL OFF-SETS ARE REQUIRED IN THE EXHAUST DUCTWORK. COORDINATE ROOF OPENINGS WITH THE KITCHEN EQUIPMENT.
3. PROVIDE ANY FRAMING REQUIRED FOR DIFFUSER INSTALLATION IN HARD CEILING.

## **HVAC:**

1. INSTALLATION SHALL CONFORM TO THE ENERGY CONSERVATION DESIGN MANUAL STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS.
2. ALL WORK AND MATERIALS SHALL COMPLY WITH GOVERNING CODES, SAFETY ORDERS AND REGULATIONS.
3. OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES AND INSPECTIONS REQUIRED BY GOVERNING AUTHORITIES.
4. E.C. SHALL PROVIDE CONDUIT FOR LINE AND LOW VOLTAGE WIRING, LINE VOLTAGE WIRING SWITCHES, AND FINAL CONNECTIONS. M.C. SHALL PROVIDE 24V CONTROL WIRING AND FINAL CONNECTIONS.
5. ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS.
6. FOR INSTALLATION OF RECHARGEABLE REFRIGERANT LINES FROM ICE MACHINE TO CONDENSER ON ROOF. SEE SCOPE OF WORK.
7. HVAC UNITS SHALL BE MOUNTED LEVEL ON ROOF CURBS.
8. ALL SUPPLY / RETURN DUCTWORK SHALL BE EXTERNALLY INSULATED.
9. ALL SUPPLY / RETURN DUCTS SHALL BE RIGID WITH THE EXCEPTION OF THE LAST 14'-0", WHICH MAY BE FLEX.
10. SMOKE DETECTOR SHALL BE INSTALLED IN THE RETURN AIR DUCT, PRIOR TO ANY OUTSIDE AIR CONNECTIONS, AND SHALL DEACTIVATE ROOFTOP UNIT UPON SENSING SMOKE. INCLUDE SMOKE DETECTOR IN THE SUPPLY AIR DUCT ONLY IF REQUIRED BY LOCAL CODE.
11. ALL HOOD EXHAUST DUCTS SHALL BE RIGID 16 GA MINIMUM, WELDED DUCT. GRIND ALL WELDS SMOOTH. PROVIDE 3M FIRE BARRIER DUCT WRAP FOR ALL HOOD EXHAUST DUCTS. SEE 15m/4.0.
12. ALL BRANCH DUCTS FEEDING INDIVIDUAL DIFFUSERS SHALL HAVE DAMPERS AT TAKEOFFS FOR AIR BALANCING. PROVIDE ACCESS PANELS TO DAMPERS. SEE 4m/4.0.
13. ALL UTILITY PIPING FOR RITUS SHALL RUN UP THROUGH ROOF INSIDE EACH UNIT'S ROOF CURB.
14. ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM EXHAUST FANS AND / OR VENTS.
15. FIRE, HC SYSTEM TESTING AND BALANCING SHALL BE PERFORMED BY INDEPENDENT AGENT CONTRACTED DIRECTLY BY THE OWNER. A RE-TEST IS MANDATORY FOR A FALSE START (IE. NO POWER UPON AGENTS ARRIVAL, EQUIPMENT NOT WIRED, ETC.) AND SHALL BE A COST INCURRED BY THE G.C. IN THE EVENT A SYSTEM / STORE RECEIVES A GRADE OF 5 OR BELOW AS A RESULT OF THE HVAC SYSTEM PERFORMANCE OR OPERATIONAL DEFICIENCIES. OWNER WILL REQUEST A RE-TEST AND THE COST FOR SAME SHALL BE ALSO INCURRED BY THE GENERAL CONTRACTOR.

## MECHANICAL NOTES

6

SYMBOL & ABBREV.	DESCRIPTION
	SA/SUP SUPPLY AIR (RISE/DROP)
	RA/RET RETURN AIR DUCT (RISE/DROP)
	EA/EXH EXHAUST AIR DUCT (RISE/DROP)
	CD/SR CEILING DIFFUSER/SUPPLY REGISTER (ARROWHEAD REPRESENTS NUMBER OF THROW)
	RR/RG RETURN REGISTER/GRILLE
	ER/EG EXHAUST REGISTER/GRILLE
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
	FC FLEXIBLE CONNECTION
	MCD MANUAL VOLUME DAMPER
	FD FIRE DAMPER
	(L) DUCT LINING (1" THICK UNLESS OTHERWISE NOTED)
	SINGLE LINING DUCT BRANCH TAKEOFF
	DUCT TRANSITION (RECTANGULAR TO ROUND)
	FLEX FLEXIBLE DUCT (14'-0" MAXIMUM)
	T-STAT PROGRAMMABLE THERMOSTAT, PROVIDED WITH LENNOX PACKAGE
	THERMOSTAT SENSOR (REMOTE), PROVIDED WITH LENNOX PACKAGE
	HUMIDITY SENSOR (REMOTE), PROVIDED WITH LENNOX PACKAGE
	D CONDENSATE DRAIN
	DIA. DIAMETER
	DL DOOR LOUVER
	UC DOOR UNDERCUT (3/4" MINIMUM)
	MECHANICAL EQUIPMENT DESIGNATION
	RESET SMOKE DETECTOR RESET

## MECHANICAL SYMBOLS

7

		FAN DATA					COOLING CAPACITY			HEATING CAPACITY			UNIT ELECT DATA				MANUF.	MODEL	NOTES	
MARK	AREA SERVED	SUPPLY CFM	MIN O.A. CFM	ESP	HP	RPM	NOMINAL TONS	MIN CAP (MBH) TOT/SEN	EER	INPUT STAGE (MBH)	OUTPUT (MBH)	HEATING STAGES	AFUE %	VOLTS/ PH	MCA (A)	MCCP (A)				WEIGHT (LBS.)
RTU-1	DINING	3000	750	1.0'	2	1195	7.5	93/67.9	12.5	130	104	2	80	208/3	42	50	1163	LENNOX	LGH092H4BM1Y	1.2,3,4,5,6,7
RTU-2	KITCHEN	4400	950	1.0'	3	970	12.5	145/120.2	12.3	240	192	2	80	208/3	64	80	1365	LENNOX	LGH152U4EH1Y	1.2,3,4,5,6,7

SCHEDULE NOTES:

1. LISTED CAPACITY IS THE STANDARD UNIT'S GROSS COOLING CAPACITY AT 80 DEG. F. DB / 67 DEG. F. WB EAT AND 95 DEG. F. AMBIENT. OUTDOOR DESIGN CONDITION, SUMMER 90 DEG. F. & 73 DEG. F. WB, WINTER 0 DEG. F. (ARI STANDARD CONDITIONS). THERMOSTAT SHALL BE PROGRAMMED FOR 73 DEG. F. IN SUMMER AND 68 DEG. F. IN WINTER WITH 2 DEG. ADJ. FUNCTION UP OR DOWN. THE UNOCCUPIED TEMP SHALL BE SET TO THE STORE SCHEDULE, 100% AND 60 DEG. F. MINIMUM.
2. SPECIFIED RTUS ARE DOWN DISCHARGE PACKAGED GAS / ELECTRIC ROOFTOP UNITS WITH MINIMUM 2-STAGE COOLING. INCLUDES THROUGH THE ROOF CURB POWER, GAS & CONDENSATE DRAIN. GAS PIPING SHALL BE FACTORY PIPED WITH SHUT-OFF OUTSIDE OF UNIT.
3. SPECIFIED UNIT INCLUDES HINGED HAIL ACCESS DOORS, 2" PLEATED FILTERS, LOW AMBIENT CONTROL TO 0 DEG. F., MODULATING ECONOMIZER, CIRCUIT BREAKER WITH SINGLE POINT WIRING, HAIL GUARD, AND FACTORY FABRICATED, KNOCK-DOWN ROOF CURB.
4. SPECIFIED UNIT INCLUDES FACTORY INSTALLED GAS REHEAT OPTION, INCLUDING REMOTE MOUNTED TEMPERATURE AND HUMIDITY SENSORS AS INDICATED ON THE DRAWINGS.
5. SPECIFIED UNIT INCLUDES SUPPLY AIR TEMPERING CONTROL.
6. PROJECT LOCATIONS NEAR COASTAL AREAS MAY REQUIRE EPOXY COATED COILS.
7. SPECIFIED RTUS SHALL BE SUPPLIED WITH OVERSIZED INDOOR FAN MOTOR AND EVAPORATOR MOTOR.

## HVAC UNIT SCHEDULE

1

Mark	FAN DATA				VOLTS/PH	DRIVE TYPE	MANUFACTURER	MODEL	NOTES
	CFM	FSP	RPM	HP					
EF-1	1050	0.9	1344	1/2	120/1	DIRECT	STRATOVENT	#SVDU50HFA	1,3,5,6,7,8,10
EF-2	300	0.375	1025	1/4	120/1	DIRECT	STRATOVENT	#SVD30HFA	2,4,7,8,9,10,11

## REMARKS:

1. UL 762 LISTED (GREASE)
2. UL 705 LISTED (HEAT OR STEAM)
3. FLAT ROOF CURB, 19.5" X 19.5" X 26"H, VENTED
4. FLAT ROOF CURB, 19.5" X 19.5" X 14"H
5. GREASE CUP WITH DRAIN
6. FACTORY ATTACHED HINGES
7. WEATHERPROOF PRE-WIRED DISCONNECT SWITCH
8. PROVIDE PRE-WIRED SOLID STATE SPEED CONTROLLER
9. GRAVITY BACKDRAFT DAMPER
10. PROVIDED BY OWNER WITH HOOD PACKAGE
11. PROVIDED WITH DAMPER TRAY

## SUPPLY AND EXHAUST FAN SCHEDULE

2

MARK	QUANTITY	NECK SIZE	FACE SIZE OR GRID SIZE	(NO.) & AIR PATTERN	TYPE	MAX FLOW (CFM)	MOUNTING	MATERIAL	MANUFACTURER	MODEL NUMBER	REMARKS
E-1	2	8"Ø	12x12	-	EXHAUST	200	SURFACE	ALUMINUM	METAL-AIRE / TITUS	CC5 / 50F	FRN SGR TO RND ADAPTER
E-2	1	8"Ø	12x12	-	EXHAUST	200	SURFACE	ALUMINUM	METAL-AIRE / TITUS	CC5 / 50F	FRN SGR TO RND ADAPTER
R-1	4	22x22	24x24	-	RETURN	2000	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	CC5-FB-TB / 50FF	FULLY REMOVABLE FACE
S-1	9	SEE PLANS	24x24	(2)4W/(2)3W	SUPPLY	500	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	5000-6 / TDC-AA	FRN SGR TO RND ADAPTER
S-2	3	6"Ø	14x14	HORIZ	SUPPLY	250	SURFACE	ALUMINUM	METAL-AIRE / TITUS	5000-1 / TDC-AA	FRN SGR TO RND ADAPTER
S-3	3	12x6	14x83	VERT	SUPPLY	400	SURFACE	ALUMINUM	TITUS	301RL	SUPPLY GRILLE WITH SINGLE DEFLECTION
S-4	5	SEE PLANS	24x24	HORIZ	SUPPLY	700	LAY-IN	ALUMINUM	HART & COOLEY	RZMCDST	PLASTIC MODULAR CORE
S-5	1	12"Ø	6" (3 SLOTS)	LINEAR	SUPPLY	525	LAY-IN	ALUMINUM	TITUS	ML-37-26	Linear Slot Ceiling Diffuser

NOTES:

1. DIFFUSERS IN SURFACE MOUNTED CEILINGS SHALL BE PROVIDED WITH OPPOSED BLADE DAMPERS. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES.

## AIR DEVICE SCHEDULE

# 3

ITEM	OA	RA	SA	EA	PRESSURE
EF-1	--	--	--	1050	-1050
EF-2	--	--	--	300	-300
RTU-1	750	2250	3000	--	+750
RTU-2	950	3450	4400	--	+950
TOTAL	1700	5700	7400	1350	+350

NOTE:  
THE OUTSIDE PERCENTAGE OF TOTAL SUPPLY AIR IS 25.0% FOR RTU-1 AND 21% FOR RTU-2.

## AIR BALANCE SCHEDULE CFM

4



T52  
OPEN KITCHEN  
MODERN EXPLORER

## MECHANICAL SCHEDULES AND NOTES

# M1.0

PLOT DATE: 9/13/2018 4:30:34 PM

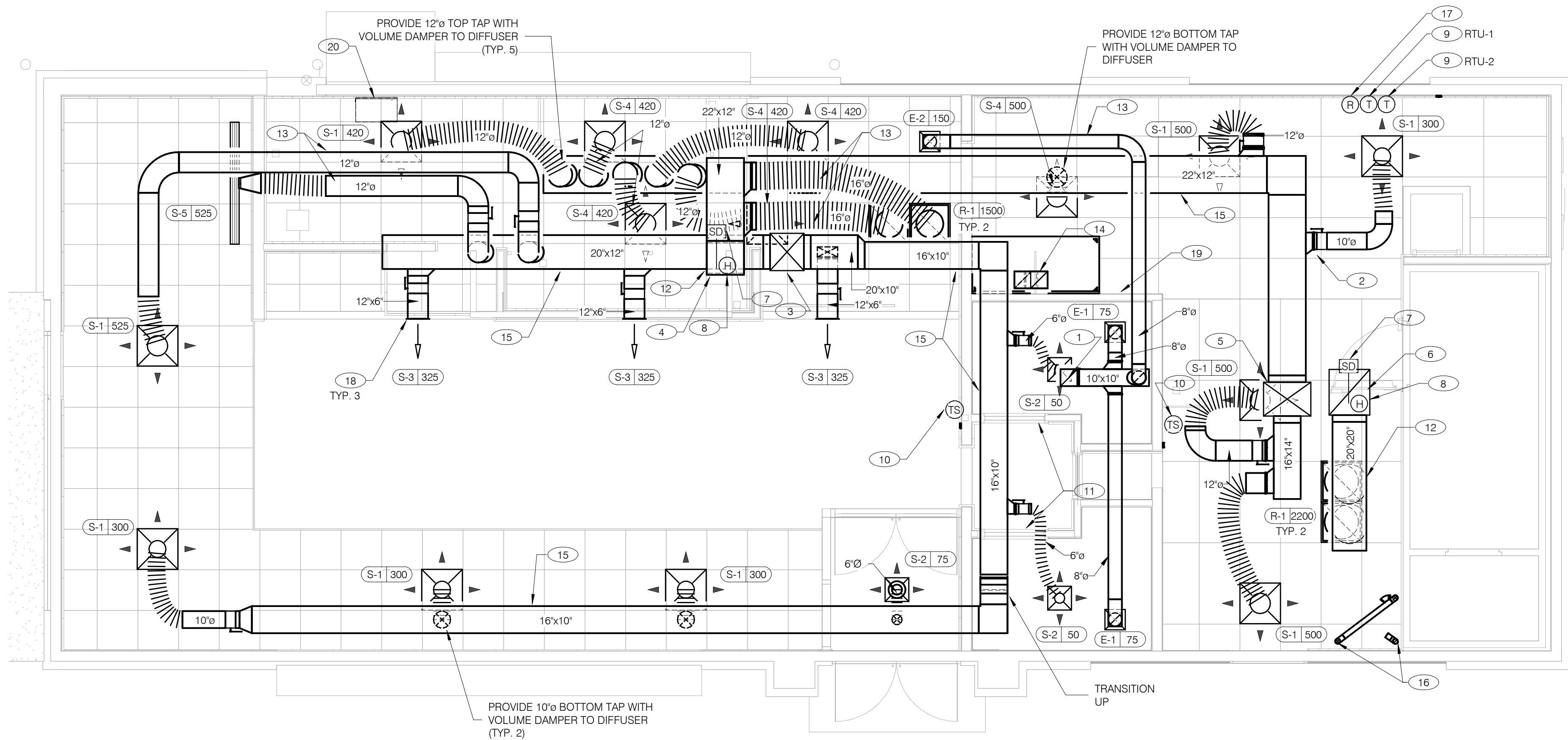
[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-C  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/44523  
STORE NUMBER: 2017088.46

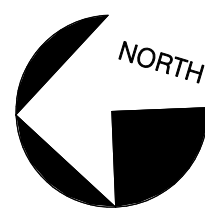
# Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146





**COVER ALL HVAC DUCT SYSTEMS OPENINGS TO PROTECT FROM CONSTRUCTION DUST AND DEBRIS UNTIL CONSTRUCTION IS COMPLETE. IF THE HVAC SYSTEM IS OPERATED BEFORE CONSTRUCTION IS COMPLETE, PROVIDE MERV8 FILTERS AT ALL AIR INTAKES INSIDE THE BUILDING.**



09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

**Taco Bell**  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



**T52**  
OPEN KITCHEN  
MODERN EXPLORER

## DUCT AND DIFFUSER PLAN

**M2.0**

PLOT DATE: 9/13/2018 4:30:35 PM

### GENERAL NOTES - MECHANICAL NTS

**C**

- DINING ROOM LIGHT FIXTURE LOCATIONS ARE CRITICAL. COORDINATE DUCTWORK LOCATIONS SO AS NOT TO CONFLICT WITH LIGHT FIXTURE LOCATIONS.
- THERMOSTATS SHALL BE PROGRAMMABLE THERMOSTAT WITH SUBBASE. REMOTE TEMPERATURE SENSOR, AND REMOTE HUMIDITY SENSOR.
- HUMIDITY SENSOR APPLICATION IS VARIABLE PER SITE SPECIFIC CONDITIONS. REFER TO HVAC UNIT SCHEDULE, 1/M1.0, FOR APPLICATION CONDITIONS.
- COORDINATE DUCTWORK LOCATIONS WITH LIGHTING AND STRUCTURAL.
- NO FLEX DUCT ALLOWED ON EXHAUST SYSTEMS.
- HVAC TEST AND BALANCE: CONTRACTOR TO CONTACT ONE OF THE FOLLOWING COMPANIES TO PERFORM THE HVAC AIR BALANCE.
  - TEST AND BALANCE CORP.  
MISTY CRIDER  
(678) 393-9401 EXT.2237  
isextorikeeton@tabonline.com
  - MELINK CORP.  
JENNIFER JACKSON  
(513) 393-9401 EXT. 2237  
kjohnson@melinkcorp.com
  - AIR CARE EXPERTS  
CHUCK McCABE  
cmccabe@ace-iaq.com

- 10x10 EXHAUST AIR DUCT UP TO EF-2.
- SEE DETAIL 4 ON DRAWING M4.0 FOR SUPPLY AIR TAKE-OFF TO CEILING DIFFUSERS AND GRILLES.
- EXTEND FULL SIZE SUPPLY DUCT DROP WITH FLEX CONNECTION TO RTU-1. PROVIDE 90° ELBOWS WITH TURNING VANES.
- DUCT TRANSITION FROM MAIN RETURN PLENUM TO 22"x18" RETURN AIR DUCT. CONNECT TO RETURN AIR PLENUM AT ROOFTOP UNIT RTU-1 WITH FLEX CONNECTION.
- EXTEND FULL SIZE SUPPLY PLENUM WITH FLEX CONNECTION TO RTU-2. PROVIDE 90° ELBOWS WITH TURNING VANES AND SPLITTER DAMPERS.
- EXTEND FULL SIZE RETURN DUCT DROP WITH FLEX CONNECTION TO RTU-2.
- FURNISH AND INSTALL SMOKE DETECTOR IN THE RETURN AIR DUCT, IN ACCORDANCE WITH LOCAL CODES. DUCT SMOKE DETECTOR WIRED BY ELECTRICAL CONTRACTOR, SEE SHEET E3.2.
- HUMIDITY SENSOR (REMOTE). HUMIDITY SENSOR LOCATION SHALL BE PLACED IN RETURN AIR DUCTWORK. VERIFY EXACT LOCATION.
- LOCATE THERMOSTAT CONTROLS ON WALL IN OFFICE AT 48" A.F.F. COORDINATE LOCATION WITH LIGHT SWITCHES AND OTHER WALL MOUNTED ACCESSORIES.
- MOUNT THERMOSTAT REMOTE SENSOR AT 60" ABOVE FINISHED FLOOR.
- UNDERCUT RESTROOM DOORS MINIMUM 3/4" FOR MAKE-UP AIR.
- RUN DUCTWORK BETWEEN TRUSSES AS HIGH AS POSSIBLE. COORDINATE ACTUAL DUCT ROUTING WITH FINAL TRUSS SPACING AND LOCATIONS.

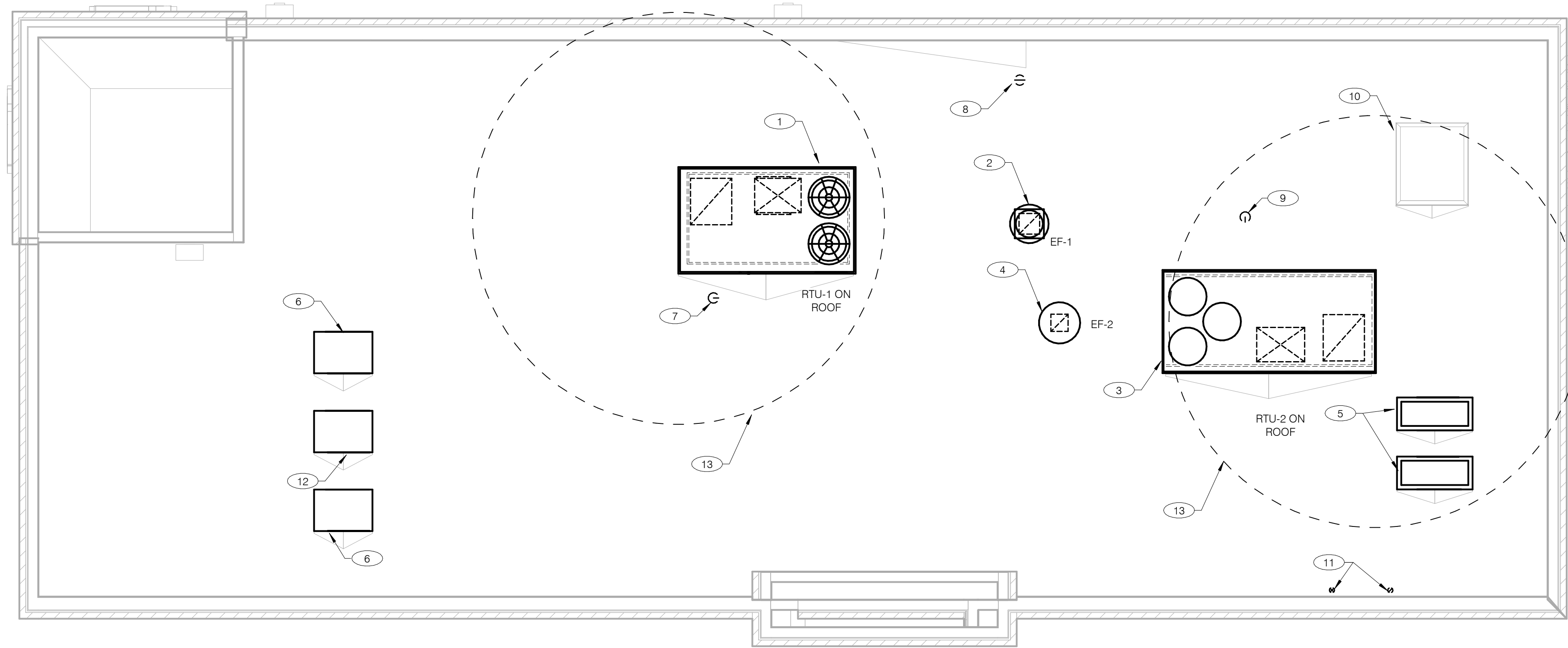
### DUCT AND DIFFUSER PLAN 1/4" = 1'-0"

**A**

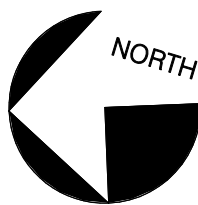
- RUN DUCT THROUGH OPEN WEBBING OF ROOF TRUSSES (WHERE POSSIBLE). COORDINATE WITH TRUSS DESIGN PRIOR TO DUCTWORK FABRICATION.
- 10"x10" EXHAUST AIR DUCT DOWN FROM EF-1 AND TRANSITION TO FIELD CUT EXHAUST CONNECTION AT HOOD. EXHAUST DUCT SHALL BE ROUTED THROUGH TRUSS WEBS TO CONNECT TO HOOD COLLAR. SEE HOOD DETAILS ON DRAWING M3.0. SEE DETAIL 10 ON SHEET M4.0 FOR FIRE PROTECTION OF DUCT WORK. SEE DETAIL 6 ON SHEET M4.0 FOR EXHAUST DUCT TRANSITION.
- RUN MAIN SUPPLY DUCT UNDER BOTTOM OF TRUSS. COORDINATE ACTUAL DUCT ROUTING WITH FINAL CEILING HEIGHT.
- FURNISH AND INSTALL 3" PVC WATER HEATER INTAKE AND FLUE VENT TERMINATION ON ROOF. COORDINATE WORK WITH ALL TRADES.
- NEW SMOKE DETECTOR RESET SWITCH WITH KEY. MFR. IS "SYSTEM SENSOR" MODEL # RT5151 KEY. MOUNT NEXT TO THERMOSTATS @ 48" A.F.F. - INSTALL PER MFR. SPECIFICATIONS.
- INSTALL SIDE-WALL MOUNTED GRILLE AT APPROXIMATELY 10'-8" A.F.F. CONNECT GRILLE TO SUPPLY DUCT AND PROVIDE WITH VOLUME DAMPER AT CONNECTION PAINT TO MATCH ADJACENT CONDITIONS.
- CONTRACTOR TO INSTALL FIRE SUPPRESSION CABINET ON EXHAUST HOOD. CONTRACTOR TO PROVIDE ALL NECESSARY PIPING, FITTINGS, AND ACCESSORIES TO MAKE FINAL CONNECTION AT HOOD. FIELD VERIFY EXACT LOCATION OF FIRE SUPPRESSION CABINET.
- CONTRACTOR TO PROVIDE AND INSTALL AIR CURTAIN IN LOCATION AS SHOWN ON PLAN. MOUNT AIR CURTAIN ON MULLION DIRECTLY ABOVE SERVICE OPENING DOORS AT DRIVE-THRU WINDOW. PROVIDE BERNER MODEL DTU03-2026A AT 120/1/60. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS FOR MORE DETAILS.

### KEYNOTES - DUCT AND DIFFUSER NTS

**B**



COVER ALL HVAC DUCT SYSTEMS OPENINGS TO PROTECT FROM CONSTRUCTION DUST AND DEBRIS UNTIL CONSTRUCTION IS COMPLETE. IF THE HVAC SYSTEM IS OPERATED BEFORE CONSTRUCTION IS COMPLETE, PROVIDE MERV8 FILTERS AT ALL AIR INTAKES INSIDE THE BUILDING.



MECHANICAL ROOF PLAN 1/4" = 1'-0"

A

- 1

CONTRACTOR TO PROVIDE AND INSTALL RTU-1 IN LOCATION AS SHOWN ON PLANS. COORDINATE EXACT RTU LOCATION AND DUCT DROPS WITH STRUCTURAL TRUSS LAYOUT.
- 2

CONTRACTOR TO PROVIDE AND INSTALL TYPE I EXHAUST FAN (EF-1) IN LOCATION AS SHOWN PLANS. CONNECT 10"x10" EXHAUST DUCT FROM EXHAUST HOOD UP TO EF-1 ON ROOF. COORDINATION EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
- 3

CONTRACTOR TO PROVIDE AND INSTALL RTU-2 IN LOCATION AS SHOWN ON PLANS. COORDINATE EXACT RTU LOCATION AND DUCT DROPS WITH STRUCTURAL TRUSS LAYOUT.
- 4

CONTRACTOR TO PROVIDE AND INSTALL TYPE II EXHAUST FAN (EF-2) IN LOCATION AS SHOWN PLANS. CONNECT 10"x10" EXHAUST DUCT FROM RESTROOM EXHAUST GRILLES TO EF-2 ON ROOF. COORDINATION EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
- 5

CONDENSING UNIT SERVING WALK-IN COOLER/FREEZER. COORDINATE EXACT LOCATION WITH ROOF LAYOUT. CONTRACTOR TO FIELD VERIFY EXACT REFRIGERANT PIPING. PROVIDE ALL NECESSARY PIPING ACCESSORIES INCLUDING PIPING INSULATION AND INSTALL ON APPROPRIATE EQUIPMENT SUPPORTS.
- 6

CONDENSING UNIT SERVING ICE MAKER. COORDINATE EXACT LOCATION WITH ROOF LAYOUT. CONTRACTOR TO FIELD VERIFY EXACT REFRIGERANT PIPING. PROVIDE ALL NECESSARY PIPING ACCESSORIES INCLUDING PIPING INSULATION AND INSTALL ON APPROPRIATE EQUIPMENT SUPPORTS.
- 7

1" GAS PIPING UP THROUGH ROOF FROM BELOW. CONTRACTOR TO ROUTE GAS PIPING ON ROOF AND PROVIDE PIPING SUPPORTS. CONNECT TO RTU AND PROVIDE WITH SHUT-OFF VALVE AND DIRT LEG.
- 8

PLUMBING VENT, REFERENCE 1/P2.0. ENSURE AT LEAST A 10'-0" DISTANCE BETWEEN ANY OUTDOOR AIR INTAKES
- 9

1-1/4" GAS PIPING UP THROUGH ROOF FROM BELOW. CONNECT TO RTU AND PROVIDE WITH SHUT-OFF VALVE AND DIRT LEG.
- 10

ROOF HATCH. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
- 11

FURNISH AND INSTALL 3" PVC WATER HEATER INTAKE AND FLUE VENT TERMINATION ON ROOF. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ENSURE AT LEAST A 10'-0" DISTANCE BETWEEN ANY OUTDOOR AIR INTAKES.
- 12

CONDENSING UNIT SERVING FROZEN BEVERAGE MACHINE. COORDINATE EXACT LOCATION WITH ROOF LAYOUT. CONTRACTOR TO FIELD VERIFY EXACT REFRIGERANT PIPING. PROVIDE ALL NECESSARY PIPING ACCESSORIES INCLUDING PIPING INSULATION AND INSTALL ON APPROPRIATE EQUIPMENT SUPPORTS.
- 13

MAINTAIN A MINIMUM 10'-0" CLEARANCE TO ANY EXHAUST TERMINATIONS.

KEYNOTES - ROOF PLAN NTS

B

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52  
OPEN KITCHEN  
MODERN EXPLORER

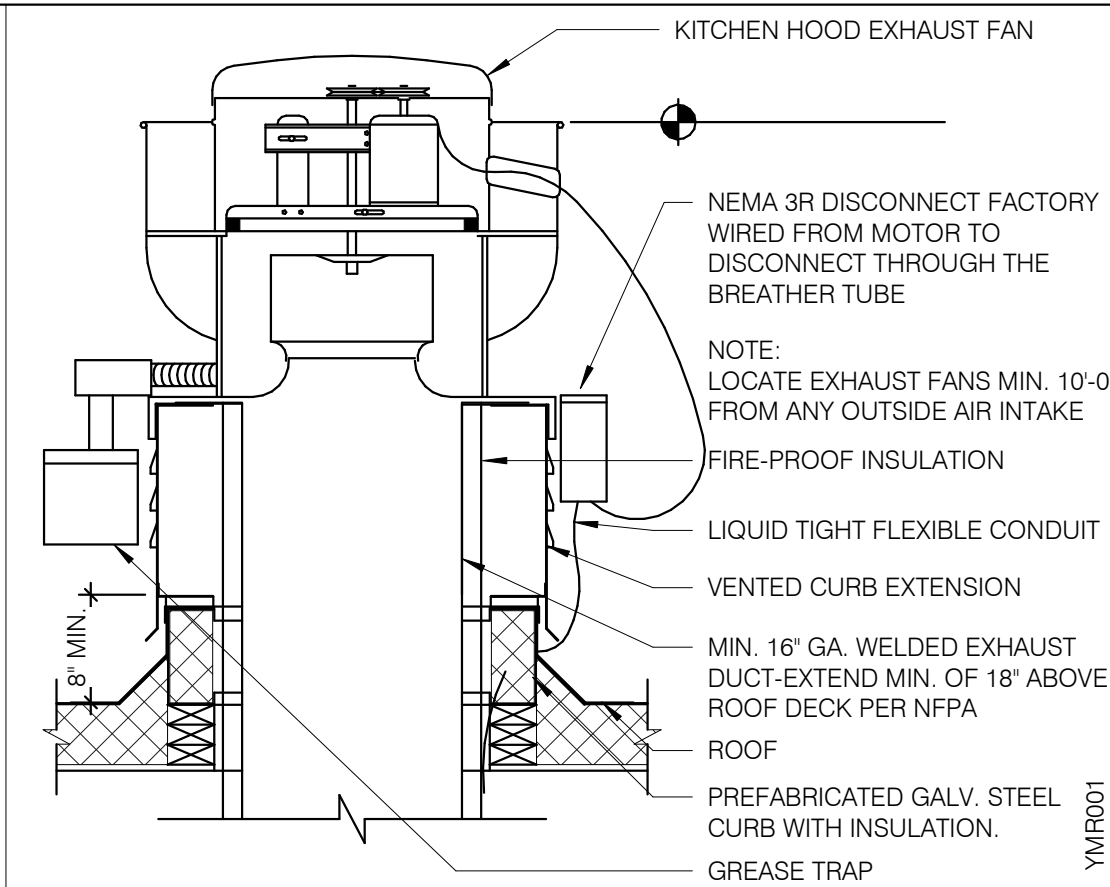
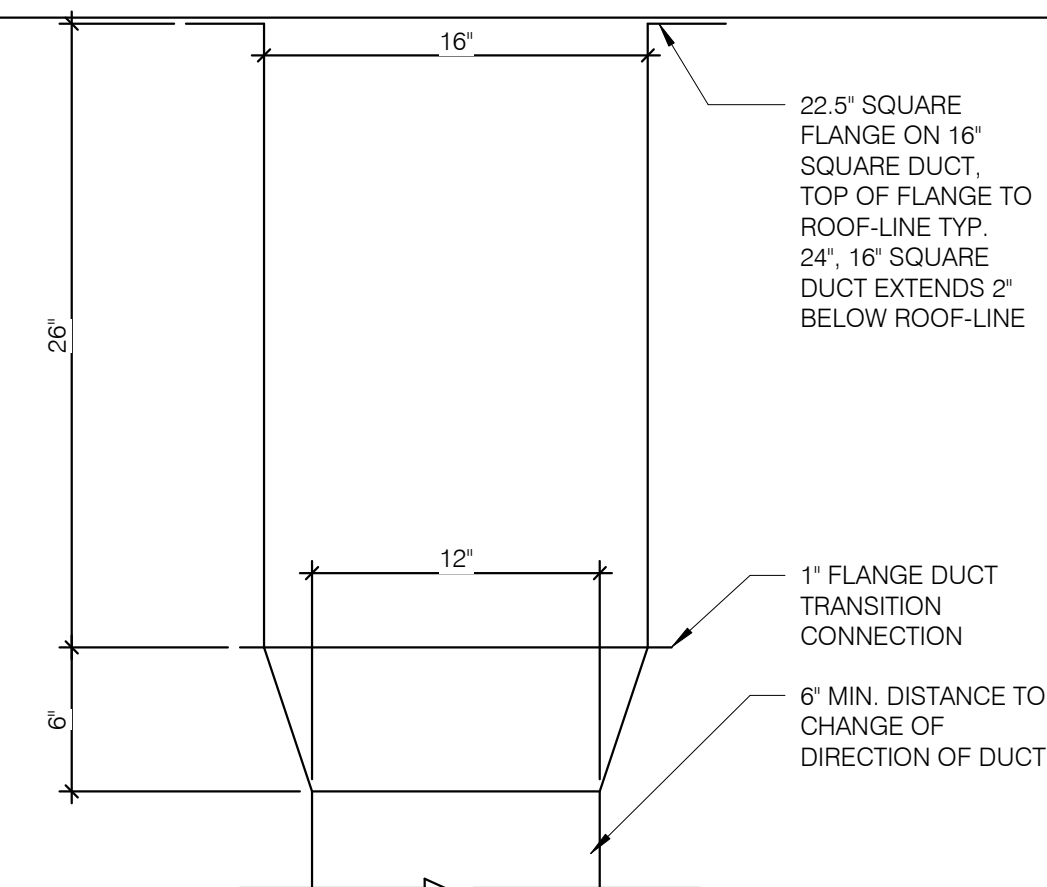
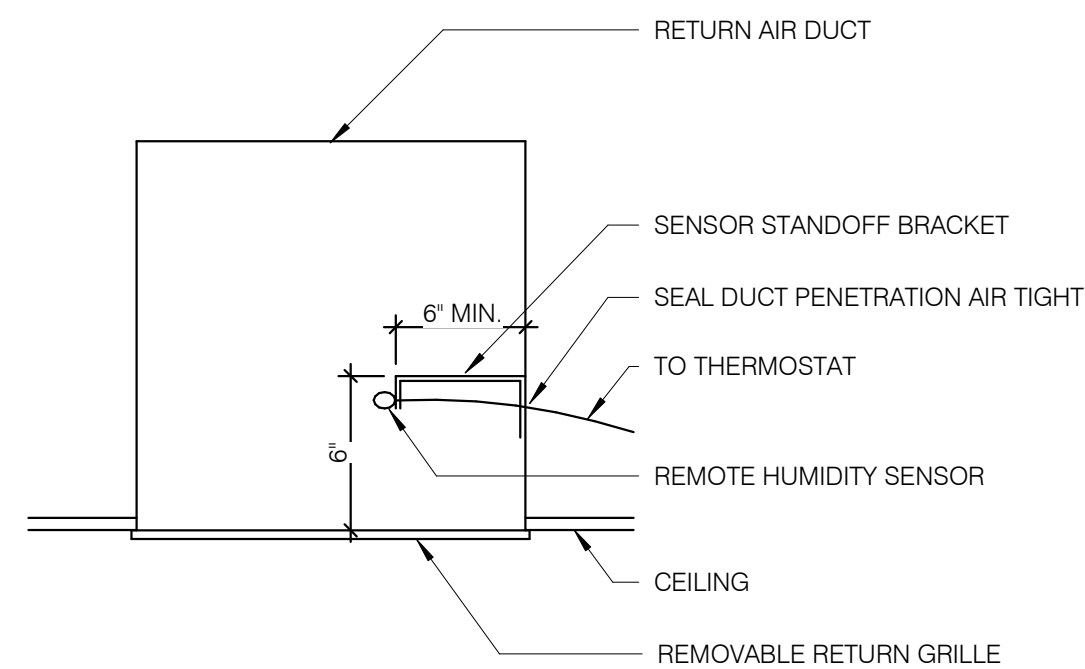
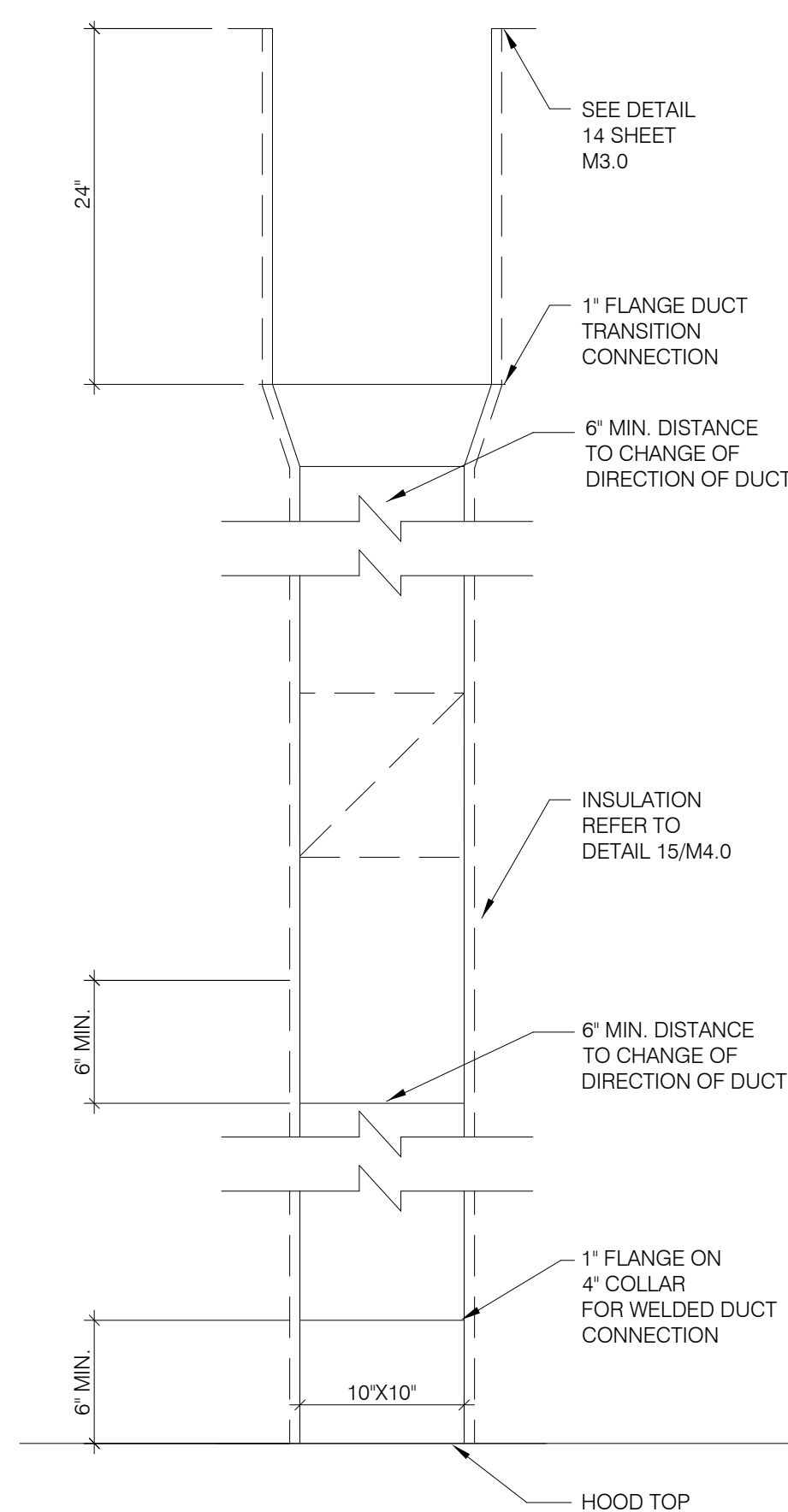
MECHANICAL  
ROOF PLAN

M2.1

PLOT DATE: 9/13/2018 4:30:35 PM



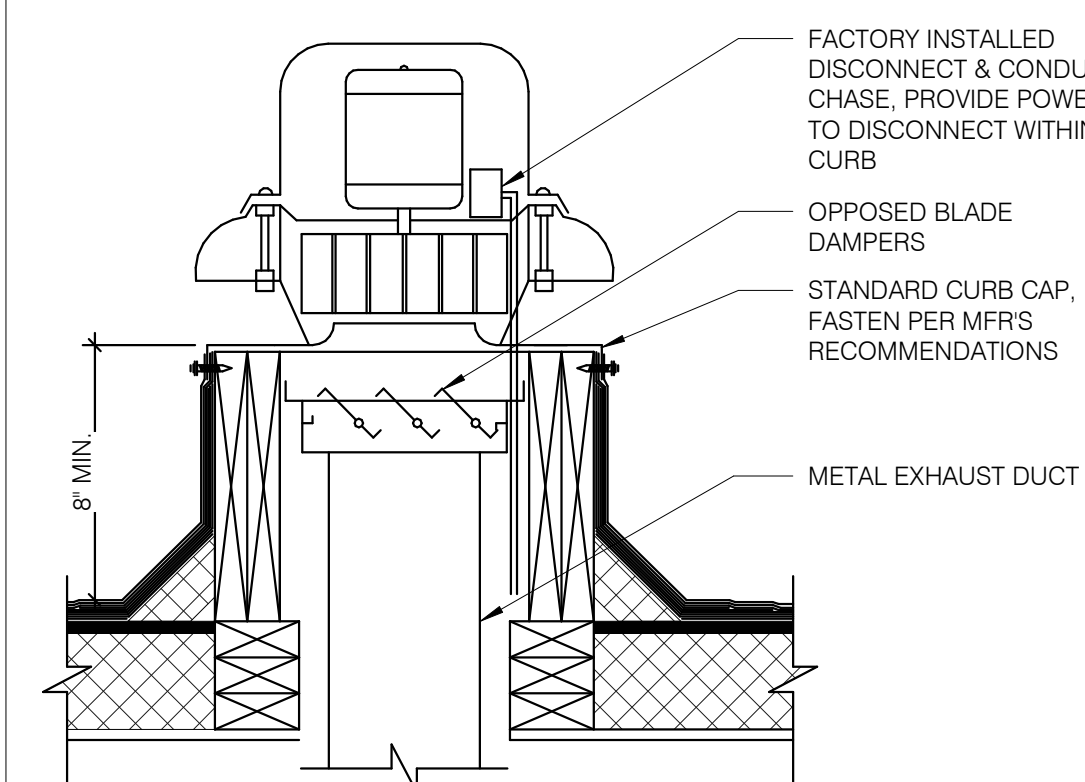
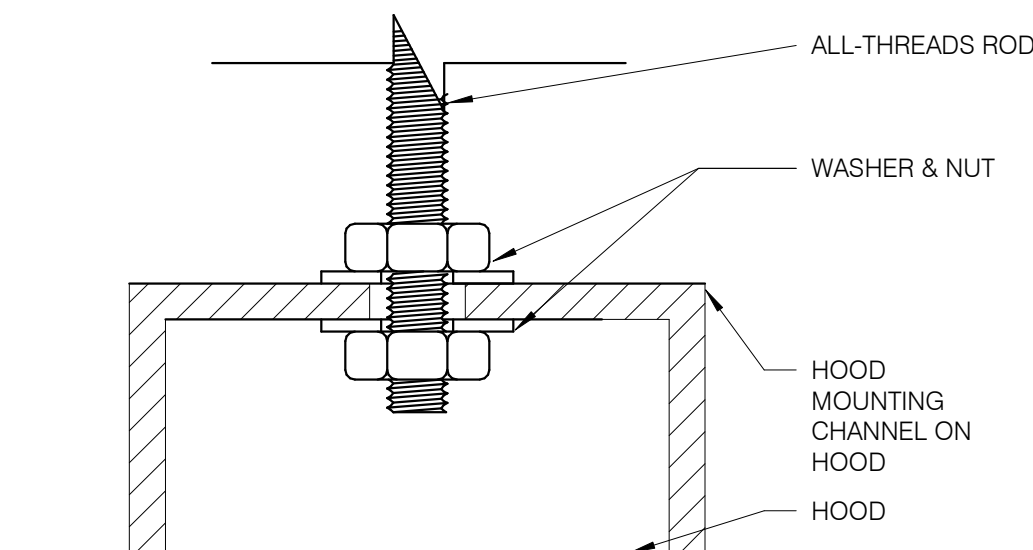
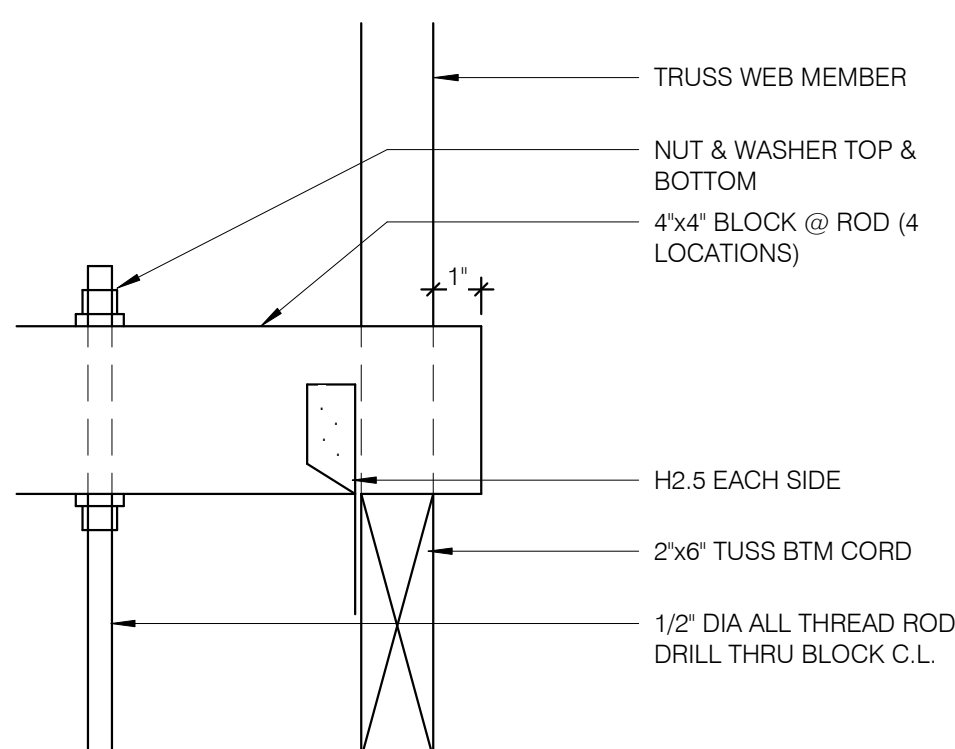




## REMOTE HUMIDITY SENSOR NTS

## OVEN HOOD EXH. DUCT TRANSITION

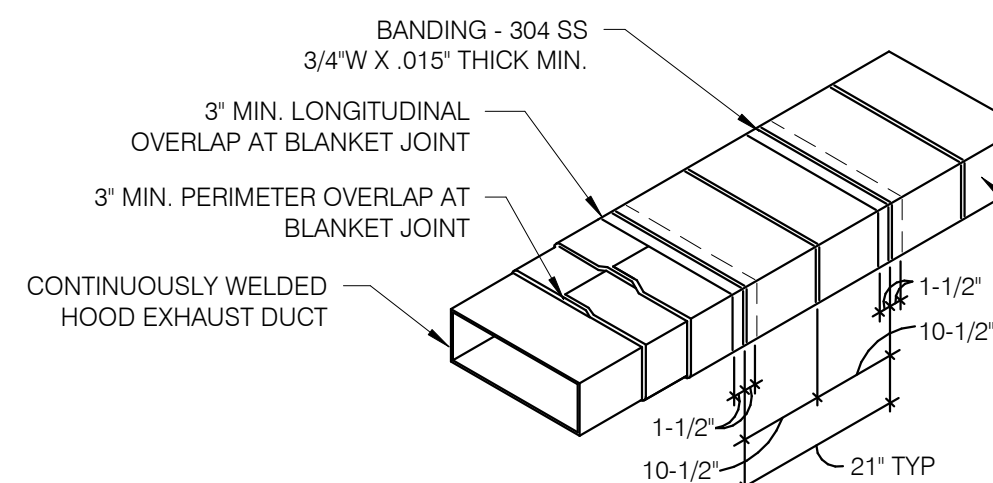
**EXHAUST FAN (EF-1)** NTS



## TB HOOD DUCT TRANSITION NTS

**ROD ATTACHMENT** NTS

### BOLT CONNECTION TO HOOD

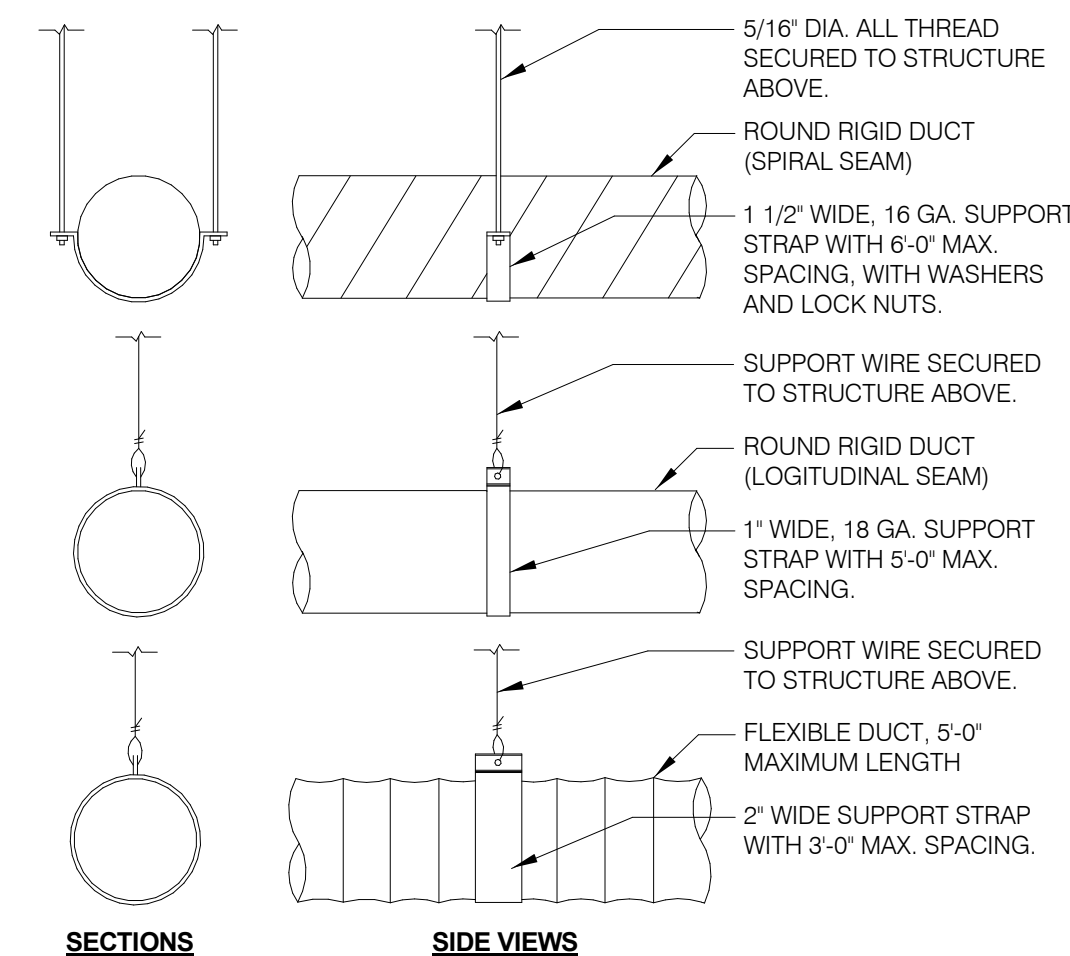
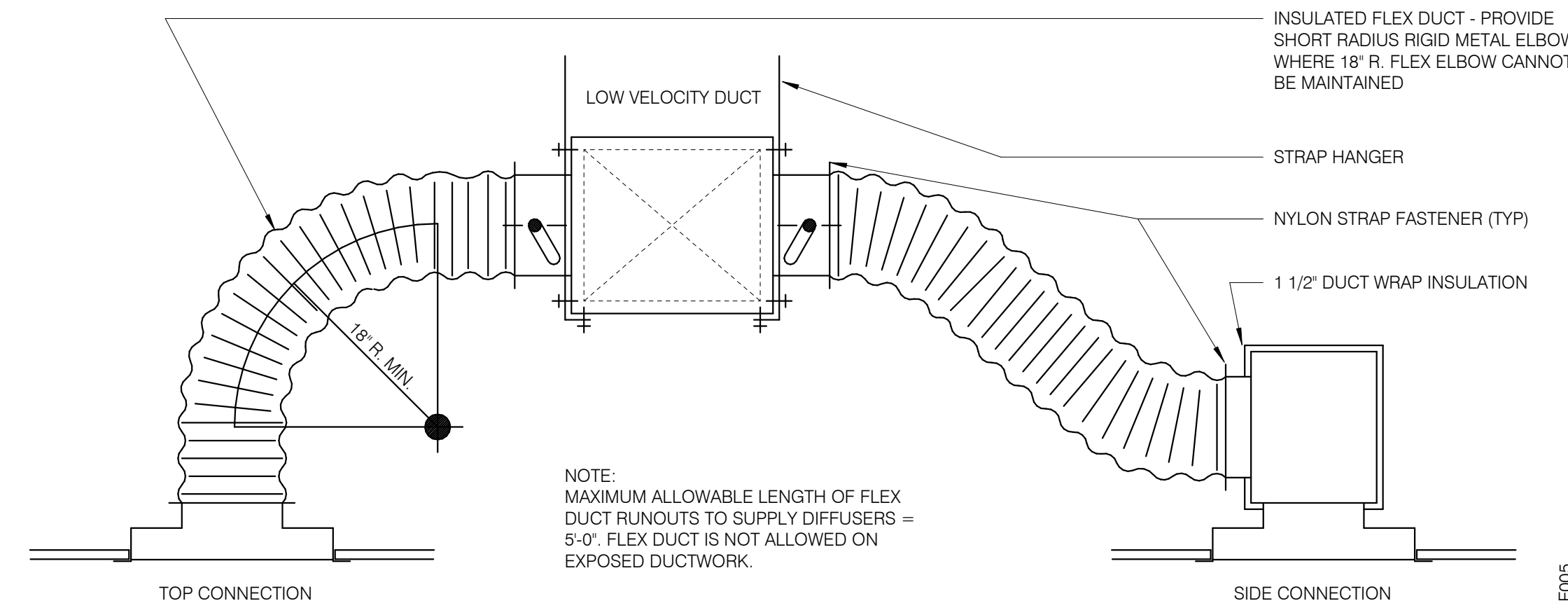
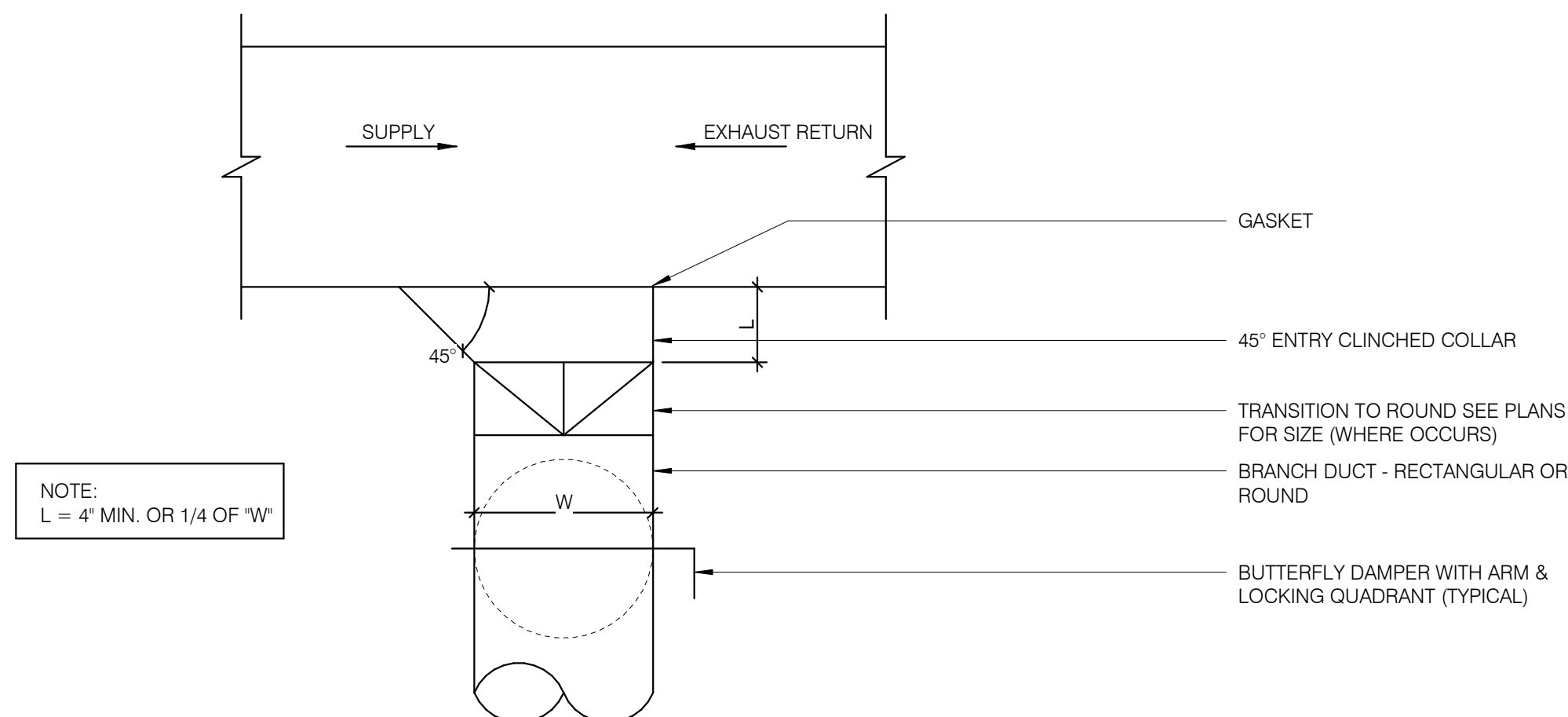
**RESTROOM FAN (EF-2)** NTS

BANDING REQUIREMENTS: USE 304 STAINLESS STEEL BANDS A MAXIMUM 1-1/2" FROM BLANKET EDGE AND SPACED A MAXIMUM OF 10-1/2" ON CENTER.

- NOTES:

1. WRAP GREASE DUCT CONTINUOUS AS SHOWN FROM CONNECTION AT FAN THROUGH CURB AND EXTEND 18" MIN. BELOW ROOF DECK.
2. FOR HORIZONTAL RUNS OF EXHAUST DUCTS PROVIDE TYPICAL TRAPEZE SUPPORT SYSTEM WITH 1/2" HANGER RODS A MAXIMUM OF 6" FROM INSULATION EDGE. TRAPEZE SUPPORTS SHALL BE SPACED A MAXIMUM OF 60" ON CENTER FROM CENTERLINE OF VERTICAL EXHAUST DUCT.
3. SLOPE HORIZONTAL EXHAUST DUCT RUNS A MINIMUM OF 1/4" PER FOOT (2% SLOPE) TOWARDS EXHAUST HOOD.
4. PROVIDE INSULATED ACCESS DOOR OR PANEL NEAR MID POINT OF EXHAUST DUCT RUN FOR CLEANING AND INSPECTION OF DUCT. PROVIDE AN APPROVED SIGN ON ACCESS DOOR OR PANEL WHICH READS "ACCESS PANEL DO NOT OBSTRUCT"

### KITCHEN HOOD EXHAUST DUCT SYSTEM DETAIL NTS



## SECTIONS

### SIDE VIEWS

## TYPICAL DUCTWORK DETAILS NTS

## CEILING DIFFUSER CONNECTIONS NTS

### DUCT SUPPORT DETAIL NTS

	1
--	---

[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-C  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/44523  
STORE NUMBER: 2017088.46

Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52  
OPEN KITCHEN  
MODERN EXPLORER

## MECHANICAL AND HOOD DETAILS

# M4.0

PLOT DATE: 9/13/2018 4:30:37 PM







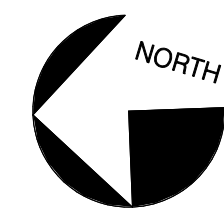
**TACO  
BELL.**

T52

OPEN KITCHEN  
MODERN EXPLORER

## P2.0

PLOT DATE: 9/13/2018 4:32:05 PM



## 1

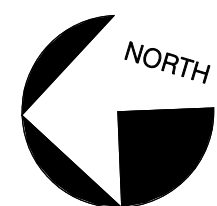


4

- 10 1" CONDENSATE DRAIN DOWN FROM RTU-1. SEE DETAIL 10/P6.0.
- 11 1" CONDENSATE DRAIN DOWN FROM RTU-2. SEE DETAIL 10/P6.0.
- 12 1-1/2" CONDENSATE DRAIN PIPE DOWN TO MOP SINK. PROVIDE AIR GAP AS REQUIRED BY CODE. IF REQUIRED RUN CONDENSATE PIPING TO EXTERIOR DRYWELL, RETENTION AREA OR STORM SEWER AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION.
- 13 RUN DRAIN LINE FROM S/S DRINK MACHINE TO FLOOR SINK WITH APPROVED AIR GAP.
- 14 DOWN SPOUT, SEE CIVIL PLANS FOR CONTINUATION.
- 15 ROUTE INDIRECT WASTE FROM WH-1 TO HD-1. REFERENCE DETAIL 2/P6.0 AND DETAIL 4/P2.0.
- 16 COORDINATE INSTALLATION OF DRAIN WITH POURING OF FOUNDATION DURING CONSTRUCTION.

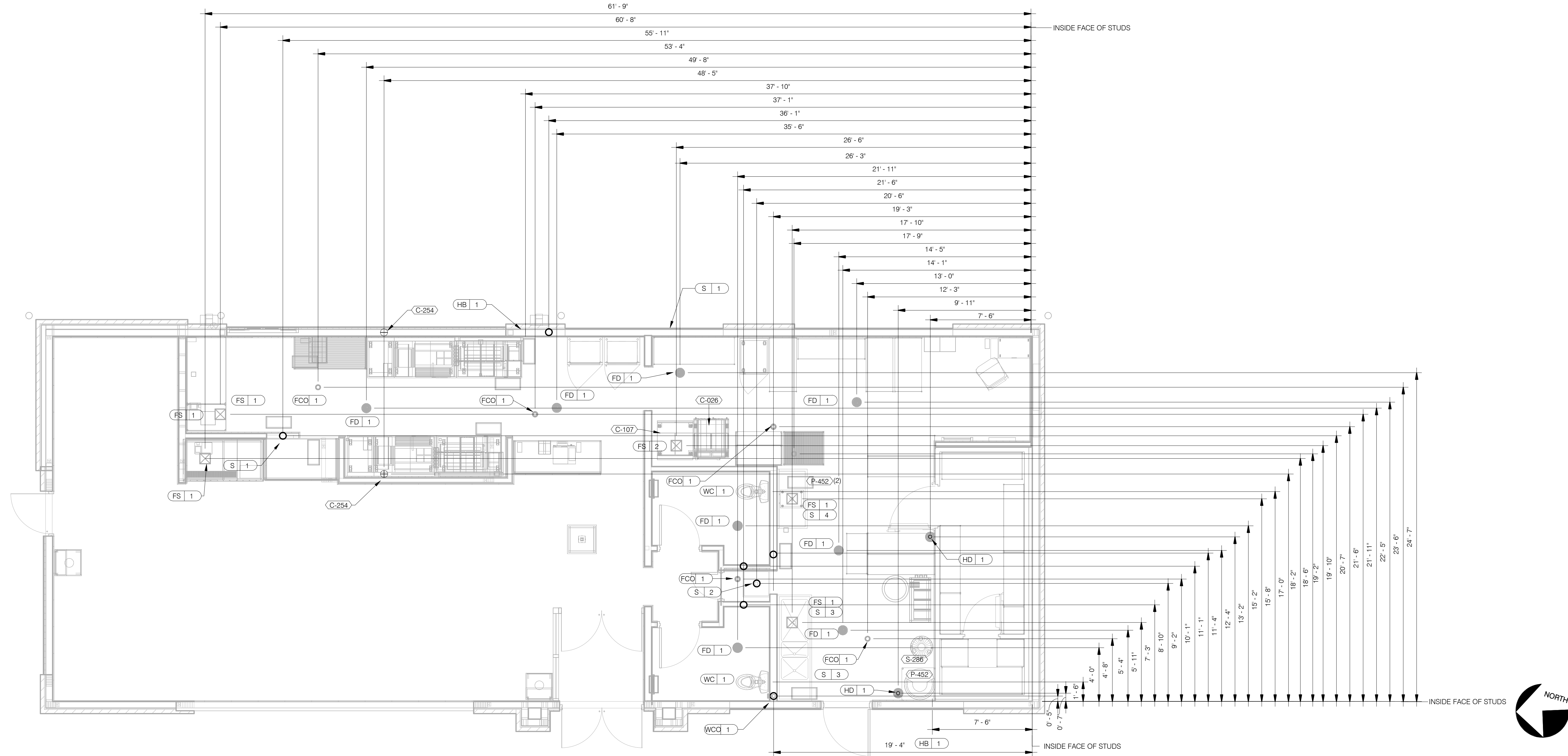
2





1

- 17 BUNDLED SYRUP LINES AND FILTERED WATER LINES TO BEVERAGE DISPENSERS S-284 AND S-285, AND FILTERED WATER LINES TO FROZEN BEVERAGE DISPENSER S-739. SEE DRAWINGS A2.0, P5.0, P6.0 AND 1/A6.6 PROVIDE AND INSTALL ASSE 1022 DOUBLE CHECK VALVE WITH 100-MESH STRAINER FOR SOFT DRINK CARBONATORS.
- 18 1-1/4" GAS DOWN OUTSIDE OF WALL TO TACO BELL COOKING EQUIPMENT. VERTICAL GAS PIPING IN WALL SHALL NOT BE RIGIDLY SECURED AND ADEQUATE PIPE PROTECTION SHALL BE PROVIDED.
- 19 3/4" GAS DIRT LEG W/ GAS COCK TO COOKING EQUIPMENT. PROVIDE FLEXIBLE GAS HOSE KIT FOR CONNECTION TO COOKING EQUIPMENT.
- 20 3" PVC EXHAUST AND INTAKE FLUES FROM WATER HEATER, PIPE THROUGH ROOF AS RECOMMENDED BY MANUFACTURER TO LOCATIONS SHOWN ON SHEET M2.0. SEE DETAIL 2/P6.0.
- 21 1/2" HOT WATER DOWN IN WALL TO TB RETHERMALIZER C-107. PROVIDE SHUT-OFF VALVE OUTSIDE OF WALL FOR CONNECTION TO RETHERMALIZER.
- 22 RUN GAS PIPE 18" A.F.F. WITH DIRT LEGS FOR GAS HOSE KITS TO COOKING EQUIPMENT C-026 AND C-107.
- 23 1/4" RO WATER PIPE DOWN IN WALL AND ROUTED IN LOW WALL OF DRY PRODUCTION LINE. PROVIDE SHUT-OFF VALVE ON RO PIPING IN CEILING NEAR CHASE.
- 24 1/2" COLD WATER TO REVERSE OSMOSIS FILTER P-315 AND 1/2" FILTER WATER FROM REVERSE OSMOSIS FILTER. PROVIDE SHUT-OFF VALVE ON CW PIPE PRIOR TO CONNECTION TO FILTER.
- 25 1/2" FW WATER PIPE DOWN IN WALL AND ROUTED IN LOW WALL OF DRY PRODUCTION LINE TO BREWERS S-546 AND S-547. PROVIDE SHUT-OFF VALVE ON FW PIPING IN CEILING NEAR CHASE.
- 26 ROUTE 1/2" FW DOWN IN WALL BELOW SLAB FOR CHEESEMELTER.
- 27 1/2" FW UP FROM BELOW SLAB TO CHEESEMELTER. PROVIDE SHUT OFF VALVE



## PLUMBING ROUGH-IN PLAN $1/4" = 1'-0"$

EQUIP #	EQUIPMENT ITEM	TYPE	ELEVATION	REMARKS	EQUIP #	EQUIPMENT ITEM	TYPE	ELEVATION	REMARKS
FD 1	FLOOR DRAIN		--		S 3	3-COMPARTMENT SINK FAUCET	CW/HW	+38" A.F.F	--
FS 1	FLOOR SINK		--		S 4	PREP SINK	W	+19" A.F.F	--
FS 2	FLOOR SINK			EPOXY COATED CAST IRON	S 4	PREP SINK FAUCET	CW/HW	+38" A.F.F	--
HD 1	HUB DRAIN		--		WCO 1	WALL CLEAN OUT			--
WH 1	WATER HEATER	CW	--		FCO 1	FLOOR CLEAN OUT			--
WH 1	WATER HEATER	G	+15" A.F.F.	--	HB 1	HOSE BIB			--
WC 1	WATER CLOSET FLUSH VALVE	CW	+29" A.F.F	BOTH HANDICAP AND REGULAR					
UR 1	URINAL FLUSH VALVE	CW	+47" A.F.F.	WALL MOUNTED					
UR 1	URINAL WASTE STUB	W	+16-1/2" A.F.F.	WALL MOUNTED	C-107	REThERMALIZER	HW	+8" A.F.F.	
L 1	LAVATORY	TW	+20" A.F.F.	--	C-107	REThERMALIZER	G	+12" A.F.F.	
L 1	LAVATORY WASTE LINE	W	+16-1/2" A.F.F.	--	C-026	DUAL VAT FRYER	G	+12" A.F.F.	
RO 1	REVERSE OSMOSIS	CW	+84" A.F.F	--	C-254	CHEESE MELTER	FW	+12" A.F.F.	
S 1	HAND SINK	TW	+18" A.F.F	RIM OF LAV @ +2'-8" A.F.F.					
S 2	MOP SINK	W	-6" A.F.F.	RECESSED IN FLOOR	S-286	WATER FILTER SYSTEM	CW	+94" A.F.F.	INLET TO & OUTLET FROM FILTER
S 2	MOP SINK FAUCET	CW/HW	+36" A.F.F	--					
S 3	3-COMPARTMENT SINK	W	+19" A.F.F	--	P-452	HOT WATER SYSTEM	CW	+24" A.F.F.	

- HOT WATER
- ⊗ COLD WATER
- ⊗ TEMPERED WATER
- ☐ GAS
- ⊖ FLOOR DRAIN
- ☒ FLOOR SINK
- ⊗ HUB DRAIN
- ◆ WASTE OUTLET
- ⊖ FLOOR CLEANOUT
- ⊖ WALL CLEANOUT
- FILTERED WATER
- ◇ VENT UP FROM UNDER SLAB
- WATER LINE THRU FLOOR

1. ALL DIMENSIONS TO FLOOR SINKS, FLOOR DRAINS AND HUB DRAINS ARE TO CENTER OF FIXTURE.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THIS DATA ON THE LOCATION OF ALL PLUMBING ROUGH-INS WITH INFORMATION PROVIDED ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND THE EQUIPMENT ACTUALLY SUPPLIED AND TO CONFIRM THE CORRECTNESS OF ANY DIMENSIONS INDICATED HEREIN.

[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



**TACO  
BELL**

**T52**

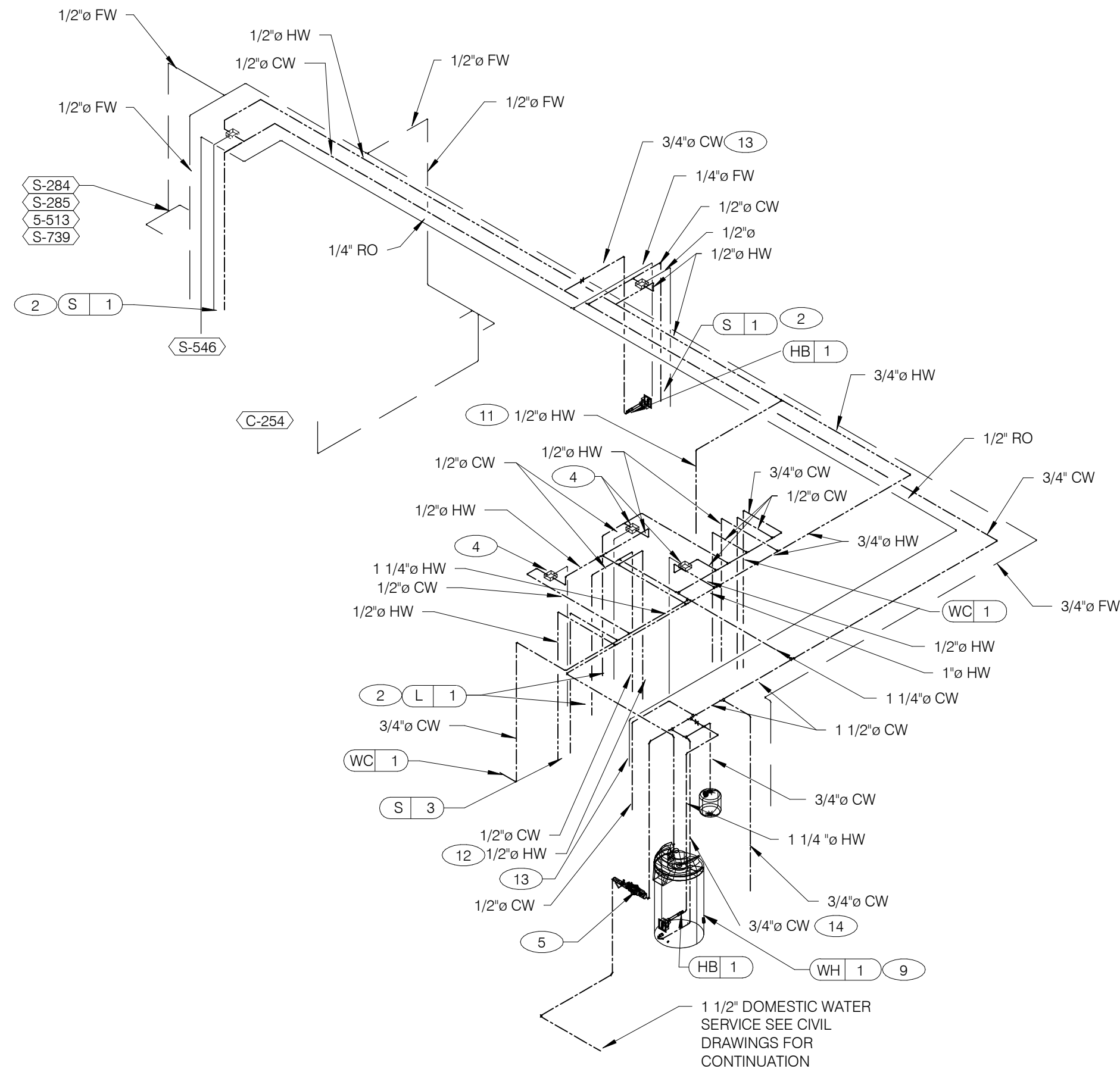
OPEN KITCHEN  
MODERN EXPLORER

# PLUMBING ROUGH-IN PLAN

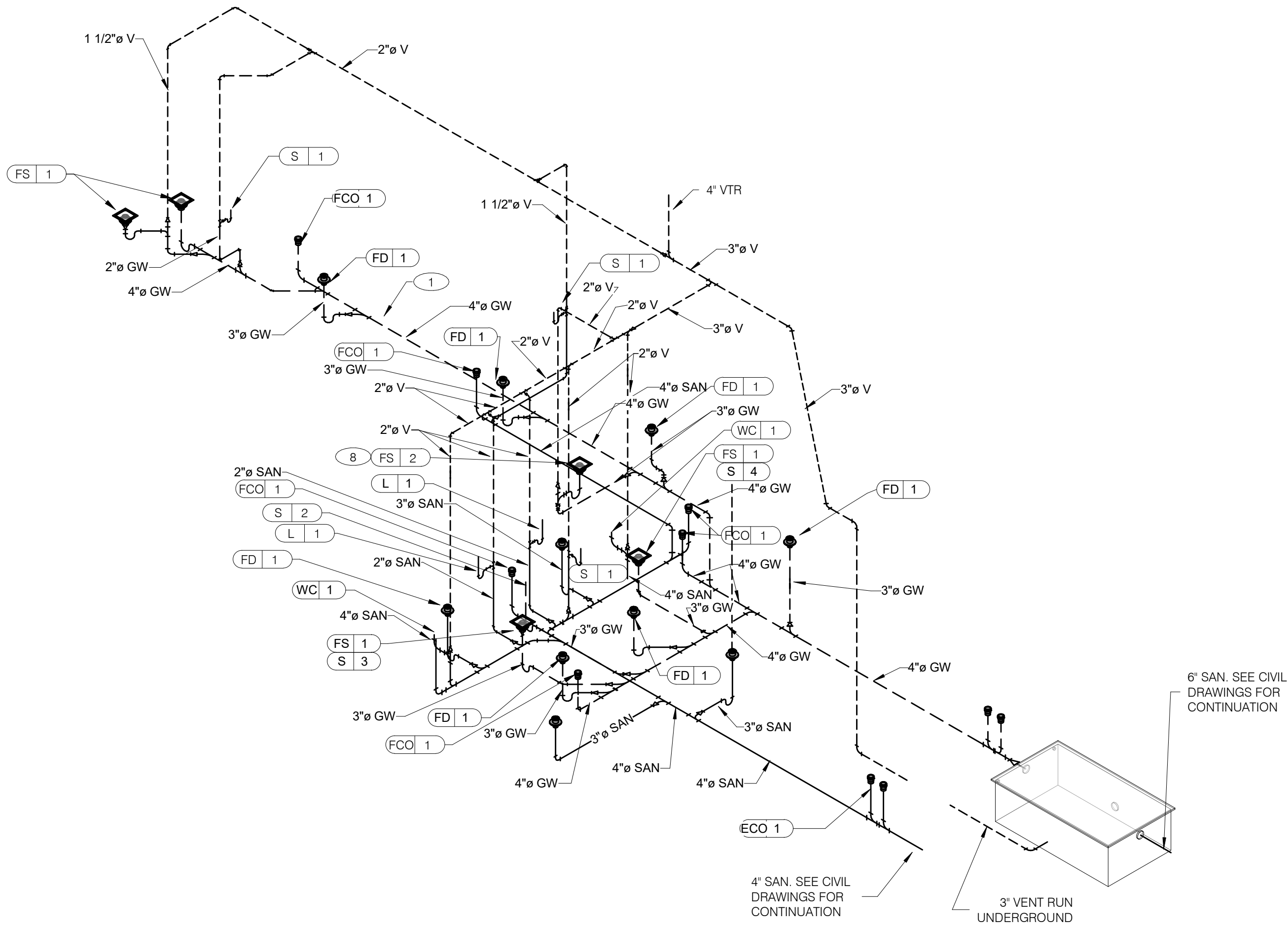
## P4.0

PLOT DATE: 9/13/2018 4:32:08 PM





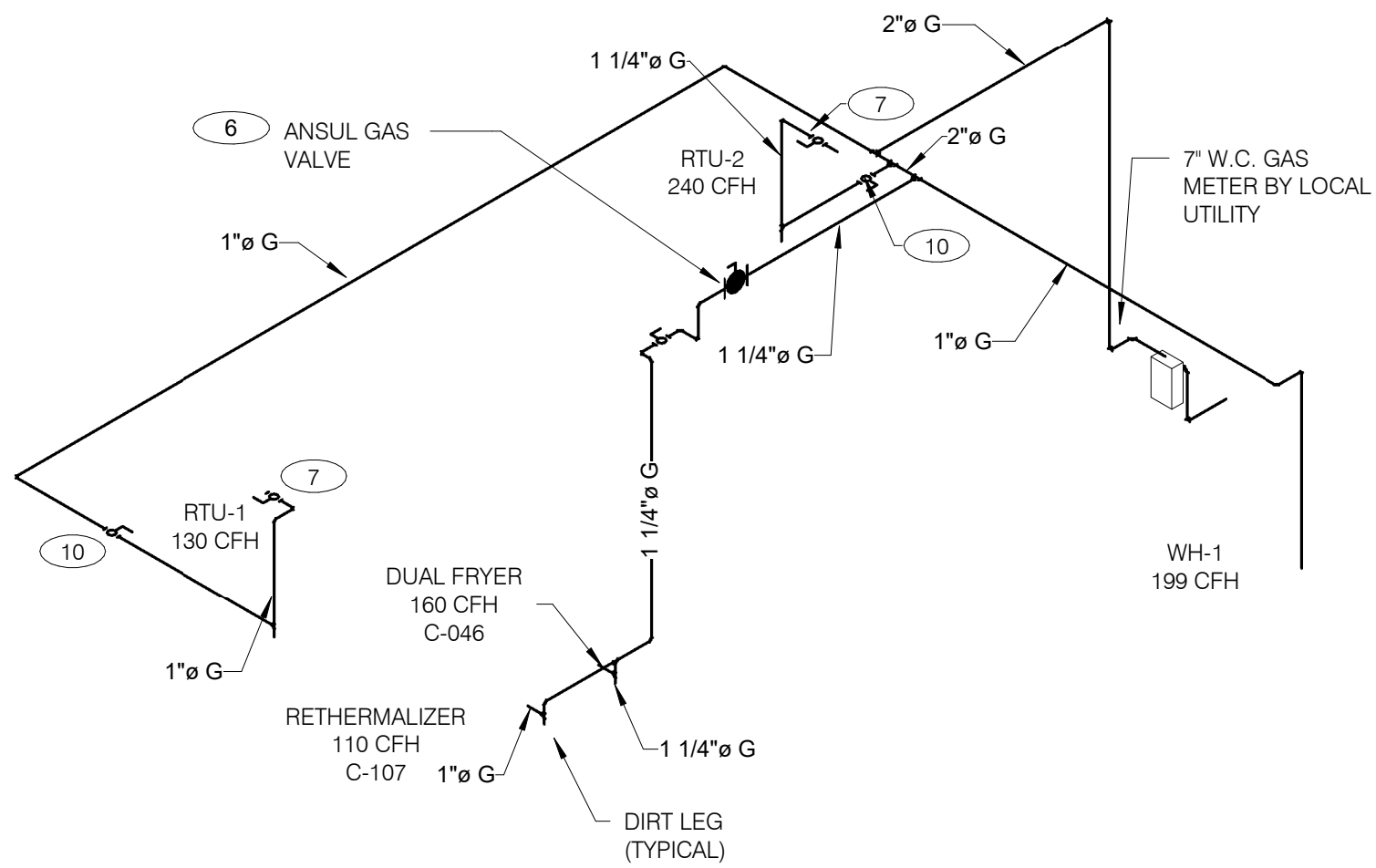
WATER ISOMETRIC NTS 5



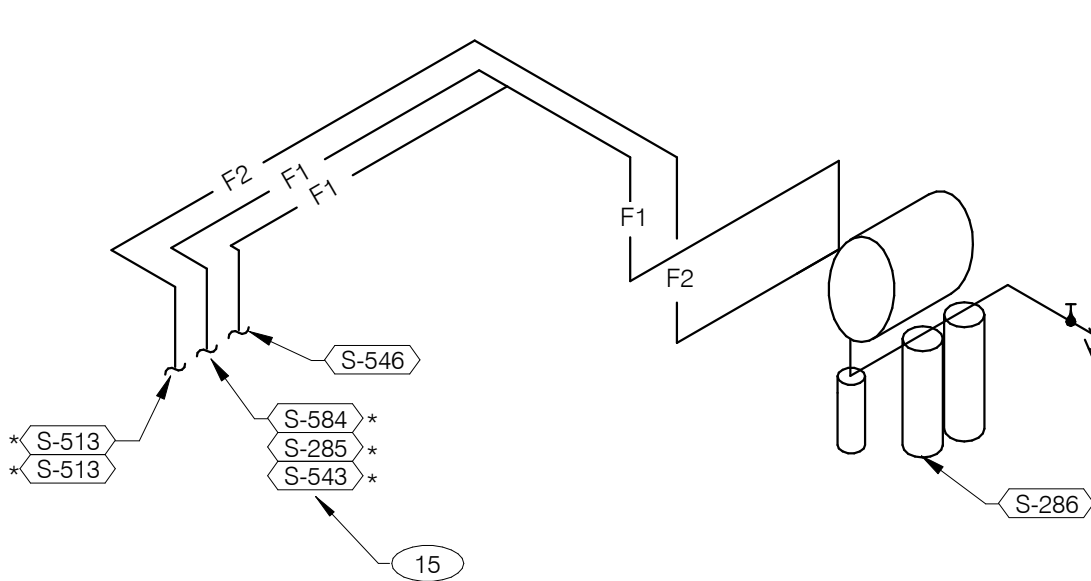
WASTE AND VENT ISOMETRIC NTS 1

GAS DEMAND SCHEDULE	
RTU-1	130 CFH
RTU-2	240 CFH
WH-1	199 CFH
DUAL FRYER	160 CFH
REETHERMALIZER	110 CFH
TOTAL DEMAND 839 CFH = 839,000 BTUH	
NOTE: COORDINATE GAS DEMAND REQUIREMENTS WITH SITE-SPECIFIC RTU DESIGN.	

PIPE SIZE BASED ON 120' OF PIPE AND 7" W.C.



GAS ISOMETRIC NTS 4



FILTERED EQUIPMENT AND LINES:  
(S-286) - WATER FILTER

FILTERED LINE (COLD WATER)  
(S-513) - ICE MAKER - ABOVE SELF-SERVE BEVERAGE DISPENSER \*  
(S-513) - ICE MAKER - ABOVE DRIVE-THRU BEVERAGE DISPENSER \*  
(S-285) - DRIVE-THRU BEVERAGE DISPENSER \*  
(S-284) - SELF-SERVE BEVERAGE DISPENSER \*  
(S-546) - ICED TEA BREWER  
(S-739) - FROZEN BEVERAGE DISPENSER

\* FILTERED WATER SUPPLIED VIA SYRUP BUNDLE. REFER TO 11/P6.0. SEE SCOPE OF WORK FOR RESPONSIBILITIES.

FILTERED WATER ISOMETRIC NTS 2

- ENTIRE RUN OF DRAIN LINES ON INLET TO GREASE TRAP SHALL BE SCHEDULE 40 PVC OR NO HUB CAST IRON AS REQUIRED BY CODE.
- 1/2" TEMPERED WATER DOWN IN WALL TO HAND SINK / LAVATORY.
- 1/2" HOT AND COLD WATER LINES DOWN IN WALL TO PREP SINK AND 1/2" COLD WATER TO WATER FILTER FOR HOT WATER SYSTEM P-450.
- THERMOSTATIC MIXING VALVE.
- REDUCED PRESSURE BACKFLOW PREVENTER PER LOCAL UTILITY REQ'S. PROVIDE SHUT-OFF VALVES AT BOTH SIDES OF BACKFLOW PREVENTER. VERIFY LOCATIONS WITH CIVIL DWGS.
- EMERGENCY GAS SHUT-OFF VALVE (NORMALLY CLOSED) SHALL BE ELECTRIC SOLENOID TYPE WITH SPRING RETURN AND .24 VOLT ACTUATOR. SUITABLE FOR USE ON GAS PIPING SYSTEMS. VALVE SHALL BE ACTIVATED BY ANY OF THE EXHAUST HOOD FIRE SUPPRESSION SYSTEM. PROVIDE RELAYS AS REQUIRED TO ACTIVATE SHUT-OFF VALVE.
- FACTORY GAS PIPING AT ROOF TOP UNIT FOR THROUGH THE BASE PIPE CONNECTION. SHUT-OFF VALVE SHALL BE LOCATED OUTSIDE OF THE UNIT.
- PROVIDE NO HUB CAST IRON PIPE FOR FIRST 10 FEET OF PIPE FROM CONNECTION TO FLOOR SINK FS-2
- PIPE T&P RELIEF VALVE TO OUTSIDE OF BUILDING OR TO HUB DRAIN, RUN FULL SIZE PIPE FROM VALVE WITH TYPE 'K' COPPER TUBING.
- GAS SHUT-OFF VALVE IN CEILING SPACE BY G.C.
- 1/2" HOT WATER PIPE DOWN IN WALL. PROVIDE SHUT-OFF VALVE OUTSIDE OF WALL FOR CONNECTION TO TB RETHERMALIZER.
- 1/2" COLD WATER CONNECT TO REVERSE OSMOSIS FILTER AND 1/2" FILTERED WATER FROM REVERSE OSMOSIS FILTER. PROVIDE SHUT-OFF ON CW PIPE PRIOR TO CONNECTION TO FILTER.
- 1/2" FILTERED WATER FROM REVERSE OSMOSIS FILTER DOWN IN UTILITY CHASE OF M.A.P.S. LINE. PROVIDE SHUT-OFF VALVE ON FW PIPE IN CEILING NEAR UTILITY CHASE.
- 3/4" COLD WATER TO WATER SYSTEM FILTER.
- TEE OFF 3/8" LINE FROM DRIVE THRU BEVERAGE DISPENSER FILTERED WATER SUPPLY. SEE DETAIL 8/P6.0.

KEYNOTES - ISOMETRICS NTS 3

09.14.18	ISSUED FOR CONSTRUCTION
C 07.11.18	HEALTH COMMENTS
06.20.18	ISSUED FOR BID
A 05.24.18	HEALTH COMMENTS
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



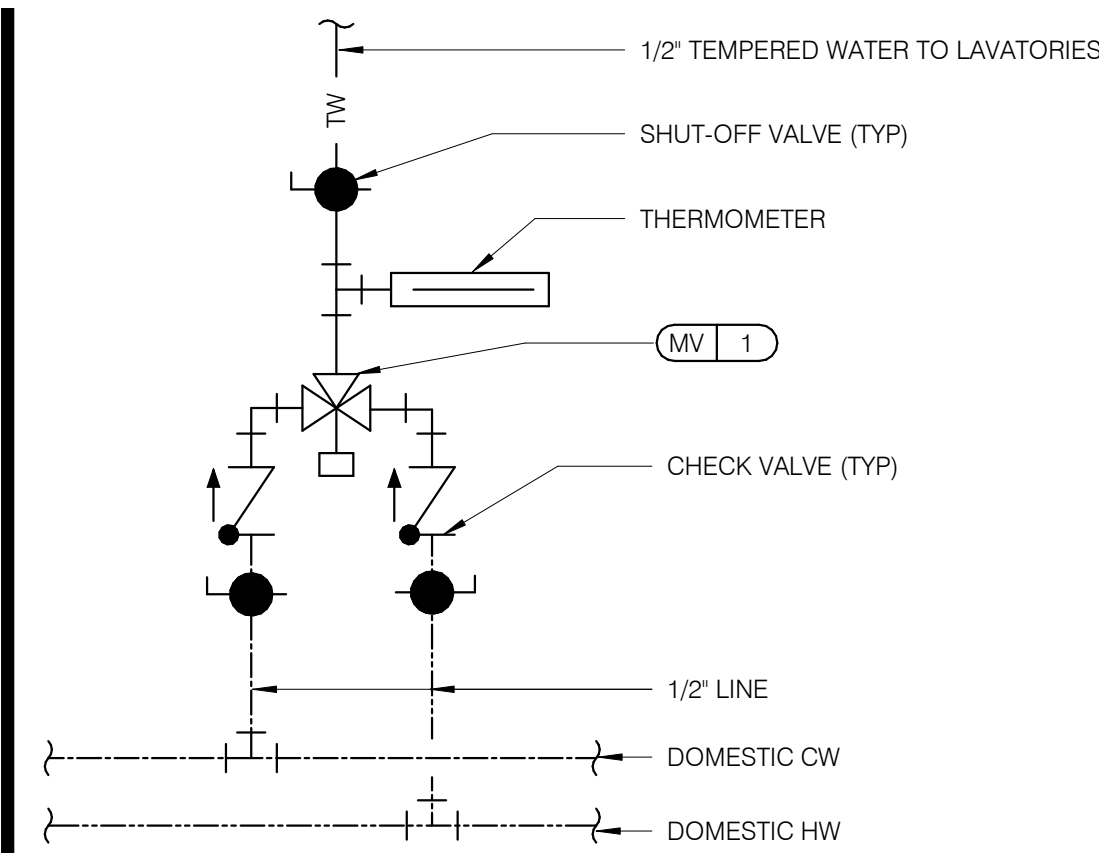
T52

OPEN KITCHEN  
MODERN EXPLORER

RISER DIAGRAMS

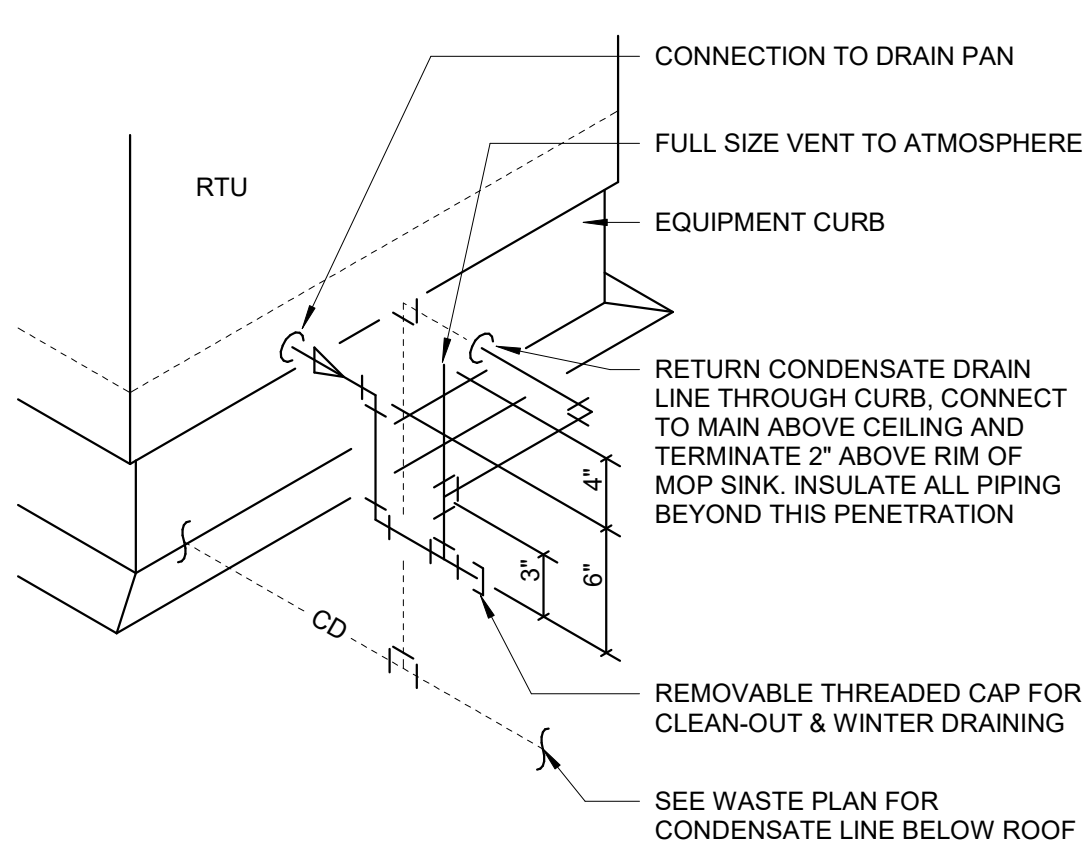
P5.0

PLOT DATE: 9/13/2018 4:32:10 PM



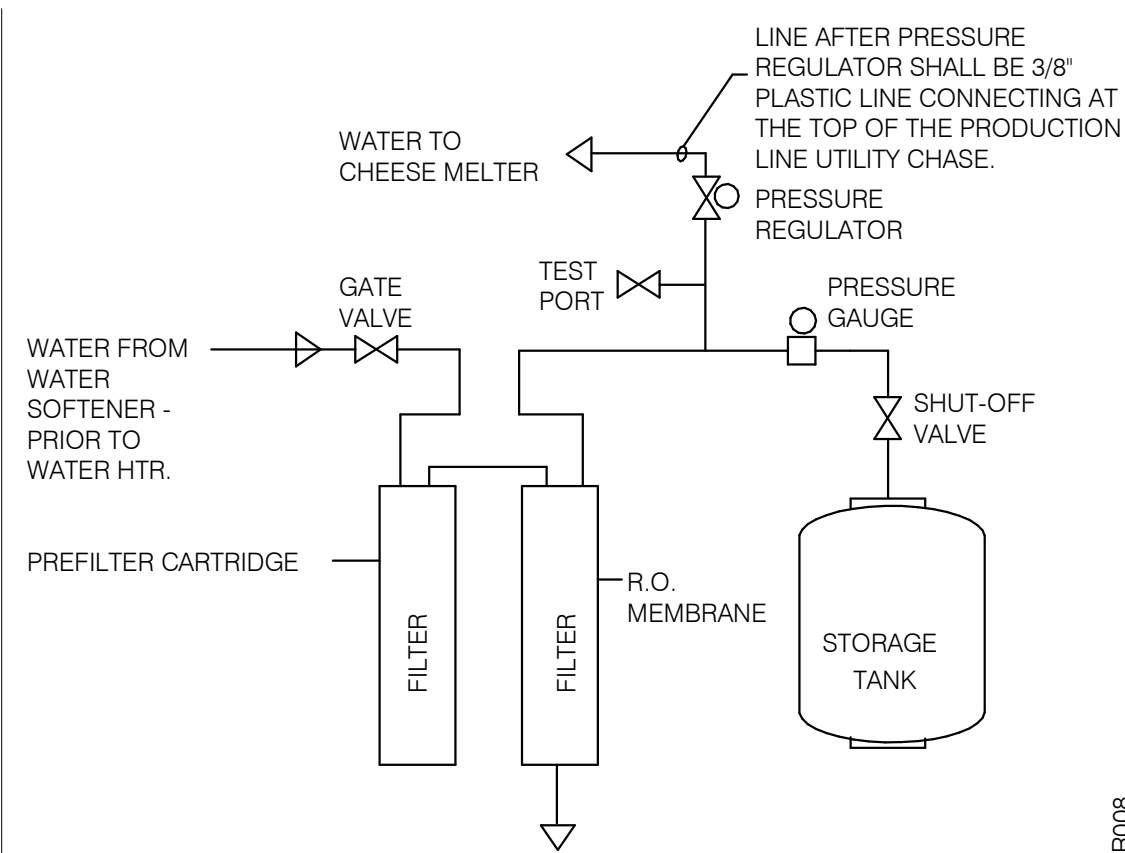
TEMPERING VALVE NTS

11



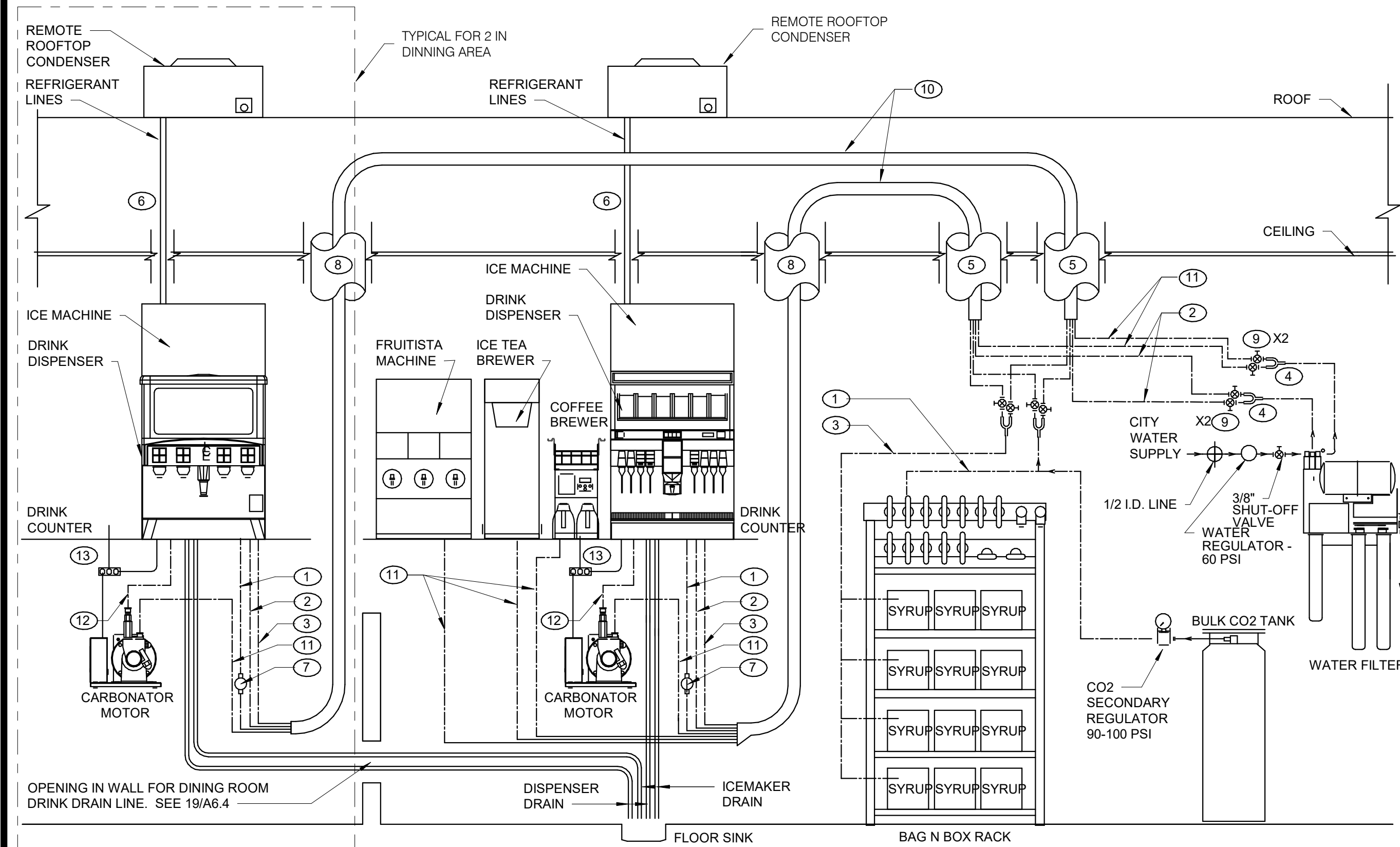
RTU CONDENSATE NTS

10



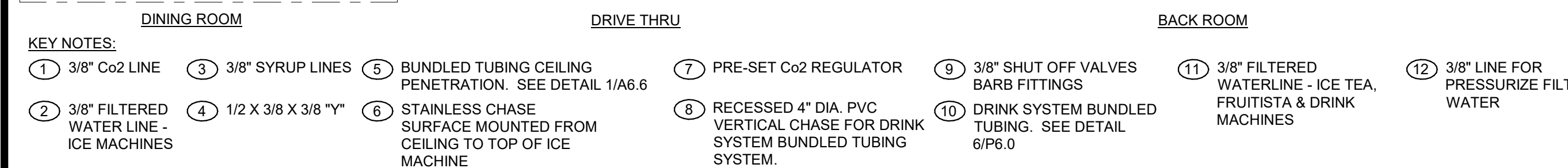
REVERSE OSMOSIS SYSTEM NTS

9



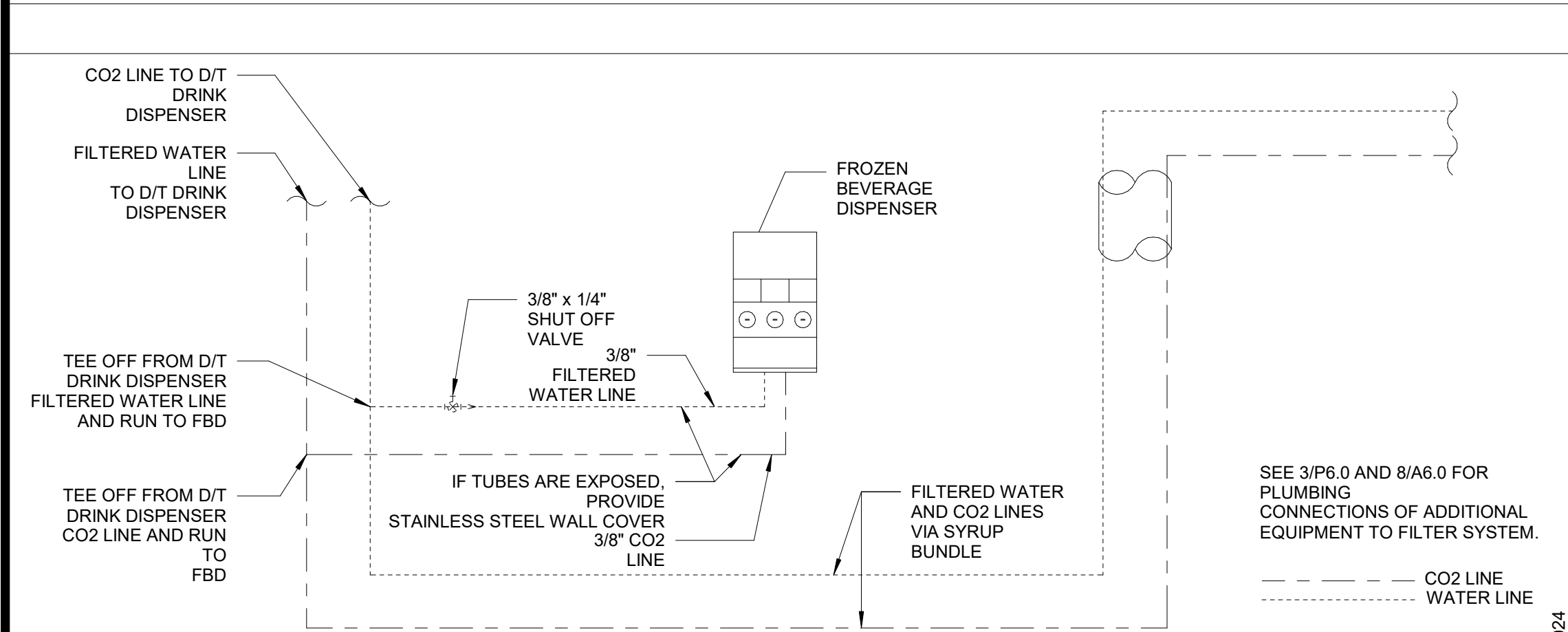
WATER FILTRATION SCHEMATIC NTS

3



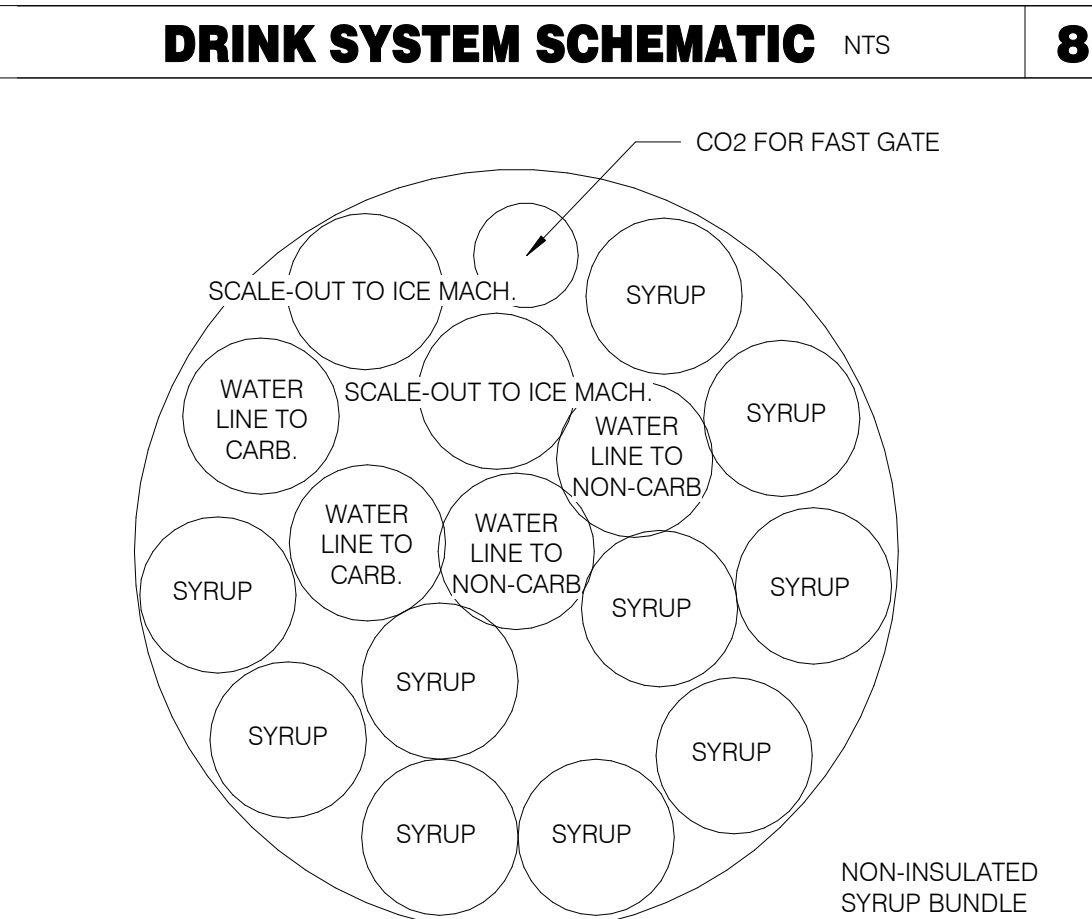
WATER HEATER NTS

2



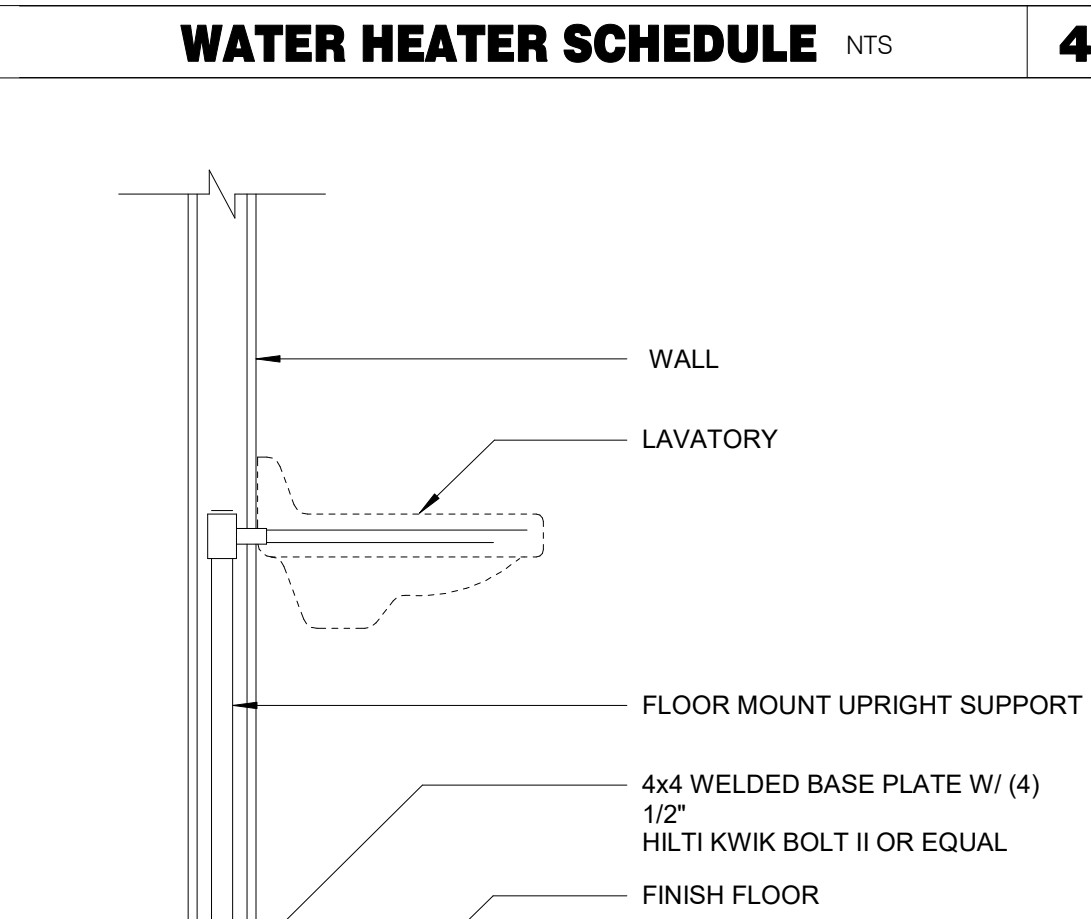
FBD DRINK SYSTEM DETAIL NTS

7



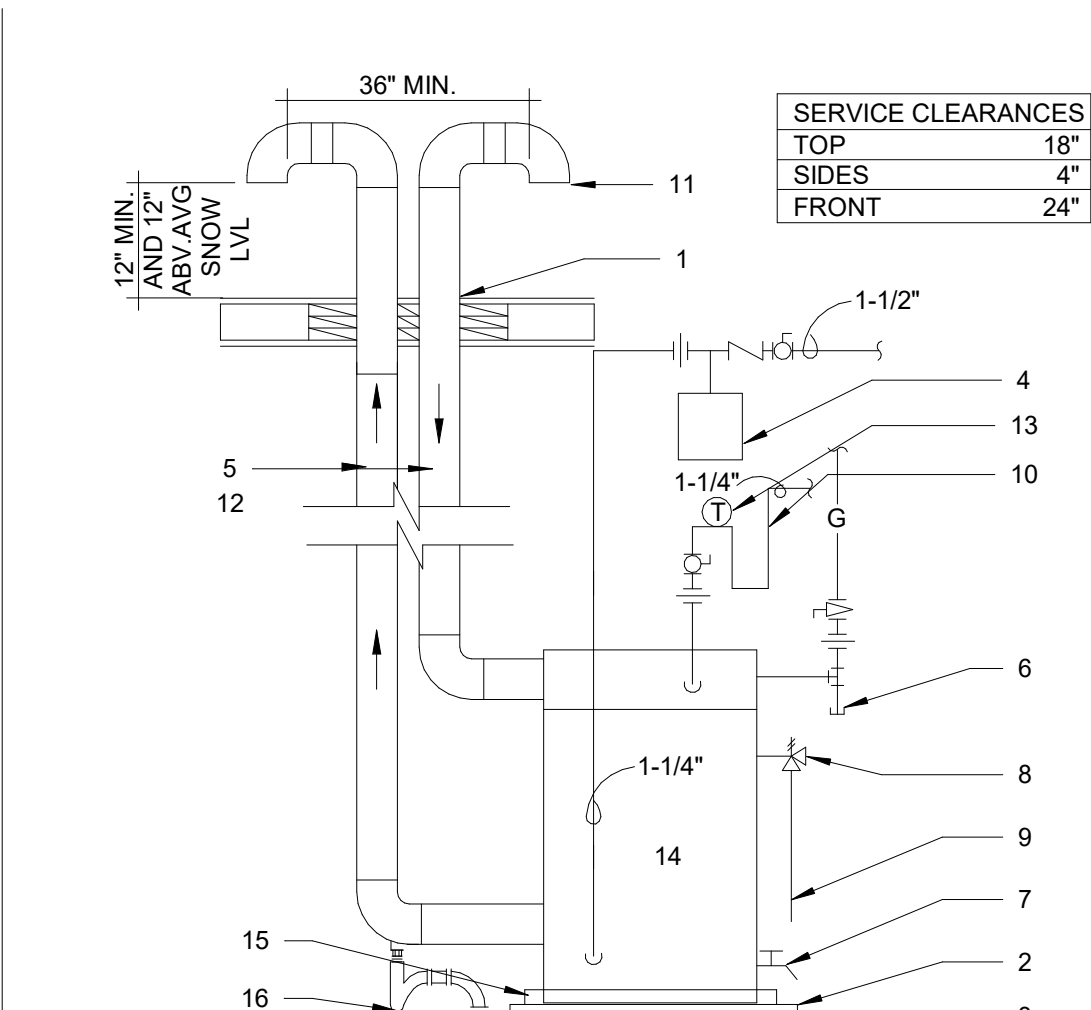
SYRUP BUNDLE CONFIGURATION NTS

6



LAVATORY SUPPORT NTS

5



WATER FILTER SYSTEM NTS

1

**GPD GROUP**  
Professional Corporation  
520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

09.14.18 ISSUED FOR CONSTRUCTION  
06.20.18 ISSUED FOR BID  
04.24.18 ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

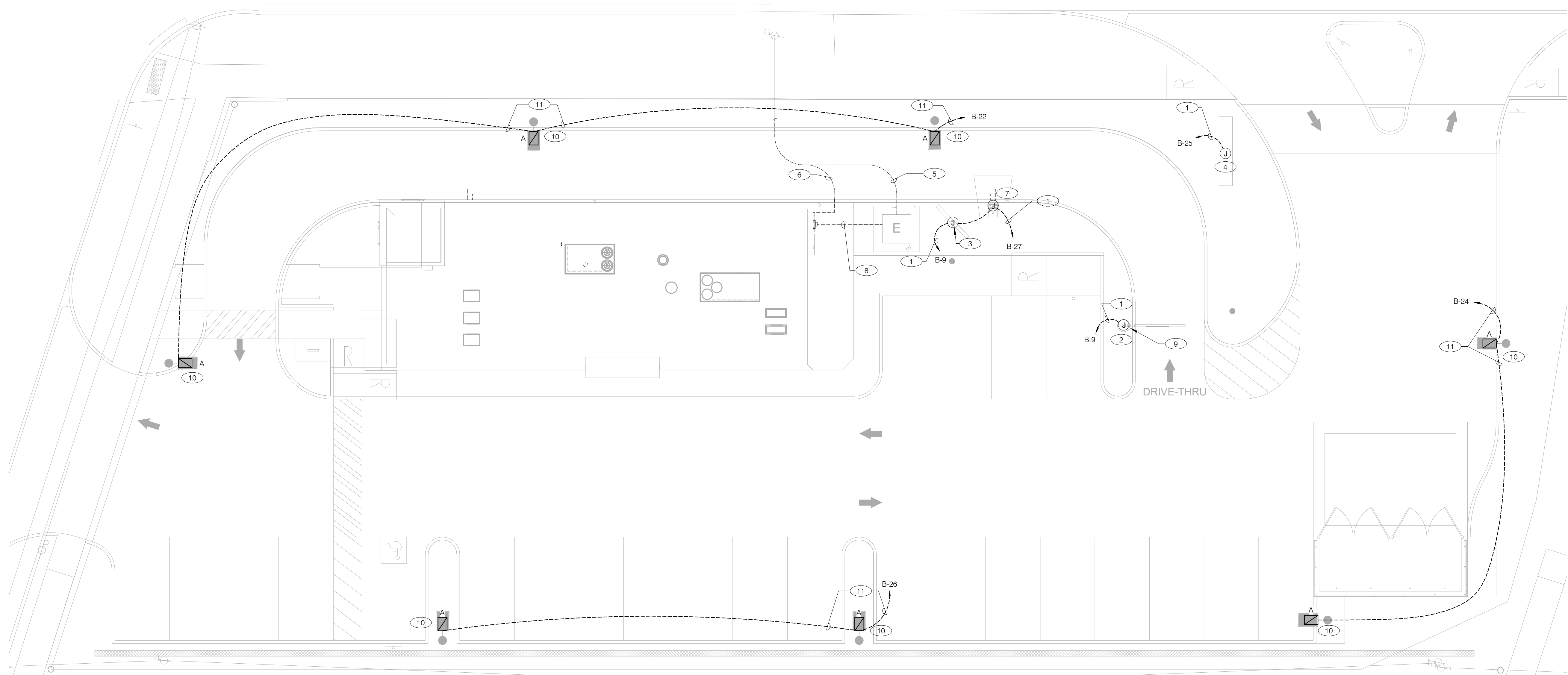
**T52**  
OPEN KITCHEN  
MODERN EXPLORER

**PLUMBING DETAILS**

**P6.0**

PLOT DATE: 9/13/2018 4:32:11 PM





09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52  
OPEN KITCHEN  
MODERN EXPLORER

**SITE ELECTRICAL  
PLAN**

**E1.0**

PLOT DATE: 9/13/2018 4:29:00 PM

- 1 3/4" C. - 2 #10, #10 GRD. (TYP. FOR ENTIRE CIRCUIT.)
- 2 PROVIDE CONNECTION TO ORDER CANOPY ON SAME CIRCUIT AS MENU BOARD AND CLEARANCE BAR. REFER TO DETAIL 1/E7.0.
- 3 MENU BOARD. REFER TO DETAIL 1/E7.0.
- 4 LED PYLON SIGN.
- 5 UNDERGROUND ELECTRIC SERVICE TO UTILITY CO. TRANSFORMER. REFER TO CIVIL SHEETS FOR LOCATION AND ROUTING. VERIFY AND COORDINATE ALL REQUIREMENTS WITH UTILITY CO.
- 6 UNDERGROUND TELEPHONE SERVICE. REFER TO CIVIL SHEETS FOR LOCATION AND ROUTING. VERIFY AND COORDINATE ALL REQUIREMENTS WITH UTILITY CO.
- 7 ORDER CONFIRMATION BOARD/ SPEAKER POST.
- 8 UNDERGROUND SECONDARY ELECTRICAL SERVICE. REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZES.
- 9 ILLUMINATED CLEARANCE BAR.
- 10 SITE LIGHTING, REFER TO E4.0 FOR SCHEDULE.
- 11 3/4" C. - 2 #8, #8 GND.

**NATIONAL ACCOUNTS: SWITCHGEAR**

---

**SUPPLY and INSTALL STANDARD PACKAGE**

---

**CORPORATE AND FRANCHISE DEVELOPMENT**

---

YUM NATIONAL ACCOUNT AGREEMENT IS WITH SQUARE-D FOR ELECTRICAL SWITCHGEAR EQUIPMENT FOR COMPANY AND FRANCHISE DEVELOPMENT. CUTLER-HAMMER ELECTRICAL SWITCHGEAR EQUIPMENT IS AN APPROVED ALTERNATE MANUFACTURER FOR FRANCHISE DEVELOPMENT ONLY.

UNDER THIS AGREEMENT, THE CONTRACTOR IS RESPONSIBLE FOR PURCHASE AND INSTALLATION OF THE SYSTEMS DESCRIBED IN THE PLANS. ALL COMPANY AND FRANCHISE PROJECTS SHALL CONTACT ACCUSERV FOR A PRICE QUOTE AND A BILL OF MATERIAL CONFIRMATION FOR THEIR SPECIFIC PROJECT. SEE THE SWITCHGEAR SECTION IN THE SCOPE OF WORK FOR ADDITIONAL INFORMATION.

PRIMARY CONTACT: BUDDY BOCKWEG  
PHONE: (877) 707-7378  
FAX: (502) 961-0357  
EMAIL: [HYPERLINKmailto:buddy@accuserv.com](mailto:HYPERLINKmailto:buddy@accuserv.com) [buddy@accuserv.com](mailto:buddy@accuserv.com)

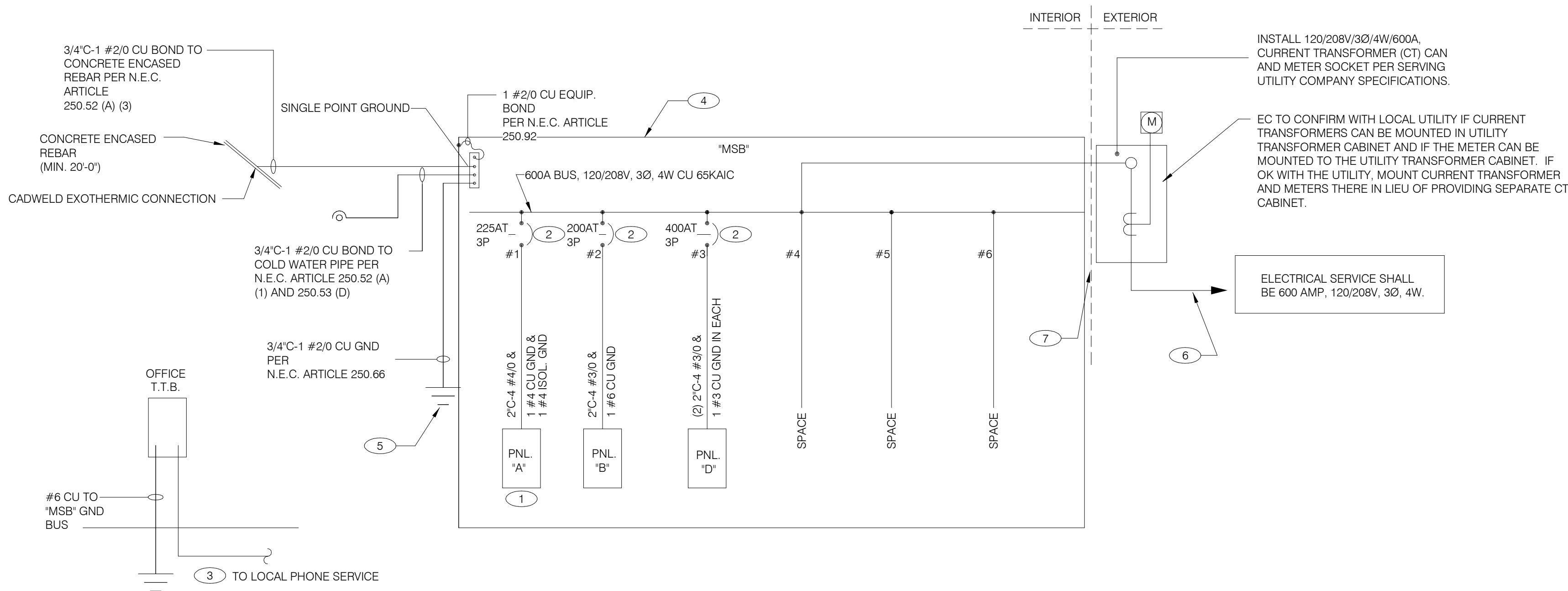
THE SWITCHGEAR PACKAGE CONSISTS OF SERVICE ENTRANCE, SWITCHGEAR, MAIN PANELS, SUB PANELS, LIGHTING CONTACTORS AND ALL ASSOCIATED PRODUCTS TO COMPLIMENT THE SWITCHGEAR PACKAGE.

BE PREPARED AT TIME OF ORDER OR QUOTE REQUEST TO PROVIDE ALL PROJECT DETAILS REGARDING SPECIFICATIONS AND QUANTITIES AS SITE SPECIFIC DESIGN MAY NOT MATCH PROTOTYPICAL DESIGN.

NOTE: THE SITE-ADAPT CONSULTANT IS RESPONSIBLE FOR DETERMINING IF THE SITE-SPECIFIC SWITCHGEAR PACKAGE FALLS WITHIN A JURISDICTION THAT REQUIRES EUSERC-COMPLIANT METERING EQUIPMENT.





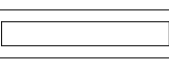



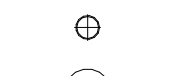

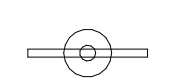



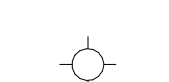

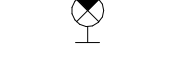

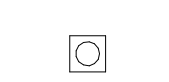




THE SWITCHGEAR PACKAGE CONSISTS OF SERVICE ENTRANCE, SWITCHGEAR, MAIN PANELS, SUB PANELS, LIGHTING CONTACTORS AND ALL ASSOCIATED PRODUCTS TO COMPLIMENT THE SWITCHGEAR PACKAGE.

NOTE: THE SITE-ADAPT CONSULTANT IS RESPONSIBLE FOR DETERMINING IF THE SITE-SPECIFIC SWITCHGEAR PACKAGE FALLS WITHIN A JURISDICTION THAT REQUIRES EUSERC-COMPLIANT METERING EQUIPMENT.

[illegible]

## NTS

A

	2X4 FLUORESCENT FIXTURE	NL	NIGHTLIGHT		FUSIBLE DISCONNECT SWITCH WITH STARTER
	2X4 FLUORESCENT FIXTURE WITH BATTERY PACK	(S)	CEILING MOUNTED SPEAKER		FUSIBLE DISCONNECT SWITCH
	1X4 FLUORESCENT FIXTURE	(S)	WALL MOUNTED SPEAKER		NON-FUSIBLE DISCONNECT SWITCH
	1X4 FLUORESCENT FIXTURE WITH BATTERY PACK	(J)	JUNCTION BOX		PHOTOCELL
	DOWNLIGHT FIXTURE	(J)	WALL MOUNTED JUNCTION BOX		RAIN SENSOR
	SUSPENDED DOWNLIGHT FIXTURE	◀	TELEPHONE OUTLET		FLUORESCENT WALL MOUNT FIXTURE
	PENDANT MOUNTED LIGHT FIXTURE	⊖	DEDICATED GROUNDED OUTLET		EMERGENCY LIGHT
	TRACK MOUNTED PENDANT LIGHT FIXTURE	⊖	DUPLEX GROUNDED OUTLET		SINGLE POLE, SINGLE THROW TOGGLE SWITCH
	DIRECTIONAL FIXTURE, TRACK MOUNTED	⊖	DOUBLE DUPLEX GROUNDED OUTLET		SINGLE POLE, SINGLE THROW TOGGLE SWITCH W/ PILOT LIGHT
	DIRECTIONAL FIXTURE, TRACK MOUNTED TO UNDERSIDE OF INTERIOR CANOPY	⊖	GROUND FAULT DUPLEX OUTLET		WALL MOUNTED OCCUPANCY SENSOR
	COOLER FIXTURE	⊖	GROUND FAULT DUPLEX W/ BOTT. HALF SWITCHED		RELAY
	EXIT SIGN (WALL MOUNTED)	⊖	GROUND FAULT DEDICATED OUTLET	---	CONDUIT RUN, UNDERGROUND
	EXIT SIGN (CEILING MOUNTED)	⊖	CEILING DUPLEX OUTLET		SMOKE DETECTOR
	SECURITY STROBE	⊖	DUPLEX ISOLATED GROUND OUTLET		EXTERIOR WALL FIXTURE
		⊖	DOUBLE DUPLEX ISOLATED GROUND OUTLET		EXTERIOR DECORATIVE WALL FIXTURE
		⊖	DEDICATED ISOLATED GROUND		EXTERIOR DECORATIVE WALL FIXTURE
		⊖	SPECIAL PURPOSE OUTLET		
		⊖	CEILING SPECIAL PURPOSE OUTLET		
		⊖	ELECTRICAL PANEL SEE SHEET E2.1 FOR PANEL SCHED.		
		⊖	HOLD UP EMERGENCY BUTTON		
		⊖	ELECTRICAL MOTOR		
		⊖	DUCT MOUNTED SMOKE DETECTOR		
		⊖	CONNECTION TO EQUIPMENT		

1. THERE SHALL BE UL LISTED SERIES RATING BETWEEN CKT. BREAKERS LOCATED AT THE DISTRIBUTION PANEL AND THE DOWNSTREAM 10k A.I.C. RATED CIRCUIT BREAKERS AT PANELS "A," "B" DUAL-LINE EQUIPMENT CABINET BASED ON THE MAXIMUM FAULT CURRENT AS DETERMINED AT THE SERVICE ENTRANCE AND DOWNSTREAM 22K A.I.C. RATED CIRCUIT BREAKERS AT PANEL D."
2. THE NFPA-70 SIX SWITCH MAXIMUM RULE SHALL APPLY AT THE POINT AT WHICH THE SERVICE ENTERS THE BUILDING AS DEFINED BY NFPA-70 (CURRENT EDITION IN FORCE AT THIS SITE), NOTIFY ENGINEER WHERE LOCAL CONDITIONS REQUIRE ALTERNATE LOCATIONS OR SINGLE POINT DISCONNECT.
3. SEE SCOPE OF WORK FOR DETAILS REGARDING OWNER SUPPLIED AND/OR INSTALLED PRODUCTS. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL OTHER ASPECTS OF THE PROJECT
4. IF UTILITY COMPANY PROPOSES A SERVICE DIFFERENT FROM THAT ILLUSTRATED, CONTACT THE CONSTRUCTION ENGINEER FOR A DECISION BEFORE PROCEEDING. COORDINATE AVAILABLE SHORT CIRCUIT CURRENT W/ LOCAL UTILITY AND PROVIDE CIRCUIT BREAKERS W/ SUFFICIENT INTERRUPTING CAPACITY.
5. COORDINATE CT METERING COMPARTMENT SIZE WITH LOCAL UTILITY COMPANY, THE LOCAL ELECTRICAL INSPECTOR AND THE NATIONAL ELECTRICAL CODE TO MEET ALL REQUIREMENTS BEFORE PURCHASE AND INSTALLATION. NEW METER BY LOCAL UTILITY COMPANY.
6. ALL WIRING SHOWN SHALL BE COPPER TYPE "THHN/THWN" EXCEPT FEEDERS FROM UTILITY TRANSFORMER TO SWITCH BOARD MAY BE ALUMINUM. CONTRACTOR SHALL RESIZE CONDUCTORS/CONDUITS PER NEC.
7. ARMOR CABLE ACCEPTABLE FOR THE LAST 6'-0" FROM A JUNCTION BOX TO LIGHT FIXTURES. ARMOR CABLE IS NOT ALLOWED FOR NON-ACCESSIBLE FLOORS, WALLS AND CEILINGS. CABLES SHALL CONTAIN GREEN CU CODE SIZED GROUND CONDUCTOR. CABLE MUST BE ALLOWED BY LOCAL JURISDICTION.

- 1 WIRE ISOLATED GROUND TO ISOLATION GROUND BUS IN PANEL AND LAND ISOLATED GROUND TO SINGLE POINT GROUND. "DO NOT COMBINE COMMON GND TO ISOLATED GROUND". REF DETAIL 6/E3.1.
- 2 6 BUILDING MAIN DISCONNECTS FOR THIS SERVICE:  
(MAXIMUM 6 MAINS PER N.E.C.)  
LABEL EACH MAIN BREAKER AS INDICATED:  
  
"MAIN 1 OF 6" (ENGRAVED LETTERS x 3/4" HIGH, TYP.)  
"MAIN 2 OF 6"  
"MAIN 3 OF 6"  
"MAIN 4 OF 6"  
"MAIN 5 OF 6"  
"MAIN 6 OF 6"
- 3 PROVIDE 2" CONDUIT STUBBED INTO BUILDING FROM LATERAL POLE FOR TELEPHONE.
- 4 VERIFY AVAILABLE FAULT CURRENT AT SERVICE ENTRANCE WITH THE UTILITY COMPANY. IF THE AIC RATING AS INDICATED IS NOT SUFFICIENT, CONTACT PROJECT MANAGER AND ENGINEER PRIOR TO BID/PRICING TO UPDATE EQUIPMENT RATING.
- 5 (3) 5/8" DIA. x 10'-0" COPPER CLAD GROUND RODS. INSTALL 10'-0" APART AND CONNECT GROUND SYSTEM PER N.E.C. ARTICLE 250
- 6 PROVIDE UNDERGROUND SERVICE LATERAL TO UTILITY TRANSFORMER PER SERVING UTILITY COMPANY SPECIFICATIONS. 4#50 KCMIL IN EACH OF (2) 3". TO PAD MOUNT TRANSFORMER. G/ELECT. CONTRACTOR SHALL COORDINATE SERVICE POLES PER LOCAL UTILITY CODE. IF ALUMINUM CONDUCTORS ARE USED PROVIDE 4#500 KCMIL IN EACH (2) 3-1/3".
- 7 PROVIDE ONE MAIN SERVICE ENTRANCE 600 AMP SERVICE DISCONNECT OR MAIN BREAKER IF REQUIRED BY LOCAL JURISDICTION. VERIFY BEFORE BID AND BEFORE ORDERING EQUIPMENT OR START OF CONSTRUCTION.

## NTS

D

## NTS

**C**

## NTS

**B**

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

# Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52

OPEN KITCHEN  
MODERN EXPLORER

# ELECTRICAL ONE LINE DIAGRAMS AND LEGEND

## E2.0

PLOT DATE: 9/13/2018 4:29:00 PM



Switchboard: MSB

Location:  
Supply From: MSB  
Mounting: SURFACE  
Enclosure: NEMA-3R

Volts: 120/208 Wye  
Phases: 3  
Wires: 4

A.I.C. Rating: 65 KAIC  
Mains Type: M.C.B  
Mains Rating: 600 A  
MCB Rating: 600 A

Notes:

CKT	Circuit Description	WIRE SIZE	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	PANELBOARD A		3	225 A	225 A	51486 VA	--
2	PANELBOARD B		3	225 A	200 A	20617 VA	--
3	PANELBOARD D		3	400 A	400 A	70716 VA	--
4							
5							
6							

				Total Conn. Load:	142998 VA
				Total Amps:	397 A
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	13885 VA	100.00%	13885 VA		
Kitchen	10316 VA	65.00%	6705 VA	Total Conn. Load: 142998 VA	
Lighting	13493 VA	125.00%	16866 VA	Total Est. Demand: 142761 VA	
Other	19037 VA	100.00%	19037 VA	Total Conn. Current: 397 A	
Power	59189 VA	100.00%	59189 VA	Total Est. Demand Current: 396 A	
Receptacle	7684 VA	100.00%	7684 VA		
Refrigeration	18894 VA	100.00%	18894 VA		
Spare	500 VA	100.00%	500 VA		
Notes:					

Branch Panel: B

Location:  
Supply From: MSB  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/208 Wye  
Phases: 3  
Wires: 4

A.I.C. Rating: SERIES  
Mains Type: M.L.O.  
Mains Rating: 225 A  
MCB Rating:

Notes:

NOTE	CKT	Circuit Description	Wire Size	Trip	Poles	A	B	C	Poles	Trip	Wire Size	Circuit Description	CKT	NOTE
	1	DINING LTS	20 A	1	1	783 VA	0 VA		1	20 A		SPARE	2	
	2	EXTERIOR SCONCE/PATIO LTS	20 A	1	1		240 VA	0 VA	1	20 A		SPARE	4	
	5	KITCHEN/BOH/ RESTROOM LTS	20 A	1	1			679 VA	2000 VA	1	20 A	EXTERIOR SIGNAGE	6	2
	7	SPARE	20 A	1	1	0 VA	154 VA		1	20 A		EMERGENCY LTS INT/EXT, EXIT SIGNS	8	
	2	LTG-SITE-MENU CLEARANCE & CANOPY	20 A	1	1		2000 VA	500 VA	1	20 A		TBCCB	10	
	2	11 EXTERIOR CANOPY LTS - ENTRANCE	20 A	1	1			2000 VA	900 VA	1	20 A	LTG - SHOW WINDOW	12	
	13	LTG - SHOW WINDOW	20 A	1	1	600 VA	500 VA		1	20 A		INTERIOR COVE LIGHTS	14	
	2	15 EXTERIOR CANOPY LTS	20 A	1	1		1500 VA	1000 VA	1	20 A		DIGITAL MENU SECURITY LTS	16	
	17	LTG - COOLER & FREEZER	20 A	1	1			800 VA	1000 VA	1	20 A	CANOPY LTS - DRIVE THRU	18	2
	19	SPARE	20 A	1	1	0 VA	0 VA		1	20 A		SPARE	20	
	2	21 CANOPY LTS - ENTRANCE	20 A	1	1		1500 VA	579 VA	1	20 A		SITE LIGHTING	22	2
	23	SPARE	20 A	1	1			0 VA	386 VA	1	20 A	SITE LIGHTING	24	2
	2	25 LTG-SITE-PYLON SIGN	20 A	1	1	1200 VA	386 VA		1	20 A		SITE LIGHTING	26	2
	2	27 LTG-SITE-S240 OCB & SPEAKER POST	20 A	1	1		130 VA						28	
	29	EF-1	20 A	1	1			1120 VA	660 VA	1	20 A	EF-2	30	
	31	SPARE	20 A	1	1	0 VA	0 VA		1	20 A		SPARE	32	
	33	SPARE	20 A	1	1		0 VA	0 VA	1	20 A		SPARE	34	
	35	SPARE	20 A	1	1			0 VA	0 VA	1	20 A	SPARE	36	
	37	SPARE	20 A	1	1	0 VA	0 VA		1	20 A		SPARE	38	
	39	SPARE	20 A	1	1		0 VA	0 VA	1	20 A		SPARE	40	
	41	SPARE	20 A	1	1			0 VA	0 VA	1	20 A	SPARE	42	

		Total Load:		3623 VA	7449 VA	9545 VA	
		Total...		30 A	67 A	84 A	
Load Classification		Connected Load	Demand Factor	Estimated Demand		Panel Totals	
	HVAC	1780 VA	100.00%	1780 VA			
	Lighting	13493 VA	125.00%	16866 VA		Total Connected Load:	20617 VA
	Other	14 VA	100.00%	14 VA		Total Estimated Demand:	23990 VA
	Power	3330 VA	100.00%	3330 VA		Total Connected Current:	57 A
	Receptacle	1500 VA	100.00%	1500 VA		Total Estimated Demand Current:	67 A
	Spare	500 VA	100.00%	500 VA		System Voltage:	120/208 Wye

Branch Panel: A

Location:  
Supply From: MSB  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/208 Wye  
Phases: 3  
Wires: 4

A.I.C. Rating: SERIES  
Mains Type: M.L.O.  
Mains Rating: 225 A  
MCB Rating:

Notes:

			Wire Size	Trip	Poles	A		B		C		Poles	Trip	Wire Size	Circuit Description	CKT	NOTE
NOTE	CKT	Circuit Description															
	1	P-417 TIMER	20 A	1		180 VA	300 VA					1	20 A		F-040 OFFICE COMPUTER	2	3
3	3	S-546 ICED TEA	20 A	1				240 VA	720 VA			1	20 A		DRIVE THRU POS/ORDER ENTRY 1	4	3
	5	OFFICE QUAD RECEPTACLE	20 A	1						680 VA	480 VA	1	20 A		S-547 BREWER	6	3
1	7	J-BOX SECURITY SYSTEM / DVR	20 A	1		1180 VA	1200 VA					1	20 A		DINING POS ENTRY 1	8	3
	9	OFFICE RECEPT AND J-BOX	20 A	1				680 VA	180 VA			1	20 A		RECEPTACLES - OFFICE	10	
1	11	U-052 SECURITY SYSTEM	20 A	1						860 VA	864 VA	1	20 A		S-204 D/T TIMING SYSTEM	12	3
3	13	DRIVE THRU POS/ORDER ENTRY 2	20 A	1		1220 VA	1140 VA					1	20 A		R-009 FULL HEIGHT FREEZER	14	3
3	15	BEVERAGE DISPENSER D/T	15 A	1				360 VA	2013 VA								
	17									2013 VA	2013 VA	2	30 A		P-452 HOT WATER SYSTEM	16	
	19	P-452 HOT WATER SYSTEM	30 A	2												18	
	21	C-107 RETHERMALIZER	20 A	1		2013 VA	1080 VA					1	20 A		INTERIOR DIGITAL MENUBOARD	20	1
3	23	E-272 HOOD FIRE SUP.	20 A	1				180 VA	500 VA			1	20 A		E-107 FIRE SUPPRESSION	22	
	25	C-400 COOK TIMER	20 A	1		180 VA	0 VA			500 VA	180 VA	1	20 A		C-026 FRYER	24	3
	27											--	--		SHUNT TRIP BREAKER FOR DUAL...	26	
	29	EVO CABINET 1 (VLINE 1)	15 A	2				1248 VA	500 VA			1	20 A		OCB SWITCH	28	
										1248 VA	1248 VA	2	15 A		EVO CABINET 2 (VLINE 1)	30	
3	31	S-027 HEATED CABINET	20 A	1		180 VA	1248 VA									32	
3	33	S-027 HEATED CABINET	20 A	1				180 VA	0 VA			1	20 A		Spare	34	
3	35	REFRIGERATOR (VLINE 1)	15 A	1						960 VA	0 VA	1	20 A		Spare	36	
	37					2309 VA	1664 VA									38	
	39	HOT WELL W/ GRILL	30 A	2				2309 VA	1664 VA			2	20 A		C-250 (VLINE 1) CHEES MELTER	40	
	41									1664 VA	2196 VA	1	30 A		C-203 (VLINE 1) CLAM	42	
	43	C-250 (VLINE 2) CHEESE MELTER	20 A	2		1664 VA	2196 VA					1	30 A		C-203 (VLINE 2) CLAM	44	
3	45	DIGITAL SCALE (VLINE 1)	15 A	1				240 VA	240 VA			1	15 A		DIGITAL SCALE (VLINE 1)	46	3
3	47	DRIVE THRU MONITORS	20 A	1						360 VA	960 VA	1	15 A		REFRIGERATOR (VLINE 2)	48	3
	49					1248 VA	1248 VA									50	
	51	EVO CABINET 1 (VLINE 2)	15 A	2				1248 VA	1248 VA			2	15 A		EVO CABINET 1 (VLINE 2)	52	
3	53	DINING POS ENTRY 2 & CARD READERS	20 A	1						900 VA	360 VA	1	20 A		SAFE W/TOUCHSCREEN CONTROLS	54	3

	Total Load:		20250 VA	13750 VA	17486 VA	
	Total...		174 A	115 A	151 A	
Load Classification		Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen		1500 VA	100.00%	1500 VA		
Power		45462 VA	100.00%	45462 VA	Total Connected Load: 51486 VA	
Receptacle		4524 VA	100.00%	4524 VA	Total Estimated Demand: 51486 VA	
					Total Connected Current: 143 A	
					Total Estimated Demand Current: 143 A	
					System Voltage: 120/208 Wye	
Notes:						

NOTE TO CONTRACTORS

ALL CONTRACTORS PRIOR TO BID SUBMISSION PROCESS SHALL VISIT PROPOSED WORK SITE AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY CONDITION THAT DIFFERS FROM THAT SHOWN ON THESE PLANS SHALL BE REPORTED TO THE TENANT'S ARCHITECT/ENGINEER SO THAT NEW AND REVISED BID DRAWINGS OR INFORMATION MAY BE ISSUED. MODIFICATION TO THE SCOPE OF WORK WHICH RESULTS FROM THE CONTRACTORS NEGLIGENCE TO VISIT THE SITE PRIOR TO SUBMITTING BID, SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY.

GENERAL NOTE:

FOR PARKING LOT (SITE) LIGHTS AND OUTSIDE SIGNS: PROVIDE (5) 3/4" C FROM PANEL "B" AND STUB OUT 10'-0" AWAY FROM THE BUILDING. VERIFY EXACT LOCATION OF STUB PRIOR TO ROUGH-IN. LOADS MAY VARY WITH LOCATION. VERIFY OUTDOOR VOLTAGE DROP FOR ALL PARKING LIGHTING (SITE) CIRCUITS.

PANEL SCHEDULE NOTES:

- PROVIDE LOCK-ON BREAKER.
- CIRCUITS TO BE WIRED THROUGH COMBINED CONTROL BOX CONTACTOR. SEE SHEETS 6.0 THROUGH 6.3. CIRCUITS TO BE WIRED THROUGH COMBINED CONTROL BOX CONTACTOR. SEE SHEETS 6.0 THROUGH 6.3.
- PROVIDE GFCI BREAKER.



CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52  
OPEN KITCHEN  
MODERN EXPLORER

ELECTRICAL SCHEDULES

E2.1

PLOT DATE: 9/13/2018 4:29:01 PM

COMMERCIAL KITCHEN EQUIPMENT SCHEDULE																								
EQUIPMENT IDENTIFICATION			EQUIPMENT ELECTRICAL CHARACTERISTICS					EQUIPMENT CIRCUIT						EQUIPMENT DISCONNECT										
TAG	TYPE	EQUIPMENT NAME	V/Ph - WATTS	FLA/RLA	MCA	TIME DELAY FUSE	INVERSE-TIME BREAKER	SETS	BRANCH CIRCUIT	PANEL	CIRCUIT NUMBER	WIRE TYPE	CONDUIT TYPE	TYPE	SIZE	NEMA	SUPPLIED BY	INSTALLED BY	NOTES					
B-223	O	B-223 WATER HEATER IGNITION	120 V/1-180 VA	1.5	1.9	20	20	1	#12 W/#12 G IN 3/4"C	D	3	CU	ST	C&P	20	5-20	ES	ES	2					
C-026	KR	FRYER	120 V/1-180 VA	6.1	7.6	20	20	1	#12 W/#12 G IN 3/4"C	A	24	CU	ST	C&P	20	5-20	ES	ES	2					
C-107	O	RE THERMALIZER	120 V/1-180 VA	3.0	3.8	20	20	1	#12 W/#12 G IN 3/4"C	A	21	CU	ST	C&P	20	5-20	ES	ES	2					
C-203	KR	VLINE CLAM	120 V/1-2196 VA	18.3	22.8	30	30	1	#10 W/#10 G IN 3/4"C	A	44	CU	ST	C&P	30	5-30P	ES	ES	2					
C-250	KR	VLINE CHEESE MELTER	208 V/2-3328 VA	16	20	20	20	1	#12 W/#12 G IN 3/4"C	A	41,43	CU	ST	C&P	20	6-20P	ES	ES	2					
C-400	O	COOK TIMER	120 V/1-180 VA	3.5	4.4	20	20	1	#12 W/#12 G IN 3/4"C	A	25	CU	ST	C&P	20	5-20	ES	ES	2					
E-107	O	EXHAUST HOOD	120 V/1-500 VA	6.0	7.5	20	20	1	#12 W/#12 G IN 3/4"C	A	22	CU	ST	DIRECT	20	J-BOX	ES	ES	8					
E-272	O	HOOD FIRE SUPPRESSION SYSTEM	120 V/1-500 VA	6.0	7.5	20	20	1	#12 W/#12 G IN 3/4"C	A	23	CU	ST	DIRECT	20	J-BOX	ES	ES	8					
F-040	O	F-040 OFFICE COMPUTER	120 V/1-300 VA	2.5	3.1	20	20	1	#12 W/#12 G IN 3/4"C	A	2	CU	ST	C&P	20	5-20	ES	ES	2					
F-090	O	U-070 RECEIPT PRINTER	120 V/1-240 VA	2.0	2.5	20	20	1	#12 W/#12 G IN 3/4"C	A	8	CU	ST	C&P	20	5-20	ES	ES	2					
F-090	O	UPS	120 V/1-500 VA	4.0	5.0	20	20	1	#12 W/#12 G IN 3/4"C	A	13	CU	ST	C&P	20	5-20	ES	ES	2					
F-174	O	SAFE W/TOUCHSCREEN CONTROLS	120 V/1-360 VA	3.0	3.8	20	20	1	#12 W/#12 G IN 3/4"C	A	54	CU	ST	C&P	20	5-20	ES	ES	2					
HM-10	O	OCB SWITCH	120 V/1-500 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	28	CU	ST	C&P	20	5-20	ES	ES	2					
IR-01	O	IRRIGATION TIMER	120 V/1-500 VA	6.0	7.5	20	20	1	#12 W/#12 G IN 3/4"C	D	6	CU	ST	C&P	20	5-20	ES	ES	2					
L-049	O	DIGITAL MENU BOARD	120 V/1-180 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	20	CU	ST	C&P	20	5-20	ES	ES	2					
M-03	O	MUSIC SYSTEM JACK	120 V/1-500 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	D	8	CU	ST	C&P	20	5-20	ES	ES	2					
N-043	O	POWER SOAK	208 V/2-4700 VA	11.4	14.1	20	20	1	#12 W/#12 G IN 3/4"C	D	22,24	CU	ST	C&P	20	6-20P	ES	ES	2					
P-07	O	POS J-BOX	120 V/1-500 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	9	CU	ST	C&P	20	5-20	ES	ES	2					
P-417	O	TIMER - 8 CHANNEL	120 V/1-180 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	1	CU	ST	C&P	20	5-20	ES	ES	2					
P-452	KR	HOT WATER SYSTEM	208 V/2-4026 VA	19.4	24.2	30	30	1	#10 W/#10 G IN 3/4"C	A	16,18	CU	ST	C&P	30	6-30	ES	ES	2					
P-452	KR	HOT WATER SYSTEM	208 V/2-4026 VA	19.4	24.2	30	30	1	#10 W/#10 G IN 3/4"C	A	17,19	CU	ST	C&P	30	6-30	ES	ES	2					
R-009	KM	R-009 FULL HEIGHT FREEZER	120 V/1-1140 VA	9.5	11.9	20	20	1	#12 W/#12 G IN 3/4"C	A	14	CU	ST	C&P	20	5-20	ES	ES	2					
S540	KM	PEPSI BOOSTER TANK	120 V/1-540 VA	4.7	5.9	20	20	1	#12 W/#12 G IN 3/4"C	D	7	CU	ST	C&P	20	5-20	ES	ES	2					
S-01	O	J-BOX SECURITY DVR	120 V/1-500 VA	4.2	5.3	20	20	1	#12 W/#12 G IN 3/4"C	A	11	CU	ST	C&P	20	5-20	ES	ES	2					
S-12	O	J-BOX SECURITY	120 V/1-500 VA	4.2	5.3	20	20	1	#12 W/#12 G IN 3/4"C	A	7	CU	ST	C&P	20	5-20	ES	ES	2					
S-027	KR	HEATED CABINET	120 V/1-180 VA	16.6	20	20	20	1	#12 W/#12 G IN 3/4"C	A	31	CU	ST	C&P	20	5-20	ES	ES	2					
S-027	KR	HEATED CABINET	120 V/1-180 VA	16.6	20	20	20	1	#12 W/#12 G IN 3/4"C	A	33	CU	ST	C&P	20	5-20	ES	ES	2					
S-204	O	S-204 D/T TIMING SYSTEM	120 V/1-216 VA	7.2	9.0	20	20	1	#12 W/#12 G IN 3/4"C	A	12	CU	ST	C&P	20	5-20	ES	ES	2					
S-284	KM	S-284 BEVERAGE DISPENSER	120 V/1-360 VA	3.0	3.8	20	20	1	#12 W/#12 G IN 3/4"C	D	15	CU	ST	C&P	20	5-20	ES	ES	2					
S-285	KM	S-284 BEVERAGE DISPENSER (D/T)	120 V/1-360 VA	3.0	3.8	20	20	1	#12 W/#12 G IN 3/4"C	A	15	CU	ST	C&P	20	5-20	ES	ES	2					
S-286	O	WATER FILTRATION SYSTEM	120 V/1-400 VA	2.0	2.5	20	20	1	#12 W/#12 G IN 3/4"C	D	39	CU	ST	C&P	20	5-20	ES	ES	2					
S-381	O	PEPSI BOOSTER TANK	120 V/1-120 VA	1	1.3	15	15	1	#12 W/#12 G IN 3/4"C	D	41	CU	ST	C&P	15	5-15	ES	ES	2					
S-513	O	S-513 ICE MAKER	120 V/1-180 VA	1.1	1.4	15	15	1	#12 W/#12 G IN 3/4"C	D	2	CU	ST	C&P	15	5-15	ES	ES	2					
S-546	O	ICED TEA	120 V/1-240 VA	2.0	2.5	20	20	1	#12 W/#12 G IN 3/4"C	A	3	CU	ST	C&P	20	5-20	ES	ES	2					
S-547	O	BREWER	120 V/1-480 VA	4.0	5.0	20	20	1	#12 W/#12 G IN 3/4"C	A	6	CU	ST	C&P	20	5-20	ES	ES	2					
S-570	O	CARBONATOR	120 V/1-138 VA	2.3	2.9	15	15	1	#12 W/#12 G IN 3/4"C	D	1	CU	ST	C&P	15	5-15	ES	ES	2					
S-570	O	CARBONATOR	120 V/1-138 VA	2.3	2.9	15	15	1	#12 W/#12 G IN 3/4"C	D	15	CU	ST	C&P	15	5-15	ES	ES	2					
S-737	KM	S-737 FROZEN BEVERAGE DISPENSER	208 V/2-3120 VA	31.6	39.5	30	30	1	#10 W/#10 G IN 3/4"C	D	10,12	CU	ST	C&P	30	6-30	ES	ES	2					
S-XX2	O	AIR CURTAIN RECEPTACLE	120 V/1-500 VA	4.2	5.25	20	20	1	#12 W/#12 G IN 3/4"C	D	25	CU	ST	C&P	20	5-20	ES	ES	2					
U-052	O	U-052 SECURITY SYSTEM	120 V/1-180 VA	3.0	3.8	15	15	1	#12 W/#12 G IN 3/4"C	A	5	CU	ST	C&P	15	5-15	ES	ES	2					
U-052	O	GENERAL PURPOSE RECEPTACLE	120 V/1-360 VA	3.0	3.8	15	15	1	#12 W/#12 G IN 3/4"C	A	11	CU	ST	C&P	15	5-15	ES	ES	2					
U-061	O	CREDIT CARD READER	120 V/1-180 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	13	CU	ST	C&P	20	5-20	ES	ES	2					
U-061	O	CREDIT CARD READER	120 V/1-360 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	53	CU	ST	C&P	20	5-20	ES	ES	2					
U-070	O	U-070 RECEIPT PRINTER	120 V/1-240 VA	2.0	2.5	20	20	1	#12 W/#12 G IN 3/4"C	A	8	CU	ST	C&P	20	5-20	ES	ES	2					
U-070	O	CREDIT CARD READER	120 V/1-180 VA	1.1	1.4	20	20	1	#12 W/#12 G IN 3/4"C	A	13	CU	ST	C&P	20	5-20	ES	ES	2					
U-100	O	POS	120 V/1-180 VA	1.5	1.9	15	15	1	#12 W/#12 G IN 3/4"C	A	53	CU	ST	C&P	15	5-15	ES	ES	2					
U-238	O	CREDIT CARD READER	120 V/1-180 VA	1.1	1.4	20	15	1	#12 W/#12 G IN 3/4"C	A	47	CU	ST	C&P	20	5-20	ES	ES	2					
W-075	KM	W-075-2 WALK-IN FREEZER	208 V/3-0 VA	11.6	14.5	20	20	1	#12 W/#12 G IN 3/4"C	D	27,29,31	CU	ST	DIRECT	20	J-BOX	ES	ES	2					
W-075	KM	W-075-1 WALK-IN COOLER	208 V/3-0 VA	14.2	17.8	20	20	1	#12 W/#12 G IN 3/4"C	D	28,30,32	CU	ST	DIRECT	20	J-BOX	ES	ES	2					

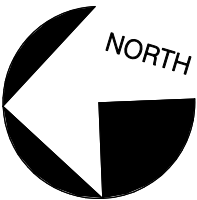
\*\*\*REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR ALL KITCHEN EQUIPMENT AND FINAL COORDINATION\*\*\*

TYPE: H-HEATING, C-COOLING, KR-KITCHEN RESISTIVE, KM-KITCHEN MOTOR, WH-WATER HEATER, OM-OTHER MOTORS, O-OTHER DISCONNECT TYPE: HP-HP RATED SWITCH, C&P-CORD & PLUG, LC&P-LOCKING CORD & PLUG, F-FUSED, NF-NON-FUSED, MCCB-MOLDED CASE CIRCUIT BREAKER SUPPLIED/INSTALLED BY: EC-ELECTRICAL CONTRACTOR, HC-HVAC CONTRACTOR, PC-PLUMBING CONTRACTOR, ES-EQUIPMENT SUPPLIER \*VOLTAGE DROP CALCULATION FORMULAS COURTESY OF COOPER BUSSMANN.

NOTES: 1 - REQUIRES SHUNT TRIP PROTECTION 5 - SINGLE PHASE, THREE WIRE EQUIPMENT, PROVIDE NEUTRAL CONDUCTOR AND GROUND. 2 - CORD & PLUG SUPPLIED AND INSTALLED BY ES. EC SHALL PROVIDE RECEPTACLE. 6 - THREE PHASE, FOUR WIRE EQUIPMENT, PROVIDE NEUTRAL CONDUCTOR AND GROUND. 3 - CORD & PLUG SUPPLIED AND INSTALLED BY ES. RECEPTACLE SUPPLIED BY ES AND INSTALLED BY EC. 7 - OUTLETS SUPPLIED AND INSTALLED BY ES. CONDUIT & WIRING PROVIDED BY EC. 4 - CORD, PLUG & RECEPTACLE SUPPLIED AND INSTALLED BY EC.

Branch Panel: D															Location:					Volts: 120/208 Wye					A.I.C. Rating: SERIES				
															Supply From: MSB					Phases: 3					Mains Type: M.L.O.				
															Mounting: Recessed					Wires: 4					Mains Rating: 400 A				
															Enclosure: Type 1					MCB Rating:									
Notes:																													
NOTE	CKT	Circuit Description					Wire Size	Trip	Poles	A		B		C		Poles	Trip	Wire Size	Circuit Description					CKT	NOTE				
1	1	CARBONATOR					15 A	1	1	138 VA	360 VA					1	20 A		S-513 ICE MAKER					2	1				
	3	B-223 WATER HEATER IGNITION					20 A	1				180 VA	680 VA			1	20 A		ALTERNATE PAYMENT ROUTER BOX...					4					
1	5	HUB TABLE RECEPTACLES					20 A	1						500 VA	680 VA	1	20 A		IRRIGATION TIMER AND RECEPTACLE					6	1				
1	7	S-540 PEPSI TANK					20 A	1		540 VA	680 VA					1	20 A		MUSIC SYSTEM J-BOX AND...					8					
1	9	RECEPTACLES - ROOF					20 A	1				360 VA	1560 VA						S-737 FROZEN BEV. DISP.					10					
	11	CONVENIENCE RECEPTACLES					20 A	1						540 VA	1560 VA	2	30 A							12					
	13	GENERAL PURPOSE RECEPTACLES					20 A	1		540 VA	1600 VA													14					
1	15	DRINK FOUNTAIN - S-284 AND S-570					20 A	1				498 VA	1600 VA			2	20 A		ICE MAKER CONDENSER					16					
1	17	U-238 MONITORS					20 A	1						720 VA	1600 VA	2	20 A		ICE MAKER CONDENSER					18					
	19	ICE MAKER CONDENSER D/T					20 A	2		1600 VA	1600 VA													20					
	21											1600 VA	2350 VA											22					
1	23	HUB TABLE KIOSK					20 A	1						500 VA	2350 VA	2	20 A		POWER SOAK					24					
	25	AIR CURTAIN RECEPTACLE					15 A	1		500 VA	500 VA					1	20 A		MUSIC SYSTEM (MUZAK)					26					
	27											1393 VA	1705 VA											28					
	29	WALK-IN FREEZER					20 A	3						1393 VA	1705 VA	3	20 A		WALK-IN COOLER					30					
	31									1393 VA	1705 VA													32					
	33											4035 VA	6341 VA											34					
	35	RTU-1					50 A	3						4035 VA	6341 VA	3	80 A		RTU-2					36					
	37									4035 VA	6341 VA													38					
1	39	S-286 WATER FILTER SYSTEM					20 A	1				400 VA	2309 VA											40					
	41	S-381 AMPROBE CO2 MONITOR					20 A	1						120 VA	2309 VA	2	30 A		HOT WELL W/ GRILL (VLINE 2)					42					
Total Load:									21532 VA		25011 VA		24353 VA																
Total...									179 A		212 A		207 A																
Load Classification							Connected Load		Demand Factor		Estimated Demand		Panel Totals																
HVAC							12105 VA		100.00%		12105 VA																		
Kitchen							8816 VA		65.00%		5730 VA		Total Connected Load: 70716 VA																
Other							19023 VA		100.00%		19023 VA		Total Estimated Demand: 67630 VA																
Power							10218 VA		100.00%		10218 VA		Total Connected Current: 196 A																
Receptacle							1660 VA		100.00%		1660 VA		Total Estimated Demand Current: 188 A																
Refrigeration							18894 VA		100.00%		18894 VA		System Voltage: 120/208 Wye																
Notes:																													





- REFER TO POWER AND COMMUNICATION DIMENSIONS PLAN

**POWER PLAN**  $1/4'' = 1'-0''$  **A**

- J. ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA-1 FOR INTERIOR AND NEMA 3R FOR EXTERIOR. IN COASTAL REGIONS THE STANDARD FOR OUTSIDE SHALL BE NEMA-4X.
- K. PER SECTION 210.8(B)(3) NEC 2011, ALL 15 AND 20A, 120V RECEPTACLES IN COMMERCIAL KITCHENS ARE REQUIRED TO BE GFCI PROTECTED. THIS INCLUDES ISOLATED GROUND RECEPTACLES.
- L. DO NOT MEASURE/LOCATE OUTLETS ON DRAWINGS. USE DIMENSIONS PROVIDED.
- M. CONDUIT MAY RUN UNDER SLAB AT G.C.'S DISCRETION.
- N. E.C. SHALL PROVIDE A PREPRINTED SELF-ADHESIVE LABEL ON ALL POS RECEPTACLES STATING "POS USE ONLY".
- O. PROVIDE ESCUTCHEON PLATES AND SEALANT AT ALL UTILITY PENETRATIONS INTO WALL, CEILING, AND FLOORS. DO NOT USE CAULKS OR EXPANSION FOAM FOR SEALANT.
- P. ARMOR CABLE (BX) ALLOWED WHERE ACCEPTABLE BY CODE. ALL WIRE SHALL BE CONCEALED O.N.U.
- Q. FOR ALL CIRCUITS NOT SHOWN ON EQUIPMENT SCHEDULE, CONTRACTOR SHALL PROVIDE CONDUCTOR AND CONDUIT SIZES AS SHOWN ON BRANCH CIRCUIT WIRING SCHEDULE SHOWN ON E2.2. IF SIZES DIFFER FROM N.E.C., THE MORE STRINGENT (LARGER) SIZE SHALL BE PROVIDED.
- R. OUTLETS WITHIN FOH TO BE AT 18" AFF FOR ADA ACCESS.
- S. CONDUITS NEAR DRIVE THRU WINDOW AREA TO BE ROUTED FROM ABOVE CEILING OR STURBED UP FROM UNDER SLAB SO AS TO NOT INTERFERE WITH WINDOW FRAMING.

- 11 PROVIDE POWER AND DATA JUNCTIONS BOXES IN SLAB WITH COVER PLATE FOR ORDERING KIOSK. PROVIDE ALL NECESSARY TRENCHING AND CONDUITS. VERIFY EXACT QUANTITY AND LOCATION WITH EQUIPMENT INSTALLER AND TACO BELL CONSTRUCTION MANAGER. REF A9.0 FOR KIOSK OPTIONS. NUMBER OF KIOSKS & LOCATION OF KIOSKS MAY CHANGE DUE TO (3) DESIGN OPTIONS. ARROWS SHOW POSSIBLE KIOSK LOCATIONS.
- 12 NOT USED.
- 13 NOT USED.
- 14 NOT USED.
- 15 CONTRACTOR TO RUN POWER AND DATA CONDUITS FOR V LINE AND FRONT POS COUNTER UNDER SLAB. CONFIRM ROUTE WITH TACO BELL REPRESENTATIVE PRIOR TO ROUGH-IN.
- 16 LOCATION OF TBCCB COMBINED CONTROL BOX. COORDINATE EXACT LOCATION IN FIELD. CONSIDER OPERATOR'S NEED TO ACCESS SWITCHES ON THE FRONT OF THE CONTROL BOX AND BUILT-IN OCCUPANCY SENSOR FOR MANAGER'S OFFICE. CIRCUIT TO B-10.
- 17 REFER TO DETAIL 7/E3.1.

## GENERAL NOTES - ELECTRICAL POWER PLAN

## KEY NOTES - ELECTRICAL POWER PLAN NTS **B**

2306 DIX HIGHWAY  
NICHOLS PARK, MI 48146



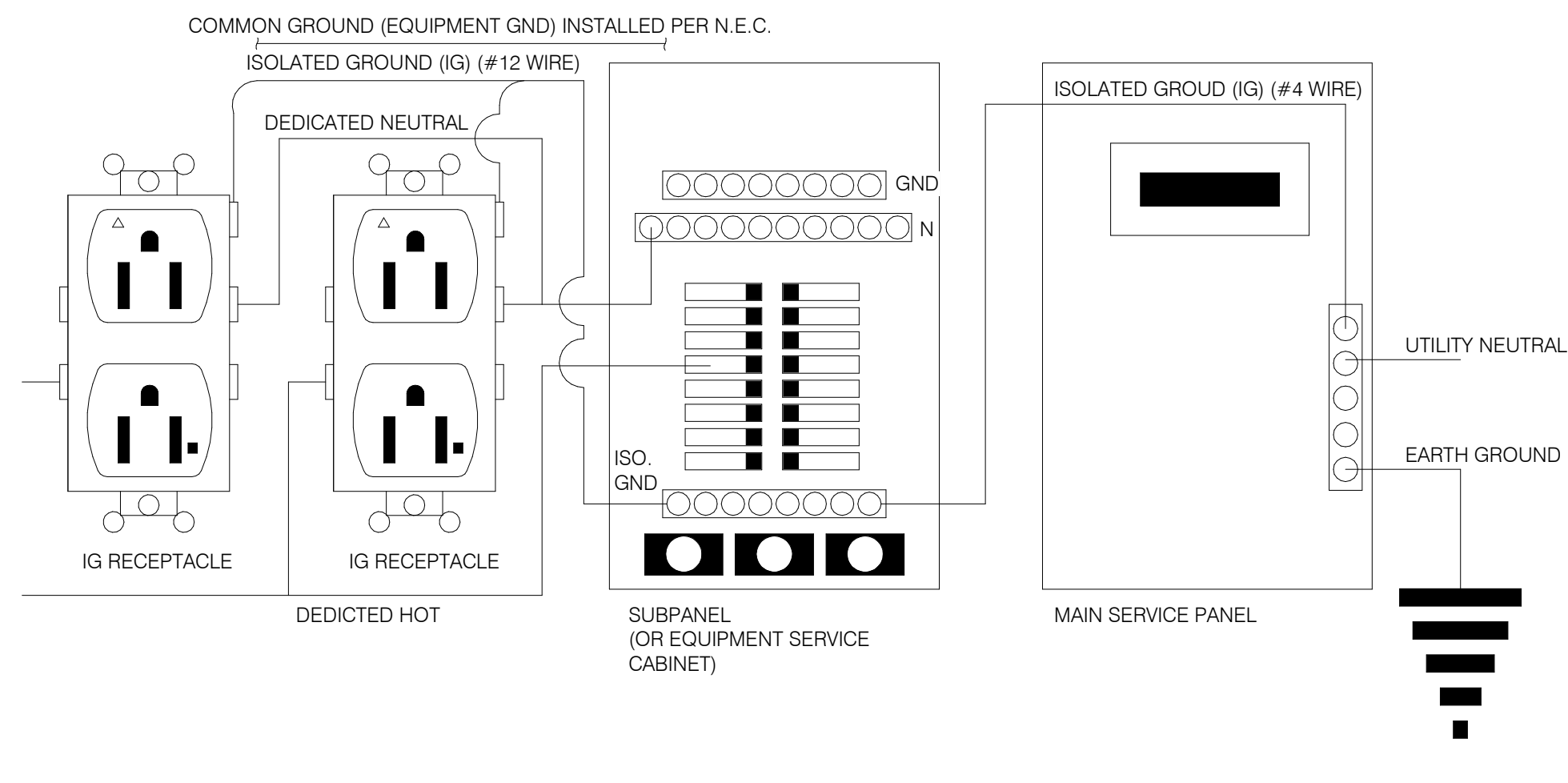
OPEN KITCHEN  
MODERN EXPLORER

# ELECTRICAL POWER PLAN

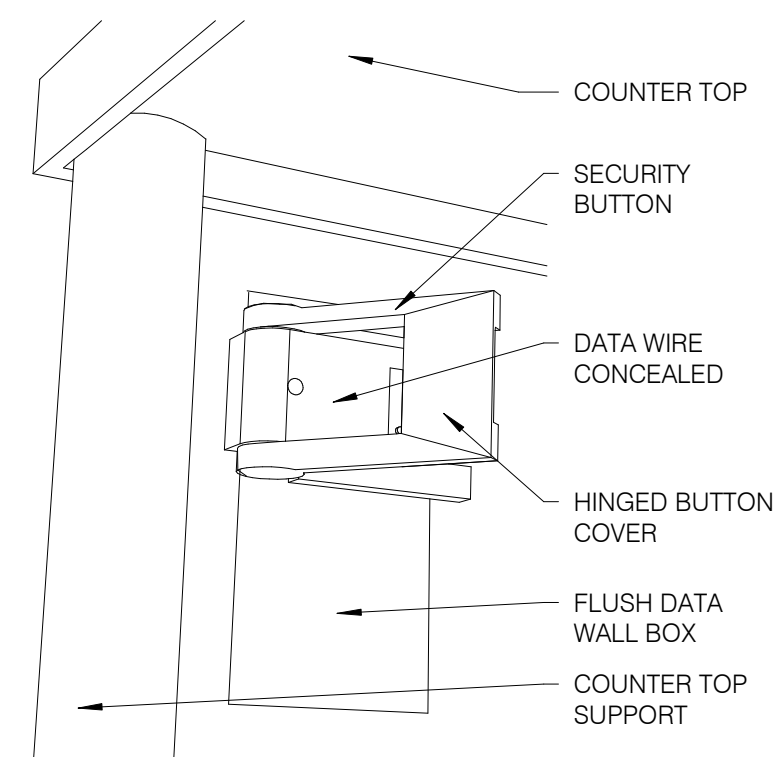
# E3.0

PLOT DATE: 9/13/2018 4:29:04 PM

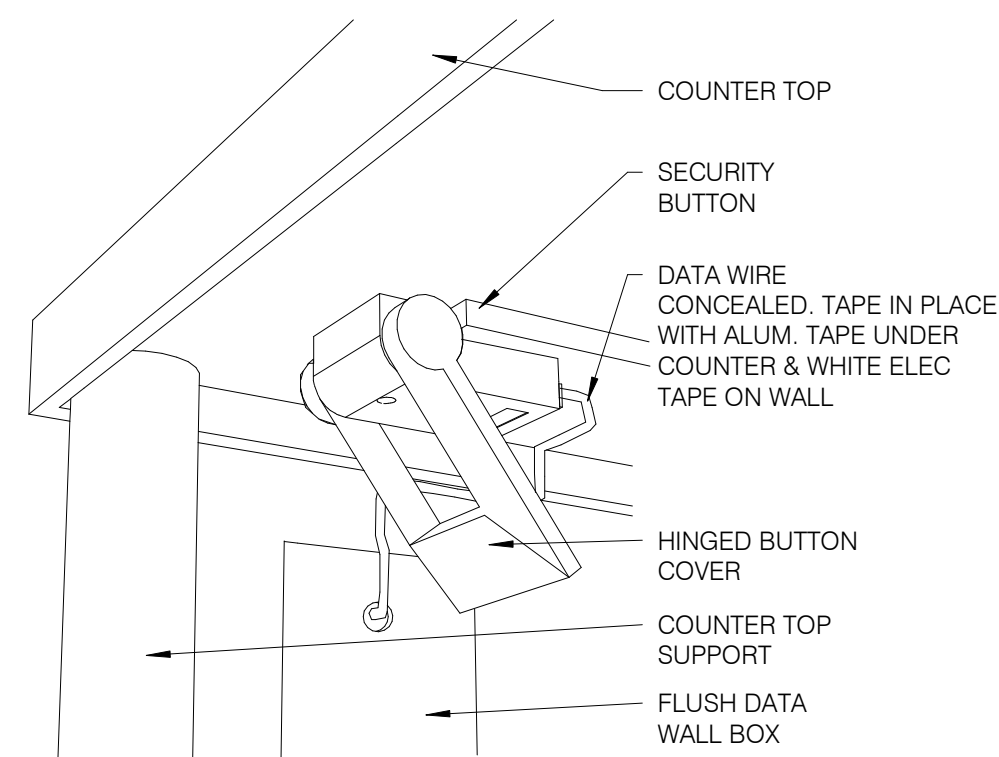
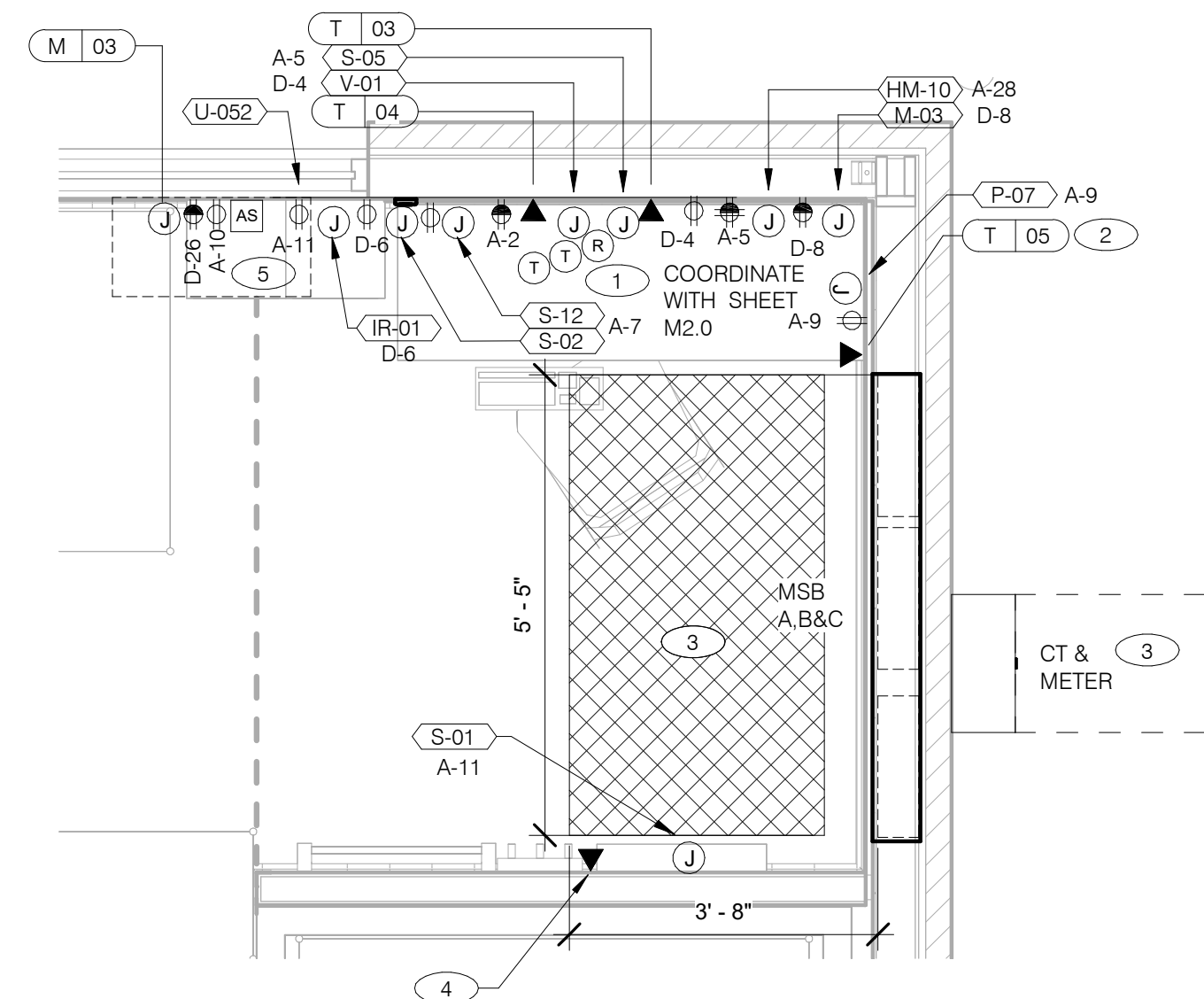
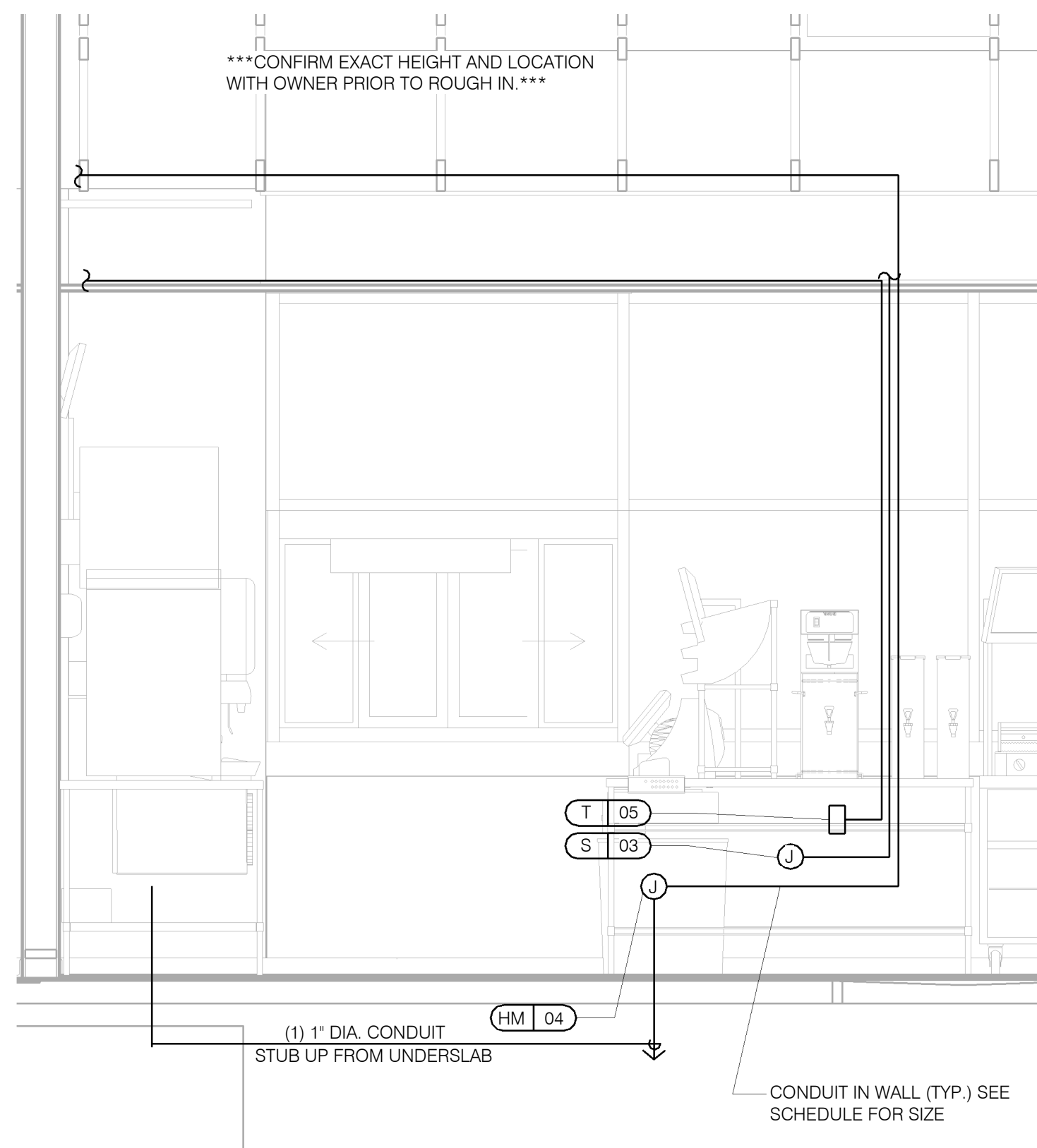
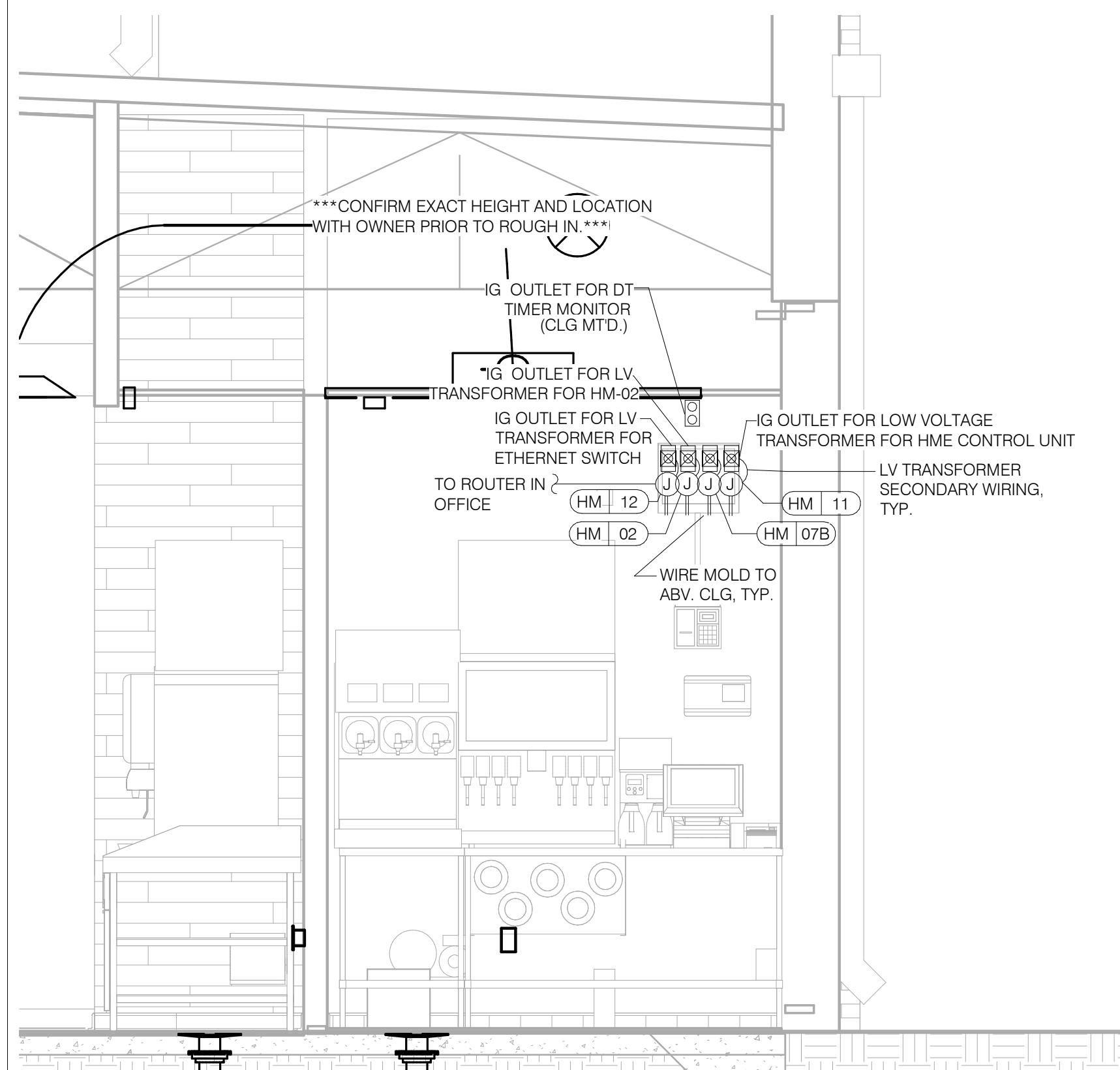
DEDICATED CIRCUITS: DEDICATED CIRCUITS REQUIRE A DEDICATED HOT AND A DEDICATED NEUTRAL THAT ARE NOT SHARED WITH ANY OTHER CIRCUITS  
IG RECEPTACLES MUST BE "PHASE ALIGNED" WITH THE "B" PHASE OF BUILDING SUBPANEL "A".



## P.O.S. ISOLATED GROUND SYSTEM NTS



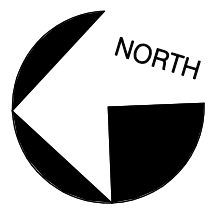
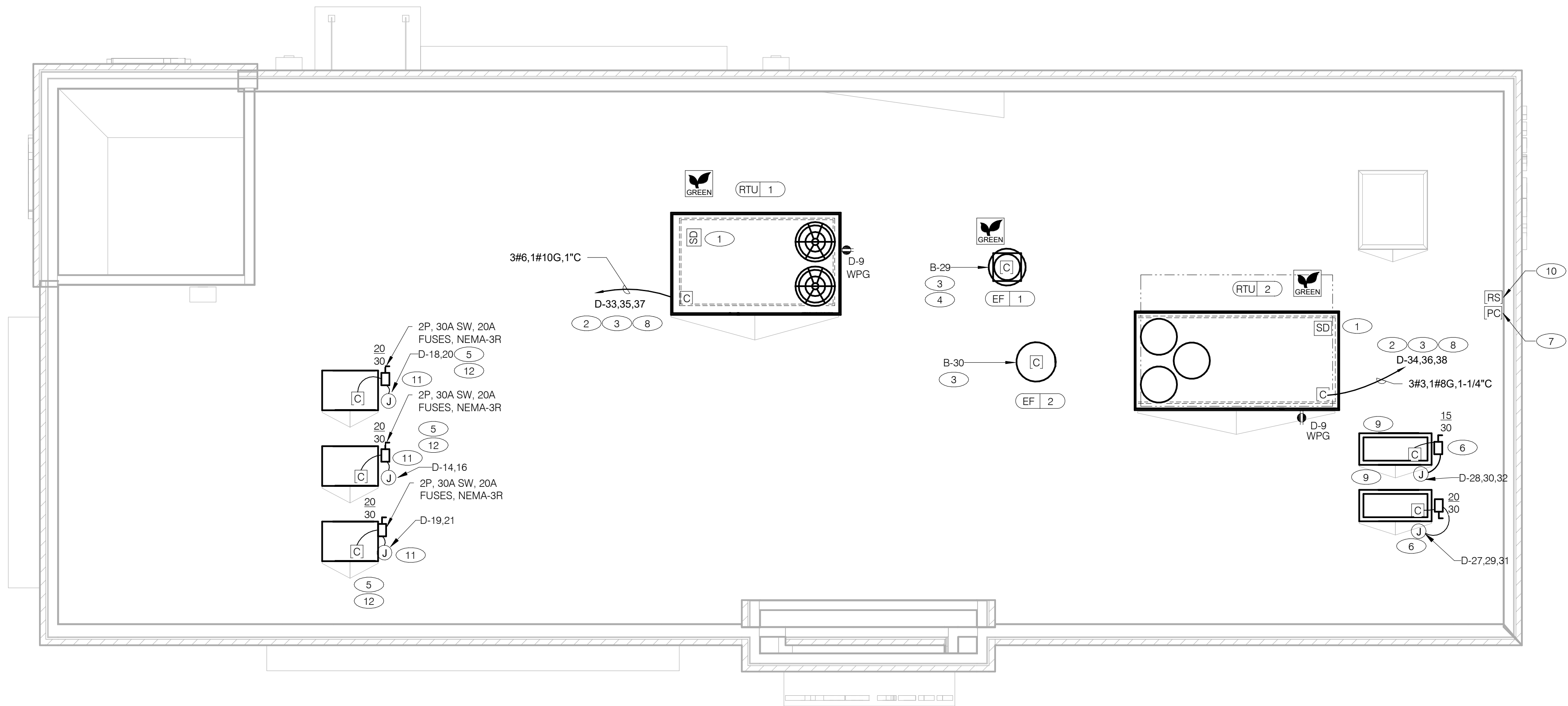
## SECURITY BUTTON ON WALL NTS

**SECURITY BUTTON UNDER COUNTER** NTS**ENLARGED POWER AND COMMUNICATIONS PLAN (OFFICE)** 1/2" = 1'-0"**ENLARGED INTERIOR ELEVATION (D/T WINDOW)** NTS**ENLARGED INTERIOR ELEVATION** NTS

- 1 THERMOSTATS CONTROLS.
- 2 PHONE JACK FOR MODEM.
- 3 ELECTRICAL WORKING CLEARANCE
- 4 DATA JACK FOR TECH-IN-BOX WITH 2 PORTS.
- 5 ELECTRICAL AND DATA DEVICES SHOWN OFFSET ON PLANS FOR CLARITY AND COORDINATION PURPOSES. COORDINATE WITH TACO BELL CONSTRUCTION MANAGER FOR FINAL LOCATIONS PRIOR TO INSTALLATION.

**KEY NOTES - ELECTRICAL ENLARGED DETAILS** NTS





POWER ROOF PLAN 1/4" = 1'-0" A

- A. NO CONDUIT SHALL BE FASTENED DIRECTLY TO OR THROUGH ROOFING MEMBRANE.
- B. ALL CUTS IN ROOFING MEMBRANE SHALL BE MINIMAL AND IN ACCORDANCE WITH ROOFING MFR'S AND INSTALLER'S REQ'S.
- C. REFER TO MECH. DWGS FOR MECHANICAL EQUIPMENT ELECTRICAL REQ'S.
- D. ALL EXPOSED ELECTRICAL CONDUITS SHALL PENETRATE ROOF MEMBRANE AT PIPE HOODS U.O.N.
- E. REFER TO ELECT. EQUIP. SCHEDULE AND ELECT. ROUGH-IN PLAN.
- F. ALL CONDUITS FROM EXHAUST FANS SHALL BE ROUTED INSIDE OF CURB.
- G. ALL CONDUITS TO AND FROM RTU SHALL BE ROUTED INSIDE OF RTU CURB. COORDINATE WITH RTU MFR RECOMMENDATIONS.
- H. REFER TO GENERAL NOTES SHEET E2.0
- I. ALL WIRING AND CONDUITS SHALL BE CONCEALED. NO CONDUITS PERMITTED TO RUN EXPOSED ACROSS ROOF DECK. ROUTE ALL CONDUITS THROUGH EQUIPMENT ROOF CURBS OR ARCHITECT SPECIFIED ROOF PENETRATIONS.
- J. ARMOR CABLE (BX) ALLOWED WHERE ACCEPTABLE BY CODE. CABLE SHALL BE ROUTED CONCEALED, AND SHALL BE ACCESSIBLE. CABLE SHALL CONTAIN GREEN CU CODE SIZE GROUND CONDUCTOR.

- 1 SMOKE DETECTOR PROVIDED WITH UNIT. REFER TO MECHANICAL DRAWINGS.
- 2 SPECIFIED RTU IS SUPPLIED WITH THRU THE BASE ELECTRICAL CONNECTIONS AND FACTORY INSTALLED HACR CIRCUIT BREAKER WITH WEATHER TIGHT ENCLOSURES AND ACCESS THRU SWINGING DOOR.
- 3 POWER AND CONTROL ENTRY FROM BOTTOM OF UNIT.
- 4 CONNECT TO EF-1 RELAY. REF E6.0 THROUGH E6.3.
- 5 1/2" C. WITH REQ'D CONDUCTORS TO J-BOX IN CEILING ABOVE ICE MACHINE. MAKE CONNECTION TO ICE MACHINE AND CONDENSING UNIT.
- 6 REFER TO POWER PLAN FOR CONTINUATION TO COOLER / FREEZER.
- 7 MOUNT PHOTOCELL ON THE SOUTH SIDE OF THE BUILDING 14.0' ABOVE GRADE. CONNECT TO LIGHTING CONTROL PANEL AND RELAYS. SEE E6.0 AND E6.1.
- 8 RTU'S SHALL BE PROVIDED WITH BUILT-IN DISCONNECT, SINGLE POINT WIRING AND CONVENIENCE OUTLET.
- 9 CONTRACTOR SHALL VERIFY CIRCUIT BREAKER TYPE, STARTER, DISCONNECT SWITCH, AND FUSE SIZE (IF REQUIRED) WITH SELECTED EQUIPMENT MANUFACTURER'S SHOP DRAWINGS PRIOR TO PLACING ORDER AND FURNISH AND INSTALL EVERYTHING AS REQUIRED.
- 10 RAIN SENSOR MOUNTED NEXT TO PHOTOCELL 14.0' ABOVE GRADE.
- 11 PIPE HOOD FOR ICE MACHINE CONDENSERS. SEE ARCHITECTURAL ROOF PLAN.
- 12 ELECTRICAL CONTRACTOR SHALL MAKE ALL ELEC. CONNECTIONS INCLUDING ALL NECESSARY INTERCONNECTIONS BETWEEN THE COMPRESSOR ON THE ROOF & THE EVAPORATOR IN THE ICE MACHINE AS REQ'D. REFER TO THE MFR'S SHOP DWGS FOR EXACT INSTALL. & INTERCONNECTION ROOMS, PRIOR TO ROUGH-IN INSTALL.

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE:	04.02.18
BUILDING TYPE:	T52M-O
PLAN VERSION:	DEC 2017
BRAND DESIGNER:	
SITE NUMBER:	283405/445231
STORE NUMBER:	2017088.46

Taco Bell

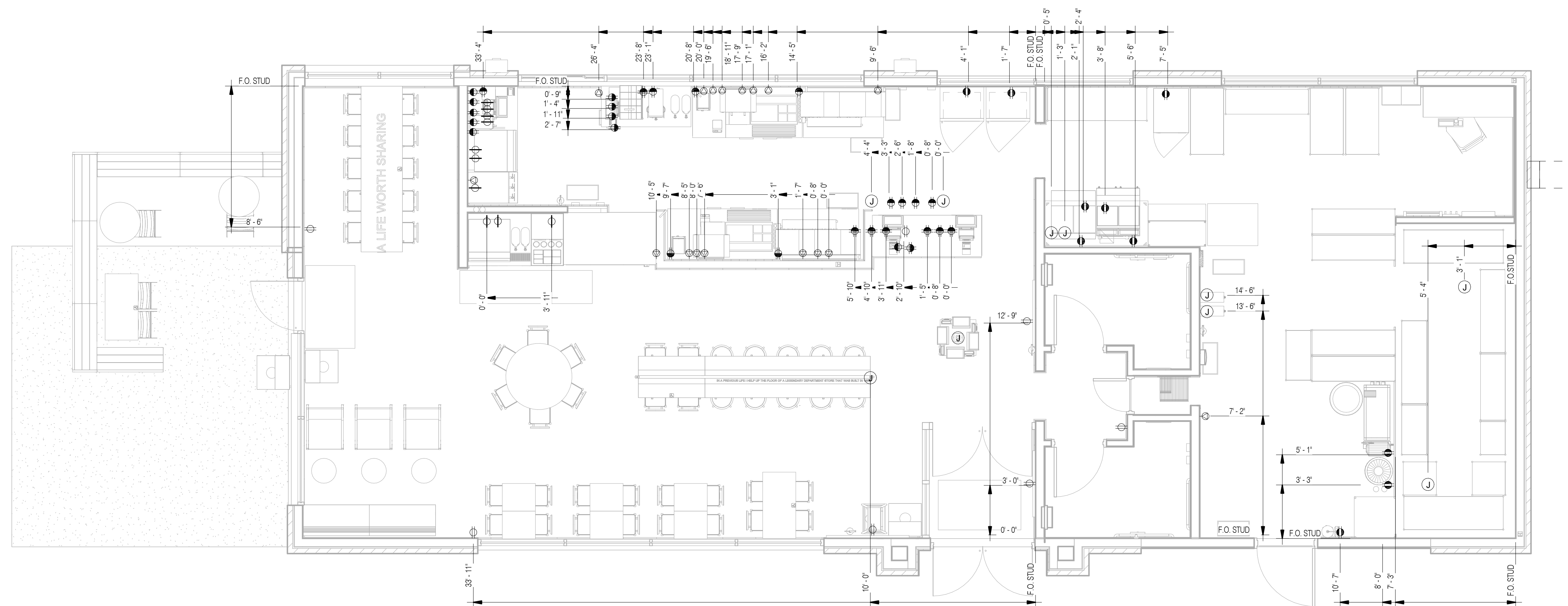
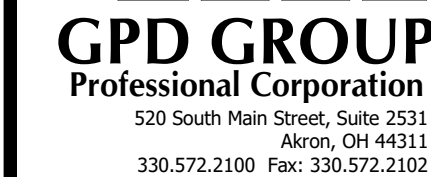
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



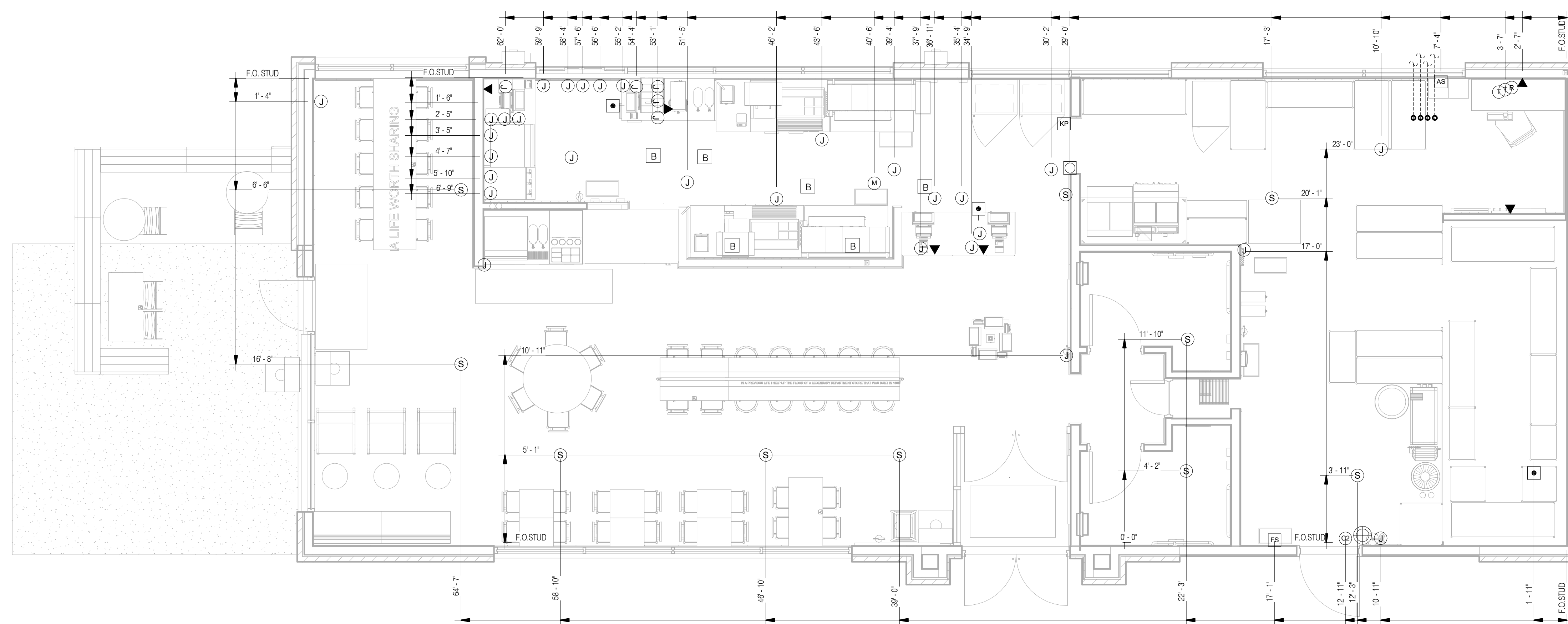
T52  
OPEN KITCHEN  
MODERN EXPLORER

ELECTRICAL  
POWER ROOF  
PLAN

E3.2



## POWER DIMENSIONS PLAN



**COMMUNICATION DIMENSIONS PLAN** 1/4" = 1'-0"

[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 481



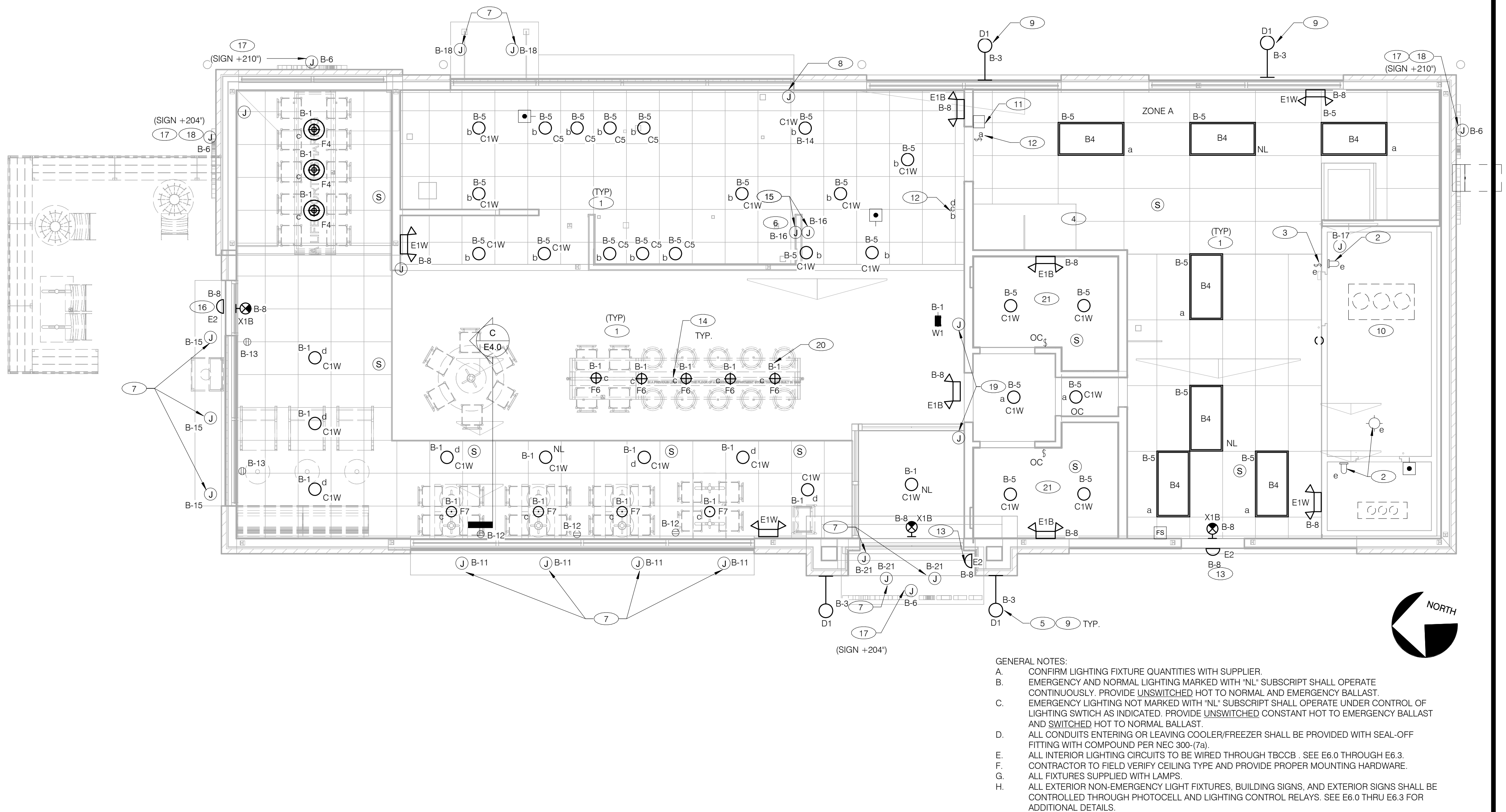
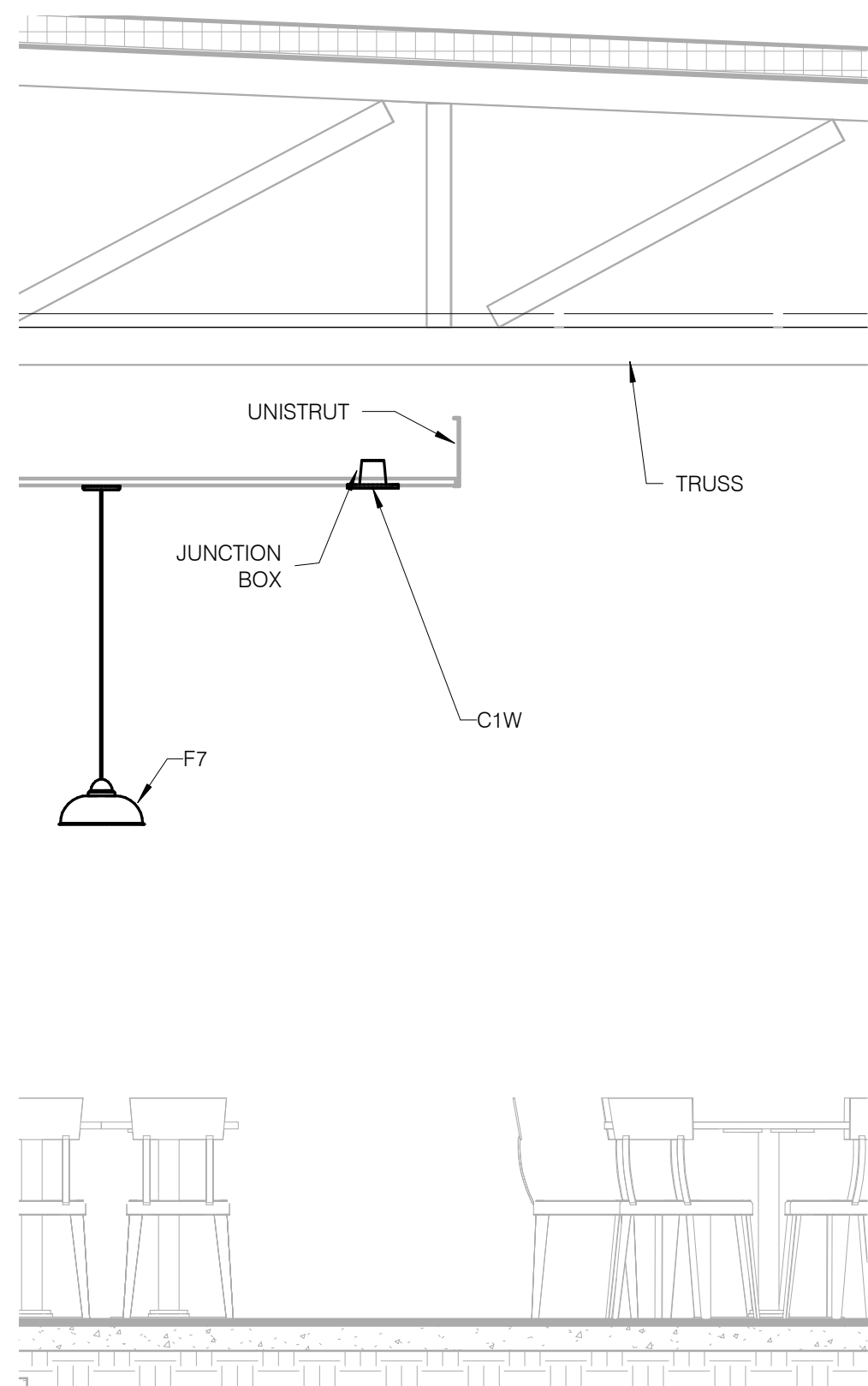
T52  
OPEN KITCHEN  
MODERN EXPLORER

# ELECTRICAL DIMENSIONS PLAN

### E3.3

PLOT DATE: 9/13/2018 4:29:12 PM





**C**

**C**

NO.	QTY	LOCATION	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	MOUNTING	LAMP #/TYPE	BALLAST TYPE	ELECTRICAL DATA	REMARKS
A	8		LSI INDUSTRIES	XALM-FT-LED-HO-40-IL	LED AREA LIGHTS FORWARD THROW, BRONZE FINISH		LED		120 V/1-193 VA	
B4	7	BOH	MAXLITE	MLFP-24EP-4841	2X4 LED TROFFER	RECESSED GRID	LED	NA	120 V/1-45 VA	-
C1W	25		MAXLITE	B6IC-AT-W- LED14DR5630KB95	LED TRIM 14W 6" RECESSED 30K 80CRI WHITE TRIM, W/ ELITE B6IC-AT-W 6" IC AIR SHUT HOUSING		LED		120 V/1-14 VA	-
C5	7	OPEN KITCHEN AREA/ FOH	MAXLITE	RR6C20U30Z/RAF6	LED DOWNLIGHT 20W 6" RECESSED 30K 80CRI WHITE TRIM	RECESSED	LED	NA	120 V/1-20 VA	-
D1	4	EXTERIOR SCONCE	TROY	B2772	17"X14" WALL MOUNT SCONCE, OLD SILVER FINISH, MEDIUM BASE SOCKET, 100 WATT MAX	WALL, CENTER OF BRACKET @ 14'-0" A.F.F.	-	NA	120 V/1-60 VA	ALIGN BOTTOM OF FIXTURE'S MOUNTING WITH CHANGE IN EIFS THICKNESS
E1B	4	FOH	ELITE	ELM-809-B	EMERGENCY LIGHT FROG EYE - BLACK	WALL, TOP @ 9'-4" U.O.N.	-	EM	120 V/1-12 VA	-
E1W	4		ELITE	ELM-809-W	EMERGENCY LIGHT FROG EYE - WHITE	WALL, TOP @ 9'-4" U.O.N.	-	EM	120 V/1-12 VA	-
E2	3	EXTERIOR	LIGHTALARMS	CAM-SD-DB-CW	CAMRAY LED EM WALL MNT, DRK BRNZ, CLD WEATHER	UNIVERSAL	-	EM	120 V/1-16 VA	-
F4	3		BASELITE	CO15/78-EXT/59-INT BLC25WINC MAX	15" PENDANT WITH CHALKBOARD BLACK EXTERIOR COPPER TONE INTERIOR BLACK CORD MED BASE SOCKET		1/LED 10A19D0D27K		120 V/1-21 VA	MED BASE SOCKET OPTION
F6	5	HUB TABLE	KICHLER	43852OZ	9.75" GLASS PENDANT AVERY WITH MED BASE SOCKET RATED 100W MAX OLDE BRONZE FINISH	PENDANT, VARIES	1/LED AAMSCO LED-6W-ST64HYBRID-DIM	NA	120 V/1-100 VA	PLACEHOLDER INCLUDES LAMP
F7	4		HI-LITES	H24212-96-CB15-20WLBL-6OP	12" GALVANIZED PENDANT WITH BLACK CORD AND CANOPY MED BASE SOCKET		1/LED 10A19D0D27K		120 V/1-20 VA	-
W1	1	172	ConTech Lighting	CTL84C2M27D-P-FA-84-B-LF16SL 60MM	Stealth LED Wall Lighter Track Fixture		LED		Power Connector 120 V/1-14 VA	MOUNT IN MIDDLE OF CEILING TILE. AIM FIXTURE TO CENTER ON GRAPHIC WALL AT BOOTH
X1B	3	FOH/BOH	LIGHTALARMS	GRANNRB	LED UNIVERSAL MNTG THERMOPLASTIC EXIT, RED LETTERS, BLACK HSG	UNIVERSAL	-LED	EM	120 V/1-3 VA	-

$$1/4'' = 1'-0''$$

**A**

1	UTILIZE TIME-CLOCK CONTROLS FOR DINING ROOM CIRCUITS. REFER TO DRAWINGS E6.0 AND E6.1.	17	COORDINATE LOCATION OF J-BOX WITH SIGN VENDOR. PROVIDE DISCONNECTING MEANS AS REQUIRED. SEE SCOPE OF WORK.
2	FOR LIGHTING FIXTURES, CONDUIT, CONDUCTORS AND INSTALLATION RESPONSIBILITIES, REFER TO SCOPE OF WORK.	18	COORDINATE LOCATION OF J-BOX WITH TOWER VENDOR. SEE SCOPE OF WORK.
3	FIXTURE AND SWITCH FACTORY INSTALLED WITH UNIT. G.C. TO COMPLETE CIRCUITING.	19	PROVIDE J-BOX TO END OF UNISTRUT FOR ROUTING OF LIGHTING CABLES TO PENDANT LIGHTING FIXTURES. SEE DETAIL C ON E4.0 FOR ADDITIONAL INFORMATION.
4	EXHAUST HOOD LIGHT FIXTURES SUPPLIED WITH HOOD AND MTD IN PRE-WIRED J-BOX. COMPLETE CIRCUITING PER SHEETS E6.0-E6.3.	20	F6 FIXTURES TO BE MOUNTED FROM HUB TABLE CROSS BAR BY ELECTRICAL CONTRACTOR. COORDINATE PRE-DRILLED HOLES AND WIRING WITH FURNITURE VENDOR. FIXTURES TO BE HUNG AT STAGGERED LENGTHS DOWN FROM THE CROSS BAR. COORDINATE LENGTH WITH TACO BELL PROJECT MANAGER.
5	COORD. J-BOX LOCATION WITH WOOD FRAMING SO IT REMAINS CONCEALED BEHIND FIXTURE. VERIFY MOUNTING HEIGHT WITH ARCH. DWGS.	21	CIRCUIT RESTROOM LIGHTS AND OCCUPANCY SENSOR SWITCH AHEAD OF LIGHTING CONTROL BOX.
6	OUTLET FOR MENU BOARD: SEE SHEET E3.0. VERIFY POINT OF CONNECTION. 10 LIGHT PANELS WIRED IN SERIES. G.C. TO MAKE FINAL CONNECTION.		
7	J-BOX FOR EVERBRITE LIGHTING SYSTEM IN CANOPY. PROVIDE DISCONNECTING MEANS FOR LIGHTING. COORDINATE WITH CANOPY MANUFACTURER FOR ADDITIONAL DETAILS.		
8	J-BOX FOR LIGHT TROUGH AGAINST WINDOW. VERIFY POINT OF CONNECTION. WIRE VIA EXTERIOR LIGHTING CONTACTOR.		
9	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR DIMENSIONED LOCATION OF FIXTURE.		
10	SEAL ALL ELECTRICAL CONDUITS INTO THE WALK-IN COOLER.		
11	ALERT LIGHT : ONLY APPLIES WHEN A GEN IV POWER SOAK IS USED. DISREGARD IF GEN III POWER SOAK IS USED. SEE SHEET E3.0 FOR POWER REQUIREMENTS.		
12	PROVIDE LIGHT SWITCHES FOR CONTROL OF LIGHT FIXTURES AS SHOWN. COORDINATE WITH LIGHTING MANUFACTURER FOR TYPE OF SWITCH.		
13	MOUNT 'E2' AT 8'-0" A.F.G. TO CENTER OF FIXTURE. REFER TO ARCHITECTURAL ELEVATIONS.		
14	SUBSCRIPT 'x' CORRESPONDS TO LIGHTING CONTROL SWITCH.		
15	J-BOX FOR SECURITY (U-052) AND INTERIOR MENU BOARD (L-XX1) RESPECTIVELY.		
16	MOUNT 'E2' AT 8'-6" A.F.G. TO CENTER OF FIXTURE. REFER TO ARCHITECTURAL ELEVATIONS.		

## NTS

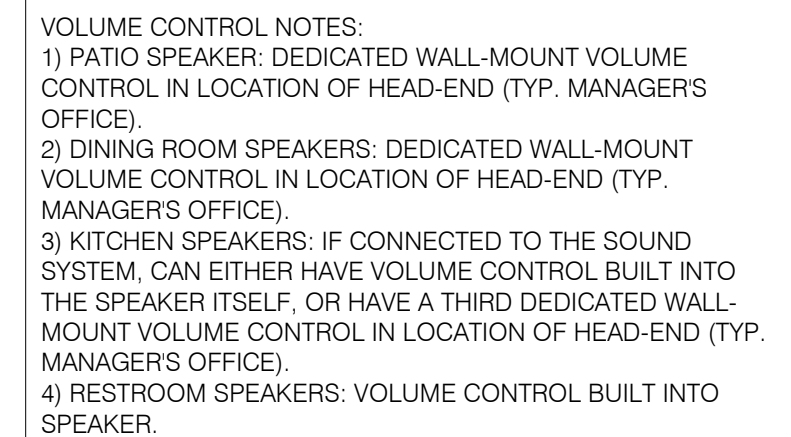
**B**

T52  
OPEN KITCHEN  
MODERN EXPLORER

## LIGHTING PLAN AND DETAILS

## E4.0

PLOT DATE: 9/13/2018 4:29:14 PM

**COMMUNICATIONS PLAN** 1/4" = 1'-0"

**A**

**A**

[illegible]

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell

2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146



T52

OPEN KITCHEN  
MODERN EXPLORER

## COMMUNICATIONS PLAN

## E5.0















PLOT DATE: 9/13/2018 4:29:15 PM

## COMMUNICATIONS ROUGH-IN SCHEDULE

COMMUNICATIONS ROUGH-IN SCHEDULE				
COMM. TYPE	COMM. #	EQUIPMENT ITEM	ELEVATION	REMARKS
H	01	UNDER COUNTER HOLD-UP BUTTON		SEE DETAIL 6/E3.1.
H	02	WALL MOUNTED HOLD-UP BUTTON	+18" A.F.F.	SURFACE MTD. 2X4 J-BOX ON INSIDE OF WALK-IN FREEZER HINGE WALL W/ (1) 1/2" CONDUIT TO ABOVE KITCHEN CEILING. BUTTON FACING DOWN. SEE DETAIL 3/E3.1.
HM	02	D/T TIMER SIGNAL PROCESSOR J-BOX	+126" A.F.F.	4X4X4" DEEP (MIN.) J-BOX ABV. CLG. W/ (1) 1" CONDUIT TO HM-07B, (1) 1" CONDUIT TO HM-04, (1) 1-1/2" CONDUIT TO HM-08 & (1) 1" CONDUIT TO HM-12. SEE DET. 5/E3.1.
HM	03	D/T BASE STATION J-BOX	+72" A.F.F.	4X4 J-BOX @ D/T BASE STATION W/ (1) 1-1/2" C TO HM-08 & (1) 1-1/2" C TO HM-07A. SEE DETAIL 5/E3.1.
HM	04	D/T COMM SYSTEM J-BOX	+18" A.F.F.	4X8 J-BOX W/ (1) 1" CONDUIT TO HM-02, (1) 1" CONDUIT TO HM-07A, (1) 1" CONDUIT TO PICK-UP WINDOW D/T LOOP, AND (3) 1" CONDUIT TO D/T MENU BOARD. SEE DETAIL 7/E3.1
HM	07A	D/T TIMER DISPLAY J-BOX	+62" A.F.F.	2X4 J-BOX W/ (1) 1-1/2" CONDUIT TO HM-03 & (1) 1" C TO HM-04. SEE DETAIL 5/E3.1.
HM	07B	D/T TIMER DISPLAY J-BOX	+126" A.F.F.	2X4 J-BOX ABV. CEILING W/ (1) 1" CONDUIT TO HM-02. SEE DETAIL 5/E3.1
HM	08	D/T J-BOX	+96" A.F.F.	4X4X4" DEEP (MIN.) J-BOX W/ (1) 1-1/2" CONDUIT TO HM-03 & (1) 1-1/2" CONDUIT TO HM-02. SEE DETAIL 5/E3.1.
HM	11	D/T CONTROL UNIT J-BOX	+126" A.F.F.	2X4 J-BOX ABV. CEILING W/ (1) 1" CONDUIT TO HM-12. SEE DETAIL 5/E3.1.
HM	12	D/T/ ETHERNET SWITCH J-BOX	+126" A.F.F.	2X4 J-BOX ABV. CEILING W/ (1) 1" CONDUIT TO HM-11, (1) 1" CONDUIT TO HM-02 & (1) 1" CONDUIT TO OFFICE ROUTER.
M	01		CEILING	SPEAKER WIRING FROM SPEAKERS IN DINING ROOM TO AMPLIFIER IN OFFICE. FOR EXACT LOCATION OF SPEAKERS, SEE LIGHTING PLAN SHEET E4.0.
M	03	MUSIC SYSTEM J-BOX (SEE ENLARGED PLAN)	+60" A.F.F.	4X4 J-BOX & COVER W/ (1) 1/2" CONDUIT TO ABOVE CEILING FOR MUSIC SYSTEM. SEE SCOPE OF WORK.
O	01	(4) 1" DATA CONDUITS	U.G.	FROM MENU BOARD/SPEAKER POST TO ABOVE CEILING FOR OCB AND D/T/ COMM. SYSTEM. SEE DETAIL 3/E7.0
P	03	KITCHEN MONITOR J-BOX	+84" A.F.F.	2X4 J-BOX W/ (1) 3/4" CONDUIT TO ABOVE CIELING
P	04	BUMP PAD J-BOX	+24" A.F.F.	2X4 J-BOX W/ (1) 3/4" CONDUIT TO P-03.
P	07	POS J-BOX W/ 2-1/2" DIA HOLE IN COVER PLATE	+24" A.F.F.	6X6X4" DEEP J-BOX W/ 2-1/2" CONDUIT IN WALL TO ABV. CEILING, WITH PULL STRING FOR POS.
S	03	J-BOX SECURITY SYSTEM	+30" A.F.F.	2X4 J-BOX W/ (1) 1/2" CONDUIT TO ABV. CLG. FOR HOLD-UP BUTTON SIGNAL WIRE.
S	04	J-BOX SECURITY SYSTEM	+84" A.F.F.	2X4 J-BOX W/ COVER & (1) 1/2" CONDUIT TO ABOVE CEILING.
S	05	J-BOX SECURITY SYSTEM	+24" A.F.F.	2X4 J-BOX W/ 3/4" CONDUIT TO S-05 AND TO ABOVE CEILING.
S	06	J-BOX SECURITY SYSTEM	+48" A.F.F.	2X4 J-BOX W/ (1) 1/2" CONDUIT TO ABOVE CEILING FOR SECURITY SYSTEM KEYPAD.

## COMMUNICATIONS ROUGH-IN SCHEDULE

COMMUNICATIONS ROUGH-IN SCHEDULE				
COMM. TYPE	COMM. #	EQUIPMENT ITEM	ELEVATION	REMARKS
S	07	J-BOX SECURITY SYSTEM	TOP OF JAMB	2X4 J-BOX W/ (1) 1/2" CONDUIT TO ABOVE CEILING FOR DOOR CONTACT.
S	08	"SOUND ALERT" DEVICE	CEILING	CONNECT TO SECURITY SYSTEM.
S	09	SECURITY STROBE LIGHT	CEILING	CONNECT TO SECURITY SYSTEM.
S	10	ALARM SIREN	ABV. CEILING	CONNECT TO SECURITY SYSTEM.
S	11	MOTION / HEAT DETECTOR	+78" A.F.F.	STUB 1/2" CONDUIT, D5835 OR D5820. MOUNT 90" A.F.F. FOR OFFICE
T	03	VOICE LINE PHONE JACK	+106" A.F.F.	2X4 J-BOX W/ DOUBLE RJ-11 PHONE JACK & 1" CONDUIT TO ABOVE CEILING
T	04	COMPUTER PHONE JACK (SEE ENLARGED PLAN)	+42" A.F.F.	2X4 J-BOX W/ RJ-11 PHONE JACK AND 1" CONDUIT TO ABOVE CEILING.
T	05	POS PHONE JACK	+24" A.F.F.	2X4 J-BOX W/ 1" CONDUIT TO ABOVE CEILING.
TV	02		+96" A.F.F.	MINI-DOME CAMERA MTD. TO BTM. OF MENU BOARD BULKHEAD. 2X4 J-BOX W/ (1) 1/2" CONDUIT TO ABOVE CEILING MTD. ON BACK SIDE OF BULKHEAD (6 TOTAL).
V	02	CREDIT CARD READER (VSAT)	+24" A.F.F.	2X4 J-BOX W/ 1/2" CONDUIT TO ABOVE CEILING FOR ETHERNET CABLES.
V	03	DIGITAL MENUBOARD	+106" A.F.F.	J-BOX MTD. TO TOP OF MENU BOARD BULKHEAD. 2X4 J-BOX W/ (1) 1/2" CONDUIT (2
S	01	J-BOX SECURITY SYSTEMS	+48" A.F.F.	4X4 J-BOX AT SECURITY SYSTEM CONTROL PANEL W/ (1) 2" CONDUIT TO S-02
S	02	J-BOX SECURITY SYSTEMS	+106" A.F.F.	4X4 J-BOX ADJACENT TO T-02 W/ (1) 2" CONDUIT TO S-01
S	12	J-BOX SECURITY DVR	+42" A.F.F.	2X4 J-BOX FOR SECURITY DVR
T	02	SECURITY SYSTEM PHONE JACK	+106" A.F.F.	2X4 J-BOX ADJACENT TO S-02 W/ RJ-31X PHONE JACK
V	01	ALTERNATE PAYMENT ROUTER BOX	+90" A.F.F.	4X4 J-BOX W/ 1/2" CONDUIT TO ABOVE CEILING FOR ETHERNET CABLES
HM	10	OCB SWITCH	+52" A.F.F.	2X4 J-BOX W/ 1" CONDUIT TO ABOVE CEILING
IR	01	IRRIGATION TIMER	+80" A.F.F.	4X4 J-BOX W/ 1" CONDUIT TO IRRIGATION VALVES

	HOLD-UP BUTTON (MOUNT 2-1/2" BEHIND COUNTER EDGE)		DOOR CONTACT (LINKED TO AUDIO / VISUAL ALARM)
	MUSIC SYSTEM SPEAKERS		*"SOUND ALERT" DEVICE
	SECURITY STROBE		KEYPAD (MTD AT 48" A.F.F.)
	J-BOX		ALARM SIREN ABOVE CLG
	2' x 4" J-BOX W/ DATA PORTS		BUMP PAD (MOUNT AT FRONT COUNTER)
	MOTION DETECTOR		HOOD FIRE SUPPRESSION
	OCCUPANCY SENSOR. CEILING MOUNTED. SEE DETAILS 1 & 2 / E7.0		USB OUTLET- STATION

## COMMUNICATIONS LEGEND

NTS

**C**

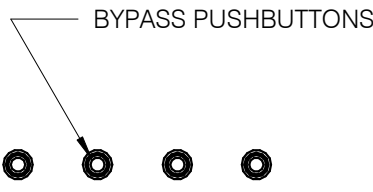
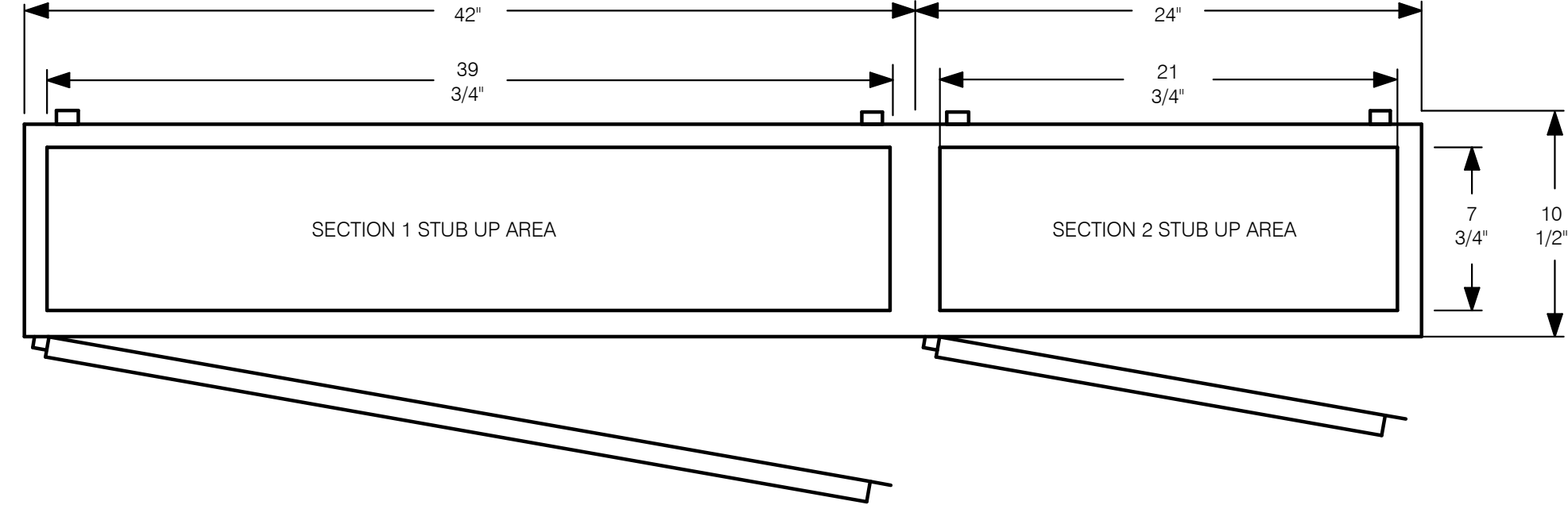
- A. SUPPLY AND INSTALL OUTLETS AND CONDUIT FOR OWNER SUPPLIED AND INSTALLED CABLE AND LOW VOLTAGE WIRING (U.O.N.). TELEPHONE AND MUSIC SYSTEM WIRING SHALL BE SUPPLIED AND INSTALLED. SEE SCOPE OF WORK SHEETS.
- B. SEE SHEETS E3.0 AND E3.1 FOR ELECT. INFO ON POS. SECURITY SYSTEM, CCTV SYSTEM, (OFFICE) COMPUTER, DRIVE-THRU TIMER AND DRIVE-THRU COMMUNICATION SYSTEM.
- C. THIS PLAN INCLUDES CONDUITS AND J-BOXES FOR POS. SECURITY SYSTEM, CCTV SYSTEM, (OFFICE) COMPUTER, TELEPHONE SYSTEM, MUSIC SYSTEM, DRIVE-THRU TIMER AND DRIVE-THRU COMMUNICATION SYSTEM.
- D. ALL OUTLETS AND BOXES MOUNTED IN THE SERVING COUNTER CABINETS ARE TO BE 24" AFF. INSTALL JUNCTION BOXES WITH CONDUIT UNDER CABINET TO NEAREST WALL AND TO ABOVE CEILING.

## COMMUNICATIONS NOTES

NTS

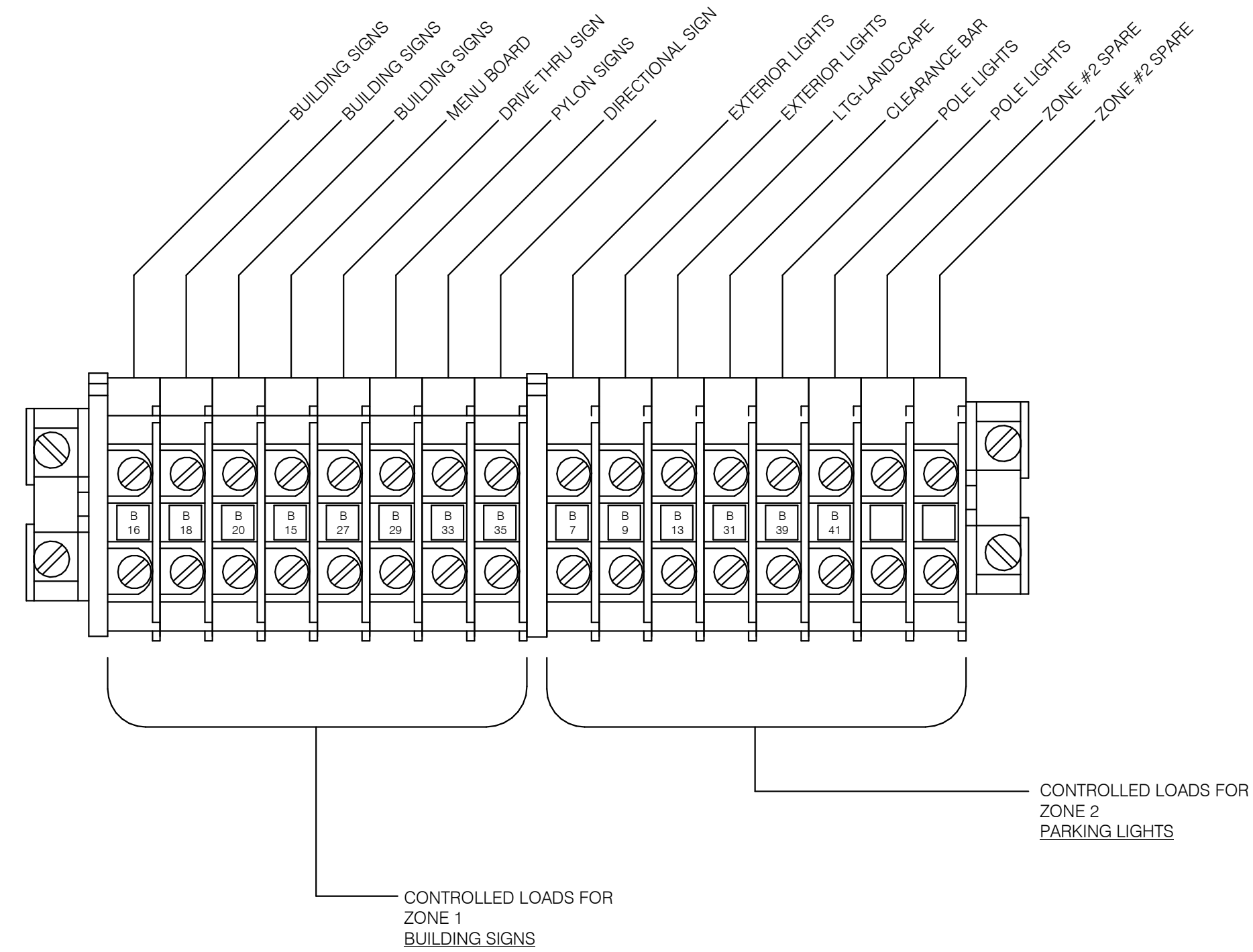
**B**









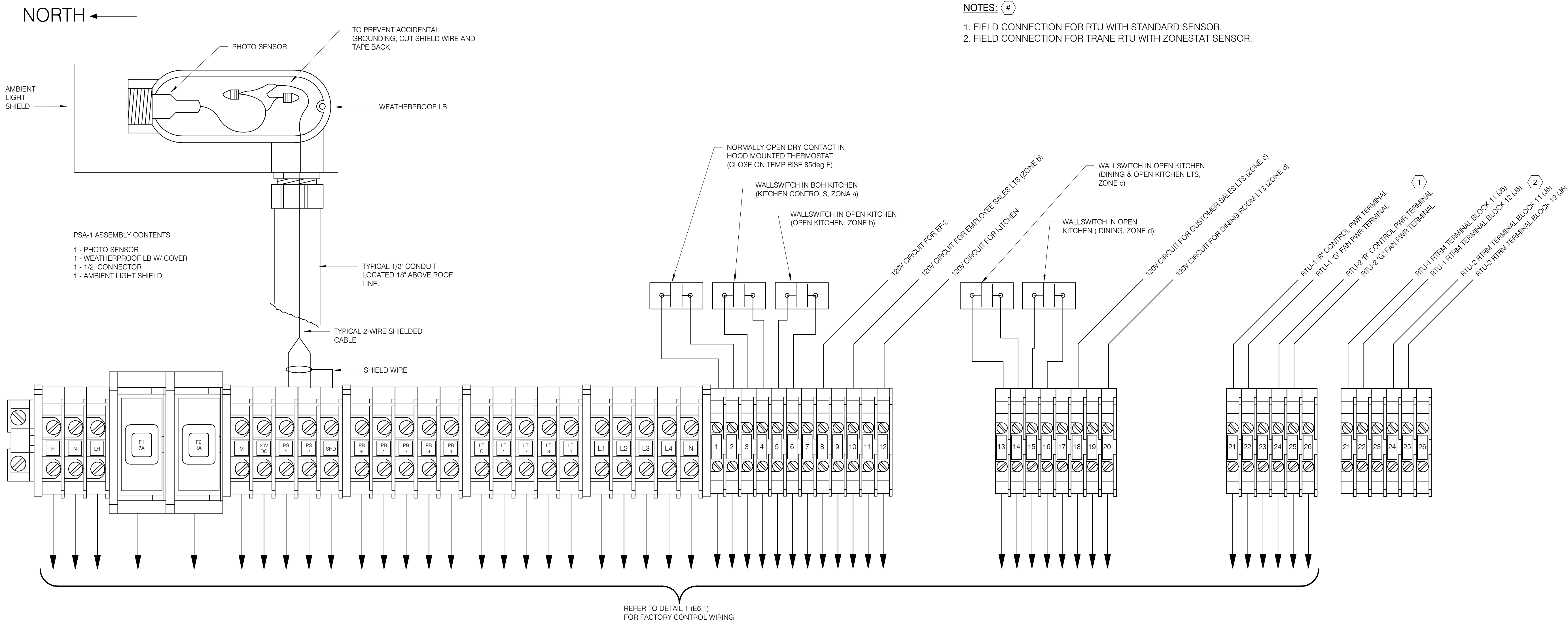


FIELD CONNECTIONS TO CONTROLLED LOADS FROM TERMINAL BLOCK SHELF N.T.S.

1

NOTES: #

1. FIELD CONNECTION FOR RTU WITH STANDARD SENSOR.
2. FIELD CONNECTION FOR TRANE RTU WITH ZONESTAT SENSOR.



FIELD CONNECTIONS TO TERMINAL BLOCKS N.T.S.

2

09.14.18	ISSUED FOR CONSTRUCTION
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

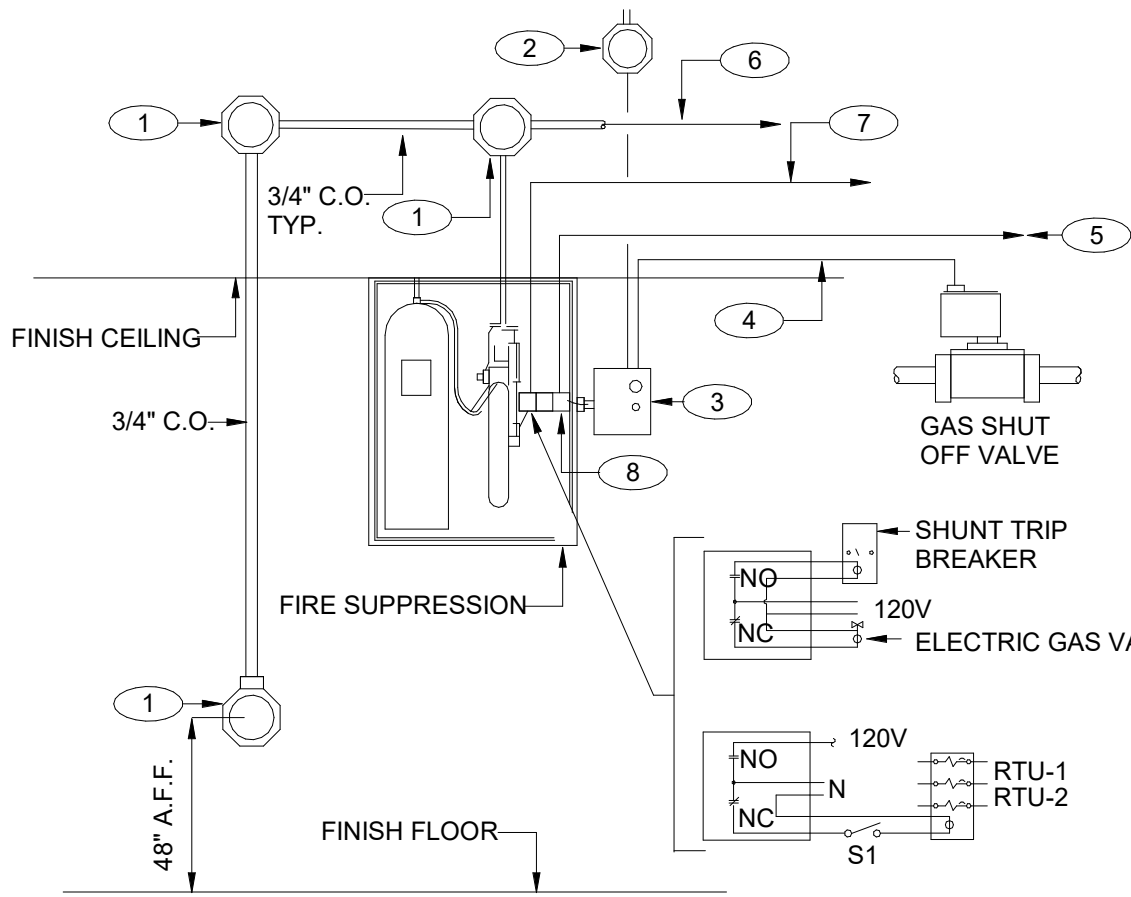
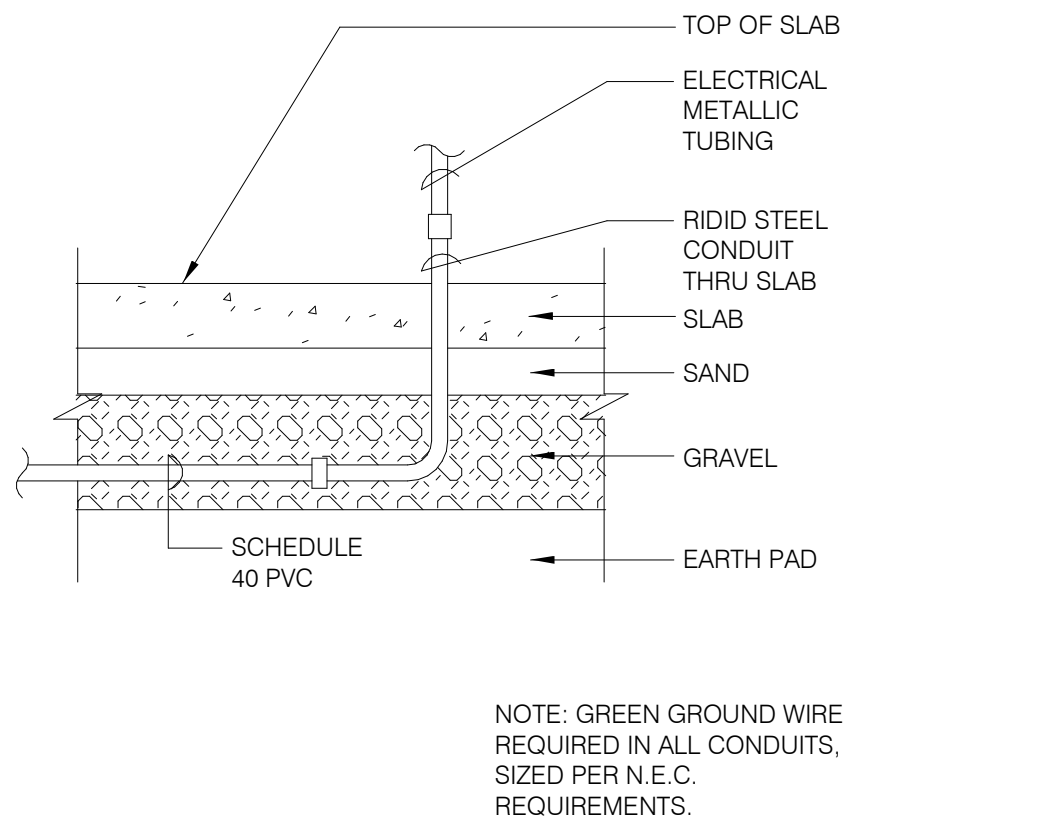
Taco Bell  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

TACO BELL  
T52  
OPEN KITCHEN  
MODERN EXPLORER

ELECTRICAL  
DETAILS - TBCCB  
(FOR REFERENCE ONLY)

E6.2

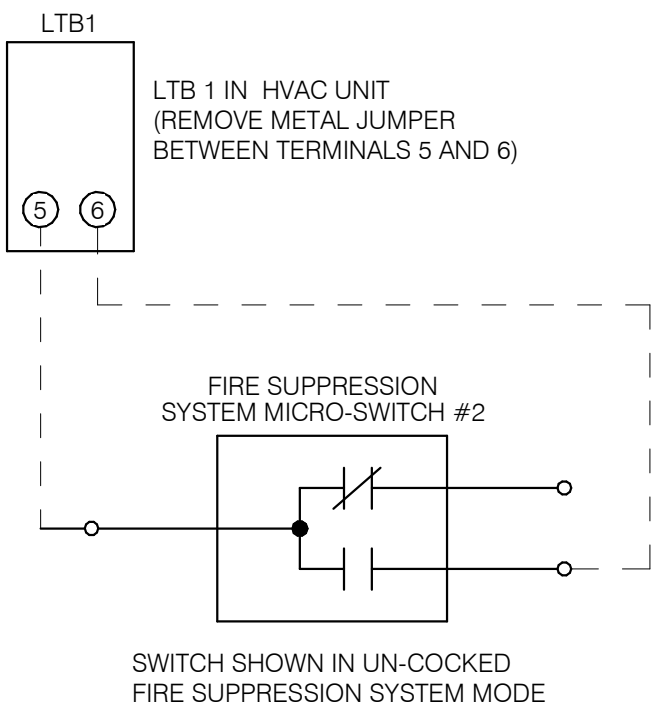
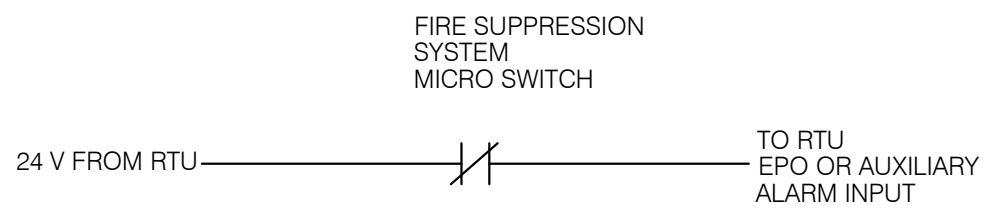
PLOT DATE: 9/13/2018 4:29:17 PM



- GENERAL NOTES:**  
1. REFER TO SHEET M3.0
- KEY NOTES:**
- 1. PROVIDE 4" OCTAGONAL J-BOX.
  - 2. PROVIDE J-BOX AND 110 V CIRCUIT. REFER TO EQUIPMENT SCHEDULE/FLOOR PLAN FOR CIRCUIT ASSIGNMENT. INTERCONNECT TO MANUAL RESET RELAY THROUGH MICROSWITCH.
  - 3. MANUAL RESET RELAY FURNISHED WITH UNIT INSTALLED BY E.C.
  - 4. PROVIDE 1/2" C WITH CONTROL CABLE. MAKE INTERCONNECTIONS TO VALVE AND RESET RELAY.
  - 5. PROVIDE 1/2" C WITH CONTROL CABLE. MAKE INTERCONNECTIONS TO EXHAUST & SUPPLY FAN INTERFACE THROUGH MICROSWITCH ON HOOD.
  - 6. CABLE AND CONNECTION TO FUSIBLE LINKS AT EXHAUST HOOD BY K.E.C.
  - 7. PROVIDE INTERCONNECTION TO "SHUNT TRIP" BREAKER AT PANEL AND MICROSWITCH AT HOOD.
  - 8. SLOT FOR SNAP ACTION MICRO-SWITCH. UP TO FOUR SWITCHES AVAILABLE FOR HOOK-UP.  
SWITCH 1: GAS SHUT-OFF VALVE.  
SWITCH 2: EXH/S.  
SWITCH 3: SHUNT TRIP BREAKER IN ELEC PANEL.

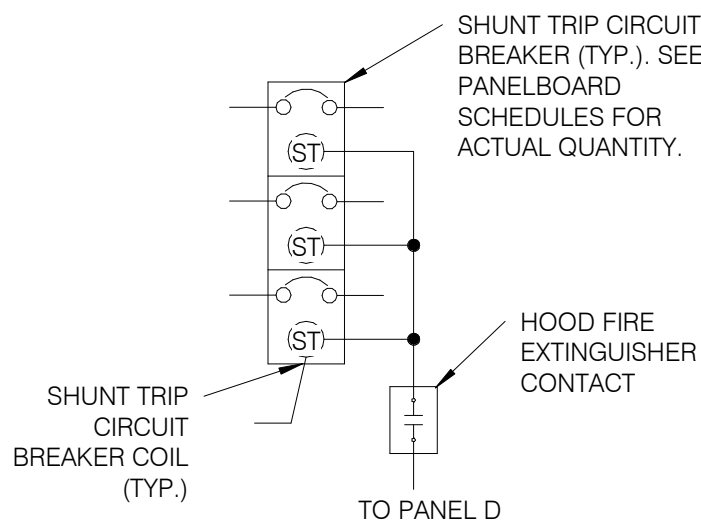
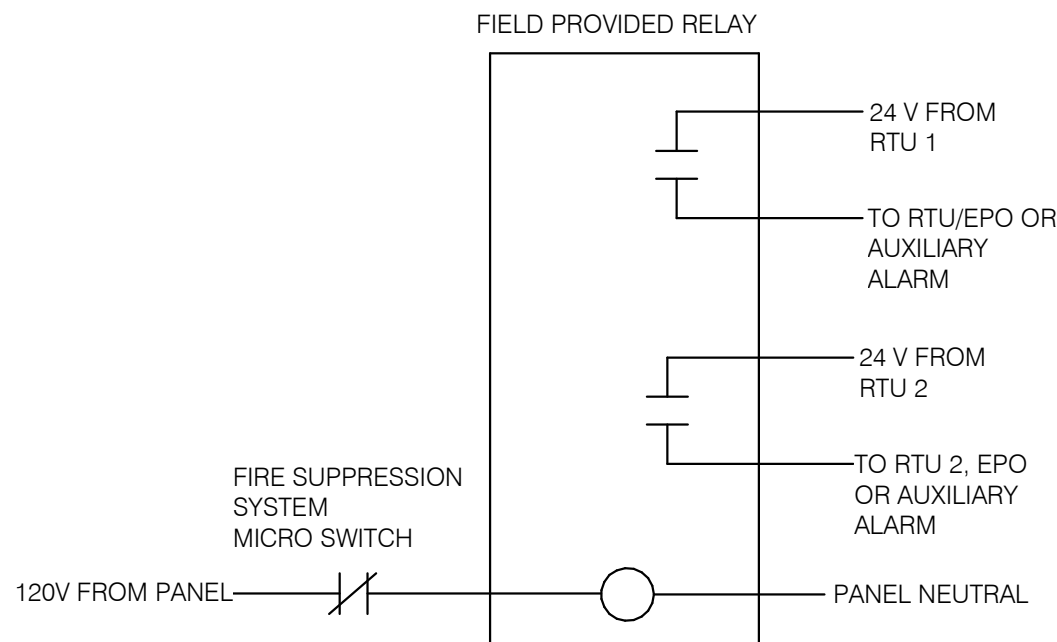
UNDER SLAB CONDUIT1 12" = 1'-0" 6

FIRE SUPPRESSION SYSTEM WIRING DIAGRAM1 12" = 1'-0" 4



SINGLE UNIT SHUTDOWN N.T.S. 7

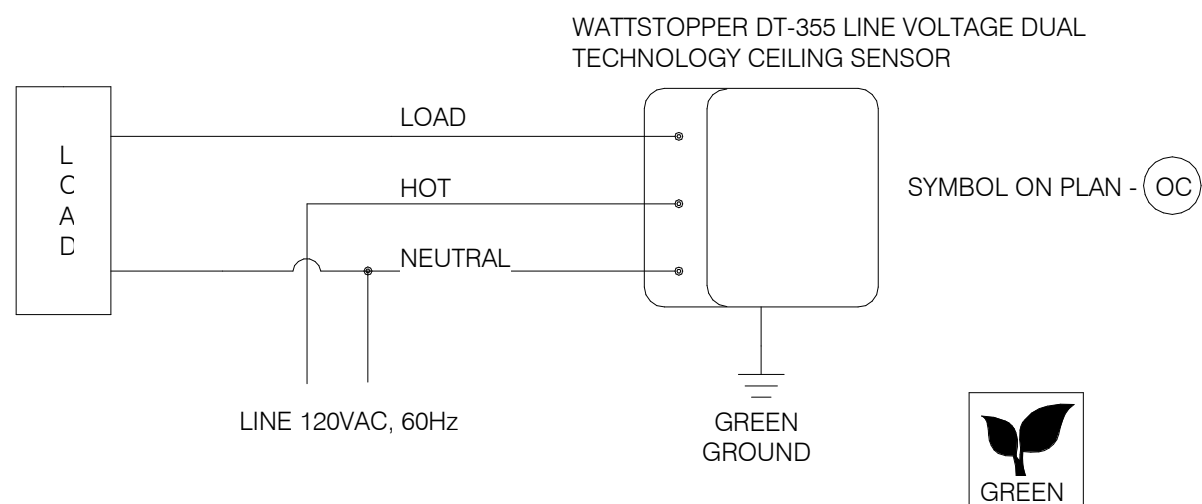
FIRE SUPPRESSION SYSTEM-TRANE SHUTDOWN N.T.S. 5



**SEQUENCE OF OPERATION:**  
UPON ACTIVATION OF ANY HOOD FIRE SUPPRESSION SYSTEM RELAY, A RELAY IN THAT FIRE SUPPRESSION SYSTEM SHALL CAUSE ALL SHUNT TRIP CIRCUIT BREAKERS TO OPERATE, THUS REMOVING POWER FROM ALL DEVICES CONNECTED TO EQUIPMENT LOCATED UNDER THE GREASE HOOD. EXHAUST FANS SHALL NOT BE AFFECTED BY THIS ACTION AND SHALL CONTINUE TO BE CONTROLLED AS INDICATED IN THE SEQUENCE OF OPERATIONS INDICATED IN DETAIL 2/E6.0.

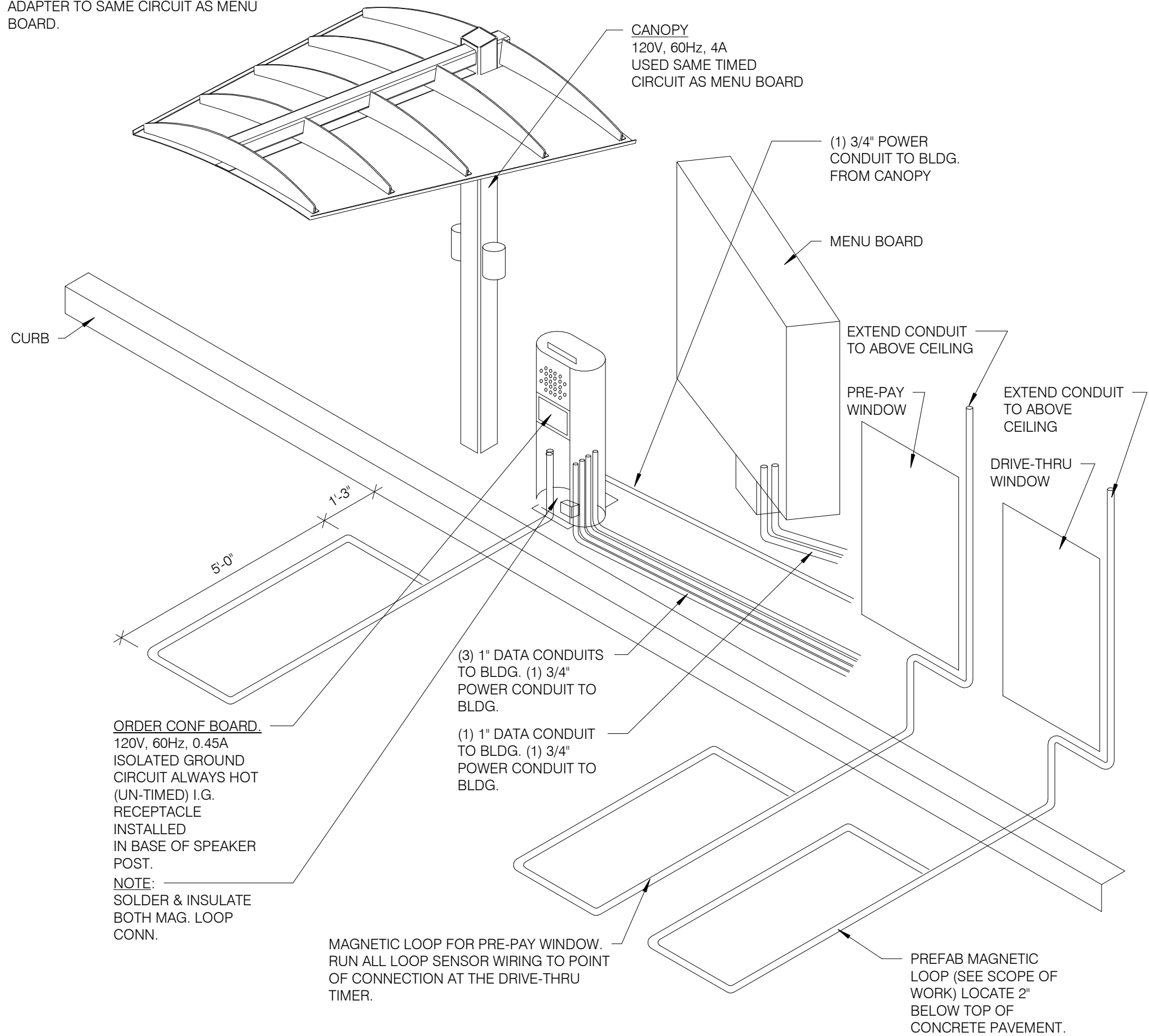
MULTI UNIT SHUTDOWN N.T.S. 8

SHUNT TRIP DETAIL1 12" = 1'-0" 9



CEILING OCCUPANCY SENSOR WIRING DIAGRAM1 N.T.S. 2

12V SOLAR PANEL OUTPUT TO BATTERY - REFER TO EVERBRITE INSTALLATION INSTRUCTIONS. CIRCUIT POWER ADAPTER TO SAME CIRCUIT AS MENU BOARD.



09.14.18	ISSUED FOR CONSTRUCTION
08.16.18	BID ADDENDUM 2
06.20.18	ISSUED FOR BID
04.24.18	ISSUED FOR PERMIT

CONTRACT DATE: 04.02.18  
BUILDING TYPE: T52M-O  
PLAN VERSION: DEC 2017  
BRAND DESIGNER:  
SITE NUMBER: 283405/445231  
STORE NUMBER: 2017088.46

Taco Bell  
2306 DIX HIGHWAY  
LINCOLN PARK, MI 48146

TACO BELL  
T52  
OPEN KITCHEN  
MODERN EXPLORER

ELECTRICAL  
DETAILS

E7.0

PLOT DATE: 9/13/2018 4:29:17 PM

