

# O'REILLY AUTO PARTS (SITE & BUILDING SHELL ONLY)

## DOLTON PLAZA

1317 E. SIBLEY BLVD., DOLTON, IL 60419

FOR: MERRILL PROPERTY GROUP, LLC

200 W. MADISON ST. SUITE 4200

CHICAGO, IL 60606

### SPECIFICATIONS

The drawings and specifications are intended to illustrate and describe a complete job in every respect. Contractors are cautioned to familiarize themselves with existing conditions on the premises as, after contracts are signed, no extras will be allowed for any labor and/or materials necessary to complete the work.

### CONDITIONS

I-1 THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A-201, LATEST EDITION, ARE ADOPTED AS PART OF THE CONTRACT DOCUMENTS AND SHALL GOVERN ALL DIVISIONS AND SECTIONS OF THE SPECIFICATIONS AND THE WORK.

I-2 THE WORK, INCLUDING LABOR AND MATERIALS, SHALL COMPLY WITH THE FOLLOWING:  
- THESE DRAWINGS & SPECIFICATIONS  
- ALL APPLICABLE CODE, ORDINANCE AND REGULATIONS, STATE AND LOCAL,  
MANUFACTURER'S SPECS, AND TRADE ASSOCIATION RECOMMENDATIONS;  
- INDUSTRY ACCEPTED ENGINEERING AND CONSTRUCTION PRACTICES.

I-3 DRAWINGS & SPECIFICATIONS ARE AND SHALL BE CONSIDERED AS COOPERATIVE AND CONSONANT. WORK MENTIONED OR INDICATED ON ONE AND NOT THE OTHER SHALL BE INCLUDED AND SUPPLIED AS THOUGH FULLY COVERED BY BOTH. IN CASE OF OVERLAPPING OR CONFLICTING REQUIREMENTS, THE MOST STRINGENT (GENERALLY MOST COSTLY) APPLIES AND WILL BE ENFORCED. ONLY ITEMS DEFINITELY NOTED "NOT IN CONTRACT," "N.C." "BY OTHERS," OR "BY OWNER," ARE NOT INCLUDED IN THE CONTRACT.

I-4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPERINTENDENCE OF THE JOB AT ALL TIMES DURING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK ALL THE WORK OF ALL TRADES TO SEE THAT IT IS BEING PROVIDED IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF ANY DISCREPANCIES OCCUR IN ANY OF THE WORK.

I-5 THE CONTRACTOR SHALL SUBMIT A SWORN CONTRACTOR'S AFFIDAVIT INCLUDING THE NAMES OF ALL PARTIES FURNISHING MATERIALS AND LABOR, AND SHALL ALSO SUBMIT PARTIAL AND FINAL WAIVERS. SUB-CONTRACTORS SHALL SUBMIT PARTIAL WAIVERS OF LIEN, OR FINAL WAIVERS, IN AMOUNT AT LEAST EQUAL TO THE NET PAYOUT REQUEST.

I-6 THE CONTRACTOR SHALL PURCHASE INSURANCE PRODUCTS IN THE FOLLOWING MANNER AND AMOUNTS:

- GENERAL LIABILITY \$2,000,000 MIN. EA. OCCURRENCE WITH A GENERAL AGGREGATE LIMIT OF \$4,000,000.
- AUTO LIABILITY \$1,000,000 MIN.
- EXCESS UMBRELLA LIABILITY \$5,000,000 MIN.
- WORKMANS COMP. IN THE REQUIRED STATUTORY AMOUNT, NO LESS THAN \$500,000.
- HOLD HARMLESS THE OWNER & ARCHITECT, FOR DAMAGE TO PROPERTY AND/OR PERSONNEL INJURIES ARISING FROM THE WORK, FROM ALL CLAIMS OR LOSSES.
- IMMEDIATELY PROVIDE G & H WITH THREE COPIES OF EACH CERTIFICATE OF INSURANCE THAT NAMES G & H DEVELOPERS CORPORATION AND OWNER OF RECORD AS ADDITIONAL INSUREDs, ON A PRIMARY, NON-CONTRIBUTORY BASIS, UNDER AN OCCURRENCE BASED POLICY IN THE AMOUNTS ABOVE AND WITH A WAIVER OF SUBROGATION ENDORSEMENT IN FAVOR OF SUCH ADDITIONAL INSUREDs, ALONG WITH DESIGNATING THE LOCATION AND NAME OF THE PROJECT UNDER DESCRIPTION ON THIS CERTIFICATE. PAYMENT FOR YOUR FIRST BILLING WILL NOT BE RELEASED UNTIL A CORRECT AND COMPLETE CERTIFICATE IS RECEIVED. ALSO, YOU ARE REQUIRED TO DEFEND, INDEMNIFY AND HOLD HARMLESS G & H DEVELOPERS CORPORATION FROM ANY LOSS, DAMAGE, COST OR EXPENSE (INCLUDING REASONABLE ATTORNEY'S FEES) DUE TO ANY BREACH OF YOUR SUBCONTRACT, OR NEGLIGENCE, BY YOU OR YOUR AGENTS, EMPLOYEES OR SUB-SUBCONTRACTORS.

I-7 ON SITE VERIFICATION OF ALL DIMENSION & CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DRAWINGS ARE REASONABLY ACCURATE FOR FIGURING PURPOSES ONLY. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR QUESTIONS ARISING FROM JOB CONDITIONS OR THESE DRAWINGS.

I-8 DO NOT SCALE DRAWINGS

I-9 COST OF WORK SHALL INCLUDE ALL SALES TAXES. CONTRACTOR SHALL PAY FOR PERMIT.

I-10 SUBSTITUTIONS AND EXTRAS ONLY FOR WORK APPROVED IN WRITING BY OWNER AND ARCHITECT.

I-11 THE OWNER WILL MAINTAIN A BUILDER'S RISK FIRE INSURANCE POLICY WITH EXTENDED COVERAGE PLUS VANDALISM AND MALICIOUS MISCHIEF COVERAGE.

I-12 CONTRACTOR SHALL REMOVE ALL DEBRIS AND LEAVE THE JOB BROOM CLEAN.

I-13 THE WORK SHALL BE GUARANTEED FOR ONE YEAR FROM COMPLETION AND APPROVAL DATE UNLESS NOTED OTHERWISE HEREIN.

### GENERAL NOTES

1. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A-201, CURRENT EDITION, ARE ADOPTED AS PART OF THE CONTRACT DOCUMENTS AND SHALL GOVERN ALL DIVISIONS AND SECTIONS OF THE SPECIFICATIONS AND THE WORK.
2. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE SITE AND REPORT ANY DISCREPANCIES FROM THESE DRAWINGS TO THE ARCHITECT.
3. THE MEASUREMENTS ON THESE DRAWINGS ARE REASONABLY ACCURATE FOR THE PURPOSE OF FIGURING. HOWEVER, IN THE EXECUTION OF WORK ON THE JOB, EACH CONTRACTOR IS TO VERIFY ALL DIMENSIONS WITH ACTUAL CONDITIONS.
4. DO NOT SCALE DRAWINGS.
5. INTERIOR PARTITIONS SHALL BE CONSTRUCTED OF METAL STUDS SIZE AND SPACING NOTED ON DRAWINGS WITH 5/8" FIRE CODE "C" GYPSUM BOARD BOTH FACES ON CONCRETE BLOCK AS NOTED ON THE DRAWINGS.
6. ALL WALL DIMENSIONS SHOWN ON PLANS ARE NOMINAL DIMENSIONS UNLESS OTHERWISE NOTED.
7. PROVIDE BACKERS, BLOCKING AND/OR FRAMING AS REQUIRED FOR SUPPORT OF ALL ELECTRICAL FIXTURES, SHELVING, DUCT REGISTERS AND MILLWORK.
8. ALL INTERIOR FINISHES SHALL COMPLY WITH CLASS 2 FLAME SPREAD OF 26-75.
9. NOT USED.
10. ALL EXIT DOOR HARDWARE TO BE KEYLESS IN THE DIRECTION OF EGRESS.
11. PROVIDE CONTROL JOINTS IN DRYWALL FURRING SYSTEMS WHERE CONTROL JOINTS OCCUR IN THE EXTERIOR WALL AND AT MAXIMUM 30 FEET ON CENTER IN BOTH DRYWALL PARTITIONS AND FURRING SYSTEMS.

### CONTRACTOR RESPONSIBILITY NOTES

1. PLUMBING CONTRACTOR IS RESPONSIBLE FOR GAS PIPING - SEE MECH. DRINKS.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY POWER

### SPECIAL INSPECTIONS

1. THE GENERAL CONTRACTOR SHALL COORDINATE THE FIELD ACTIVITIES IN ORDER TO PERMIT THIRD PARTY INSPECTION / TESTING SERVICES ORGANIZATION TIMELY ACCESS TO THE CONSTRUCTION SITE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. THE TESTING SERVICE SHALL BE RETAINED BY THE CONTRACTOR TO PERFORM ALL INSPECTIONS AND TESTS REQUIRED, INCLUDING THE FOLLOWING:
  - A. FIELD TEST FOUNDATION SUBGRADES AND COMPAKTED FILL LAYERS.
  - B. PERFORM CONCRETE COMPRESSION STRENGTH TESTS, SLUMP TESTS, AND REVIEW CONCRETE MIX DESIGNS.
  - C. OBSERVE INSTALLATION OF FOOTINGS AND REINFORCING STEEL.
  - D. OBSERVE INSTALLATION OF STRUCTURAL STEEL COLUMNS, BEAMS, AND JOISTS, VERIFYING COMPLIANCE WITH BOLTING AND WELDING REQUIREMENTS.
  - E. OBSERVE INSTALLATION OF MASONRY CONSTRUCTION.
  - F. OBSERVE INSTALLATION OF AGGREGATE PIER SOIL ENHANCEMENT
3. APPROVED AGENCY TO PERFORM THESE INSPECTIONS SHALL BE:
 

ECS Midwest, LLC  
9824 Industrial Drive, Unit C, Bridgeview, IL 60455  
T: 708-430-1011  
[www.ecsmidwest.com](http://www.ecsmidwest.com) <http://www.ecslimited.com>
4. COPIES OF REPORTS SHALL BE DISTRIBUTED AS FOLLOWS:
  - A. ONE (1) COPY TO THE ARCHITECT
  - B. ONE (1) COPY TO THE OWNER
  - C. ONE (1) COPY TO THE CONTRACTOR
  - D. TWO (2) COPIES TO THE BUILDING DEPARTMENT

### PROJECT DATA BUILDING INFORMATION

*2012 INTERNATIONAL BUILDING CODE
*2014 ILLINOIS PLUMBING CODE
*2011 NATIONAL ELECTRICAL CODE
*2012 INTERNATIONAL FIRE CODE
*2012 INTERNATIONAL MECHANICAL CODE
*2010 INTERNATIONAL ENERGY CONSERVATION CODE
*ILLINOIS ACCESSIBILITY CODE
/N CITY AND/OR STATE CODE AMENDMENTS
USE GROUP: M-MERCANTILE
CONSTRUCTION TYPE: 5B
ALLOWABLE AREA PER SECTIONS 503 & 504 AND TABLE 506.2:
ALLOWABLE AREA (100 x 9,000) 9,000 SF.
FRONTAGE INCREASE (0.425 x 1,000) 4,361 SF.
TOTAL ALLOWABLE AREA 13,368 SF.
ACTUAL AREA: 12,000 SF.
ALLOWABLE HEIGHT PER SECTION 503, 504 AND TABLE 504.3:
ALLOWABLE HEIGHT: 14'0"
ACTUAL HEIGHT: 125'-0" @ FASCIA HIGH POINT
BUILDING VOLUME: 126,438 C.F.
OCCUPANCY LOAD PER TABLE 1004.1.2 60 S.F. (GROSS) PER PERSON = 120 OCCUPANT LOAD
EXIT CAPACITY: 120 x .15 = 18.025' REQ'D/ 108' PROVIDED

### SITE & ZONING INFORMATION

SEE ARCHITECTURAL SITE PLAN

NO EXTRAS WILL BE ALLOWED FOR ANY LABOR AND/OR MATERIALS NECESSARY TO COMPLETE THE WORK.

**I CASE OF OVERLAPPING OR CONFLICTING REQUIREMENTS, THE MOST STRINGENT (GENERALLY MOST COSTLY) APPLIES AND WILL BE ENFORCED.**

**VERIFY ANY & ALL WORK WITH GENERAL CONTRACTOR**

### ARCHITECT / STRUCTURAL ENGINEER PLUMBING DESIGN

KMA & ASSOCIATES, INC. ARCHITECTS  
1121 LAKE COOK ROAD, SUITE F  
DEERFIELD, ILLINOIS 60015  
(847) 445-6864  
PRINCIPAL DESIGN PROFESSIONAL - DAVID I. MANGURIAN

### CIVIL ENGINEER

MANHARD CONSULTING LTD.  
One Overlook Point, Suite 290  
LINCOLNSHIRE, ILLINOIS 60664  
(847) 634-5550  
PRINCIPAL DESIGN PROFESSIONAL - TRACY T. RICHARD

### MECHANICAL ENGINEER

UNITED ENGINEERING  
1006 GENEVA STREET  
SHOREWOOD, ILLINOIS  
(815) 744-0100  
PRINCIPAL DESIGN PROFESSIONAL - GARY POWERS

### ELECTRICAL DESIGN CONSULTANT

WOLF CONSULTING  
505 ELM AVENUE  
ELMHURST, ILLINOIS  
(630) 833-6420  
PRINCIPAL ELECTRICAL DESIGNER - MARK R. NIEGEL



LOCATION MAP  
NO SCALE  
NORTH

### LIST OF DRAWINGS

CURRENT REVISIONS	DATE	DESCRIPTION
T1	PROJECT DATA, DRAWING INDEX, GENERAL NOTES, SPECIFICATIONS	
A0	ARCHITECTURAL SITE PLAN, RETAINING WALL/FENCE, DETAILS, NOTES	
E01	ELECTRICAL SITE PLAN, SITE DETAILS	
C1	GRAZING PLAN	
C2	UTILITY PLAN	
C3	WATER & SEWER	
C4	SOIL, EROSION AND SEDIMENT CONTROL PLAN	
C5	CONSTRUCTION DETAILS	
C6	CONSTRUCTION DETAILS	
C7	CONSTRUCTION DETAILS	
C8	CONSTRUCTION SPECIFICATIONS	
L1	LANDSCAPE PLAN	
L2	LANDSCAPE DETAILS	
L3	LANDSCAPE SPECIFICATIONS	
A1	FLOOR PLAN, DETAILS, NOTES, ELEVATIONS, MASONRY NOTES, SCHEDULE	
A2	WALL SECTIONS	
A3	WALL SECTION DETAILS, BLOCKFLASH NOTES	
A4	ROOF PLAN, ROOM FINISH & DOOR SCHEDULE	
S1	FOUNDATION PLAN, DETAILS, NOTES, ROOF FRAMING PLAN	
S2	DETAILS	
P1	PLUMBING FLOOR PLAN, DETAILS, NOTES	
M1	HVAC PLAN	
M2	GAS PIPING PLAN	
M3	HVAC & NOTES SCHEDULES	
E1	ELECTRICAL RISER DIAGRAM, SCHEDULES, NOTES	
E2	ELECTRICAL GENERAL PLAN, SCHEDULE, NOTES	
E3	ELECTRICAL SPECIFICATIONS	

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
PROJECT DATA  
DRAWINGS INDEX  
NOTES & SPECIFICATIONS

1906

### STATEMENT OF ADA COMPLIANCE

I HAVE PREPARED OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION. THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH ACCESSIBILITY CODES.

Signed: *David I. Mangurian* Date: 11/12/19  
Principal Architect - David I. Mangurian  
KMA & ASSOCIATES, INC., ARCHITECTS

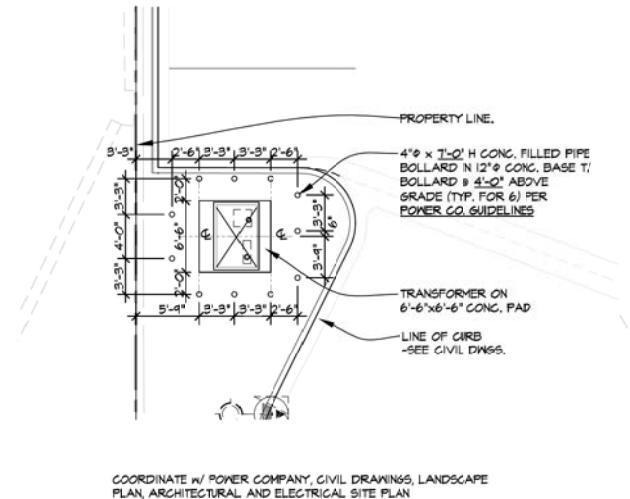
### CERTIFICATION STATEMENT

THIS IS TO CERTIFY THAT I AM A LICENSED ARCHITECT IN THE STATE OF ILLINOIS AND THAT THESE DRAWINGS WERE PREPARED UNDER MY PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE CONFORM TO ALL MUNICIPAL BUILDING AND ZONING REGULATIONS.

Signed: *David I. Mangurian* Date: 11/12/19  
Principal Architect - David I. Mangurian  
KMA & ASSOCIATES, INC., ARCHITECTS

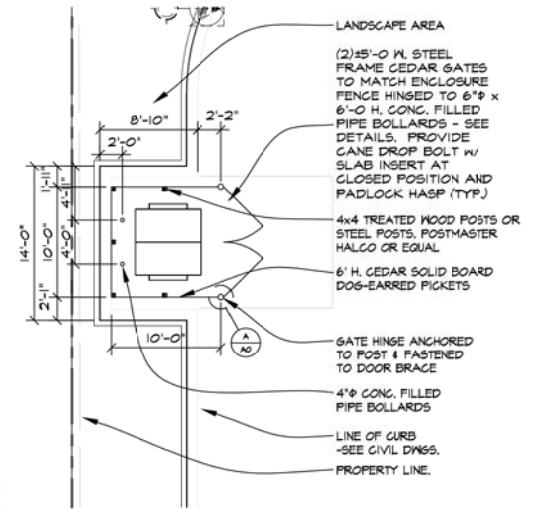


EXPIRE 11-30-2020  
T1



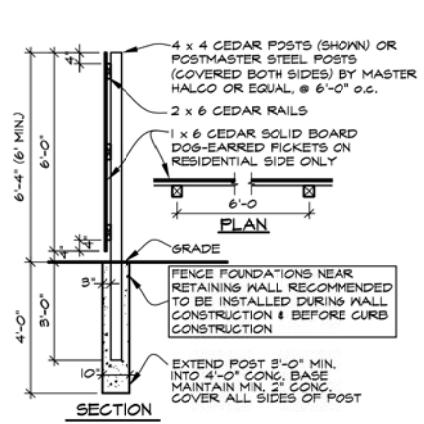
**TRANSFORMER PAD DETAIL 5**

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



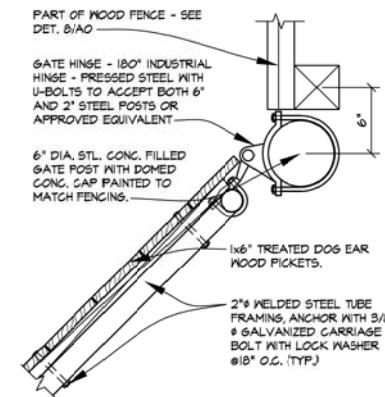
**TRASH ENCLOSURE PLAN 6**

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



**SECTION 7**

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



**SECTION @ TRASH GATE POST 8**

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

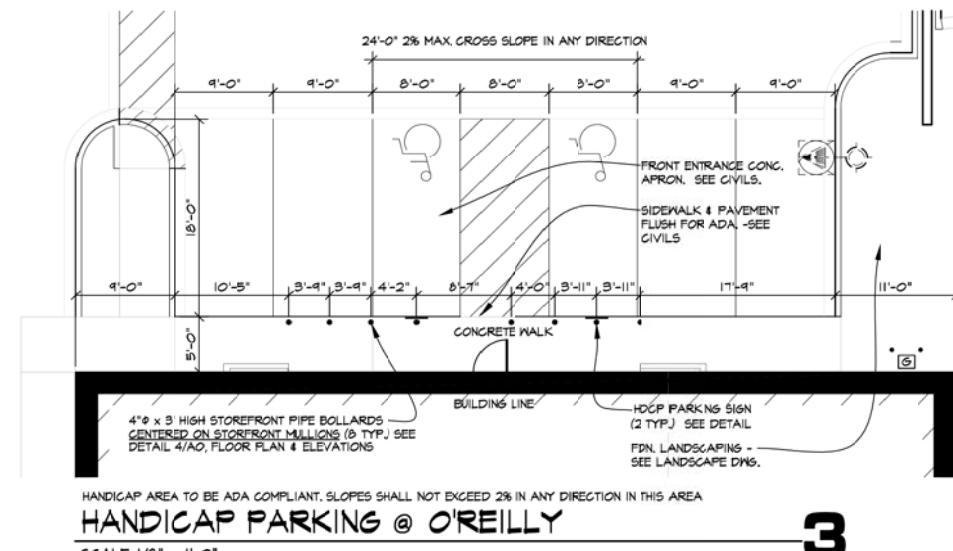
**REVISIONS**

THIS DRAWING	NOT FOR COORDINATION	FOR INFORMATION	SUITE F
		FOR INFORMATION	60015-5235
		FOR PERMIT	FAX (847) 945-6869
		FOR CONTRACTING	(847) 945-6869
		NOT FOR CONSTRUCTION	

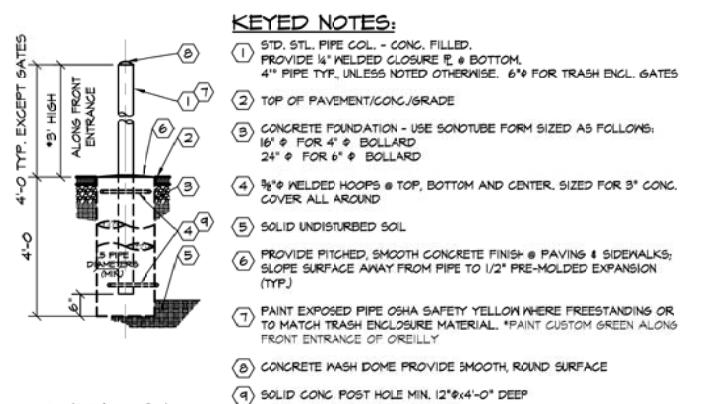
KMA & ASSOCIATES, INC. ARCHITECTS  
1121 LAKE COOK ROAD  
SUITE F  
DEERFIELD, ILLINOIS  
60015-5235  
FAX (847) 945-6869



**O'REILLY AUTO PARTS**  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC



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



**TYPICAL PIPE BUMPER GUARDS 4**

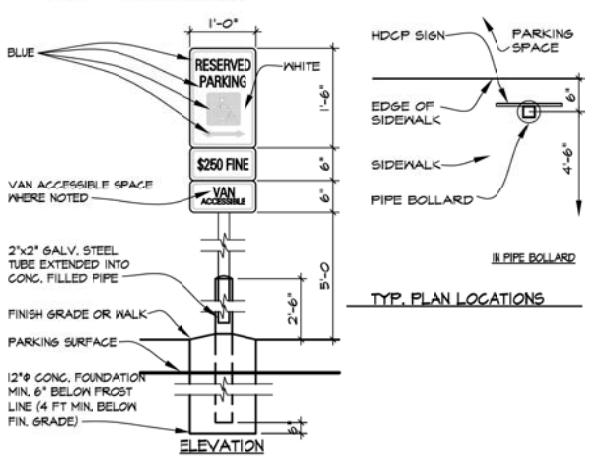
SCALE: 1/2" = 1'-0"

**HANDICAPPED PARKING SIGN**  
Each parking space designated as reserved for environmentally limited persons shall be equipped with a sign which complies with Section 4.6.4 Signage of the Federal Register (Department of Justice Rules and Regulations, 28 CFR Part 36), and meets the requirements of Sign RT-1 (U.S. Department of Transportation Standard). At least one of such required signs shall have an additional sign "Van - Accessible" mounted below the symbol of accessibility. Signs shall be located on post within 5' of parking stall w/ bottom of 18" sign @ 6'-0" above top of posts.

Provide a 6"x12" fine sign which complies with all applicable codes to be mounted directly below each handicapped parking sign. Verify fine amount with local authority.

**NOTE:**

1. VERIFY FINE AMOUNT W/ MUNICIPALITY.

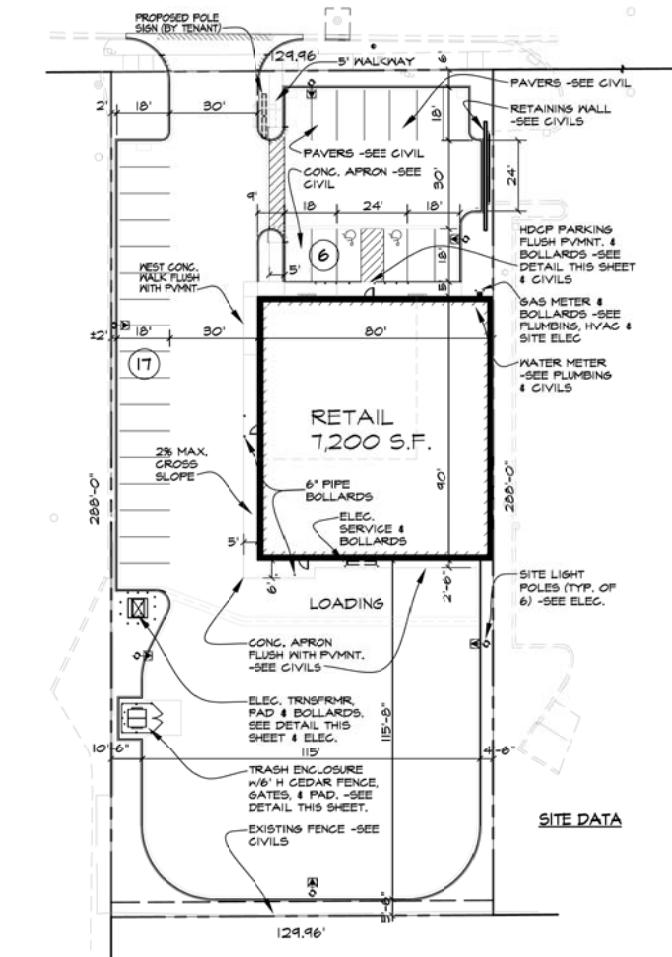


**HDCP. PARKING SIGN 2**

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

ZONING DISTRICT: BUSINESS DISTRICT LIMITED RETAIL  
GROSS LAND AREA: 31,424 S.F.  
BLDG. AREA: 7,200 S.F.  
PARKING REQUIRED: 29 CARS (1 CAR/150)  
PARKING AVAILABLE: 50

**E. SIBLEY BLVD. (IL ROUTE 88)**



**SITE PLAN**

SCALE: 1" = 30'-0"

**POLE SIGN ELEVATION 1**

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

**A**  
**O**

REVISIONS

KMA & ASSOCIATES, INC. ARCHITECTS  
1121 LAKE COOK ROAD SUITE F  
DEERFIELD, ILLINOIS 60015-5235 FAX (847) 945-6869



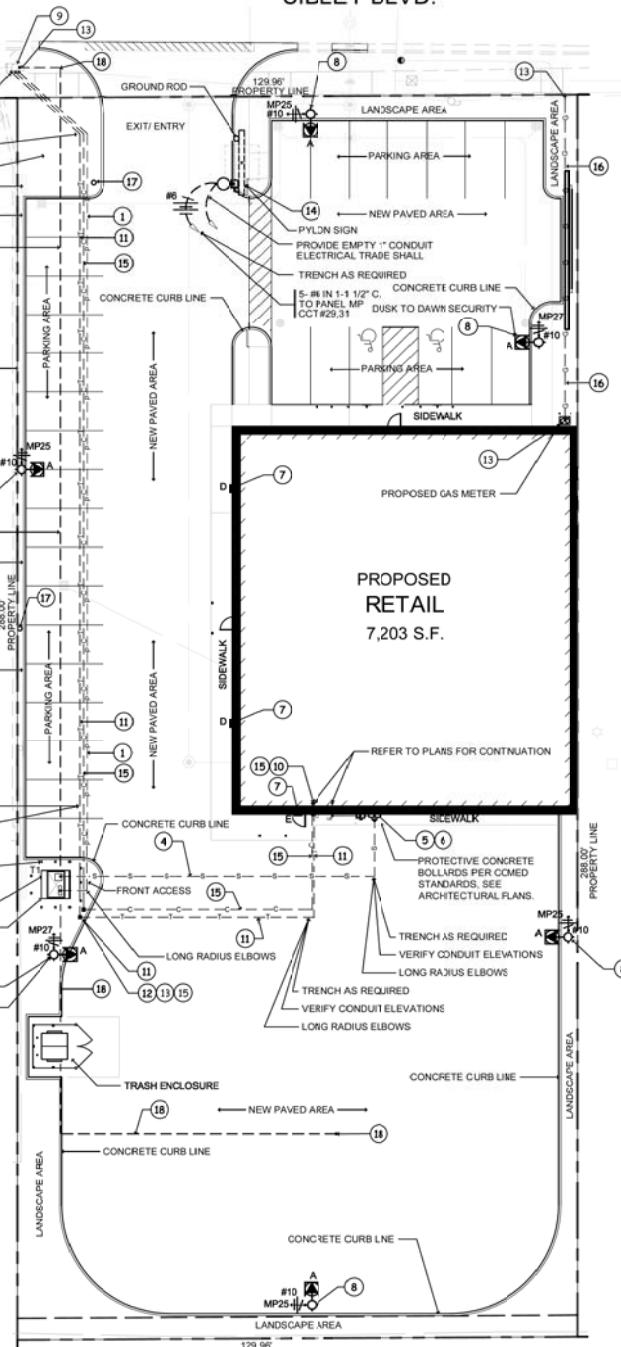
O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
ELECTRICAL SITE PLAN  
ELECTRICAL SITE PLAN DETAILS

1906

EO  
1

## SIBLEY BLVD.



ELECTRICAL SITE PLAN

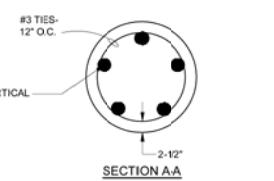
SCALE: 1" = 20'-0"

## EXTERIOR LUMINAIRE SCHEDULE

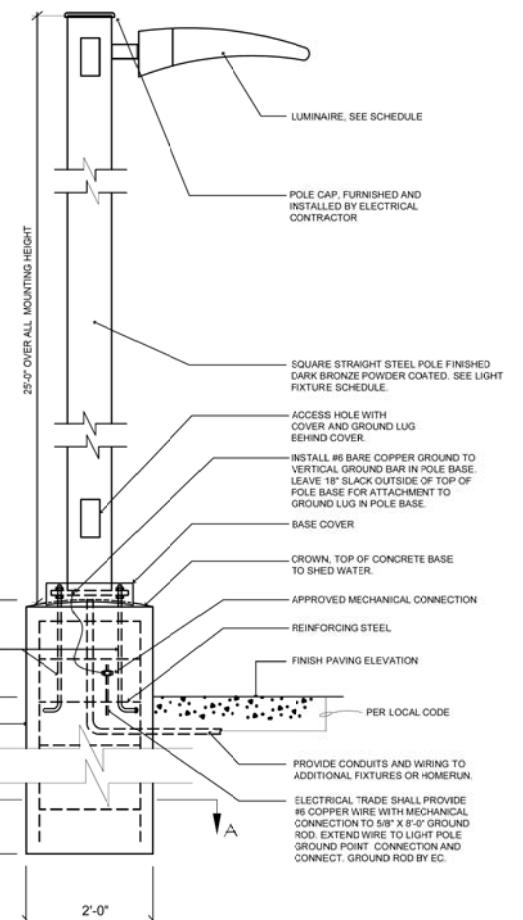
MARK	SYMBOL	MANUFACTURER	MODEL NUMBER	LAMPS PER FIXTURE					COLOR	MOUNTING	REMARKS
				TOTAL	HEADS	TYPE	WATTS	VOLTAGE			
A		LSI INDUSTRIES	MRM-LED-18L-SIL-FT-40-UNV-70CRI-BRZ-IL	6	1	LED	150	120	DARK BRONZE	POLE MOUNT	NOTES 1,2,3,4,5
D		LSI INDUSTRIES	XWM-3-LED-03L-40-UE-BRZ	2	1	LED	23	120	DARK BRONZE	WALL MOUNT	NOTES 1,5
E		LSI INDUSTRIES	XWM-FT-LED-06L-40-UE-BRZ	1	1	LED	45	120	DARK BRONZE	WALL MOUNT	NOTES 1,5

### LUMINAIRE SCHEDULE NOTES:

- ELEC. SHALL FURNISH AND INSTALL ALL POLES, LUMINAIRES AND LAMPS AS SPECIFIED.
- ELEC. SHALL FURNISH AND INSTALL ALL CONCRETE POLE BASES AS NOTED.
- ALL POLES AND LIGHTING HEADS SHALL HAVE A SMOOTH FINISH.
- ELEC. SHALL PROVIDE ALL REQUIRED LIGHTING POLES AS MANUFACTURED BY LSI INDUSTRIES. POLE SHALL BE 5" SQUARE STRAIGHT STEEL. 25'-0" IN HEIGHT, #5SQB3-S11G-25-S-BRZ-LAB-5BC WARM MOUNT AS PER MFGR.
- FINAL SITE LIGHTING FIXTURE/POLE LAYOUTS AND CONFIGURATIONS SHALL BE COORDINATED WITH LOCAL EXTERIOR LIGHTING AND WIND LOADING REQUIREMENTS AND RESTRICTIONS.



ENLARGED CROWN DETAIL



LIGHTING STANDARD ELEVATION

SCALE: NONE

SITE NOTE:  
ELECTRICAL TRADE SHALL COORDINATE  
THE INSTALLATION OF ALL NEW SITE & EXISTING  
WORK WITH CIVIL DRAWINGS AND PER  
APPROVAL OF POWER ENTRY DIAGRAM

### GENERAL NOTES:

- UTILITY TRANSFORMER, TELEPHONE SERVICE, GAS, WATER, AND SANITARY SEWER LOCATIONS: REFER TO CIVIL PLANS.
- ALL ELECTRICAL WIRING SHOWN ON THIS SHEET TO BE FED WITH #10 CU. MINIMUM U.N.O. VERIFY ACTUAL LENGTH WITH LOCAL CODE.
- ALL PVC CONDUIT MUST HAVE A MINIMUM OF #12 CU. GROUND CONDUCTOR.
- ALL UNDERGROUND CONDUIT ROUTING, SIZES AND QUANTITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO COORDINATE EXACT REQUIREMENTS WITH THE SERVING UTILITY COMPANIES.
- ALL CONDUIT EXTENDED UNDER DRIVEWAYS OR AREAS OF VEHICULAR USAGE SHALL BE GALVANIZED HEAVY WALL STEEL CONDUIT OR SCHEDULE 80 PVC NONMETALLIC CONDUIT. MINIMUM OF 36" BELOW GRADE OR PER UTILITY STANDARDS.

- AL. CONDUITS IN CONCRETE OR DIRECT BURIAL THAT ARE RIGID, PVC TYPE, MUST HAVE COMPRESSION CONNECTORS AND COUPLING FOR ALL OUTDOOR'S CONDUITS.

- CONSTRUCTION NOTE:  
A METAL IDENTIFICATION TAG SHALL BE INSTALLED WHERE THE GROUNDING CONDUCTOR IS CONNECTED TO THE GROUNDING ELECTRODE WITH A APPROVED GROUND STRAP. ALL GROUNDING ELECTRIC CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING, RIGID HEAVY WALL CONDUIT. TYPICAL.

### KEYED NOTES:

- 1.4' PRIMARY CONDUIT TO POWER COMPANY POINT OF PRESENCE TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE UNDERGROUND CONDUIT INSTALLATION, PER UTILITY STANDARD WITH NYLON PULL-STRING. REFER TO ONE-LINE DIAGRAM FOR POWER COMPANY REQUIREMENTS. MAINTAIN 10'-0" FRONT CLEARANCE, 7'-0" CLEARANCE ON SIDES. INSTALLATION TO BE LOCATED APPROVED. ELECTRICAL SHALL PROVIDE SECONDARY SIDE CONNECTION TO TRANSFORMER PAD. REFER TO ONE-LINE DIAGRAM. PER POWER COMPANY REQUIREMENTS. SEE APPROVED TRANSFORMER PAD SPECIFICATIONS PROVIDED BY POWER COMPANY. PROVIDE PROTECTIVE BALLARDS PER COMED STANDARDS.
2. PROPOSED LOCATION FOR PAD MOUNTED POWER COMPANY TRANSFORMER TI. PROVIDE APPROVED CONCRETE PAD AND GROUNDED. VERIFY EXACT LOCATION PER POWER COMPANY REQUIREMENTS. MAINTAIN 10'-0" FRONT CLEARANCE, 7'-0" CLEARANCE ON SIDES. INSTALLATION TO BE LOCATED APPROVED. ELECTRICAL SHALL PROVIDE SECONDARY SIDE CONNECTION TO TRANSFORMER PAD. REFER TO ONE-LINE DIAGRAM. PER POWER COMPANY REQUIREMENTS. SEE APPROVED TRANSFORMER PAD SPECIFICATIONS PROVIDED BY POWER COMPANY. PROVIDE PROTECTIVE BALLARDS PER COMED STANDARDS.
3. 1.2" UNDERGROUND CONDUIT FOR POWER COMPANY PRIMARY CABLES SHALL BE 4" dia. 90 DEGREES. 3' MINIMUM RADIUS HOT GALVANIZED STEEL BENDS WITH GROUNDING BUSHINGS. PRIMARY AND SECONDARY CONDUITS FLUSH WITH TOP OF FOUNDATION. TOP OF FOUNDATION SHALL BE LEVEL.
4. SECONDARY CONDUIT AND FEEDER. REFER TO ONE-LINE DIAGRAM.
5. SERVICE ENTRANCE SECTION IN NEMA 3R ENCLOSURE. COORDINATE EXACT LOCATION WITH ARCHITECT, OWNER AND POWER COMPANY. ENGINEER MAINTAIN 3' CLEARANCE IN FRONT OF SERVICE. REFER TO ONE-LINE DIAGRAM.
6. EXTERIOR RATED FOR SERVICE ENTRY A 120/208V, 3PH, 4W, 400A MAIN DISCONNECT ASSEMBLY WITH ASSOCIATED C/T CABINET AND 400A MAIN DISCONNECT. REFER TO ONE-LINE DIAGRAM.
7. FURNISH AND INSTALL WALL MOUNTED LIGHTING FIXTURES AT +1'-6" ABOVE GRADE. REFER TO ARCHITECTURAL PANS FOR ELEVATIONS. PROVIDE 2-#12 WI FULL SIZE GROUND TO PANEL MP2. REFER TO BUILD-OUT PLANS FOR ADDITIONAL INFORMATION.
8. PROVIDE WP J-BOX FOR SITE LIGHTING FIXTURE. COORDINATE EXACT REQUIREMENTS WITH APPROVED VENDOR. EC SHALL FIELD COORDINATE THE INSTALLATION OF THE BASE WITH ALL UNDERGROUND CONDUITS AND ADJUST AS REQUIRED.
9. EXISTING LOCATION OF UTILITY JOINT POLE POINT OF SERVICE. COORDINATE FINAL INSTALLATION WITH CIVIL UNDERGROUND UTILITIES AND MAINTAIN PROPER CLEARANCE. EC SHALL EXTEND NEW CONDUITS TO POLE LOCATION AND STUB UP WITH NYLON PULL STRING.
10. PROPOSED LOCATION FOR INTERIOR 24'x20' ATT TELEPHONE MAIN TERMINAL-D-MARK BOX LOCATION. COORDINATE LOCATION INSTALLATION REQUIREMENTS WITH ATT ENGINEER FOR ADDITIONAL WORK REQUIRED BY ELECTRICAL CONTRACTOR. EC SHALL PROVIDE REQUIRED ATT GROUND WIRE.

### INSTALLATION NOTES:

- ELECTRICAL FACILITIES SHALL BE INSTALLED PURSUANT TO SECTION OF THE CITY MUNICIPAL CODE. CONSTRUCTION FEE TO BE PAID BY THE LANDLORD.
- A MINIMUM 5'0" OF SEPARATION BETWEEN ELECTRICAL FACILITIES AND ANY FIRE HYDRANT, STORM DRAINS, STORM SEWERS, WATER MAINS, GAS MAINS, ETC.
- ELECTRICAL CONTRACTOR SHALL COORDINATE PVC CONDUITS FOR GROUND MONUMENT SIGNS AND LOT LIGHTING. APPROVAL OF PVC USAGE SHALL BE CONFIRMED WITH THE LOCAL OFFICIAL AND INSPECTORS DURING BIDDING. HW CONDUITS TO BE STUBBED UP TO EXIT OR ENTER J-BOXES. PROVIDE MINIMUM #12 CU GROUND IN ALL PVC PIPING.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AS PART OF THE BASE BID. VERIFICATION OF AL. SITE UTILITIES. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND LOCATE THI: EXISTING UTILITY COMPANY POWER SOURCE AND TELEPHONE. EXTEND UTILITIES TO NEW EXTERIOR BUILDING METER SYSTEM.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH LOCAL CITY OFFICIALS. THE BUILDING OWNER, COMED, TELEPHONE AND CABLE SERVICES FOR ANY EXISTING SERVICE RENOVATIONS REQUIRED HEREIN. BEFORE RENOVATION, NOTIFICATION SHALL BE GIVEN TO INSPECTORS DURING BIDDING. HW CONDUITS TO BE STUBBED UP TO EXIT OR ENTER J-BOXES. PROVIDE MINIMUM #12 CU GROUND IN ALL PVC PIPING.



# PROPOSED RETAIL DEVELOPMENT

**1317 EAST SIBLEY BOULEVARD  
VILLAGE OF DOLTON, ILLINOIS**

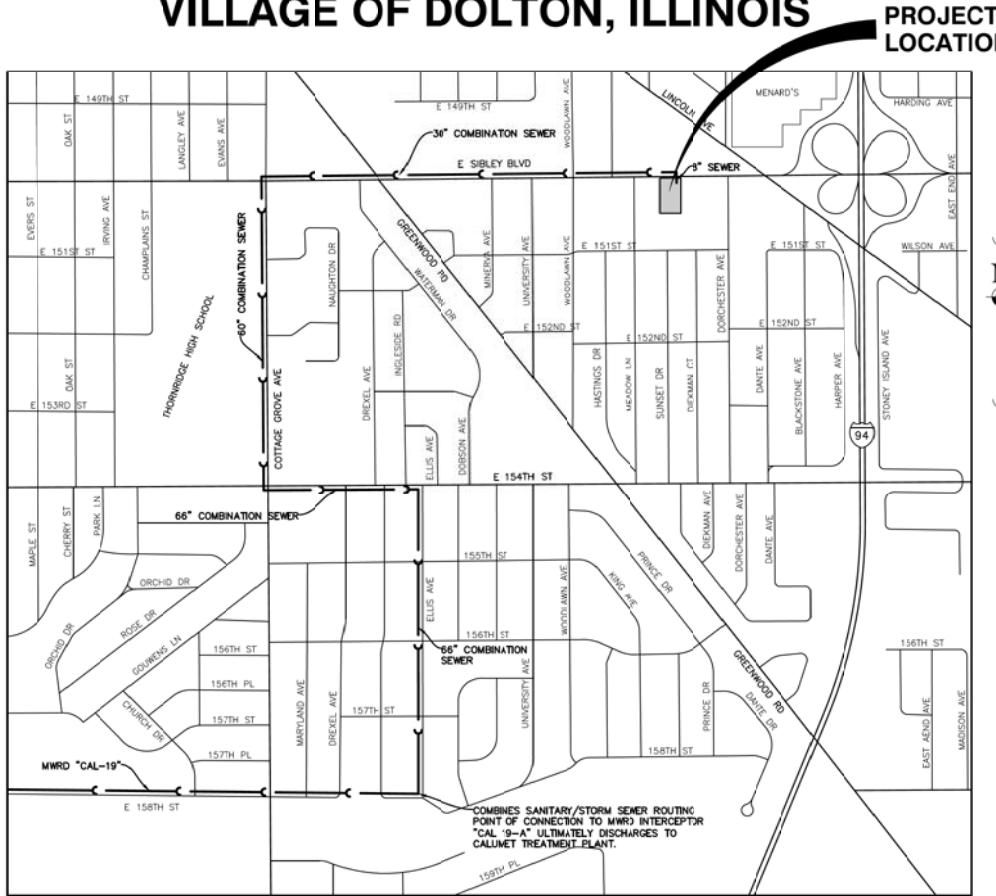
## STANDARD SYMBOLS

## ABBREVIATIONS

A	ADJUST	F/L	FLOW LINE
AGG.	AGGREGATE	FM	FORCE MAIN
ARCH	ARCHITECT	G	GROUND
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	G/F	GRADE AT FOUNDATION
B-B	BACK TO BACK	GW	GYRE WIRE
B/C	BACK TO CERB	HDWL	HEADWALL
B/P	BOTTOM OF PIPE	HNL	HANHOLE
B/W	BACK OF WALL	HWL	HIGH WATER LEVEL
B-BOX	BUFFALO BOX	HYD.	HYDRANT
BIT.	BITUMINOUS	INL.	INLET
BM	BENCHMARK	INV.	INVERT
B.O.	BY OTHERS	LT	LINE PIPE
C.E.	COMMERCIAL ENTRANCE	LEFT	LEFT
CB	CATCH BASIN	LMAX	MAXIMUM
C	CENTERLINE	MB	MAILBOX
CMP	CORRUGATED METAL PIPE	M/E	MEET EXISTING
CNTRL	CONTROL	MH	MANHOLE
C.O.	CLEANOUT	MIN.	MINIMUM
CONC.	CONCRETE	NWL	NORMAL WATER LEVEL
CY	CUBIC YARD	P.E.	PRIVATE ENTRANCE
D	DITCH	PC	POINT OF CURVATURE
DIA.	DIAMETER	PCC	POINT OF COMPOUND CURVE
DIP	DUCTILE IRON PIPE	PGL	PROPOSED GRADE LINE
DIMW	DUCTILE IRON WATER MAIN	POT	POINT OF INTERSECTION
DS	DOWNSPOUT	P	PROPERTY LINE
DT	DRAIN TILE	PP	POWER POLE
E	ELECTRIC	PROP.	PROPOSED
E-E	EDGE TO EDGE	PT	POINT OF TANGENCY
ELEV.	ELEVATION	PVC	POLYVINYL CHLORIDE PIPE
E/P	EDGE OF PAVEMENT	PVC	POINT OF VERTICAL CURVATURE
EXS.	EXISTING	PV	POINT OF VERTICAL INTERSECTION
F.E.	FIELD ENTRANCE	PVT	POINT OF VERTICAL TANGENCY
F-F	FACE TO FACE	P	PAVEMENT
F.F.	FINISHED FLOOR	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
FES	FLARED END SECTION	R	RADIUS

R.O.W.	RIGHT-OF-WAY
RCP	REINFORCED CONCRETE
REM	REMOVAL
REV	REVERSE
RR	RAILROAD
RT	RIGHT
SAN	SANITARY
SF	SQUARE FOOT
SHLD.	SHOULDER
SL	STREET LIGHT
SMNH	SANITARY MANHOLE
ST	STORY
STA.	STATION
STD.	STANDARD
SW	SIDEWALK
SY	SQUARE YARDS
TBR	TOP BOLT REMOVED
T	TELEPHONE
T-A	TYPE A
T/C	TOP OF CURB
T/F	TOP OF FOUNDATION
T/P	TOP OF PIPE
T/W	TOP OF WALK
T/WALL	TOP OF WALL
TEMP	TEMPORARY
TRANS	TRANSMITTER
V.B.	VALVE BOX
VCP	VITRIFIED CLAY PIPE
V.V.	VALVE VAULT
WL	WATER LEVEL
WM	WATER MAIN

MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.



## LOCATION MAP

N

DEPARTMENT PROPERTY GROUP, LLC  
200 W. MADISON ST., SUITE 4200  
CHICAGO, ILLINOIS 60606  
(312) 332-4172



**Manhard**  
CONSULTING LTD.

One Overlook Point, Suite 290, Lincolnshire, IL 60069 phx/7-834.5550 fx/847-834.0098 manhard.com  
Civil Engineers • Surveyors • Water Resources Engineers • Water & Wastewater Engineers  
Construction Managers • Environmental Scientists • Landscape Architects • Planners



<u>UTILITY CONTACTS</u>	
<u>ELECTRIC</u> COMED 4401 W 135TH STREET CRESTWOOD, IL 60445 (800) 334-7681	<u>WATER</u> VILLAGE OF DOLTON 401 E 144TH STREET DOLTON, IL 60419 (708) 201-3280 CONTACT: MATHEW STACEY
<u>GAS</u> NICOR 19199 GLENWOOD ROAD GLENWOOD, IL 60507 (888) 642-6748	<u>TELEPHONE</u> AT&T 236 E 159TH STREET HARVEY, IL 60425 (708) 222-2222
<u>STORM SEWER</u> VILLAGE OF DOLTON 401 E 144TH STREET DOLTON, IL 60419 (708) 201-3280 CONTACT: MATHEW STACEY	<u>SANITARY SEWER</u> MWRODC - CALUMET WRP 100 E ERIR STREET CHICAGO IL 60611 (773) 266-3538



1 OF 13  
AE7DQH-01

© 2010

**PROPOSED RETAIL DEVELOPMENT  
VILLAGE OF DOLTON, ILLINOIS**

**TITLE SHEET**

## INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ALTA-NSPS LAND TITLE SURVEY
3	EXISTING CONDITIONS AND DEMOLITION PLAN
4	SITE DIMENSIONAL AND PAVING PLAN
5	GRADING PLAN
6	UTILITY PLAN
7	MWRD EXHIBIT
8	SOIL EROSION AND SEDIMENT CONTROL PLAN
9	CONSTRUCTION DETAILS
10	CONSTRUCTION DETAILS
11	CONSTRUCTION DETAILS
12	CONSTRUCTION DETAILS
13	CONSTRUCTION SPECIFICATIONS

## DRAINAGE NARRATIVE:

I, \_\_\_\_\_, HEREBY CERTIFY THAT ADEQUATE STORMWATER STORAGE AND DRAINAGE CAPACITY HAS BEEN PROVIDED BY THIS DEVELOPMENT, SUCH THAT SURFACE WATER FROM THE DEVELOPMENT WILL NOT BE DIVERTED ONTO AND CAUSE DAMAGE TO ADJACENT PROPERTY FOR STORMS UP TO AND INCLUDING THE ONE HUNDRED (100) YEAR EVENT, AND THAT THE DESIGN PLANS ARE IN COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY, AND CITY LAWS AND ORDINANCES.

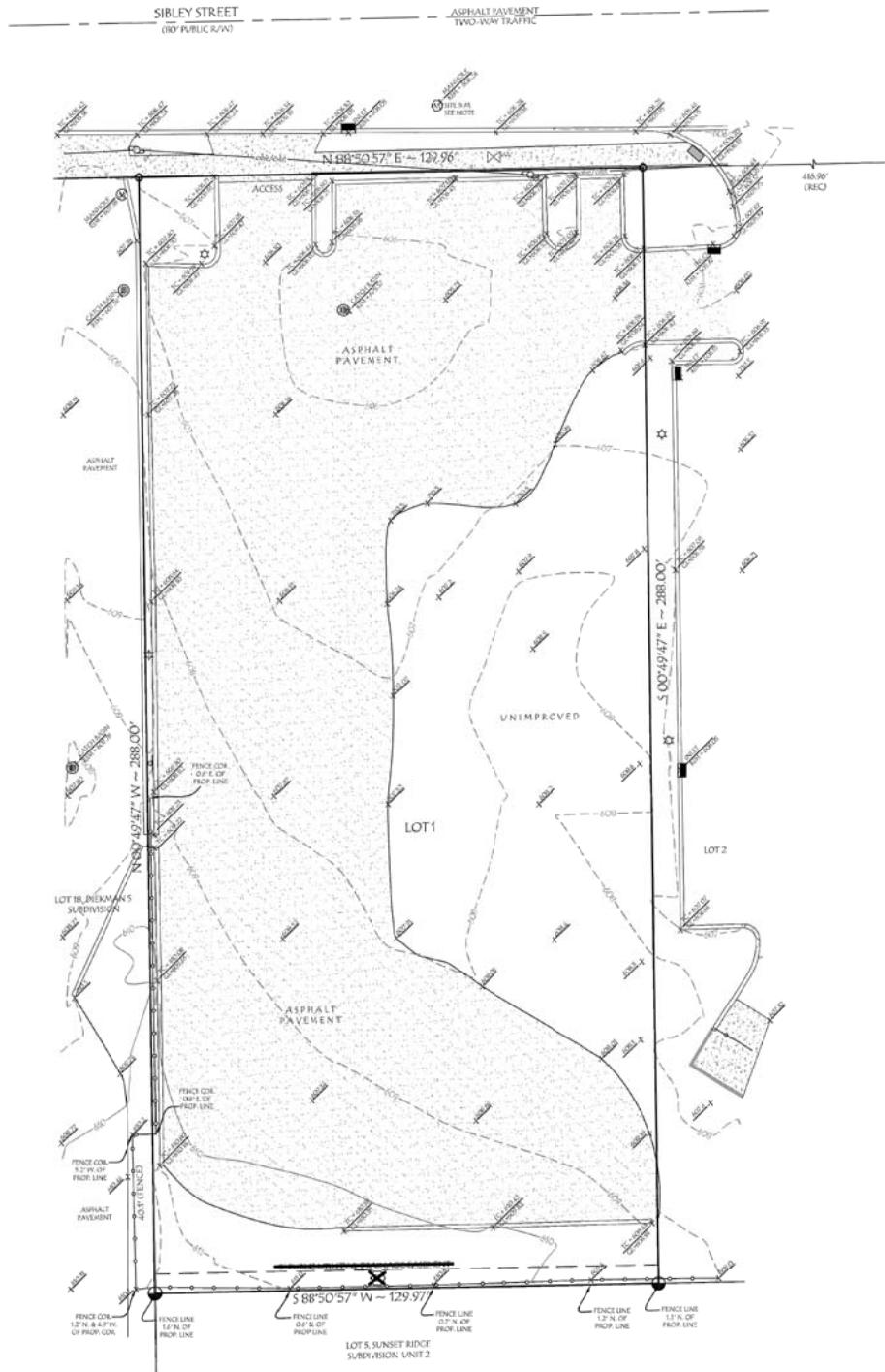
## NOTES:

1. THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY ZARKO SEKEREZ AND ASSOCIATES, INC. ON APRIL 9, 2019. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.

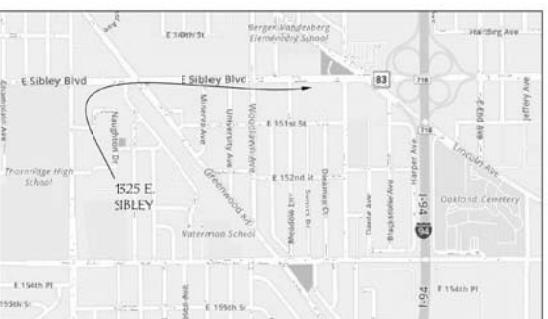
## BENCHMARKS:

SITE BENCHMARK IS RIM OF MANHOLE IN SIBLEY BOULEVARD AT APPROXIMATE MIDPOINT OF LOT 2. ELEVATION - 606.24

**Manhard** CONSULTING LTD.  
One Derick Bent, Suite 200, Uxbridge, L6E 0C9 • Tel: 905-624-5550 • Fax: 905-624-0005 • [manhard.com](http://www.manhard.com)  
2D & 3D Engineers • Surveyors • Water & Wastewater Engineers  
Resource Engineers • Water Resource Scientists • Landscape Architects • Planners

**LEGEND**

- = Set Iron Rod
- = Found Iron Rod
- = Set Survey Nail
- = Water Valve
- = Catch Basin
- = Manhole
- = Curb Inlet
- = Curb
- = ADA Textured Pad
- = Schedule "B" Item
- ★ = Arc Light
- = Bolard
- = Utility Pole
- = Sign
- = Spot Grade
- = Top of Curb Elevation
- = Curb Line Elevation
- = Concrete Walk & Pads
- = Chain Link Fence
- = Overhead Utility Wires



VICINITY MAP  
no scale



Graphic scale  
20 0 20 40

**PROPERTY DESCRIPTION**

LOT IN FINAL PLAT OF RESUBDIVISION OF LOT 2 IN DIEKMAN'S SUBDIVISION BEING A RESUBDIVISION OF PART OF LOT 2 IN DIEKMAN'S SUBDIVISION, LOCATED IN THE SOUTHEAST 1/4 OF SECTION 15, TOWNSHIP 36 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF RESUBDIVISION RECORDED JUNE 2, 2016 AS DOCUMENT 1615429064, IN THE VILLAGE OF DOLTON, COOK COUNTY, ILLINOIS.

**ITEMS CORRESPONDING TO SCHEDULE "B"**

CHICAGO TITLE INSURANCE COMPANY  
COMMITMENT No. 19GSC00624LPL  
EFFECTIVE DATE: MARCH 18, 2019

- ① N 16. Subject to matters of record as shown on plat of resubdivision recorded June 2, 2016 as document 1615429064. (For further particulars, see record.) PLATED BOUNDARY AND OTHER PARTICULARS SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING
- ② C 17. Rights of the public, the State of Illinois and the municipality in and to that part of the land, if any, taken or used for road purposes. ROADWAY SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING
- ③ C 28. Rights of Way for drainage tiles, ditches, feeders, laterals and underground pipes, if any. SURFACE DRAINAGE STRUCTURES SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING
- ④ C 29. Other easements, if any, shown on plat of resubdivision recorded June 2, 2016 as document 1615429064. (For further particulars, see record.) EASEMENT SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING

**NO RECORD OF EXISTING EASEMENT FOUND\***

**ZONING NOTE**

PROPERTY CURRENTLY ZONED "BUSINESS DISTRICT LIMITED RETAIL".

FOR BULK RESTRICTIONS REFER TO:  
BUILDING DEPARTMENT  
VILLAGE OF DOLTON  
14122 CHICAGO ROAD, DOLTON, IL 60419  
PHONE: 708-849-4000  
<http://www.dolton.org/departments/building-department/>

**FLOOD NOTE**

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 1103IC, COMMUNITY PANEL 0752 EFFECTIVE DATE AUGUST 19, 2008, THE PARCEL SHOWN HEREON APPEARS TO BE LOCATED IN ZONE "X". ZONE "X" IS DEFINED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN". THIS DETERMINATION WAS MADE BY GRAPHICAL PLOTTING AND SCALED MAP MEASURE ONLY. NO FIELD MEASUREMENTS WERE TAKEN CONCERNING THIS DETERMINATION, AND BASE FLOOD ELEVATIONS WERE NOT ESTABLISHED IN PERFORMANCE OF THIS SURVEY.

**BENCHMARK AND DATUM NOTES**

- 1) ELEVATIONS ARE ADJUSTED TO STATE PLANE COORDINATE DATUM.
- 2) SITE BENCHMARK IS RIM OF MANHOLE IN SIBLEY STREET AT APPROXIMATE MIDPOINT OF LOT 2. ELEVATION = 606.24

**ENCROACHMENT NOTE**

SUBJECT PROPERTY FENCE APPEARS TO ENCRAGE OVER AND UPON WEST ADJOINER'S PROPERTY BY THE AMOUNT SHOWN ON THE DRAWING.

**MISCELLANEOUS NOTES**

- 1) PARCEL P.I.N.: 29-11-400-C49-0000
- 2) PARCEL AREA: 57.42935 sq. ft./.0859 ac.
- 3) NO STRIPED PARKING STALLS WERE OBSERVED ON THE DAY THE FIELD WORK WAS PERFORMED.
- 4) A DIRECT VEHICULAR ACCESS TO THE SUBJECT PROPERTY FROM SIBLEY BOULEVARD THRU THE SUBJECT PROPERTY.
- 5) UTILITIES AND OTHER IMPROVEMENTS OWNED BY THE SUBJECT PROPERTY OWNER ARE BASED ON DIRECT OBSERVATION OF ABOVE-GROUND APPURTENANCES ONLY. THE SURVEYOR HAS NOT BEEN PROVIDED WITH UTILITY PLANS OR ATLAS RELATED TO THE SUBJECT PROPERTY OR ADJOINING PROPERTIES OR RIGHTS-OF-WAY.
- 6) SUBJECT PARCEL IS 416.98 FEET WEST OF THE SOUTHWESTERLY INTERSECTION OF SIBLEY BOULEVARD AND DORCHESTER AVENUE, BOTH PUBLIC RIGHTS-OF-WAY. PARCEL HAS DIRECT VEHICULAR ACCESS TO SIBLEY BOULEVARD AS SHOWN AND LABELED ON THE DRAWING.
- 7) THE PROPERTY DESCRIPTION SHOWN HEREON IS THE SAME AS, AND DESCRIBES THE SAME PARCEL, AS THAT REFERRED TO IN CHICAGO TITLE INSURANCE COMPANY COMMITMENT No. 19GSC00624LPL BEARING AN EFFECTIVE DATE OF MARCH 18, 2019.

**SURVEYOR'S CERTIFICATION**

To:  
ATENA DEVELOPMENT CORPORATION, AN ILLINOIS CORPORATION  
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 2006 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, 7(a), 7(b)(1), 8, 9 and 14 of Table A thereof. The field work was completed on April 19, 2019.

R.W.



No dimensions should be assumed by scale measurements upon plat. Contractor should verify and compare all points before beginning any construction and at once report any discrepancies to the surveyor. Surveyor should be contacted for construction layout of any improvements.

For building restrictions and/or easements refer to your deed, contract, title policy, and/or zoning regulations. This plat is valid only if it contains the original signature and seal of the surveyor. If you have any questions regarding this plat do not hesitate to contact us.

PROJ. MGR:	TTR
PROJ. ASSOC.:	JRC
DRAWN BY:	PS
DATE:	08-05-19
SCALE:	N.T.S.

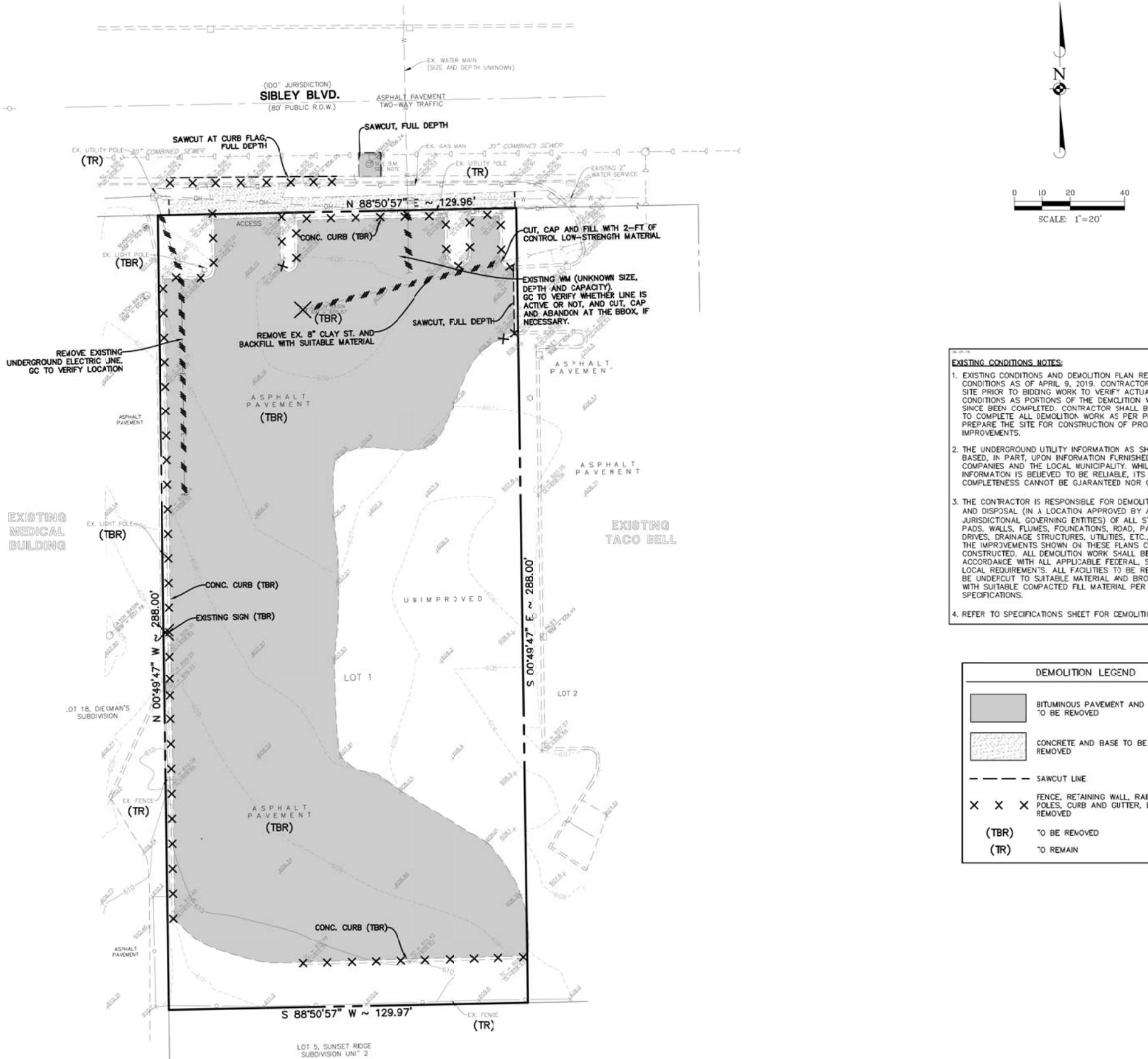
SHEET	1
OF	1



One-Owner Residential • Commercial • Industrial • Schools • Parks • Roads • Bridges • Water & Wastewater Engineers • Landscape Architects • Environmental Scientists • Construction Managers • Environmental Engineers • Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers • Landscapers • Planners

**PROPOSED RETAIL DEVELOPMENT****VILLAGE OF DOLTON, ILLINOIS****ALTA-NSPS LAND TITLE SURVEY**

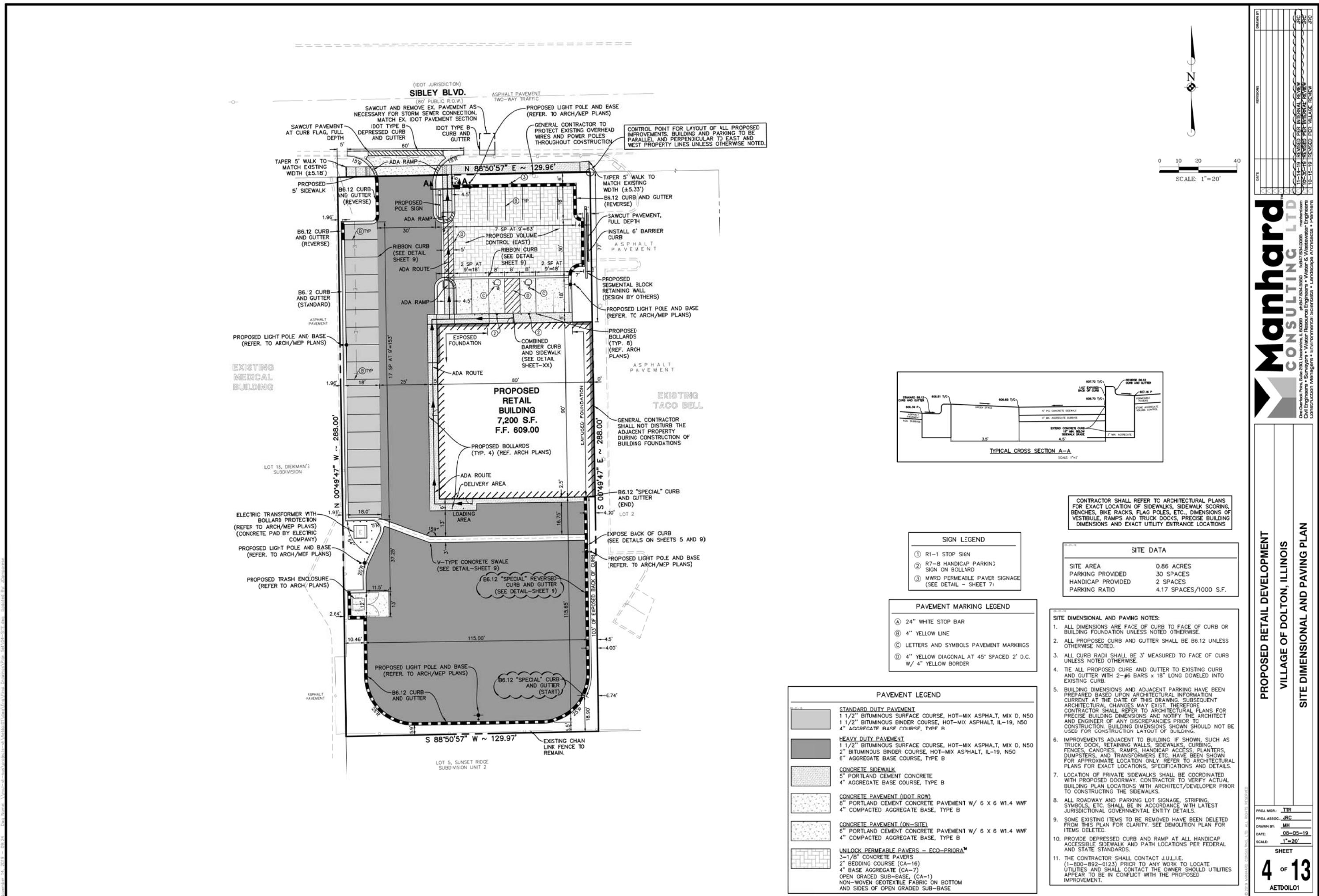
REVISIONS	
DRAWN BY:	
DATE:	April 25, 2019
ORDER NO.:	11060
REVISIONS:	



**EXISTING CONDITIONS NOTES:**

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF APRIL 9, 2019. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
3. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL (IN A LOCATION APPROVED BY ALL JURISDICTIONAL GOVERNING ENTITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, COMMUNICATIONS, ROADS, PARKING LOTS, DRAINS, DRAINAGE STRUCTURES, UTILITIES, ETC. SUCH THAT THE IMPROVEMENTS SHOWN ON THESE PLANS CAN BE CONSTRUCTED. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPAKTED FILL MATERIAL PER THE SPECIFICATIONS.
4. REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.

DEMOLITION LEGEND	
	BITUMINOUS PAVEMENT AND BASE TO BE REMOVED
	CONCRETE AND BASE TO BE REMOVED
<hr/>	
— — — — —	SAWCUT LINE
X   X   X	FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
(TBR)	TO BE REMOVED
(TR)	TO REMAIN



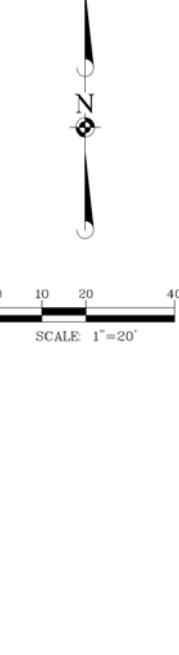
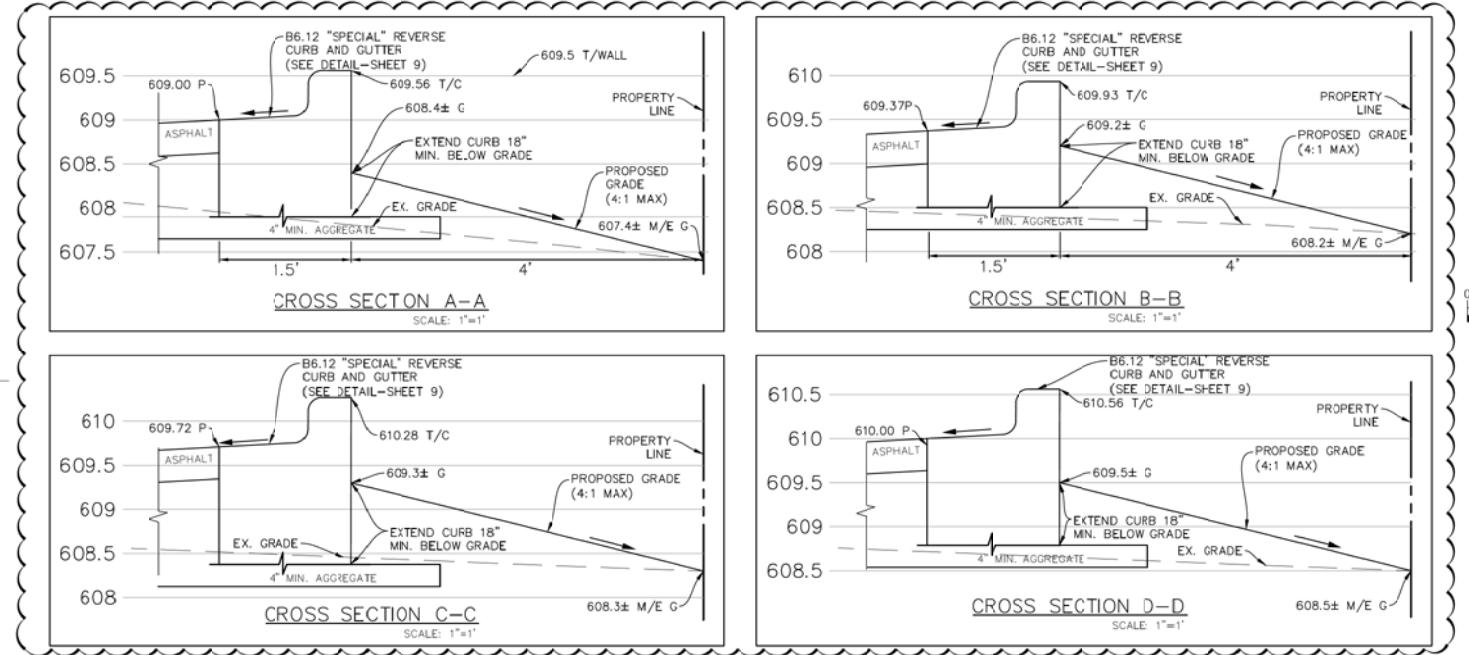
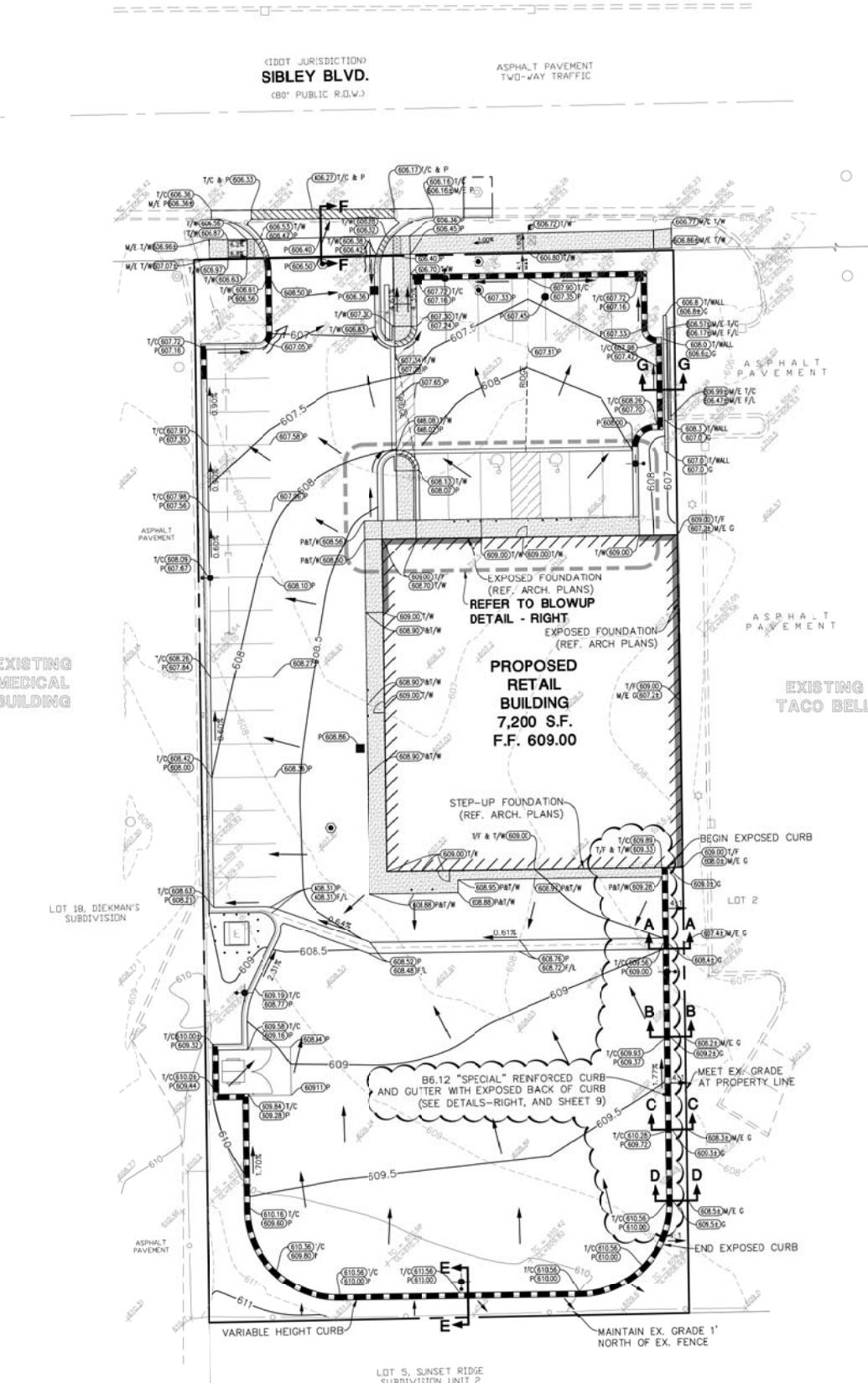
DRAWN BY  
REVISIONS  
DATE  
11-14-19 REvised PER INTERNAL REVIEW  
10-26-19 REvised PER INTERNAL REVIEW  
10-15-19 REvised FOR Village Engineers  
10-15-19 REvised FOR Village Planners



## PROPOSED RETAIL DEVELOPMENT

### VILLAGE OF DOLTON, ILLINOIS

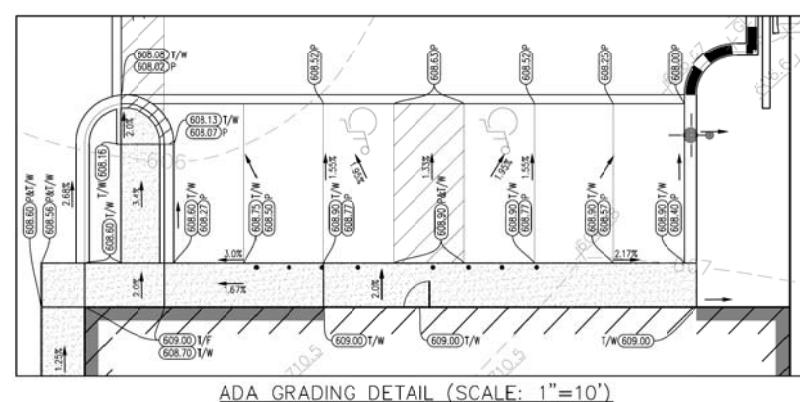
#### GRADING PLAN



**GRADING NOTES:**

- RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
- PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
- ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
- MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
- THE CONTRACTOR SHALL CONTACT JULIE (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITIES COMPANIES AND WHEREVER POSSIBLE, MEASUREMENTS MADE IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
- ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOV. SPECIFICATIONS UNTIL A HEALTHY STATE OF VEGETATION IS OBTAINED.
- EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY ZARKO SEKEREK AND ASSOCIATES, INC. ON APRIL 9, 2019. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY CHANGES IN CONDITIONS DURING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
- TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.

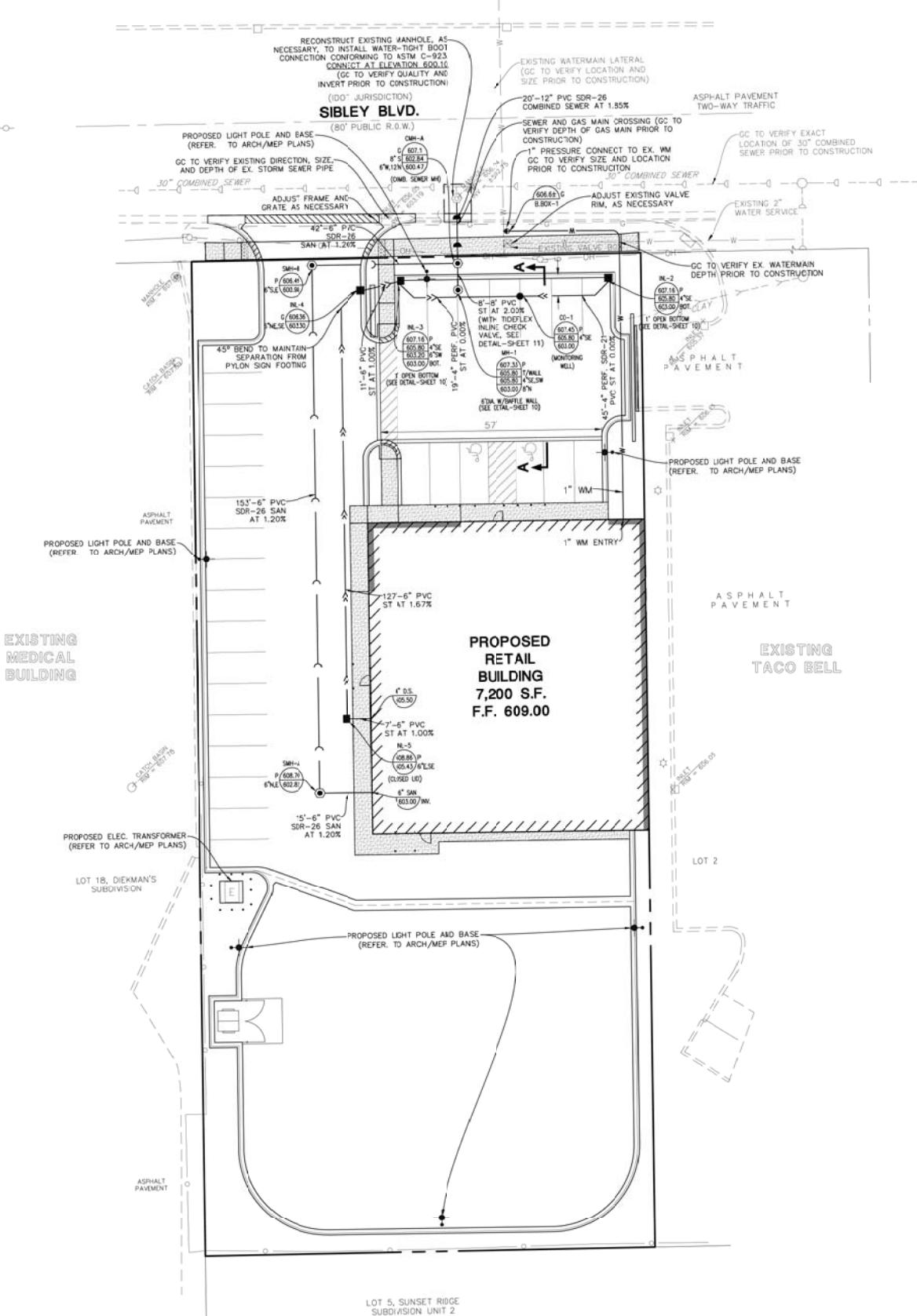
PROJ. MGR.	JRC
PROJ. ASSOC.	MH
DRAWN BY	
DATE	08-05-19
SCALE:	1"=20'
SHEET	5 OF 13

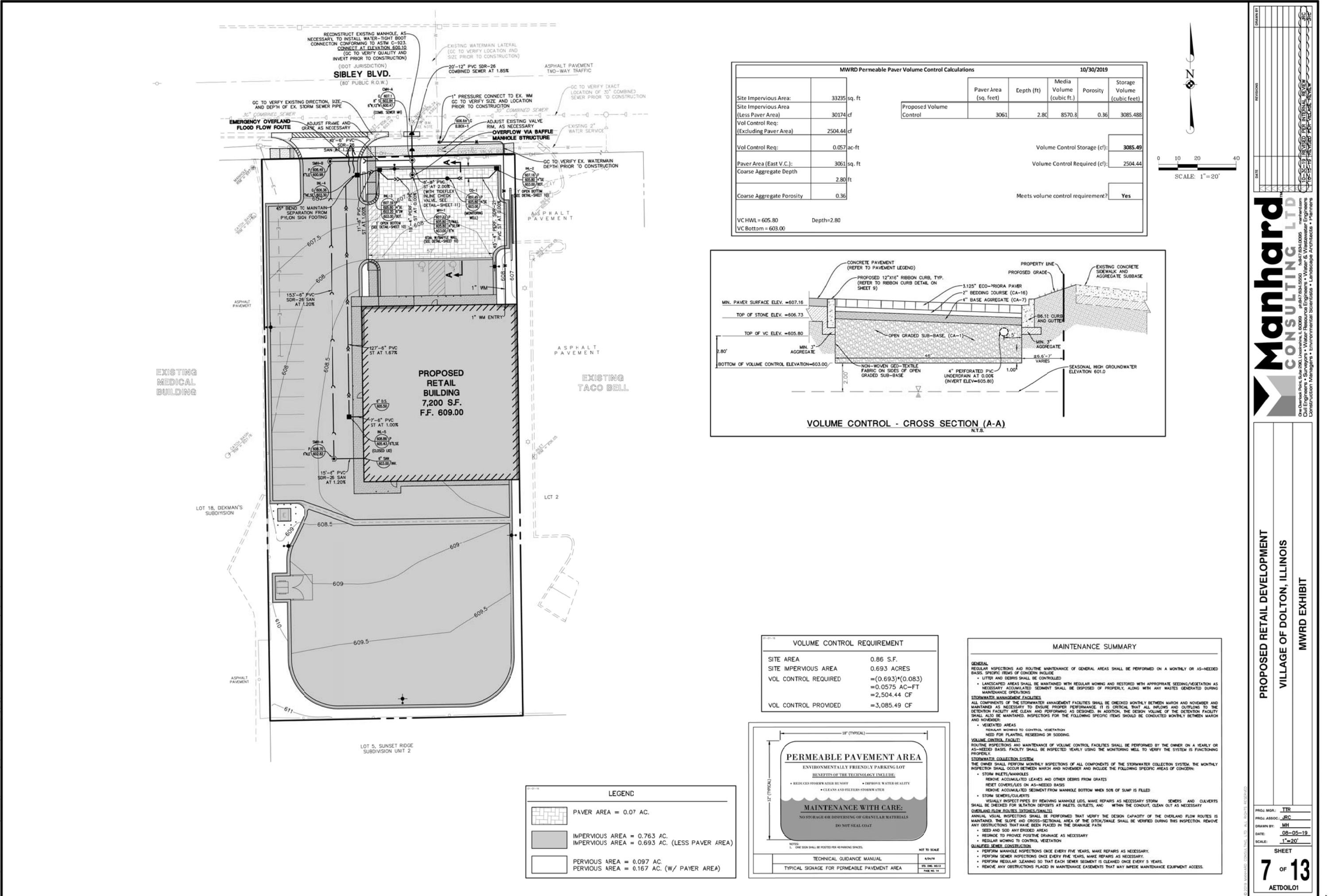


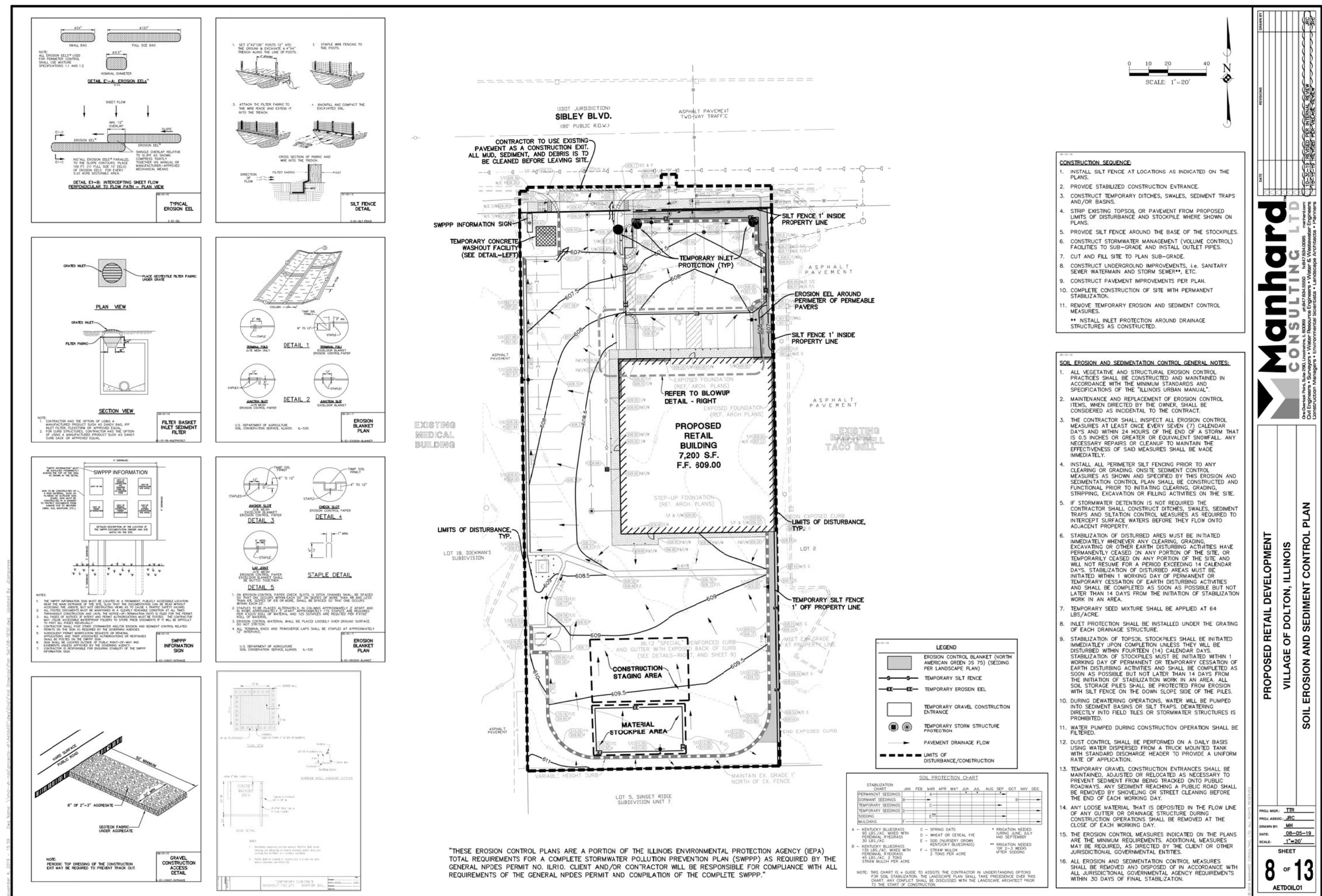
**PROPOSED RETAIL DEVELOPMENT**

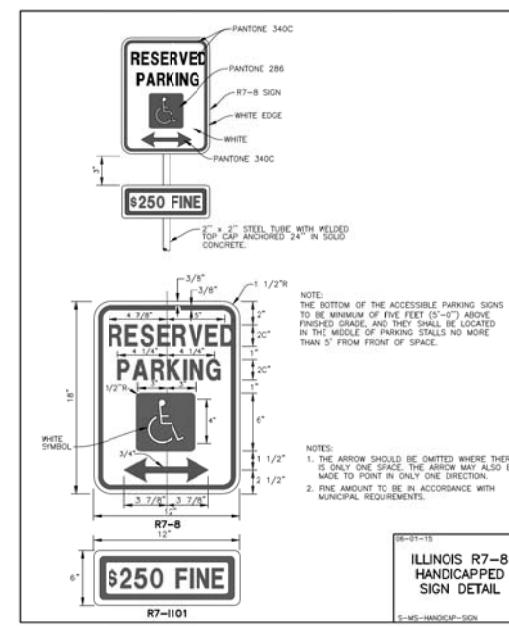
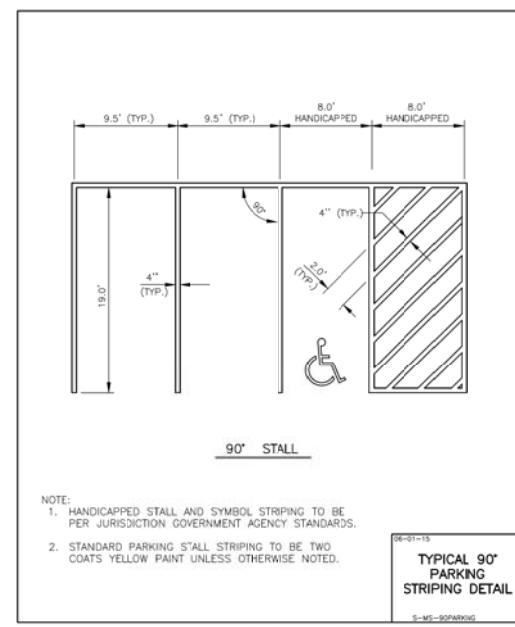
**VILLAGE OF DOLTON, ILLINOIS**

**UTILITY PLAN**

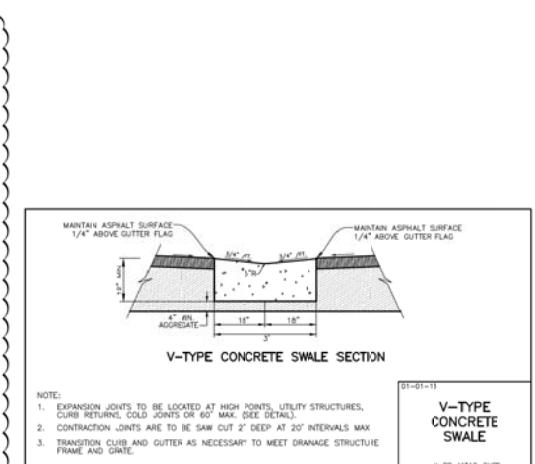
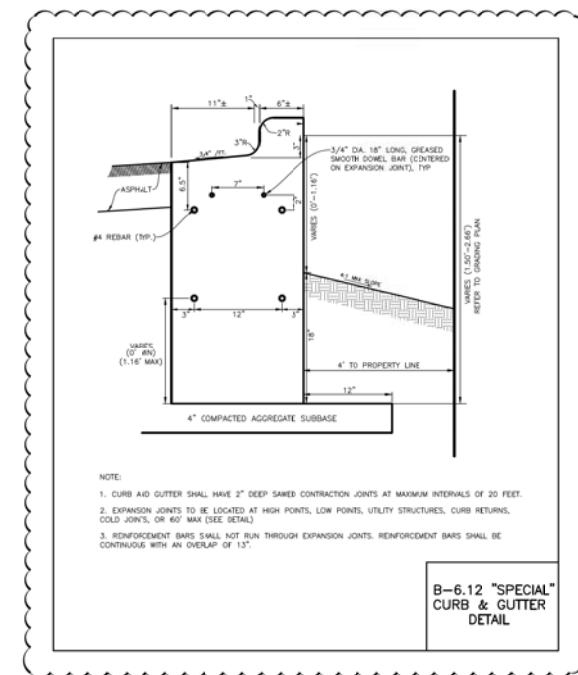
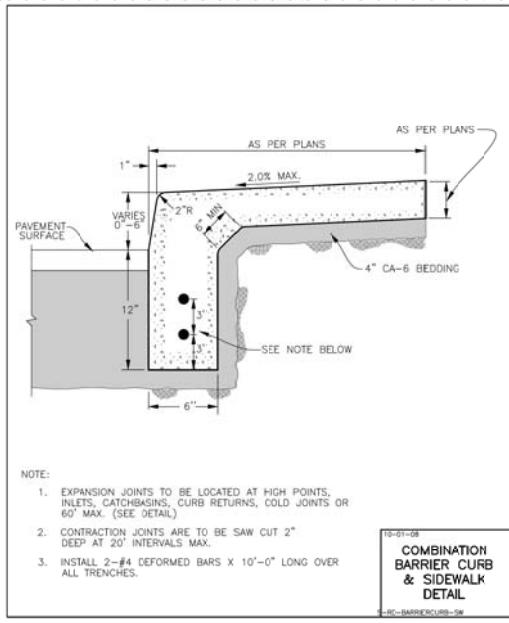
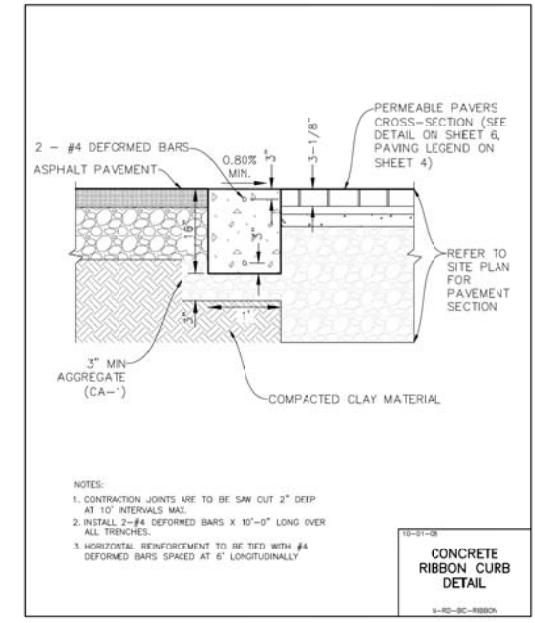
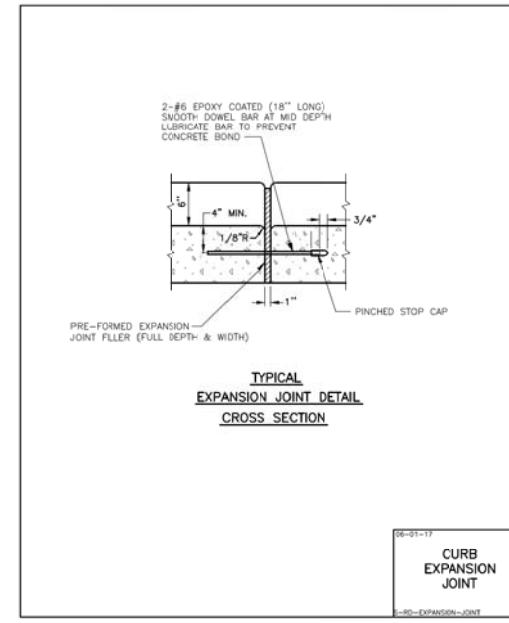
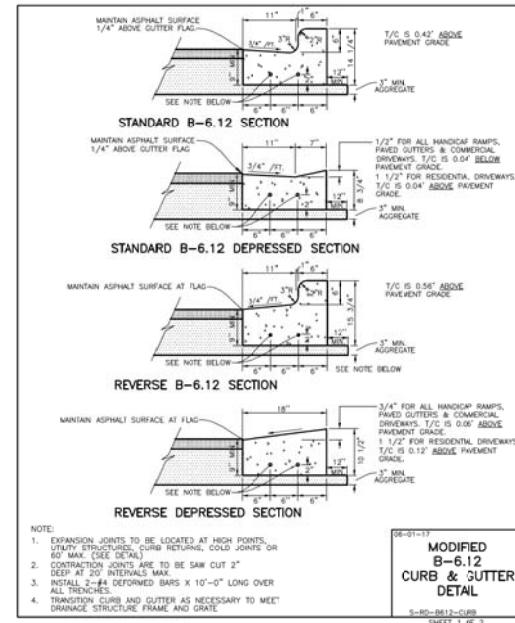
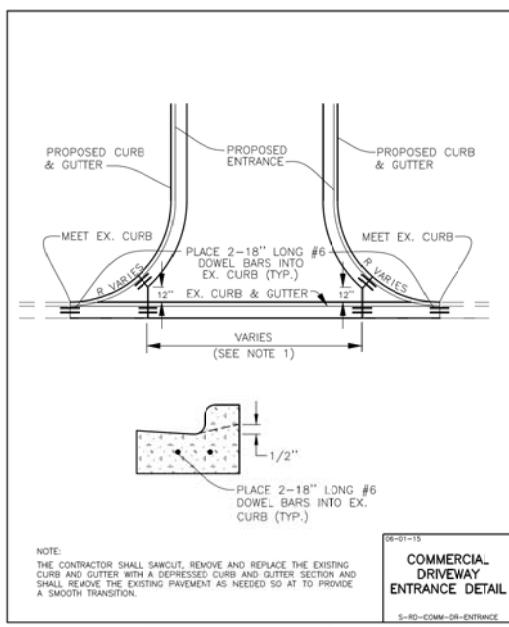






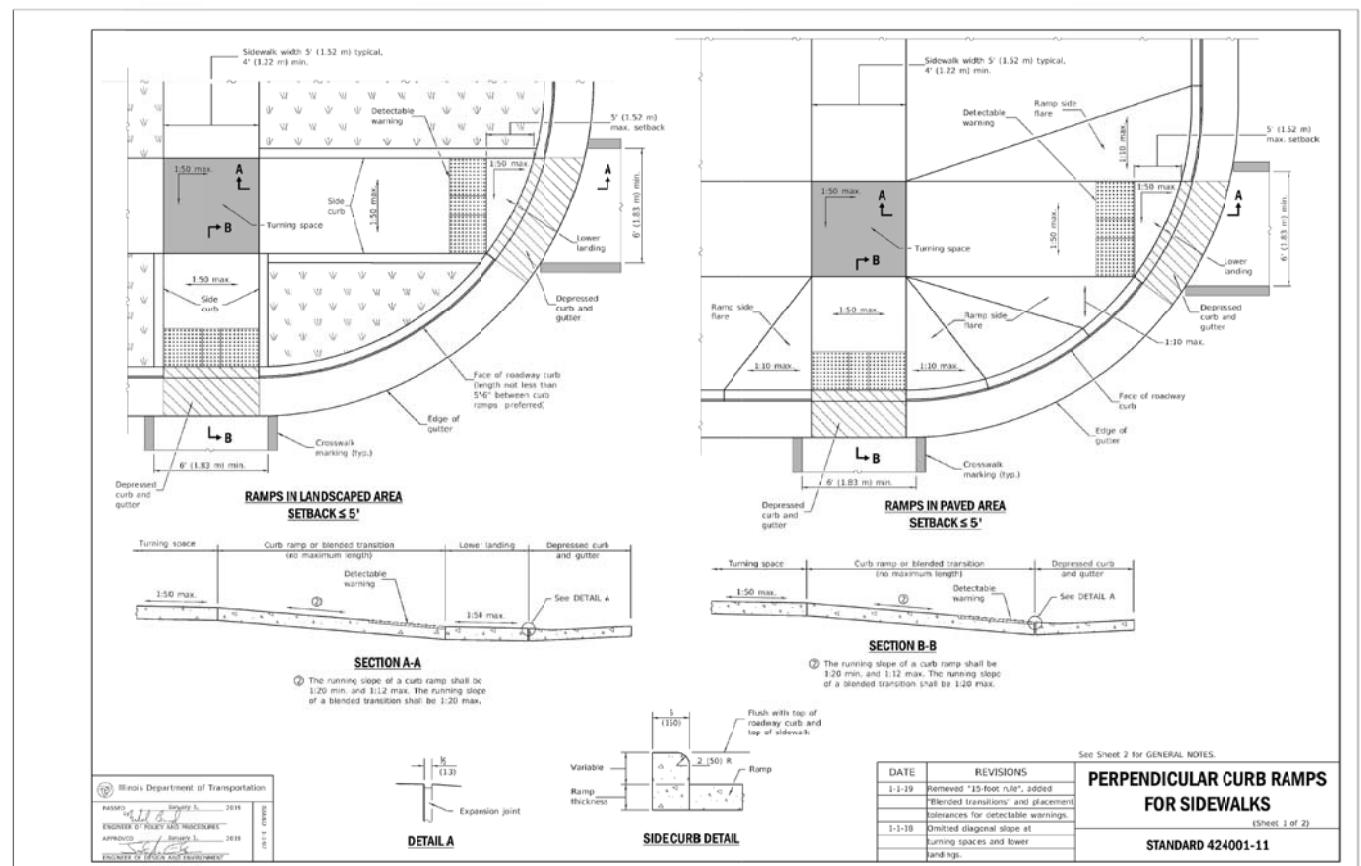
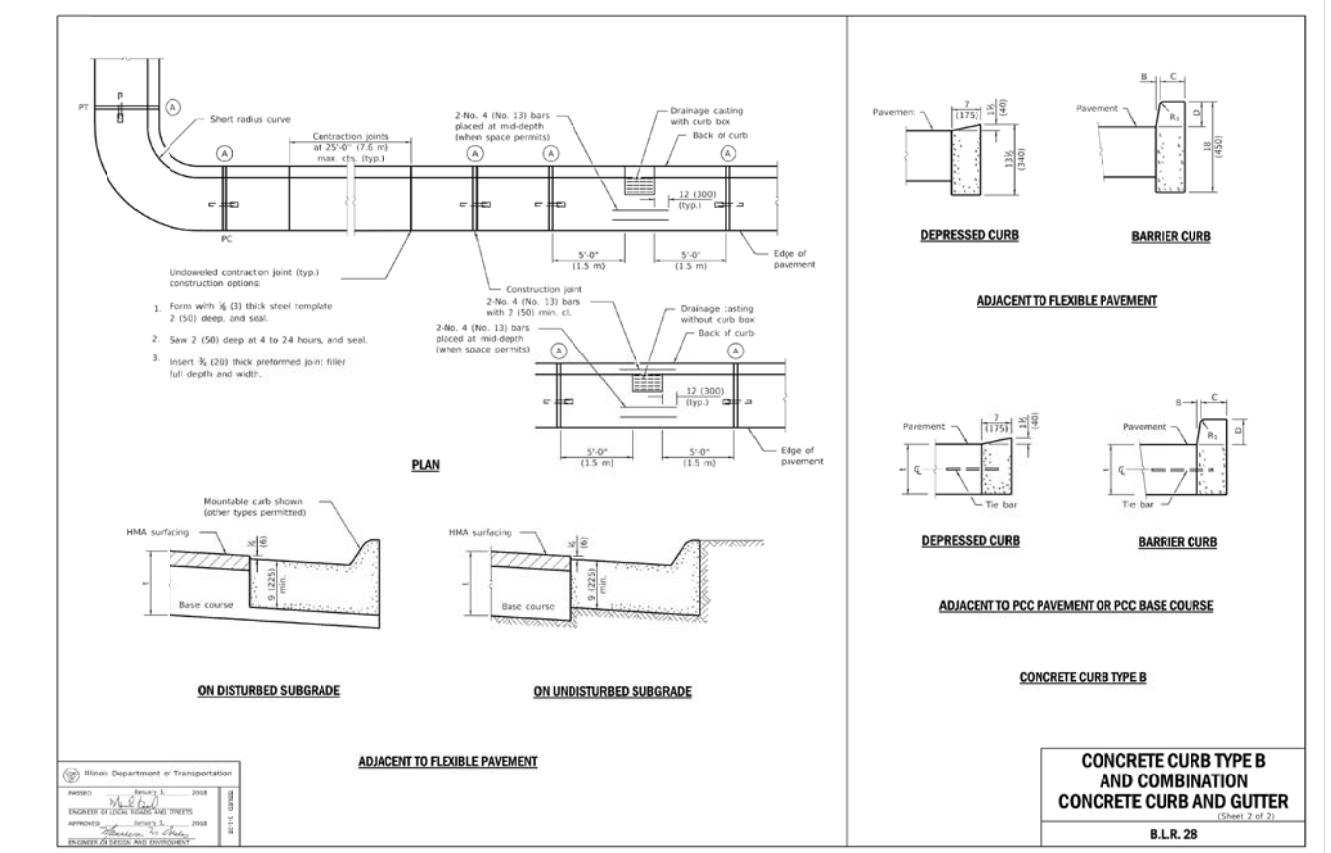
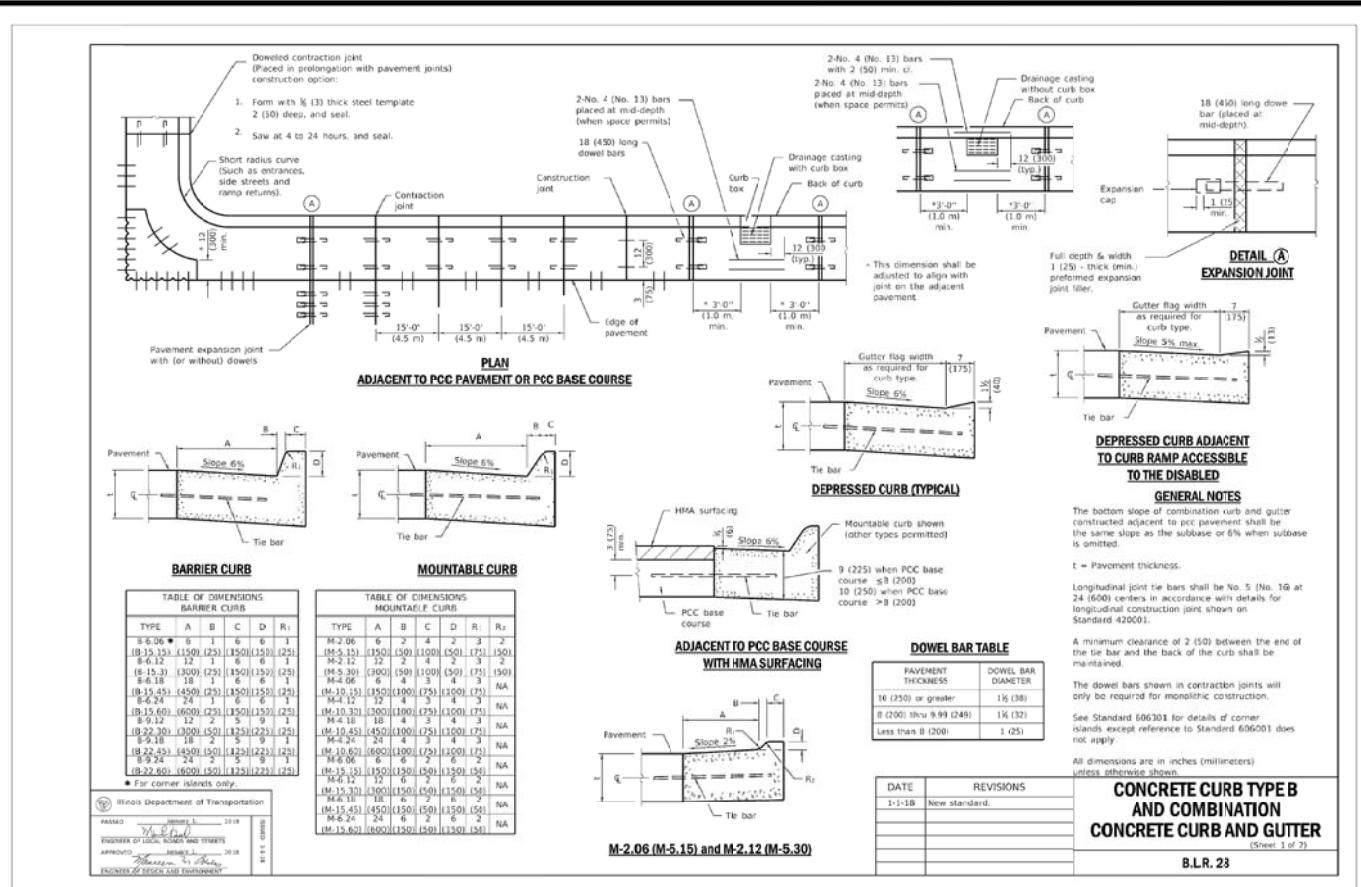


MATERIAL STANDARDS			
ITEM	BRAND	PRODUCT	
FIRE HYDRANTS (TRAFFIC MODEL)	MUELLER SUPER CENTURION WATERGUS FACER	A-423 WB-47	
GATE VALVES SPECIFY SIZE NON- RISING STEM, 2" NUT, M.U., OPEN LEFT	MUELLER (SZE) AMERICAN FLOW CONTROL	A-2360-20L SERIES 2500	
VALVE BOXES 3 PIECE	EAST JORDAN TYLER/UNIOR		SCREW ADJUSTING EXTENSION TYPE
CURB STOPS (SPECIFY SIZE)	MUELLER FORD		300 BALL VALVE BALL VALVE
CORPORATION VALVE (SPECIFY SIZE)	MUELLER FORD		H-15000 FB50V (AWW/C CC THREAC)
MANHOLES/CATCHBASINS/INLETS IN OPEN AREAS AND PAVEMENT (SELF-SEALING LID WITH PROPER UTILITY MARKINGS)	NEENAH CLOSED LID		R-1772
	OPEN LID *1 SWALES AND DITCHES		R-2502 C R-350 B
MANHOLES/CATCH BASIN/INLETS IN COMBINATION CURB & GUTTER (BICYCLE SAFE)	NEENAH ROLL/MOUNTABLE CURB B6.12 CURB		R-3501-D2A R-3281 R-3271-AL
WATER SERVICE SADDLES (ALL SERVICE SADDLES SHALL BE BOLTED STRAP, BROWNSVILLE IRON COATED OR STAINLESS STEEL)	MUELLER FORD SMITH-BLAIR 3/4" & 1"		DR2S FS .363 # 317
B-BOX (AT LEAST 1 1/4" TOP SECTION) ARCH, PLATE, PLUG PLUG STYLE LID	FORD MUELLER		EA2 CURB BOX
*1 WHEREVER STORMWATER COLD POSSIBLY ENTER STORM STRUCTURE			06-01-11
			MATERIAL STANDARDS
S-MS-MATERIALSTANDARDS			









## PROPOSED RETAIL DEVELOPMENT VILLAGE OF DOLTON, ILLINOIS CONSTRUCTION DETAILS

PROJ. MGR.: TTR  
PROJ. ASSOC.: JRC  
DRAWN BY: \_\_\_\_\_  
DATE: 08-05-19  
SCALE: N.T.S.  
SHEET: 12 OF 13  
AETDOI01

SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE VILLAGE DETAILS, THE VILLAGE DETAILS SHALL TAKE PRECEDENCE.

## MANHARD CONSULTING, LTD. STANDARD SPECIFICATIONS

**GENERAL CONDITIONS**  
CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR's covenants stated herein.

**DEFINITION OF TERMS**

- a. "CLIENT" shall mean ACTNA DEVELOPMENT CORP., which is the person or entity with whom Manhard Consulting, Ltd. has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.
- b. "ENGINEER" shall mean Manhard Consulting, Ltd., a Civil Engineering consultant on the subject project.
- c. "PLANS and SPECIFICATIONS" shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.
- d. "CONTRACTOR" shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.
- e. "JURISDICTIONAL GOVERNING ENTITY" shall mean any municipal, county, state or federal unit of government from whom an approval, permit and/or review is required for any aspect of the subject project.

**INTENT OF THE PLANS AND SPECIFICATIONS**

The intent of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinity determined so as to include minor items obviously required as part of the work. The PLANS and SPECIFICATIONS require new construction to be in accordance with the applicable codes and regulations of the work location. Specific references to any minor component part, it is not intended; however, that materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied unless distinctly noted. Materials or work described in words, which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

**INTERPRETATION OF PLANS AND SPECIFICATIONS**

- a. The CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.
- b. The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.

**GOVERNING BODY**

All works herein proposed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNING ENTITY, and all such pertinent laws, directives, ordinances and rules that shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNING ENTITY, the CLIENT and/or the CONTRACTOR shall immediately inform the ENGINEER in writing.

**LOCATION OF UNDERGROUND FACILITIES AND UTILITIES**

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, steam sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and elevation of such facilities and utilities. At the locations wherein detailed positions of these facilities and utilities become necessary to the new construction, including all points of connection, the CONTRACTOR shall furnish all tools and labor to verify or define/establish the horizontal location, elevation, size and material (if appropriate) of the facilities and utilities. The CONTRACTOR shall notify the ENGINEER at least 48 hours in advance of any disturbance or excavation that may affect these facilities with existing utilities exist. The ENGINEER assumes no responsibility whatever for the correctness of any information concerning the location of existing facilities with existing utilities exist.

The CONTRACTOR is responsible for removing the existing irrigation system in the areas of proposed improvements. The contractor shall cap the existing irrigation system to remain such that the remaining system shall continue to function properly.

**TESTING**

The parking lot shall be completed in sections such that it does not interrupt the facility operations. The CONTRACTOR shall coordinate with the construction manager to perform the testing.

**EARTHWORK**

**STANDARDS**  
The work shall be completed in conformance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition except as modified below.

**SOIL BORING DATA**

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction sites, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

**EARTHWORK CALCULATIONS AND CROSS SECTIONS**

The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are not to be relied upon by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own subsurface investigation in addition to his own calculations and cross sections to determine soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowing construction to tolerances and construction methods that are beyond the control of the ENGINEER.

**CLEARING, GRUBBING AND TREE REMOVAL**

The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

**TOPSOIL STRIPPING**

Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

**TOPSOIL RESPIED**

Upon completion of roadway and parking lot improvements and installation of underground utilities a minimum of six inches (6") of topsoil shall be resped over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

**SEEDING**

Risers shall be located in locations as shown on the PLANS and according to the detail.

**DROP MANHOLE CONNECTIONS**

Dog manhole connections to existing manholes shall be constructed according to the PLANS and the detail.

**SANITARY SEWER FORCE MAIN**

Sanitary sewer force main shall conform to the following:

- (1) Polyvinyl Chloride (PVC) Pressure Pipe conforming to the latest revision of ANSI/AWWA C900, Class 150 with integral bell and flexible elastomeric gasket joints conforming to ASTM F47.
- (2) Ductile iron cement lined pipe conforming to the latest revision of ANSI/AWWA C110/A21.51, Thickness Class 50, minimum 150 psi working pressure with "push on" type joints.

Force main shall have a minimum of five feet six inches (5'-6") of cover and shall include bedding and trench backfill.

Upon completion of installation, force mains are to be plugged and pressure tested at 2 times the working pressure or total dynamic head for a period of 10 minutes, with no loss of pressure as required by the JURISDICTIONAL GOVERNING ENTITY, whichever is more stringent.

**TELEVISION INSPECTION**

Upon completion of a television inspection of the sanitary sewer system shall be performed on all portions of the sewer if required by the JURISDICTIONAL GOVERNING ENTITY. Videotapes and written report of all television inspections shall be provided to the CLIENT. The form of report and type or format of the videotape shall be approved by the JURISDICTIONAL GOVERNING ENTITY.

**AI SEWERS AND APPURTENANCES**

AI sewers and appurtenances shall be cleaned prior to inspection as testing required by this section.

AI defects and corrective work required as the result of television inspection shall be performed by the CONTRACTOR without delay. All dips, cracks, leaks, improperly sealed joints and departs from approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and such further inspection made as may appear warranted by the CLIENT.

**MANHOLES, INLETS & CATCH BASINS**

Connections of storm sewer services to storm sewer mains should be made with manufactured tees when available. Availability of manufactured tees will be a function of the storm sewer material and pipe diameter size of the service sewer and main. If manufactured tees are not reasonably available, connections should be made in accordance with manufacturer's recommendations for all storm sewer other than concrete pipe. For concrete pipe connections without manufactured tees the storm sewer main shall be machine contoured and the service sewer connected using non-shink grout for the bedded voids. The service sewer shall be cut flush with the inside vise of the main and not extend into the made flow area of the main or otherwise impede flow.

## IV. ROADWAY AND PARKING LOT IMPROVEMENTS

**STANDARDS**

Work shall be completed in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition (hereinafter referred to as the "Standard Specifications") except as modified below and except that payment will be defined as set in the contract documents between the CLIENT and the CONTRACTOR. Supplementing the Standard Specifications shall be the applicable sections of the latest editions of the "Supplemental Specifications and Recurring Special Provisions", the Manual on Uniform Traffic Control Devices for Streets and Highways" and the Illinois Rules Supplemental, (hereinafter referred to collectively as the "MUTCD"). Any references to "ENGINEER" in the "Standard Specifications" shall be interpreted as the CLIENT or CLIENT's Construction Representative.

**WORK AREA**

The CONTRACTOR, his agents and employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project area specified by the Client. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

**UTILITY POLES**

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

**RESTORATION**

If the intent of these SPECIFICATIONS that clean-up and final restoration shall be performed immediately upon completion of each phase of the work, both sides are to be restored by the Project, or when so directed by the CLIENT so that these areas will be restored as nearly as possible to their original condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, curbs, gutters, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drain tiles, water mains, etc.

**CLEANING UP**

The CONTRACTOR shall at all times keep the premises free from accumulation of waste material or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish, tools, scaffolding and surplus materials and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

**ROAD CLEANING**

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR's trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall be responsible for removal and/or cleaning up.

**SAFETY AND PROTECTION**

The CONTRACTOR shall be safely and completely responsible for the conditions of the job site, including safety of all persons and property/during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for safety and protection. CONTRACTOR's duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable.

**HOLD HARMLESS**

Subject to the restrictions permitted by law, any CONTRACTOR, material supplier or other entity by use of these plans and specifications hereby agrees right of contribution and to indemnify, defend, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all manner of claims, causes, damages, losses and expenses, including but not limited to, attorney's fees and costs incurred in bringing an action to enforce the provisions of this indemnity; (3) costs for time expensed by the indemnified party and its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or any of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whom acts may be liable, the indemnified party shall not be limited in any way by the amount of damages, compensation or benefits payable by the CLIENT or ENGINEER or any Subcontractor or any other party.

**INSURANCE**

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, (prior to commencing any work) general public liability insurance against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and its consultants, agents and representatives as additional insureds under such insurance policy, provided that any party relying on these plans having obtained insurance against specific insurance by reason of such contract or agreement. Such insurance must contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEER's other applicable coverage is secondary coverage. Such insurance shall not limit any liability of any party providing work or services or providing materials.

**THIRD PARTY BENEFICIARY**

Manhard Consulting, Ltd., the ENGINEER, is intended to be a third party beneficiary of this written agreement and requirement.

Note: These Specifiers are for Northern Illinois.

## DETAILED SPECIFICATIONS

### I. DEMOLITION

The CONTRACTOR shall coordinate with responsible 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.

Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the applicable documents. Except for materials required to be removed on this plan, all other construction materials shall be new.

**PRIOR TO DEMOLITION**

Existing utility lines and conduits located under proposed buildings shall be removed and properly backfilled. All utility lines and conduits located under driveways, roads, parking lots or sidewalks shall be filled with a flexible backfill and end plugged. All existing structures shall be removed. All existing utility lines located under landscape areas shall be left in place and plugged at all structures.

The CONTRACTOR is responsible for demolition, removal and disposal (in a location approved by all JURISDICTIONAL GOVERNING ENTITIES) of all structures, paths, walkways, foundations, road, parking lots, driveways, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All roads, parking lots or sidewalks shall be filled with a flexible backfill and end plugged. Existing structures shall be removed. All existing utility lines located under landscape areas shall be left in place and plugged at all structures.

The CONTRACTOR is responsible for obtaining all permits required for demolition and disposal.

Electrical, telephone, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company. Manhard Consulting, Ltd., the ENGINEER, must be present at all times for engineering, bidders, endorsements, and other appropriate best management practices.

Continuous access shall be maintained for surrounding properties at all times during demolition.

The CONTRACTOR shall coordinate with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to sign the proposed improvements and to ensure adequate fire protection is available to the facility and area throughout this specific work and through all phases of construction. CONTRACTOR shall be responsible for any required water main shut offs with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut off will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

### AUGER/BORING AND CASING

Casing pipe shall be welded steel pipe, installed where shown on the PLANS. The carrier pipe shall be securely blocked and banded and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the ends shall be sealed with hydraulic cement.

**AUGER OPEN BORE**

The CONTRACTOR shall auger (open bore) where noted on the PLANS.

**HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS**

Horizontal and vertical separation of water and sewer mains shall be in accordance with Standard Specifications for Water and Sewer Construction in Illinois Section 4-2-01 and 4-2-01B and Standard Drawing 18, 19, 20, 21, 22, 23 and 24.

**STRUCTURE ADJUSTMENTS**

Structures shall be adjusted to the finished grade as shown on the PLANS.

### B. SANITARY SEWERS AND APPURTENANCES

**SANITARY SEWER PIPE**

Sanitary sewer pipe including building services, shall conform to the following:

- (1) Polyvinyl Chloride (PVC) Sewer Pipe shall conform to ASTM D3034 (4-inch thru 15-inch) or ASTM F679 (18-inch thru 48-inch) minimum SDR 26 with flexible elastomeric sealant gasket joints conforming to ASTM D3212 and F477.
- (2) Ductile Iron Sewer Pipe shall conform with ANSI/AWWA C110/A21.51 Class 50, cement lined with push on type joints conforming to ANSI/AWWA C110/A21.11.

- (3) Extra Strength Clay Sewer Pipe shall conform with ASTM C700 (glazed) with ASTM D1784 type joints conforming to CLO-NO-BEL (ESCP), with flexible gasket meeting ASTM C425 (MVRD) only.

Sanitary sewers shall include bedding and backfill.

**STRUCTURE ADJUSTMENTS**

Structures shall be adjusted to the finished grade as shown on the PLANS.

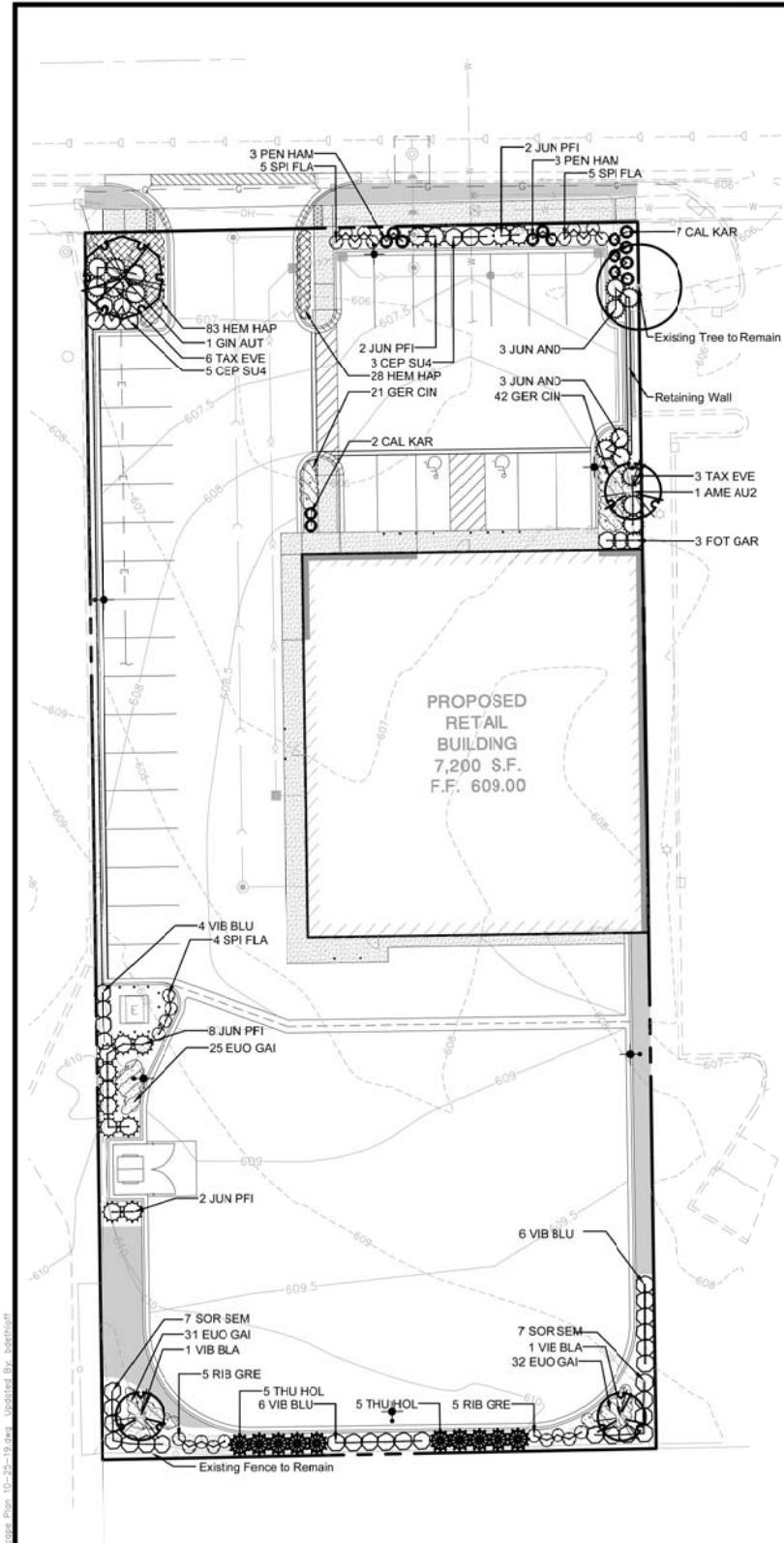
### C. STORM SEWERS AND APPURTENANCES

**STORM SEWER PIPE**

Storm sewer pipe shall conform to the following:

- (1) Reinforced concrete pipe minimum Class IV in conformance with the latest revision of ASTM designation C76 with C361 or C443 flexible gasket joints shall be used where the bottom invert is made of stone.

Any pipe that is not made of reinforced concrete shall be made of galvanized steel.



## PLANT SCHEDULE

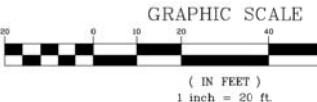
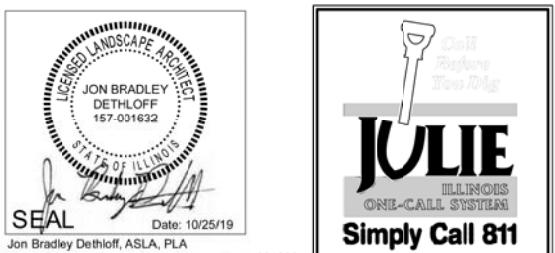
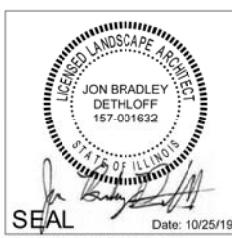
DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SZE	CONTAINER
GIN AUT	1	Ginkgo biloba 'Autumn Gold' TM	Maidenhair Tree	25' Cal.	B&B
EVERGREEN TREES	10	Thuya occidentalis 'Holstrup'	Holmstrup Cedar	6 Ft.	B&B
ORNAMENTAL TREES	1	Amelanchier canadensis 'Autumn Brilliance'	Autumn Brilliance Serviceberry	6 Ft.	B&B
VIB BLA	2	Viburnum prunifolium	Blackhaw Viburnum	6 Ft.	B&B
DECIDUOUS SHRUBS	8	Cephaelanthus occidentalis 'Sugar Shack'	Buttonbush	5 gal.	
FOT GAR	3	Fothergilla gardenii	Dwarf Fothergilla	5 gal.	
RIB GRE	10	Ribes alpinum 'Green Mound'	Green Mound Alpine Currant	5 gal.	
SOR SEM	14	Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spirea	5 gal.	
SPI FLA	13	Spiraea japonica 'Neon Flash'	Neon Flash Spirea	5 gal.	
VIB BLU	16	Viburnum dentatum 'Chloros' TM	Blue Muffin Arrowwood	5 gal.	
EVERGREEN SHRUBS	14	Juniperus chinensis 'Kalisyn Compact'	Kalay Compact Pfitzer Juniper	5 gal.	
JUN AND	6	Juniperus horizontalis 'Compacta'	Andorra Compact Juniper	5 gal.	
TAX EVE	9	Taxus x media 'Everlow'	Yew	5 gal.	
ORNAMENTAL GRASSES	9	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	3 gal.	
PEN HAM	6	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	3 gal.	
SHRUB AREAS	88	Euonymus fortunei 'Emerald Gaiety' TM	Emerald Gaiety Euonymus	flat	
GER CIN	63	Geranium cinereum 'Ballerina'	Ballerina Hardy Geranium	flat	
HEM HAP	111	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal.	

## NOTE:

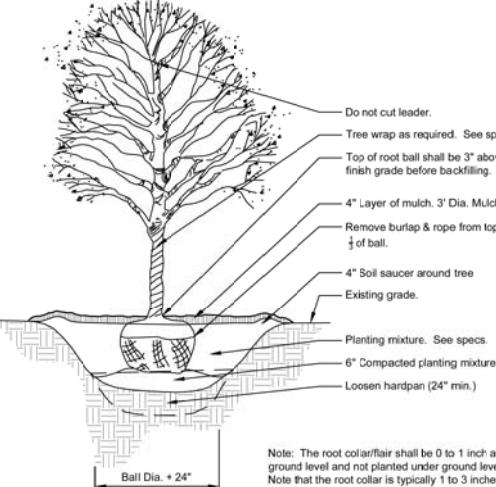
There are no planting requirements listed in the Village ordinance for the Village of Dolton.

However, the landscaping complies with the Village Comprehensive Plan for the Sibley Corridor including the following:

- 1) Landscaping provided to soften the building facades
- 2) Screening buffering parking lot areas

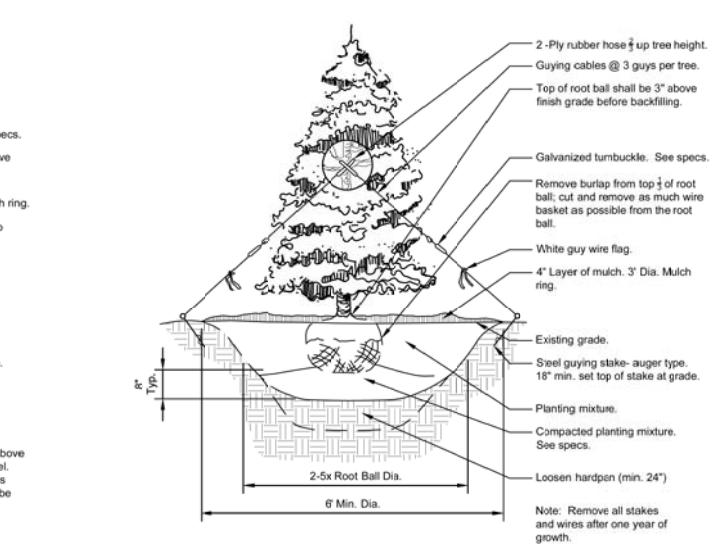


## PLANTING DETAILS



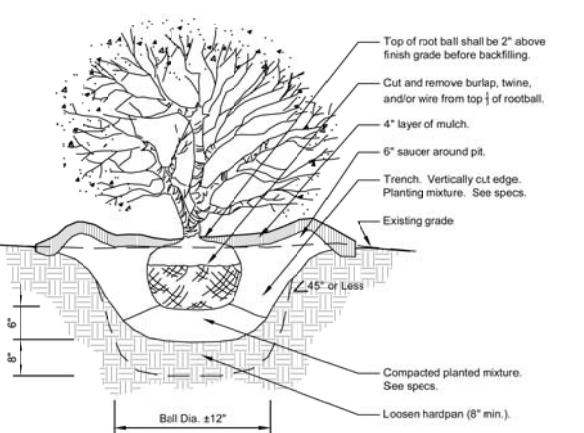
## ① DECIDUOUS TREE PLANTING

1/4" = 1'-0"



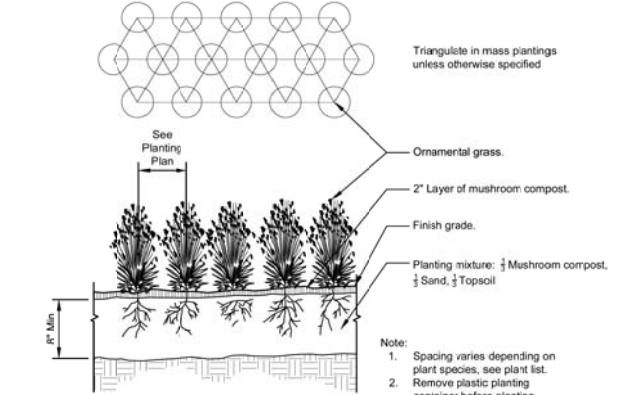
## ② CONIFER TREE PLANTING

1/4" = 1'-0"



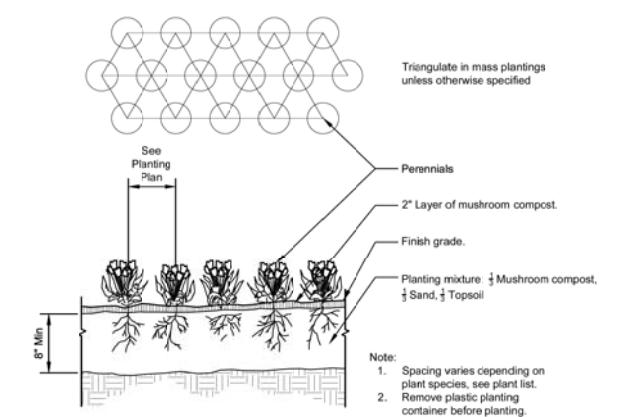
## ③ SHRUB PLANTING DETAIL

3/4" = 1'-0"



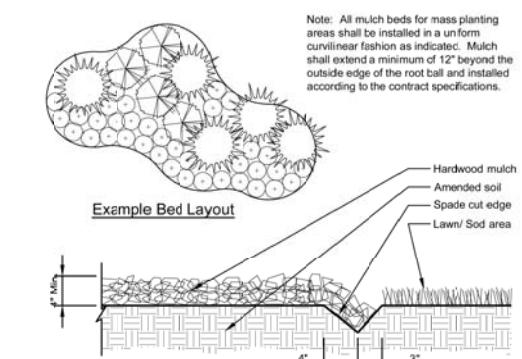
## ④ ORNAMENTAL GRASS PLANTING

1" = 1'-0"



## ⑤ PERENNIAL / ANNUAL PLANTING

1" = 1'-0"



## ⑥ CONTINUOUS MULCH EDDGING

1" = 1'-0"

DRAWN BY	JBD
REVISIONS	1
DATE	10-25-19
REVISED PER SITE PLANT ADJUSTMENTS	
10-25-19	

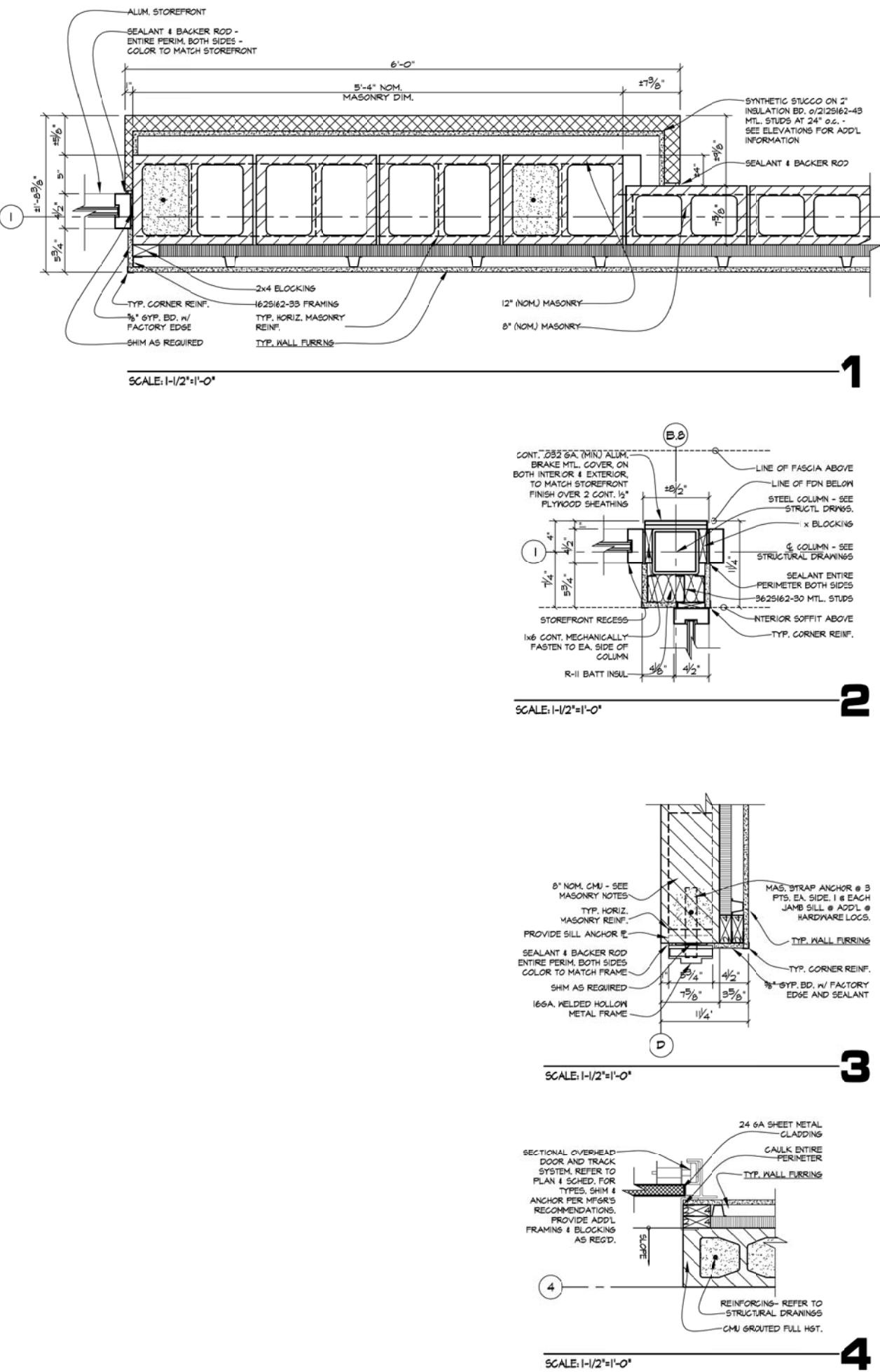
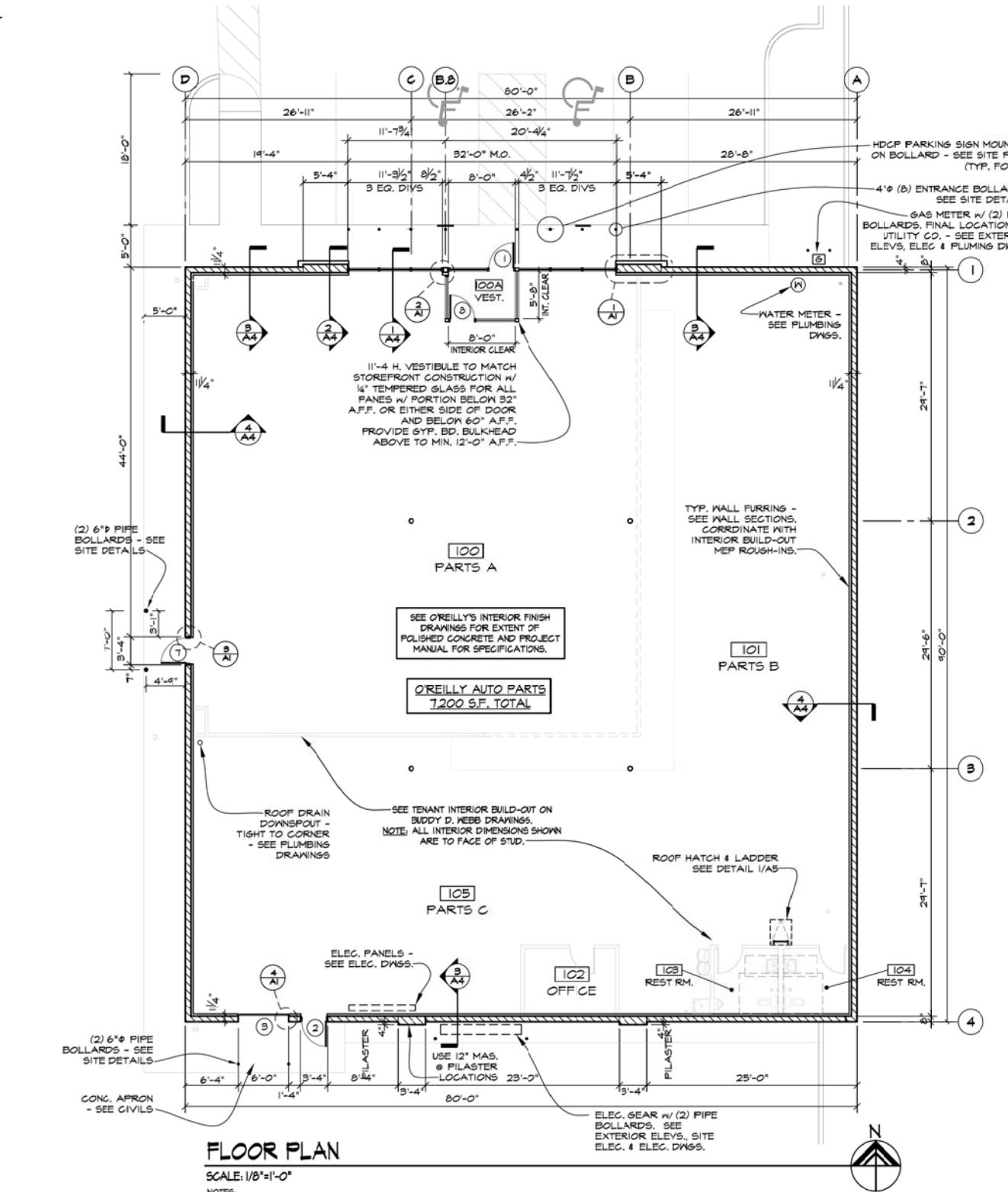
PROPOSED RETAIL DEVELOPMENT  
VILLAGE OF DOLTON, ILLINOIS  
LANDSCAPE PLAN AND PLANTING DETAILS

<b>REVISIONS</b>	
THIS DRAWING	
NOT FOR CONSTRUCTION	1/2/4
FOR BIDDING	1/2/4
FOR PERMIT	1/2/4
NOT FOR CONTRACTING	1/2/4
NOT FOR CONSTRUCTION	1/2/4

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

**SHEET TITLE**  
FLOOR PLAN DETAILS  
**1906**

**A**  
**1**



**MASONRY NOTES:**  
1. STANDARDS: COMPLY WITH RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA), AND NATIONAL CONCRETE MASONRY ASSOC. (NCMA) AND THE REQUIREMENTS OF THE CURRENT BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530/ASCE 6).

ALL MASONRY TO HAVE INTEGRAL POLYMER WATER REPELLENT BY MANUFACTURER. PROVIDE POLYMER WATER REPELLENT ADMIXTURE ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

2. CONCRETE MASONRY UNITS (CMU), ASTM C 40, GRADE N-1, PROVIDE "MEDIUM WEIGHT" UNITS (MIN. 105 PCF) WITH A MINIMUM COMPRESSIVE STRENGTH, FM OF 2000 PSI.

SELECTION: ELSLTON SPLIT & SMOOTH FACE, DISTRIBUTOR: RAMM BRICK & SUPPLY LLC. CONTACT: KIP RAMM - CELL (847)871-7183.

SIZES & TEXTURE:  
A) 18" H. X 18" W. X 15 1/2" L. (NOM. 8 x 12 x 16 @ PILASTERS). SPLIT-FACE FINISH  
B) 18" H. X 15 1/2" W. X 15 1/2" L. @ BEHIND EIPS, SMOOTH-FACE FINISH  
C) MISCELLANEOUS SIZES AS REQ'D. SEE WALL SECTIONS, EXTERIOR DETAILS & EXTERIOR FINISH LIST.

3. FINISH: PAINTED PER EXTERIOR FINISH SCHEDULE.

4. MASONRY MORTAR: ASTM C 270, TYPE S; APPROXIMATELY 3:1:1 PORTLAND CEMENT, LIME, SAND FOR EXTERIOR WORK. COLOR: NATURAL. PROVIDE POLYMER WATER REPELLENT ADMIXTURE (COMPATIBLE w/ MASONRY) ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

5. PORTLAND CEMENT: ASTM C 150, TYPE I, NON-STAINING, NO AIR ENTRAINMENT, WHITE IF NEEDED FOR COLOR MATCH.

6. LIME: HYDRATED LIME, ASTM C 207, TYPE S.

7. SAND: ASTM C 144, OR FINER IF NEED FOR JOINT SIZES LESS THAN 1/4".

8. INSTALL (LAY) THRU-WALL BRICK UNITS IN 1/2 RUNNING BOND PATTERN & CMU, IN RUNNING BOND PATTERN.

9. CUT EXPOSED MASONRY UNITS, WHERE NECESSARY, WITH A POWER SAW. AVOID THE USE (BY PROPER LAYOUT) OF LESS-THAN-HALF-SIZE UNITS.

10. HOLD UNIFORM JOINT SIZES AS INDICATED, OR IF NOT INDICATED, HOLD JOINT SIZES TO SUIT MODULAR SIZE OF MASONRY UNITS.

11. CUT JOINTS FLUSH AND TOOL SLIGHTLY CONCAVE, UNLESS OTHERWISE INDICATED.

12. REINFORCE HORIZONTAL JOINTS WITH CONTINUOUS MASONRY WIRE REINFORCING, SPACED 6'-0" VERTICALLY; EXCEPT SPACED 8' IN PARAPET WALLS AND IMMEDIATELY ABOVE AND BELOW OPENINGS, FOR A DISTANCE OF 2 FEET BEYOND THE OPENING IN ALL FOUR DIRECTIONS. DO NOT BRIDGE CONTROL AND EXPANSION JOINTS IN THE WALL SYSTEM.

13. COMPLETELY FILL WITH MORTAR COLLAR JOINTS IN MULTI-WYTHE MASONRY WALLS, EXCEPT WHERE FLASHING AND/OR KEEPS ARE PRESENT.

14. FILL HEAD (VERTICAL) JOINTS WITH MORTAR @ INTERIOR AND EXTERIOR FACES ONLY IN ALL MASONRY WORK, EXCEPT WHERE FLASHING AND/OR KEEPS ARE PRESENT..

15. WHERE INDICATED, COMPLETELY FILL CORES OF MASONRY UNITS FOR FULL HEIGHT OF THE WALL WITH THE TYPE S MORTAR OR CONCRETE - SEE MASONRY REINFORCING NOTES.

16. PROVIDE CONTROL AND EXPANSION JOINTS AT LOCATIONS SHOWN AND KEEP CLEAN OF MORTAR DROPPINGS/ SQUEEZE - CUT.

17. IF LOCATIONS ARE NOT SHOWN, SPACE CONTROL JOINTS 25'-0" (HORIZONTALLY) FOR CMU MASONRY.

18. THE CONTRACTOR SHALL BRACE WALLS ADEQUATELY DURING CONSTRUCTION UNTIL THE ROOF AND FLOOR STRUCTURE ARE IN PLACE.

19. THE WORK IN PROGRESS WILL BE INSPECTED BY THE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH SECTION 1.5 OF ACI 530.1.

20. JOIST BEARINGS - USE A MINIMUM OF 3 CONCRETE BLOCK BRICK COURSES OR FILL ONE COURSE OF CONCRETE BLOCK SOLID WITH GROUT UNDER EACH JOIST.

21. BEAM BEARING - USE SOLID CONCRETE BLOCK 2 COURSES WIDE BY 3 COURSES DEEP UNDER EACH BEAM.

22. PILASTERS - FILL SOLID WITH GROUT (SEE BEAM BEARING NOTE # 21).

23. N/A

24. MASON IS RESPONSIBLE FOR KEEPING FLASHING/NEEP SYSTEM FUNCTIONING AND FREE OF MORTAR.

25. PROVIDE CONTROL JOINTS AT MAXIMUM 25'-0" O.C.

26. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.

27. PROVIDE INTEGRAL POLYMER WATER REPELLENT RECOMMENDED BY MANUFACTURER. PROVIDE POLYMER WATER REPELLENT ADMIXTURE ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

28. CLEANING: DO NOT USE ACID, WASH OR HARSH DETERGENT. MASONRY WALLS ARE TO BE CLEANED SEVEN DAYS AFTER COMPLETION WITH A MILD DETERGENT SOLUTION OR OTHER PROPRIETARY SOLUTION AS RECOMMENDED BY MASONRY MANUFACTURER, OR USE PROSOCO "LIGHT DUTY Concrete Cleaner". WALLS SHOULD BE THOROUGHLY SATURATED WITH CLEAR WATER BEFORE AND AFTER CLEANING SOLUTION IS APPLIED.

29. N/A

30. FLASHING: "BLOCKFLASH" BY MORTAR NET SOLUTIONS, AS SHOWN ON DRAWINGS, SEE BLOCKFLASH INSTALLATION NOTES. IN ADDITION, FLEXIBLE MEMBRANE FLASHING WITH END DAMS TO ALSO BE USED AND FULLY ADHERED TO ALL STEEL LINTELS.

**MASONRY REINFORCING NOTES:**

1. PROVIDE REINFORCED UNIT MASONRY WITH RUNNING BOND.

2. REINFORCED CONCRETE UNIT SHELL SHALL CONSIST OF THE FOLLOWING:  
A. MEDIUM WEIGHT HOLLOW LOAD-BEARING CONCRETE UNIT COMPLYING WITH ASTM C40, GRADE N TYPE I.  
B. REINFORCING BARS SIZE 1/4" IN. AISI 4130 AND SHALL HAVE CLEARANCES IN ACCORDANCE TO ASTM SPECIFICATION A805.  
C. TYPE S MORTAR WITH A MINIMUM COMPRESSIVE UNIT STRESS FOR THE MASONRY ASSEMBLY, FM = 2000 PSI.  
D. GROUT SHALL BE COARSE GROUT CONFORMING TO ASTM C476 WITH A MINIMUM COMPRESSIVE ASSEMBLY, FM = 2000 PSI.

3. THE REINFORCED CONCRETE MASONRY UNITS SHALL BE ERECTED USING THE LOW LIFT METHOD.

4. PROVIDE ONE NUMBER FOUR (4) BAR MINIMUM AROUND ALL DOOR OPENINGS.

5. VERTICAL REINFORCING BARS SHALL BE AS SHOWN ON DRAWINGS WITH LADDER TYPE HORIZONTAL REINFORCING WITH FOUR(4) NO. 9 GAGE BARS AT 16" ON CENTER, U.N.C.

6. REINFORCING STEEL SHALL BE LAPPED 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER, WHERE SPLICED, AND SHALL BE SEPARATED BY ONE BAR DIAMETER OR WIRED TOGETHER.

7. VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF REINFORCEMENT.

8. VERTICAL REINFORCING STEEL SHALL HAVE A CLEARANCE OF THREE QUARTERS OF AN INCH FROM MASONRY OR ADJACENT BARS, BUT NOT LESS THAN ONE BAR DIAMETER BETWEEN BARS.

9. ALL REINFORCING SHOWN ON DRAWINGS SHALL BE GROUTED FULL LENGTH.

10. ALL GROUT SHALL BE PUDDLED OR VIBRATED IN PLACE.

11. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 2" X 3".

12. CELLS CONTAINING REINFORCEMENT SHALL BE SOLIDLY FILLED WITH GROUT AND POURS SHALL BE STOPPED ONE AND ONE HALF INCHES BELOW THE TOP OF A COURSE TO FORM A KEY AT POUR JOINTS.

13. ALL BOLTS, ANCHORS, ETC. INSERTED IN THE WALL SHALL BE SOLIDLY GROUTED IN PLACE.

**THRU-WALL MASONRY NOTES:**

1. **MOCK-UP:** CONSTRUCT A MASONRY WALL PANEL AT LEAST

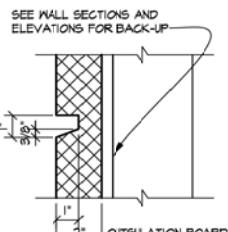
4 FEET LONG & 4 FEET HIGH TO REPRESENT THE EXTERIOR MASONRY WALL (INCLUDING ACCENT BANDS). INCLUDE

REINFORCING AND MINIMUM ONE CONTROL JOINT AND ONE OUTSIDE CORNER. INCLUDE JOINT PROFILE AND MORTAR COLOR.

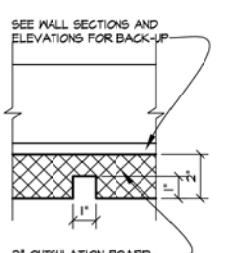
CLEAN ONE-HALF OF MOCK-UP TO REPRESENT FINAL CLEAN DOWN USING METHODS AND MATERIALS IN ACCORDANCE WITH THE CLEANING REQUIREMENTS HEREIN AND LEAVE REMAINDER

WITHOUT FINISH CLEAR FOR COMPARISON. MOCK-UP TO BE APPROVED BY ARCHITECT FOR APPROVAL AND USE BEFORE PROCEEDING WITH MASONRY INSTALLATION. PROVIDE ON-SITE INSPECTION BY MASONRY MANUFACTURER REPRESENTATIVE OF MOCK-UP CONSTRUCTION AND CLEANING AND SUBMIT MANUFACTURER'S LETTER OF APPROVAL OF THE WORK PROCEDURES AND THE COMPLETED MOCK-UP.

2. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.



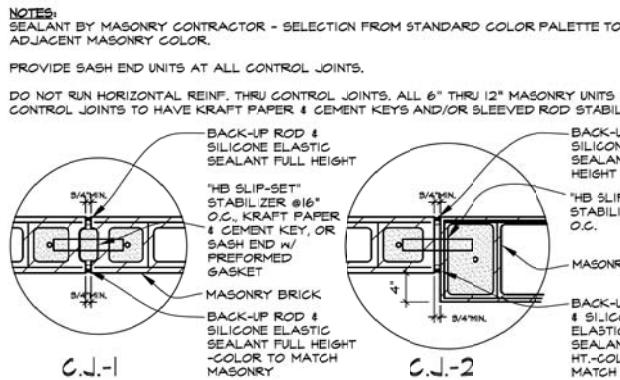
### HORIZONTAL



### VERTICAL

### E.I.F.S. SCORE JOINT DETAILS

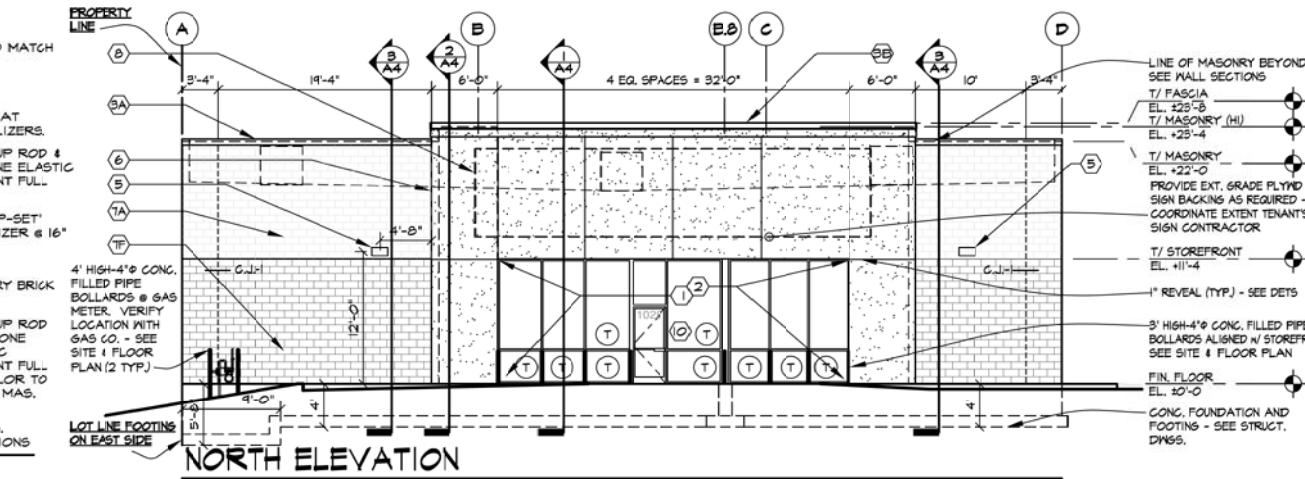
SCALE: 2" = 1'-0"



### MASONRY CONTROL JOINT DETAILS

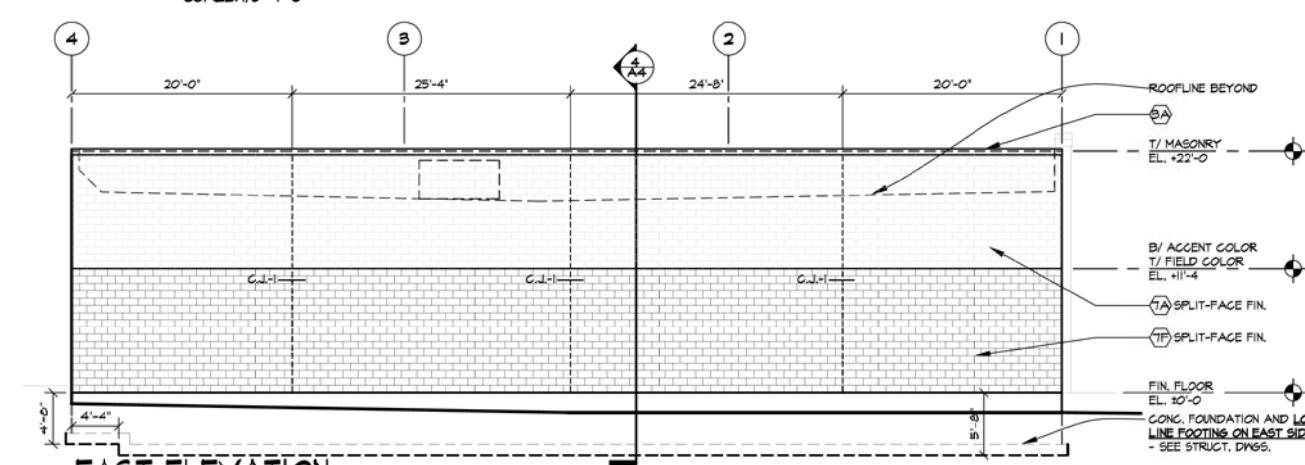
SEE ELEVS. FOR MAS. SELECTIONS / LOCATIONS

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



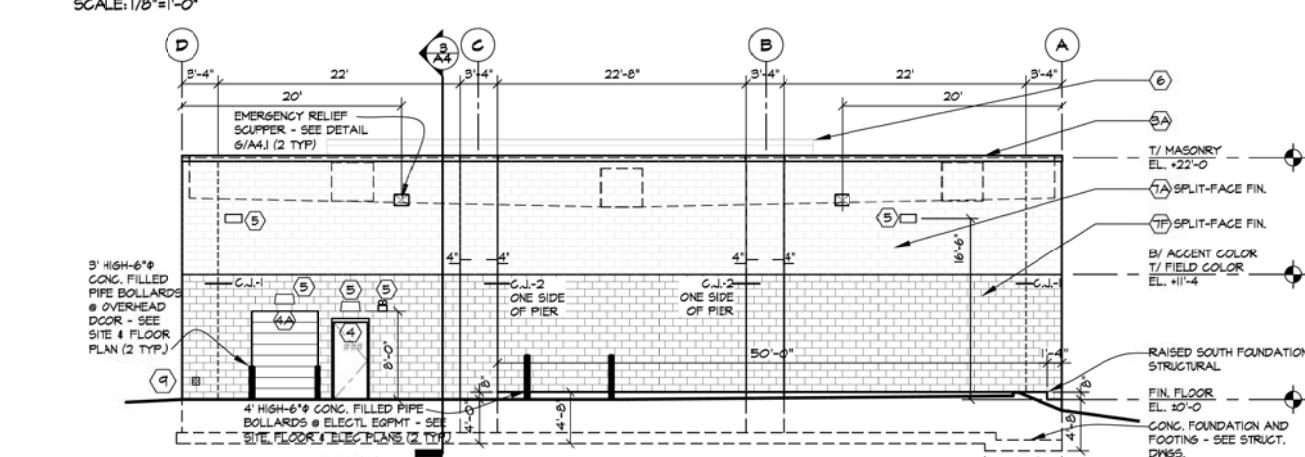
### NORTH ELEVATION

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



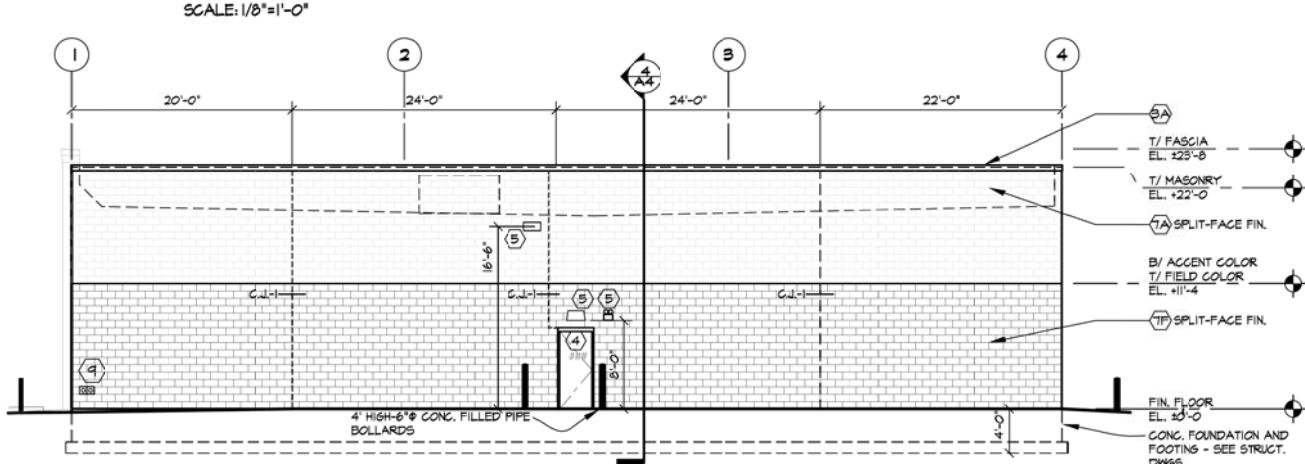
### EAST ELEVATION

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



### SOUTH ELEVATION

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



### WEST ELEVATION

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

THIS DRAWING	NOT FOR CONSTRUCTION
T/F FOR BOND	NOT FOR CONSTRUCTION
FOR PERMIT	NOT FOR CONSTRUCTION
FOR CONTRACTOR	NOT FOR CONSTRUCTION
FIN. FLOOR	NOT FOR CONSTRUCTION

KMA & ASSOCIATES, INC. ARCHITECTS SUITE F  
60015-5225  
1121 LAKE COOK ROAD  
DEERFIELD, ILLINOIS FAX(847)945-6869

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD.  
DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
EXTERIOR ELEVATIONS  
MASONRY NOTES  
DETAILS

1906

A  
3

### SPECIAL MASONRY NOTE ALERT!

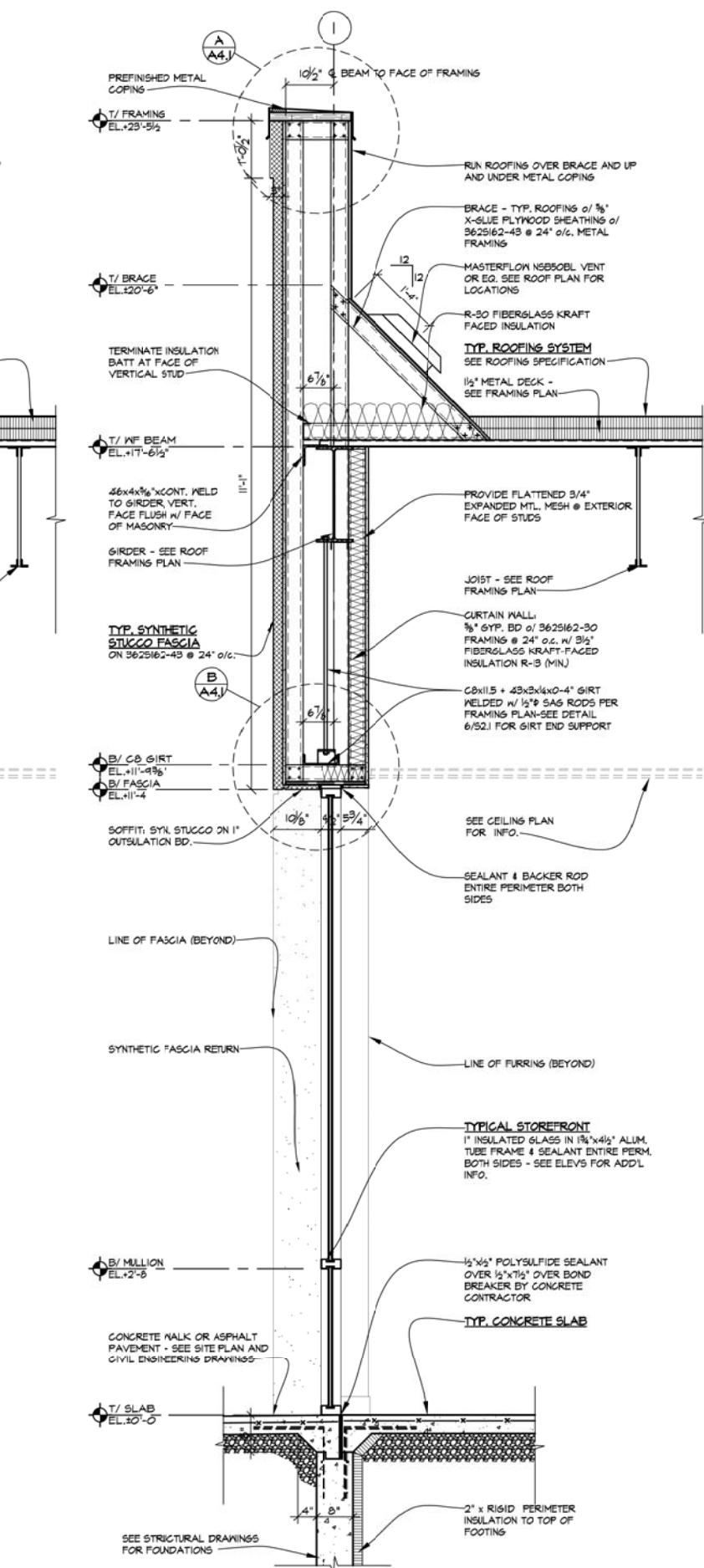
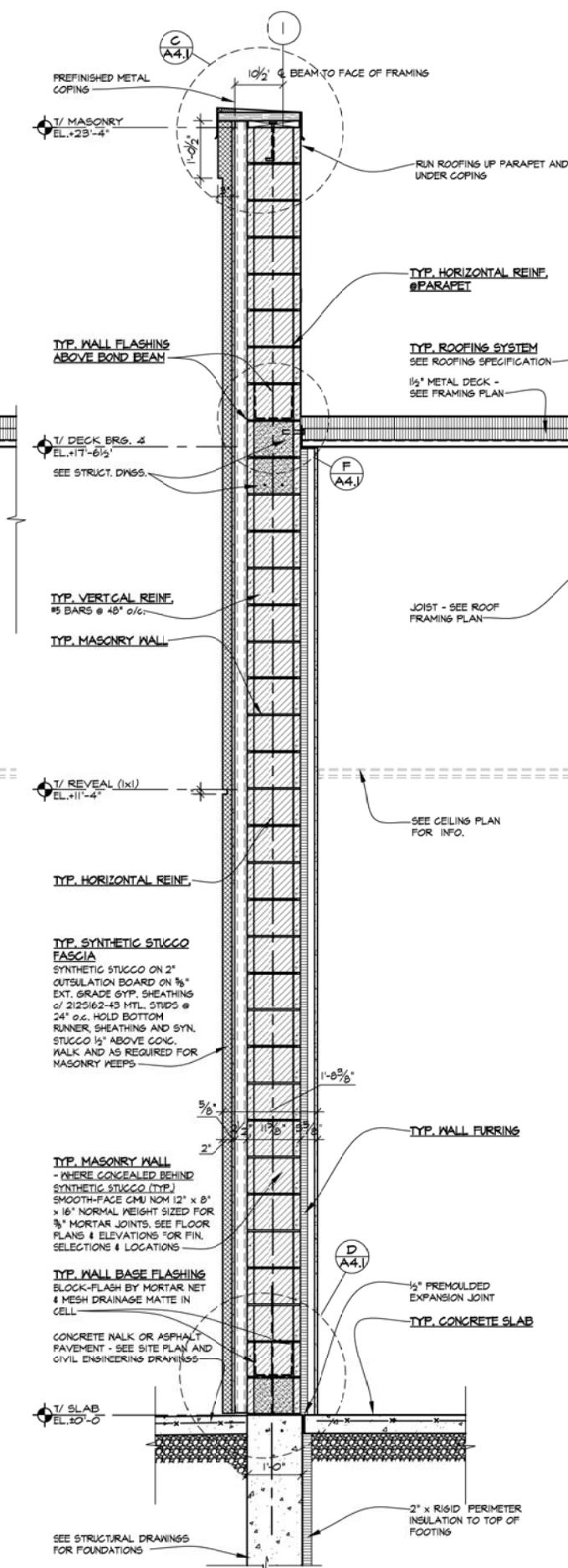
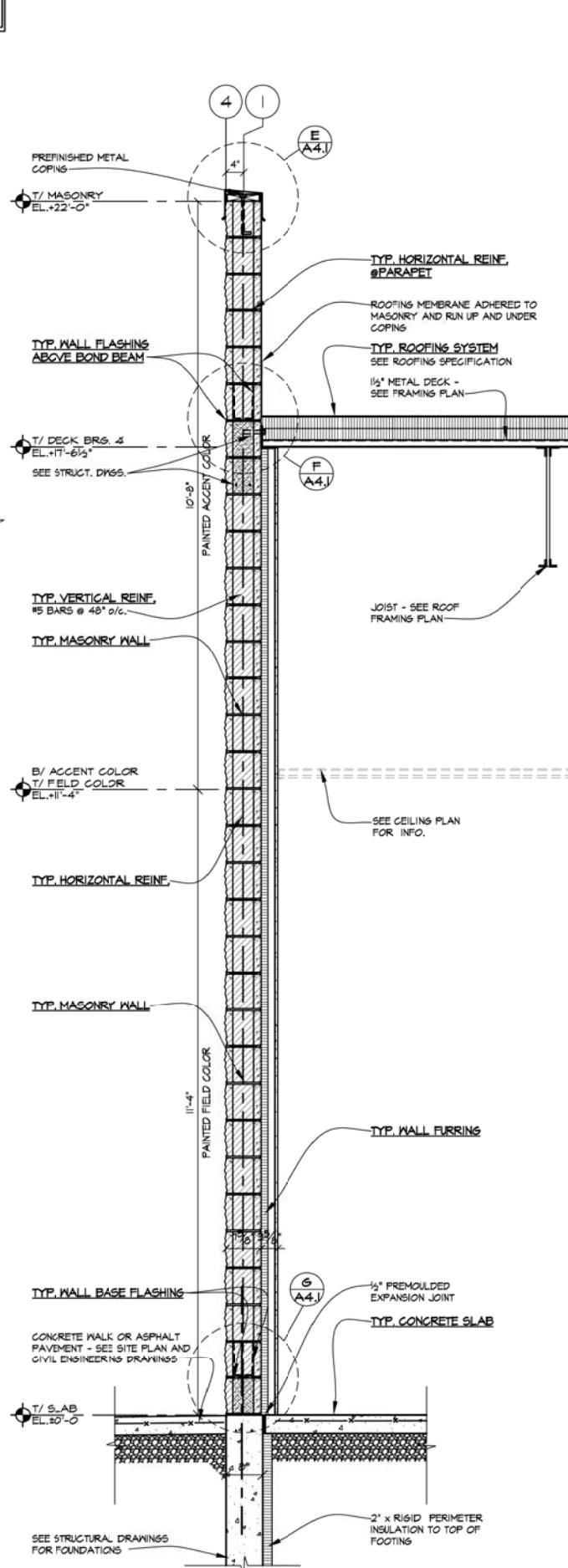
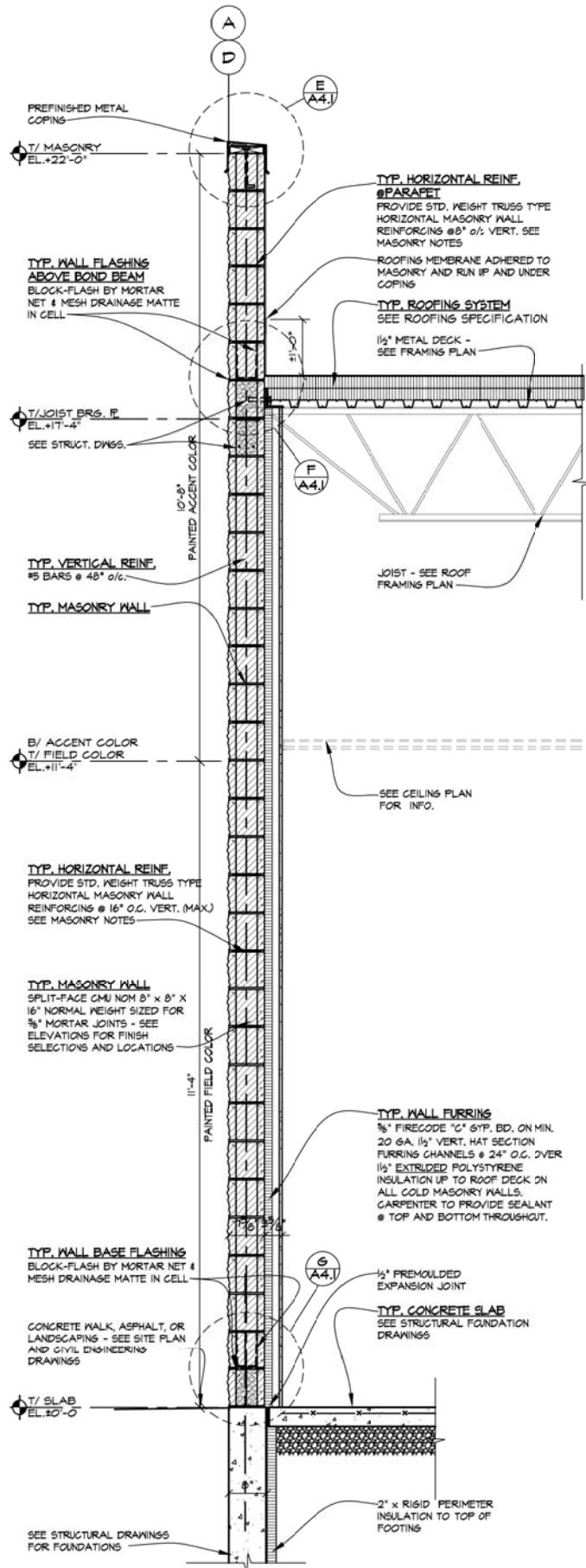
There are four CRITICAL elements to SINGLE WYTHE masonry construction:

- The concrete brick product has to have integral waterproofing.
- The mortar has to have a water repellent.
- All flashing, including the "BlockFlash" flashing system, has to be employed correctly.
- The building has to be sealed with a protective sealer treatment.

See masonry notes for more information regarding these and other specification items.

**NOTE:**  
-PROVIDE BLOCKFLASH NEAR BASE OF WALL & ABOVE ALL LINTELS, STEEL BEAMS, SOLID CORES, BOND BEAMS AND ABOVE ANY MULTI-WYTHE WALL.  
-EXTERIOR WALL DEPRESSIONS TO BE FILLED w/ CONCRETE TO ELEV. 20'-0". IT IS THE CONCRETE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY MASONRY SHIMS USED TO TEMPORARILY FILL PIER DEPRESSIONS.

VERIFY JOIST ORIENTATION w/ ROOF FRAMING PLAN AND DETAILS



## O'REILLY AUTO PARTS DOLTON PLAZA

1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

THIS DRAWING  
NOT FOR CONSTRUCTION  
FOR BIDDING  
NOT FOR CONTRACTING  
NOT FOR CONSTRUCTION

KMA & ASSOCIATES, INC. ARCHITECTS  
SUITE F  
60015-5225  
FAX (847) 945-6869

SHEET TITLE  
WALL SECTION

1906

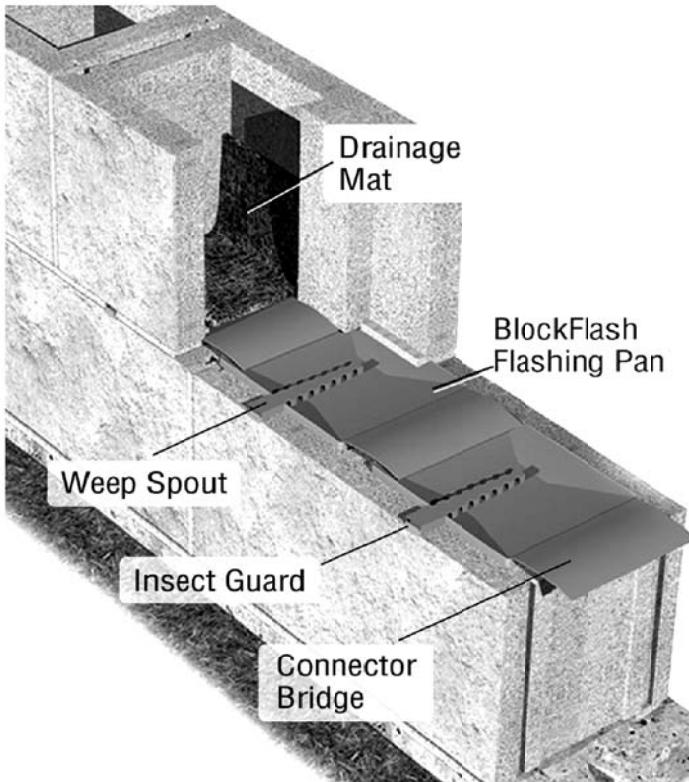
A  
4

REVISIONS

1/2/9  
1/2/9  
1/2/9  
1/2/9

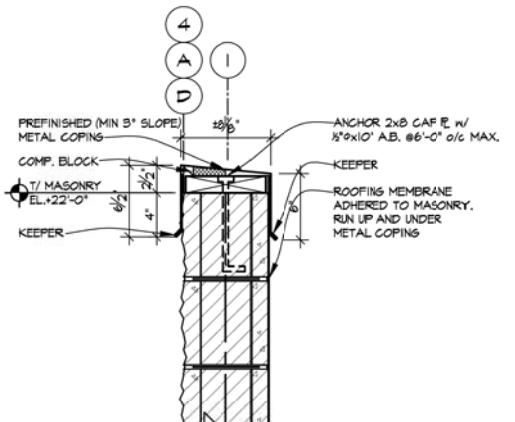
6015-5225  
FAX (847) 945-6869



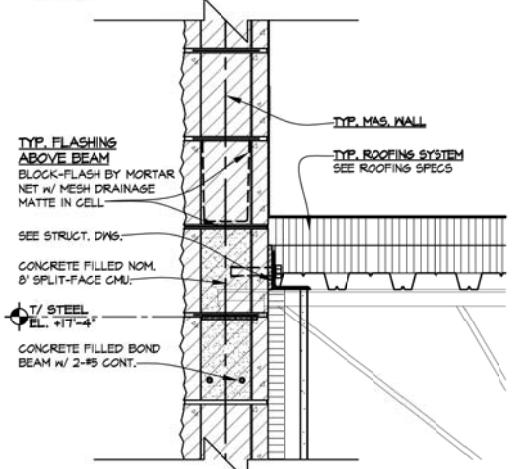


**SINGLE NYTHE THRU-WALL MASONRY  
BLOCKFLASH INSTALLATION NOTES**

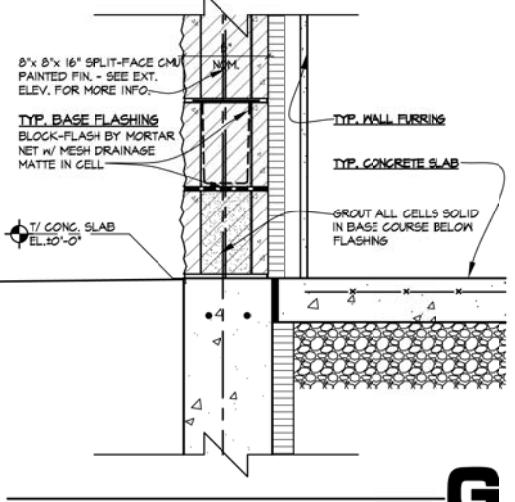
1. BlockFlash is a product of Mortar Net Solutions. Provide BlockFlash near base of wall & above all intel. steel beams, solid cores, bond beams and above any multi-nythe condition.
2. See all wall sections for complete information.
3. BlockFlash is to be installed ABOVE GRADE ONLY.
  - a. Fully grout masonry cores / cells directly below BlockFlash for one course minimum.
  - b. Install the BlockFlash course by spacing BlockFlash Pan units over the cores of each block.
  - c. Use the reference lip on bottom of the BlockFlash spout to position the pan against front of block. The drip edge on the weep spout will extend slightly. Make sure the connector bridges overlap the next pan this will divert water into adjoining BlockFlash pans.
  - d. Continue BlockFlash a minimum of one cell beyond edge of any intel opening.
4. Vertical rebar/grouted cells/corners: Where walls are reinforced, eliminate the BlockFlash pan at the grouted core and detach the connector bridge from the adjoining pan by bending it back and forth a few times. You same technique for corners. Cross bed webs adjacent to the grouted core making sure to overlap the BlockFlash flange. Use same technique for corners.
5. Mortar spreading: Use standard mortar spreading techniques with mortar lapped, first over the inner and second over the outer flanges of the BlockFlash pane. This will stabilize the pane during the installation and later help divert moisture into the BlockFlash pane. Cross bed mortar front to back on both sides of the grouted cells to prevent grout from flowing onto pans adjacent to grouted cells.
6. Drainage: With 8, 10 and 12 inch pans install one 7" x 16" Drainage Mat in each CMU core in the course directly above the pan course. With 6 inch pans install one 7" x 14" Drainage Mat in each CMU core directly above the pan course. 6 inch pan should run continuously so the bridge of each pan overlaps onto the pan next to it as with other sizes, but the 6 inch size pan may not align perfectly over every CMU cell or structural brick core. The Drainage Mat for all sizes should be installed front and back of CMU cells not side to side, and should touch both walls of the CMU and the BackFlash pan. Properly installed Drainage Mats catch and suspend mortar droppings above the pans and provide pathways for water to flow past the droppings to the pans.
7. Tooling-Tool all head and bed joints and remove any obstruction from the weep spouts.



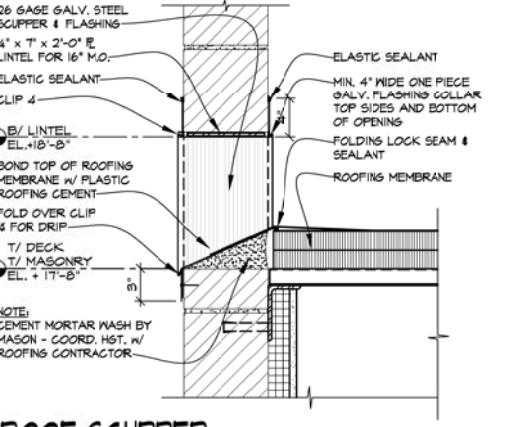
SCALE: 1 1/2" = 1'-0"



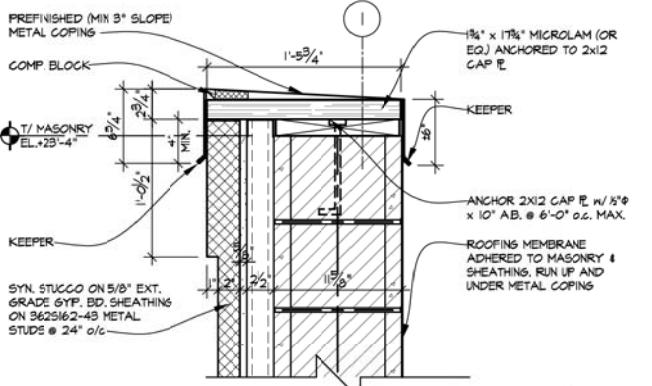
SCALE: 1 1/2" = 1'-0"



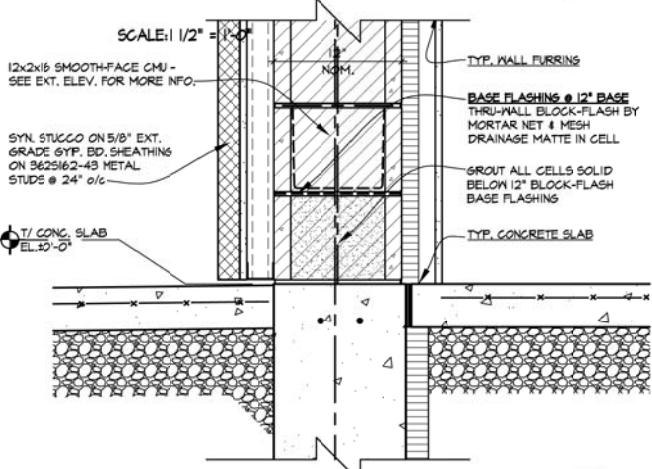
SCALE: 1 1/2" = 1'-0"



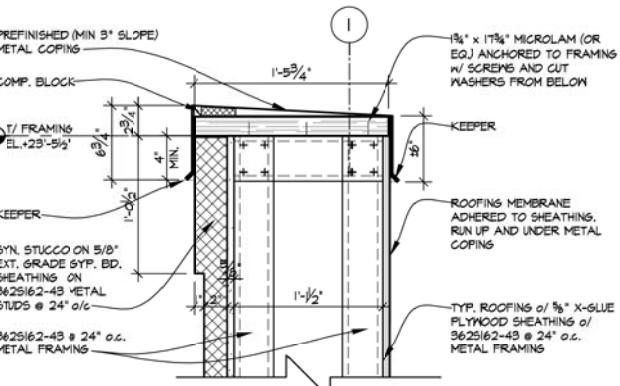
SCALE: 1 1/2" = 1'-0"



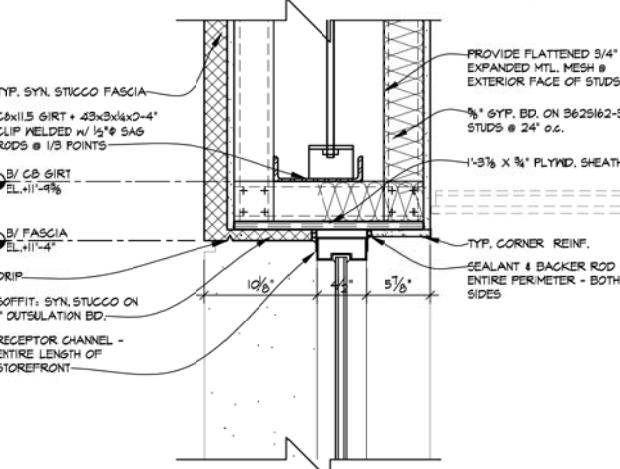
SCALE: 1 1/2" = 1'-0"



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



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



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

<b>EXTRUDED POLYSTYRENE INSULATION BOARD</b> POLYSTYRENE BOARD INSULATION IS LIMITED TO A FLAME SPREAD OF 25 OR LESS (ACTUAL = 5) AND A SMOKE DEVELOPED RATING OF 450 OR LESS (ACTUAL = 165) PER ASTM E84. INSULATION AND STUDS TO BE FACED WITH A FACE LAYER OF $\frac{1}{2}$ " FIRECODE "C" GYPSUM DRYWALL PROTECTION AS REQUIRED BY CODE.
<b>FIBERGLASS INSULATION</b> FIBERGLASS INSULATION TO BE TYPE FLAME SPREAD 25 INSULATION, FACED WITH A VAPOR BARRIER OF MAX. LO PERM RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 96. THE FLAME SPREAD INDEX OF $\leq 25$ AND A SMOKE DEVELOPED INDEX OF $\leq 50$ PER ASTM E84.
<b>PLYWOOD SHEATHING</b> ALL PLYWOOD ROOF & WALL SHEATHING SHALL BE FASTENED w/ #8 SCREWS $\#6$ O.C. @ SUPPORTED PLYWOOD EDGES, AND $12$ O.C. @ INTERMEDIATE SUPPORTS, U.N.O. ROOF & WALL PLYWOOD SHEATHING TO MEET DOG PS 1 OR 2 STANDARDS
<b>GYPSUM BOARD &amp; ACCESSORIES</b> ALL GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO THE APPROPRIATE STANDARDS LISTED BELOW: ACCEESSORIES FOR GYPSUM BD.....ASTM C 1047 GYPSUM WALLBOARD.....ASTM C 74 JOINT REIN. TAPE & COMPOUND.....ASTM C 474; C 479 STEEP REIN. TAPE.....ASTM C 1220 STEEL STUDS, NO-LOAD BEARING.....ASTM C 645 WATER RESISTANT GYP. BACKING BD.....ASTM C 630 FIBER REINF. GYPSUM PANELS.....ASTM C 1218 TESTING GYPSUM AND GYPSUM PRODUCTS.....ASTM C 22; C 472; C 479

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

**SHEET TITLE**  
WALL SECTION DETAILS

1906

**A 4.1**

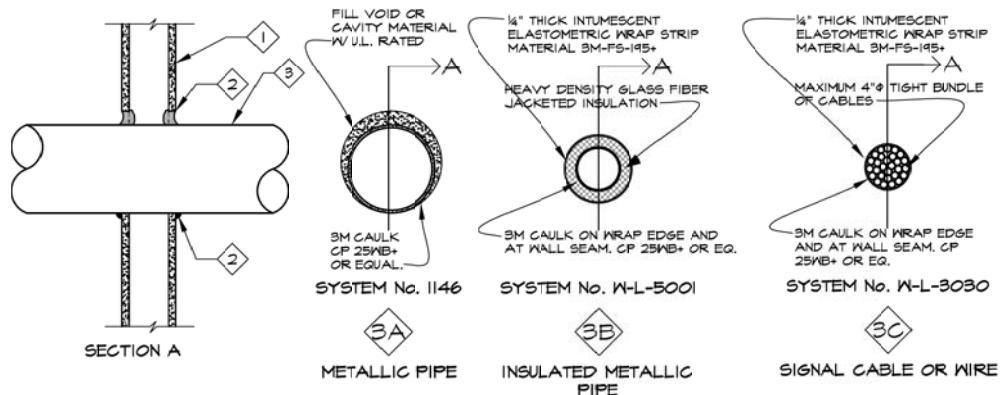
THIS DRAWING	NOT FOR COORDINATION	NOT FOR BIDDING	NOT FOR PERMIT	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION
KMA & ASSOCIATES, INC. ARCHITECTS 1121 LAKE COOK ROAD DEERFIELD, ILLINOIS (847)945-6869	SUITE F 60015-5225				FAX(847)945-6869

**REVISIONS**

1/2/9  
1/2/9  
1/2/9  
1/2/9

## INTERIOR FINISH SCHEDULE

SEE BWCO DRAWINGS  
FOR INTERIOR FINISHES



### TYPICAL DEMISING WALL PENETRANT RESTORATION DETAIL

SCALE:  $\frac{1}{4}$ " = 1'-0"

#### DRAWING LEGEND NOTES

- 1 WALL ASSEMBLY
- 2  $\frac{1}{8}$ " THICK MINIMUM CAULK 3M CP 25WB+ OR EQUAL
- 3 THROUGH WALL PENETRANT
- 3A METALLIC PIPE (SYSTEM W-L 1146)
  - 1 STEEL PIPE 12 $\frac{1}{2}$ " (OR SMALLER) SCHED. 10 (OR HEAVIER)
  - 2 IRON PIPE 12 $\frac{1}{2}$ " (OR SMALLER)
  - 3 CONDUIT 6 $\frac{1}{2}$ " (OR SMALLER)
- 3B INSULATED METALLIC PIPE (SYSTEM W-L 5001)
  - 1 STEEL PIPE 12 $\frac{1}{2}$ " (OR SMALLER) SCHED. 10 (OR HEAVIER)
  - 2 COPPER TUBING 6 $\frac{1}{2}$ " (OR SMALLER) TYPE L (OR HEAVIER)
  - 3 COPPER PIPE, 6 $\frac{1}{2}$ " (OR SMALLER) REGULAR (OR HEAVIER)
- 3C SIGNAL CABLE OR WIRE (SYSTEM W-L 5001)

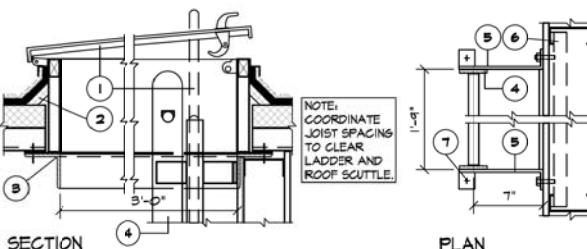
NOTE:  
CONSULT INDIVIDUAL PENETRATION SYSTEM DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY FOR ADDITIONAL INFO.

- 4 COPPER TUBING, 6 $\frac{1}{2}$ " (OR SMALLER) TYPE L (OR HEAVIER)
- 5 COPPER PIPE, 6 $\frac{1}{2}$ " (OR SMALLER) REGULAR (OR HEAVIER)

#### 3B INSULATED METALLIC PIPE (SYSTEM W-L 5001)

- 1 STEEL PIPE 12 $\frac{1}{2}$ " (OR SMALLER) SCHED. 10 (OR HEAVIER)
- 2 COPPER TUBING 6 $\frac{1}{2}$ " (OR SMALLER) TYPE L (OR HEAVIER)
- 3 COPPER PIPE, 6 $\frac{1}{2}$ " (OR SMALLER) REGULAR (OR HEAVIER)

#### 3C SIGNAL CABLE OR WIRE (SYSTEM W-L 5001)



#### KEYED NOTES

- 1 ROOF SCUTTLE - 2 $\frac{1}{2}$ " X 3 $\frac{1}{2}$ " TYPE "S" WITH "LADDER-UP" SAFETY POST MODEL 2 BY BILCO CO. SECURE SCUTTLE TO ROOF STRUCTURAL STEEL WITH THRU BOLTS ACCORDING TO MANUFACTURER'S DIRECTIONS. HINGE PINS ARE TO BE WELDED NON-REMOVEABLE.
- 2 STANDARD 1" FIBER GANT, BUILT UP ROOFING & COUNTER FLASHING.
- 3 3 $\frac{1}{2}$ " X 5 $\frac{1}{2}$ " X 14" ANGLED WELDED FRAME, EXTEND AND SECURE TO BUILDING ROOF STRUCTURE AS REQUIRED.
- 4 2 $\frac{1}{2}$ " X 5 $\frac{1}{2}$ " FLAT STL. BAR SIDE RAILS, 1" DIA. STL. RUNGS PUNCHED INTO RAILS 12 $\frac{1}{2}$ " O.C. & WELDED W/ MTL. "MEBA" SLIP-RESISTANT RUNG COVERS W/ A FINISH COAT RUST INHIBITIVE PAINT.
- 5 PROVIDE 24 $\frac{1}{2}$ " X  $\frac{3}{8}$ " THICK FLAT BENT STEEL BRACKETS AT MAX. 4 $\frac{1}{2}$ " CENTERS, WELD TO SIDE RAILS, WELD TOP TO STEEL ANGLE FRAME.
- 6 AT METAL STUD WALL, PROVIDE 1 $\frac{1}{2}$ " G.R. STEEL REINFORCING CHANNELS WITH WELDED 1 $\frac{1}{2}$ " THRU BOLTS TO RECEIVE BRACKETS, CUT STUD FLANGES TO RECEIVE REINFORCING CHANNEL. AT MASONRY, FASTEN BRACKETS WITH  $\frac{3}{8}$ " X 2 $\frac{1}{2}$ " WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.
- 7 PROVIDE 2 $\frac{1}{2}$ " X 2 $\frac{1}{2}$ " X  $\frac{3}{8}$ " WELDED CLIP ANGLES SECURED TO CONCRETE FLOOR WITH 1 $\frac{1}{2}$ " X 2 $\frac{1}{2}$ " WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.

#### LADDER & SCUTTLE DETAIL

SCALE:  $\frac{3}{4}$ " = 1'-0"

**2**

SCALE: NONE

## DOOR SCHEDULE

MK	DOOR			DOOR HARDWARE		FRAME			DETAILS			FIRE RATING	REMARKS (REFER NOTES)	
	SIZE (W X H X D)	TYPE	SWING	MATERIAL	GLAZ. TYPE	SET #	KEYED	TYPE	MATERIAL	HEAD HEIGHT	HEAD	JAMB	SILL	
1	3'-0" X 7'-0" X 1-3/4" (EXTERIOR ENTRY DOOR)	A	REFER TO FLOOR PLAN	ALUMINUM		1	A	1	ALUMINUM					1, 2
2	3'-0" X 7'-0" X 1-3/4" (DELIVERY DOOR)	B	REFER TO FLOOR PLAN	INSULATED METAL		2	A	2	INSULATED METAL	4"	SEE 3/A1			1, 2, 3
3	6'-0" X 8'-0" (OVERHEAD DELIVERY DOOR)	D	SECTIONAL OVERHEAD	INSULATED METAL		3			MANUFACTURER'S STANDARDS		SEE 4/A1			1

SEE BWCO DRAWINGS FOR INTERIOR DOORS

7	3'-0" X 7'-0" X 1-3/4" (INTERIOR EGRESS DOOR)	B	REFER TO FLOOR PLAN	INSULATED METAL		6		2	INSULATED METAL	4"	SEE 3/A1		1, 3
8	3'-0" X 7'-0" X 1-3/4" (INTERIOR PATRIOT DOOR)	A	REFER TO FLOOR PLAN	ALUMINUM		7		1	ALUMINUM				1

NOTES:  
1. ALL DOORS SHALL BE SHOP PREPARED FOR HARDWARE.  
2. ALL EXTERIOR DOORS TO BE KEYED ALIKE. CONTRACTOR TO FIELD VERIFY AND MATCH CORE OF DOOR MARKED "2".  
3. EXTERIOR DOOR, FRAME AND HARDWARE OWNER FURNISHED AND CONTRACTOR INSTALLED. VERIFY W/G.C.  
4. CONTRACTOR'S OPTION TO PURCHASE INTERIOR DOORS, FRAMES, AND HARDWARE THROUGH PREFERRED VENDOR. REFER TO SCOPE OF WORK SCHEDULE.

LOCKNET  
100 COURCHELLE DRIVE  
NICHOLASVILLE, KY 40356  
PHONE: 859-881-4307 EXT 133  
FAX: 859-881-5499  
EMAIL: construction@locknet.com

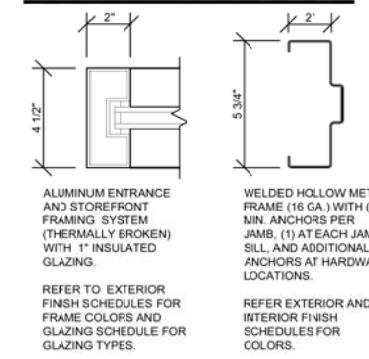
SPECIAL NOTE:  
UNLESS OTHERWISE INDICATED, KNOCK JOHN (KD) TYPE DOOR FRAMES ARE NOT PERMITTED.

## GENERAL NOTES

- (A) N/A
- (B) N/A
- (C) REFER TO FLOOR PLAN, ELEVATIONS, AND SECTIONS FOR ADDITIONAL REQUIREMENTS.
- (D) REFER TO EXTERIOR SCHEDULES FOR COLORS. PERIMETER SEALANT COLOR TO MATCH FRAME COLOR UNLESS OTHERWISE INDICATED.

## FRAME TYPES

(SCALE 3" = 1'-0")



1

2

## ROOFING SYSTEM SPECIFICATIONS:

1. BASE BID - TYP. EPDM ROOF SYSTEM  
FULLY-ADHERED MIN. 45 MIL BLACK EPDM ROOFING MEMBRANE OVER POLYISOCYANURATE INSULATION.
2. ALTERNATE BID - TYP. TPO SINGLE PLY ROOFING SYSTEM, MIN. 45 MIL WHITE TPO THERMOPLASTIC POLYOLEFIN SINGLE-PLY ROOFING MEMBRANE (MEETING ASTM STANDARDS D2141, D2170, D3104 FOR MATERIAL USED), OVER POLYISOCYANURATE INSULATION.
3. PROVIDE MINIMUM 2 LAYERS OF POLYISOCYANURATE INSULATION MECHANICALLY FASTENED TO 1/2" METAL ROOF DECK. MINIMUM INSULATION "R" VALUE SHALL BE 20. (SINGLE LAYER WILL NOT ACHIEVE REQUIRED "R" VALUE & THICKNESS). TOTAL ROOF SYSTEM SHALL HAVE 40 MPH WIND RESISTANCE, PHYSICAL INTEGRITY AND IMPACT RESISTANCE IN ACCORDANCE WITH ASTM G55, D2146 AND D4271. ALL ROOF COMPONENTS TO BE INSTALLED PER MANUF. INSTRUCTIONS. ROOF COVERING MIN. GLASS "C" CONSTRUCTION; WHEN TESTED IN ACCORDANCE WITH UL 790 & 1256.
4. ROOFING SYSTEM SHALL HAVE FIFTEEN (15) YEAR WARRANTY FROM DATE OF SUBSTANTIAL COMPLETION. ROOFING SYSTEM SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR, APPROVED BY ROOFING SYSTEM MANUFACTURER, TO INSTALL MANUFACTURER'S PRODUCTS. ROOFING SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH THE ROOFING SYSTEM MANUFACTURER'S WRITTEN TECHNICAL SPECIFICATIONS. PROVIDE ROOFING SYSTEM BY THE FOLLOWING APPROVED MANUFACTURERS OR APPROVED EQUAL:
  - FIRESTONE BUILDING PRODUCTS (800)428-4442
  - CARLISLE, INC. (717)245-1000
  - JOHNS MANVILLE (800)654-3103

## ROOF PLAN

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

**1**

## DOOR HARDWARE SCHEDULE

ANOTES:

1. ALL HARDWARE TO BE ADA AND ANSI COMPLIANT.  
2. VERIFY COMPATIBILITY OF HARDWARE SPECIFIED. NOTIFY ARCHITECT OF INCOMPATIBILITY ISSUES PRIOR TO ORDERING AND INSTALLATION.

SET NO. 1 (DR. 1) - EXTERIOR STOREFRONT DOOR

1 CYLINDER: 20-062 X US28D - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)

1 PAIR OFFSET PIVOTS: 195/188 X 626..... RIXON

1 DEADLOCK: MS1850S X 626..... ADAMS RITE

1 DEADLOCK LEVER: 4550 X 626..... ADAMS RITE

1 STRIKE: MS4002 X 4550 X 626..... EFCO

1 SET PUSH/PULLS: 86-151 ULTRALINE W/ OFFSET PULL X 626..... LCN

1 CLOSER: 4041-3077-187J-TB X 689 (ADJ. TO 8.5 LBS.)..... PEMKO

1 SET PERIMETER GASKETS: POLYMERIC BULB X LENGTH REQUIRED..... PEMKO

1 SWEEP: 345AP X LENGTH REQUIRED..... PEMKO

1 THRESHOLD: 270A X LENGTH REQUIRED (OFFSET PIVOT COMPATIBLE)..... PEMKO

1 ANSI & ADA COMPLIANT..... PEMKO

SET NO. 2 (DR. 2) - CONTINUOUS HINGE

1 CONTINUOUS HINGE: 780-112HD X LENGTH REQUIRED X 626..... HAGER

1 CYLINDER: 20-057 X 626 - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

1 EXIT PANIC LOCK: 930CB X 486 X 689 - PRTO3 X 630..... DORMA

1 CLOSER: 860-860 X 689 (ADJ. TO 8.5 LBS.)..... DORMA

1 SET PERIMETER GASKETS: QEBD-500 X LENGTH REQ'D..... SCHLEGEL

1 LATCH GUARD: LG100Z/SF X 626 (STRAIGHT W/ PIN W/ SEX BOLTS)..... LATCHGUARD

1 DOOR VIEWER: 689-190 DEGREE X 626..... IVES

1 KICK PLATE: 190S X 134" X 626..... HAGAR

1 DOOR BOTTOM SEAL: 3132I X LENGTH REQUIRED..... GLOBAL

1 THRESHOLD: 31206 X LENGTH REQUIRED..... GLOBAL

SET NO. 3 (DR. 3) - OVERHEAD DELIVERY DOOR

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH OVERHEAD DOOR SYSTEM)

1 PAIR OFFSET PIVOTS: 195/188 X 626..... RIXON

1 SET PUSH/PULLS: 86-151 ULTRALINE W/ OFFSET PULL X 626..... EFCO

1 CLOSER: 4041-3077-187J-TB X AL (ADJ. TO 8.5 LBS.)..... LCN

1 SET PERIMETER GASKETS: POLYMERIC BULB X LENGTH REQUIRED..... PEMKO

## REVISIONS

THIS DRAWING

FOR COORDINATION

6/4/14

FOR BIDDING

11/2/14

FOR PERMIT

11/2/14

NOT FOR CONTRACTING

NOT FOR CONSTRUCTION

REVISIONS  
THIS DRAWING  
NOT FOR COORDINATION  
FOR INFORMATION  
FOR PERMIT  
NOT FOR CONTRACTING  
NOT FOR CONSTRUCTION

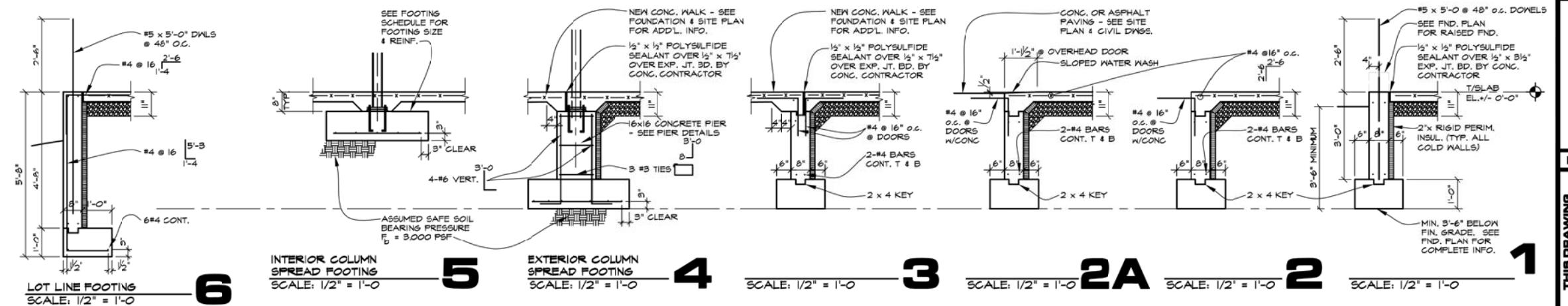
KMA & ASSOCIATES, INC. ARCHITECTS  
SUITE F  
DEERFIELD, ILLINOIS  
(847) 945-6869  
FAX (847) 945-0284

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

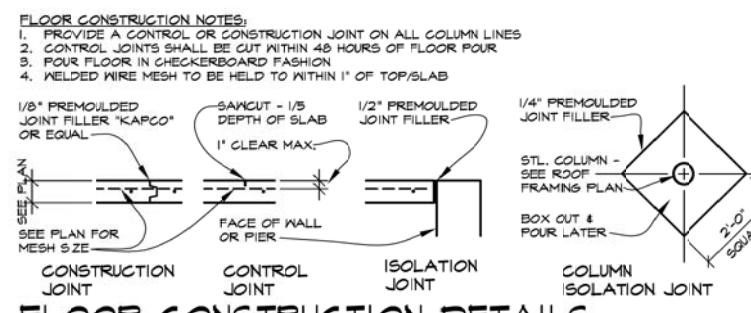
SHEET TITLE  
FOUNDATION PLAN  
SPECIFICATIONS  
DETAILS

1906

S  
1

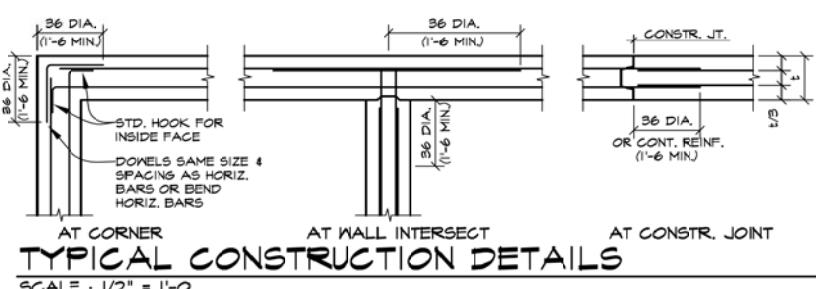


FOOTING SCHEDULE							
MARK	PAD		PIER		SIZE	VERT. REINF.	TIES
	SIZE	REINF. EA. WAY	BOTTOM ELEV.	SIZE	REINF.		
P1	4'-6" x 4'-6" x 1'-0"	4 #4 EM	(-1)-0	16 x 16	4 #6	#3 @ 12	-0-8
P2	5'-6" x 5'-6" x 1'-0"	6 #4 EM	(-4)-6				



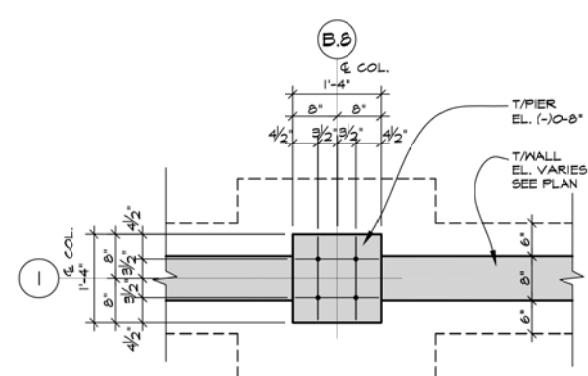
### FLOOR CONSTRUCTION DETAILS

SCALE: 1/2" = 1'-0



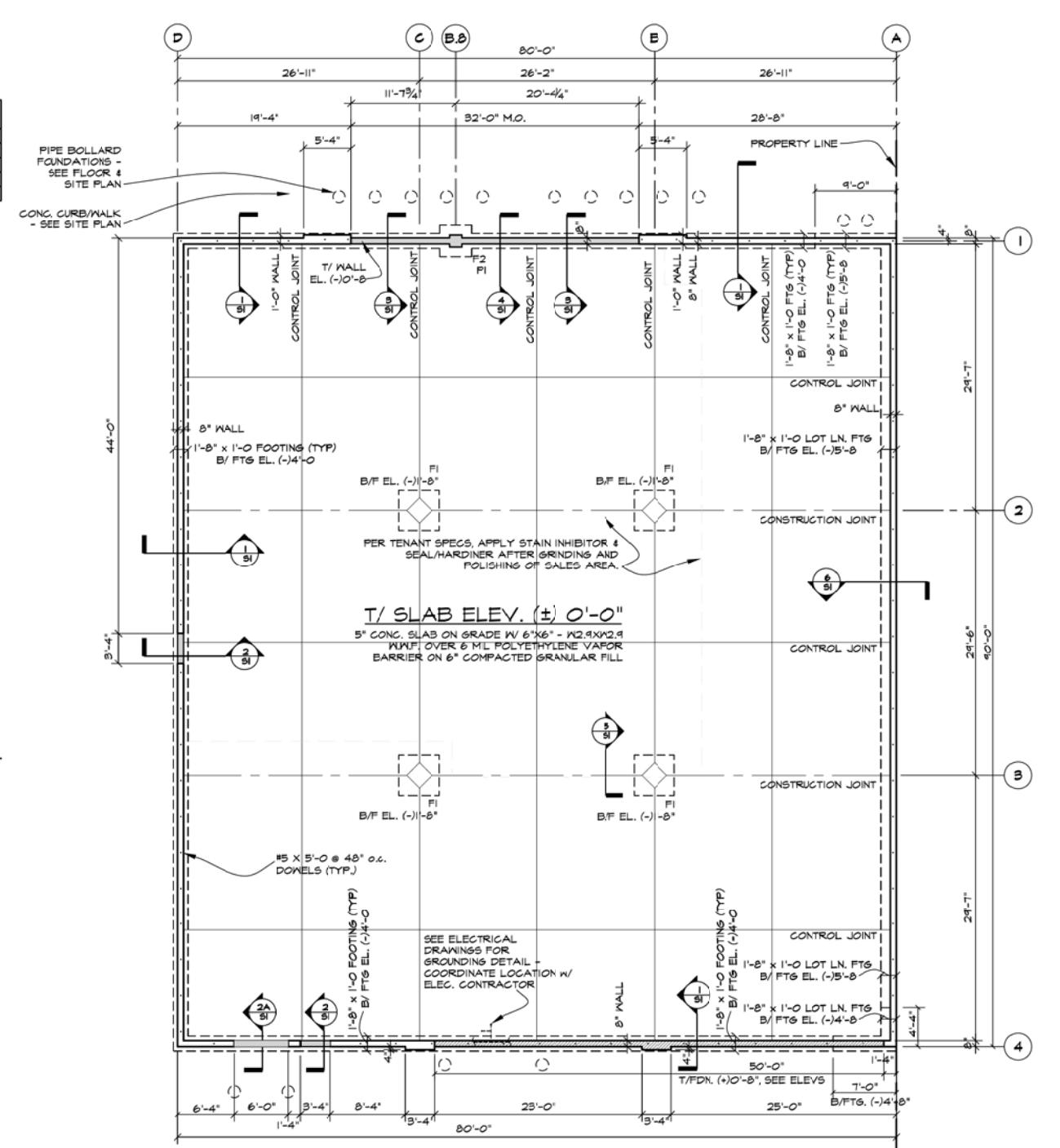
### TYPICAL CONSTRUCTION DETAILS

SCALE: 1/2" = 1'-0



### PIER DETAILS

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



### FOUNDATION PLAN

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



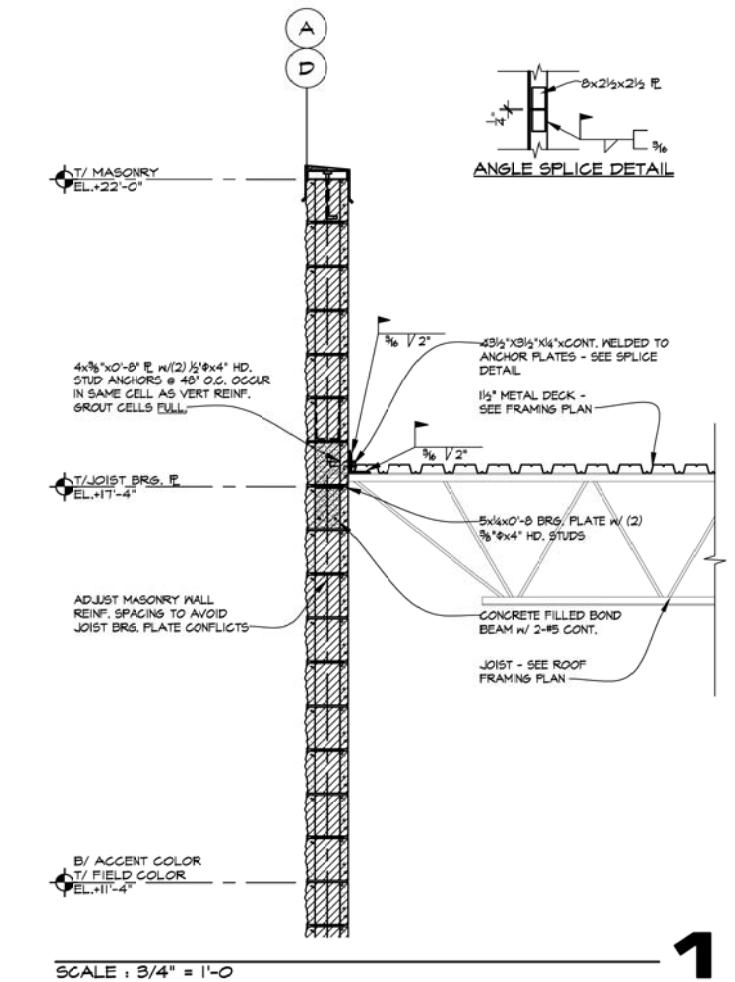
**REVISIONS**

THIS DRAWING	NOT FOR COORDINATION	SUITE F
	FOR BIDDING	60015-5225
	FOR PERMIT	FAX(847)945-6869
	NOT FOR CONTRACTING	(847)945-6869
	NOT FOR CONSTRUCTION	

**O'REILLY AUTO PARTS**  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

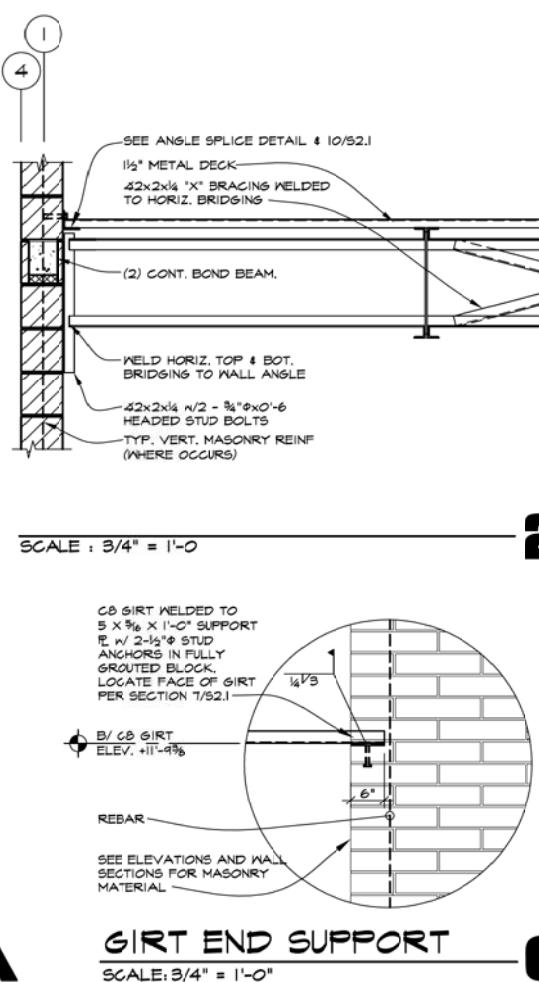
**SHEET TITLE**  
DETAILS  
**1906**

**2.1**



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

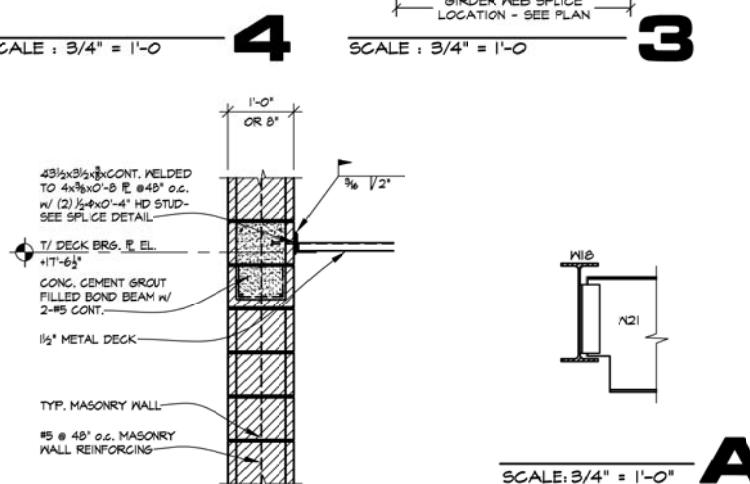
**1**



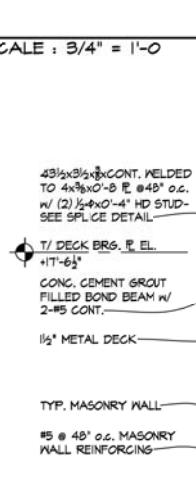
SCALE : 3/4" = 1'-0"

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

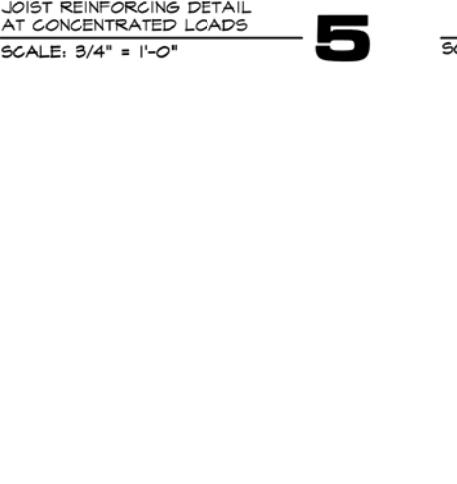
**2**



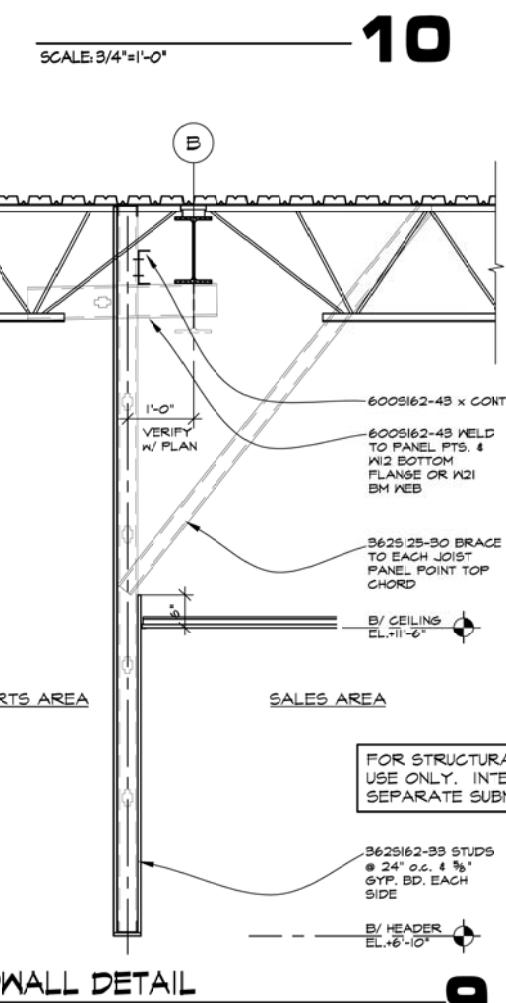
SCALE : 3/4" = 1'-0"



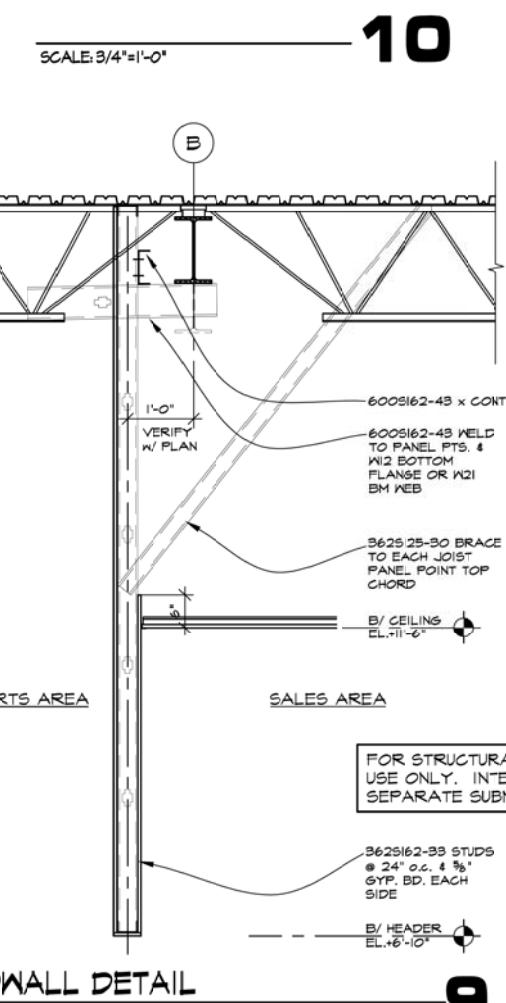
SCALE : 3/4" = 1'-0"



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



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

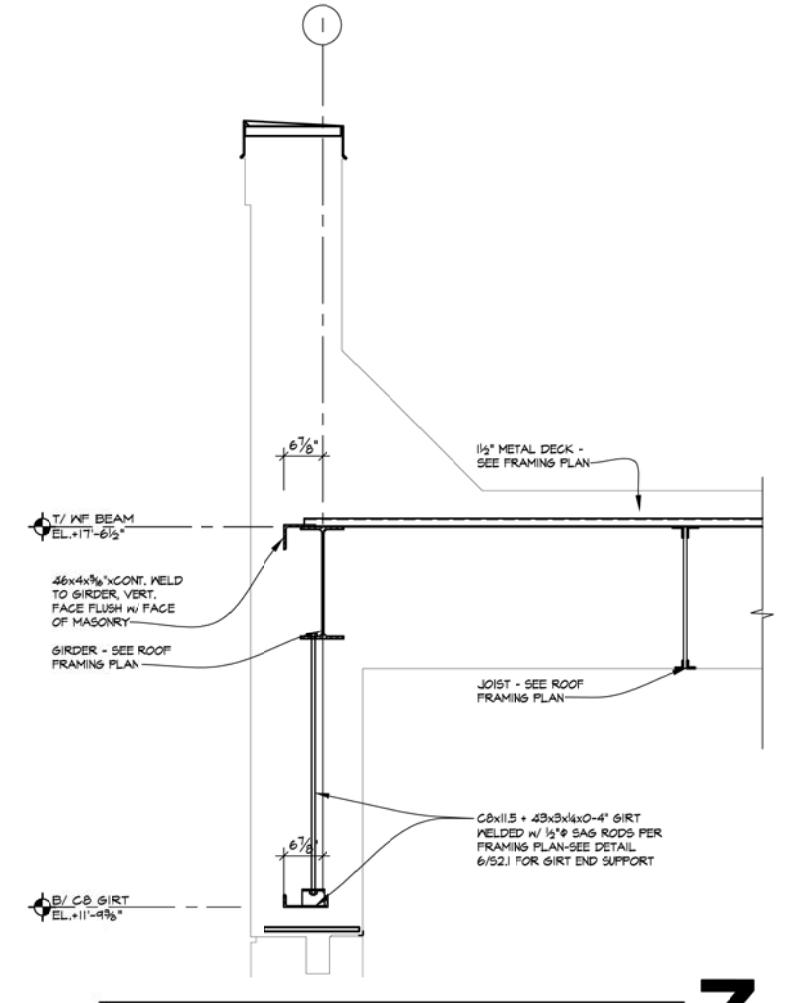


SCALE : 3/4" = 1'-0"

**8**

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

**9**



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

**9**

**10**

## PLUMBING FIXTURE SCHEDULE / ALL FIXTURES & FITTINGS MUST BE "LEAD FREE"

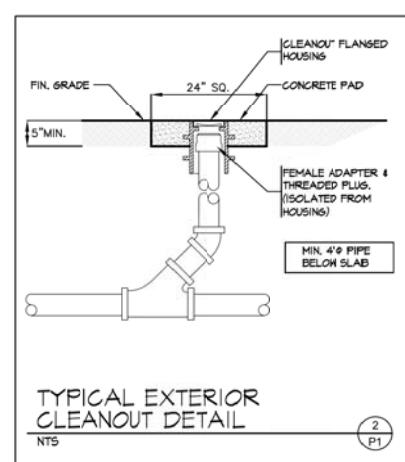
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	ACCESSORIES	PIPING REQUIREMENTS			REMARKS	APPROVED MANUFACTURERS	CODE APPROVALS
					WASTE	VENT	SUPPLY			
F.D.	FLOOR DRAIN	ZURN	ZN415-B-P	1/2" TRAP PRIMER CONNECTION	2"	2"	-	COMBINATION MASTIC VENT	MADE & JAY R. SMITH	ASSE 101-B
G.O.	CLEANOUT (INTERIOR)	JAY R. SMITH	4100	WCARPET CLAMPING RINGS WHERE REQUIRED	SEE PLAN	-	-	SAME SIZE AS LINE	MADE & ZURN	-
C.O.I	CLEANOUT (EXTERIOR)	JAY R. SMITH	4250	-	SEE PLAN	-	-	SAME SIZE AS LINE SEE DETAILS P2 & B/P2	MADE & ZURN	-

### PLUMBING NOTES

1. DRAWING IS DIAGRAMMATIC & IS NOT TO SCALE. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
2. ALL PLUMBING WORK IS TO BE DONE IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE CODE SUMMARY SHEET.
3. VALVES ON WATER LINES SHALL BE BRONZE BALL VALVES. DO NOT SUBSTITUTE GATE OR GLOBE VALVES. VALVES SHALL BE THE SAME SIZE AS THEIR INLET PIPING. (SPEC 20 05 00)
4. ALL PLUMBING FIXTURES ARE TO BE FURNISHED COMPLETE WITH NECESSARY STOPS, TRAPS, TAILPIECES, TRIM, ETC. (SPEC 22 40 00)
5. THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS & SUBCONTRACTORS IN LAYING HIS OUT & INSTALLING HIS WORK. COOPERATION DOES NOT MEAN IT WAS HERE FIRST.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE CONTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
- 7-HO. N/A
- II. CONTRACTOR SHALL COORDINATE WITH ALL STATE & LOCAL BUILDING REGULATION AGENCIES & UTILITY COMPANY(S) IN THE PROCUREMENT OF & PAYMENT OF ALL PERMITS, LICENSES, FEES & CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
- 12-13. N/A
14. ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A 1-COMPONENT NON-SAG URETHANE SEALANT. ANY CONTRACTOR WHO USED SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH A SPECIFIED SEALANT. (SPEC 01 92 00)
15. N/A
16. ALL GAS PIPING INSTALLATIONS SHALL COMPLY WITH "NFPA-54" NATURAL GAS OR "NFPA-58" LP GAS (latest edition).
17. N/A

### PLUMBING PIPE MATERIALS

- A. THE FOLLOWING APPLICATIONS ARE FOR INSIDE, BELOW & ABOVE THE BUILDING SLAB AND ENDING AT A POINT 5'-0" OUTSIDE THE PERIMETER BUILDING WALLS.
1. DOMESTIC WATER DISTRIBUTION PIPING BELOW GROUND: ALL INTERIOR DOMESTIC WATER PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING (SIL-FOS 7, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL). THIS IS REQUIRED FOR THE WATER SERVICE LINE COPPER TUBING (SIL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL). THIS IS REQUIRED FOR THE WATER SERVICE LINE FROM THE SHUT-OFF VALVE IN THE BUILDING TO A POINT 5 FEET OUTSIDE THE BUILDING.
  2. DOMESTIC WATER DISTRIBUTION PIPING ABOVE GROUND: HARD COPPER TUBE, TYPE ..
  3. SOIL, WASTE, AND VENT PIPING BELOW GROUND: SCHEDULE 40 POLY VINYL CHLORIDE (PVC) PLASTIC DWV PIPE;
  4. SOIL, WASTE, AND VENT PIPING ABOVE GROUND: HUBLESS CAST-IRON SOIL PIPE OR POLY VINYL CHLORIDE (PVC) PLASTIC DWV PIPE
  5. NOTE: PVC PIPING IS NOT PERMITTED IN AIR-HANDLING CEILING SPACES, USE ONLY CAST-IRON OR DUCTILE IRON PIPE IN THESE LOCATIONS.
- B. THE FOLLOWING APPLICATIONS ARE FOR ONLY FROM 5'-0" OUTSIDE THE BUILDING TO THE UTILITY POINT OF CONNECTION (POC).
- UNDERGROUND DOMESTIC WATER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC.  
(SEE SITE UTILITIES PLAN FOR WHICH PIPING MATERIAL (COPPER OR PVC) IS REQUIRED):
1. 3/4" - 1 1/4" SCHEDULE 40 PVC PIPE WITH SOLVENT-WELDED JOINTS.
  2. 1-1/2" - 3", SDR-21, PVC PIPE (ASTM D2241) CLASS 200, BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
  3. 3/4" - 3", TYPE "K" HARD DRAWN COPPER TUBING (SIL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL).
  4. 4" AND LARGER SDR-1 PVC PIPE (AMCA C-400) CLASS 150 BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
- UNDERGROUND SANITARY SEWER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC.
1. POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL CONFORM TO ASTM D2034 (SDR-35).
  2. CAST IRON OR DUCTILE IRON PIPE SHALL CONFORM TO USASI #A-21 CLASS 50.
- C. GAS PIPE MATERIAL:
- LOW-PRESSURE GAS SYSTEMS, ABOVE GROUND WITHIN OR OUTSIDE BUILDING:  
USE THE FOLLOWING:
1. 2" AND SMALLER: STEEL PIPE, MALLEABLE-IRON, THREADED FITTINGS, AND THREADED JOINTS.
  2. 2-1/2" AND LARGER: STEEL PIPE, BUTT-WELDING FITTINGS, AND HELD JOINTS.



TYPICAL EXTERIOR CLEANOUT DETAIL

N.T.S.

WATER SERVICE DETAIL

1 P1

### PIPING INSULATION NOTES

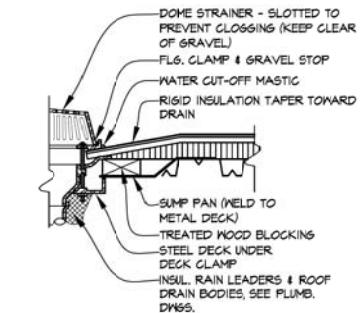
#### SCOPE:

FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID. PROVIDE PIPLING INSULATION ON NEW AND EXISTING PIPLING AS REQUIRED BY CONSTRUCTION DOCUMENTS. REPAIR OR REPLACE EXISTING PIPLING INSULATION WITHIN PROJECT AREA AS REQUIRED.

PIPLING INSULATION IS REQUIRED AT NEW AND EXISTING PIPLING PIPING INCLUDING: ALL DOMESTIC HOT WATER, EXPOSED DOMESTIC COLD WATER, DOMESTIC COLD WATER AGAINST AN EXTERIOR WALL, HVAC PIPLING & CONDENSATE LINES/DRAINS, INTERIOR HORIZONTAL AND VERTICAL ROOF DRAIN PIPLING AND INTERIOR ROOF DRAIN BODY.

#### SPECIFICATIONS:

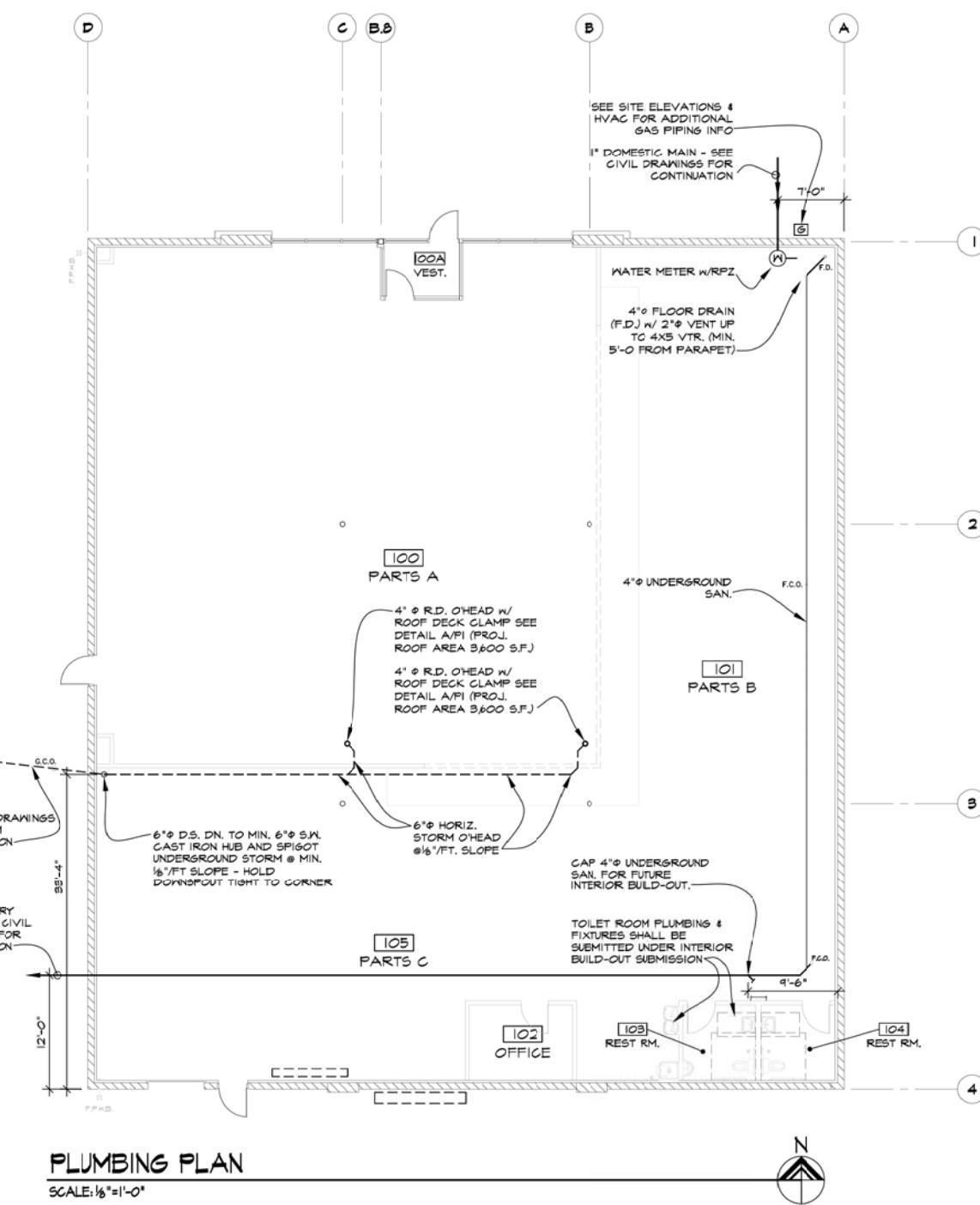
- A. ALL PIPLING (ABOVE FINISHED FLOOR) SHALL BE COVERED WITH ARMACELL AP/ARMAFLEX PIPE INSULATION IN ACCORDANCE WITH ASTM C-554, GRADE I, TYPE I FOR TUBULAR MATERIALS AND GRADE I, TYPE II FOR SHEET MATERIAL. MINIMUM PIPE INSULATION THICKNESS (PER ICC TABLE C403.11.3) AS FOLLOWS:
- B. ALL JOINTS SHALL BE SEALED WITH APPROVED MANUFACTURER'S ADHESIVE.
- C. ACCEPTABLE ALTERNATE MANUFACTURER: AEROCEL (BY AEROFLX INTERNATIONAL CO.) CLOSED CELL ELASTOMERIC THERMAL INSULATION.
- D. FIBERGLASS PIPE INSULATION, RIGID (NOT WRAP TYPE), ONE INCH THICK WITH BUILT-IN VAPOR BARRIER MAY BE USED IN LIEU OF ARMACELL PRODUCT SPECIFIED ON ALL PIPLING EXCEPT HOT WATER 1 1/2" PIPE OR LARGER. ACCEPTABLE MANUFACTURERS ARE ARMSTRONG, CERTAINTED, JOHNS-MANVILLE, KNAUF, AND OWENS-CORNING.
- E. FLAME SPREAD SHALL BE 25 OR LESS. SMOKE DEVELOPED SHALL BE 50 OR LESS.
- F. INSTALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



ROOF DRAIN

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

A



O'REILLY AUTO PARTS

DOLTON PLAZA

1317 E. SIBLEY BLVD. DOLTON, IL 60419

FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE

PLUMBING PLAN

DETAILS

1906

P

1

REVISIONS	
THIS DRAWING	NOT FOR COORDINATION
FOR BIDDING	1/1/2019
FOR PERMIT	1/1/2019
FOR CONTRACTING	NOT FOR CONSTRUCTION



KMA & ASSOCIATES, INC.

ARCHITECTS

SUITE F

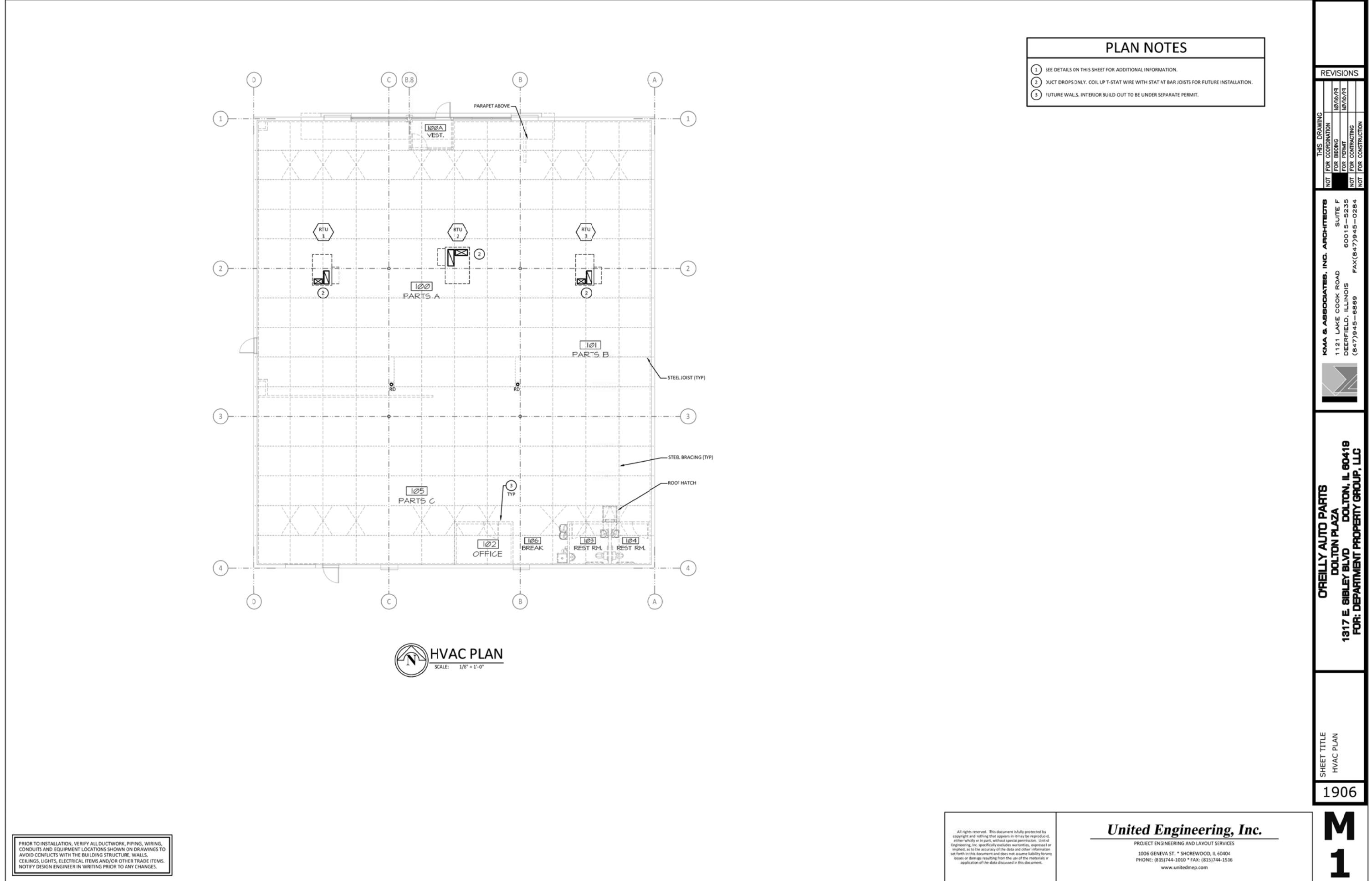
60015-5235

FAX(847)945-6869

1121 LAKE COOK ROAD

DEERFIELD, ILLINOIS

(847)945-6869



PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

1957-1 United Engineering, Inc., 1006 Geneva Street, Shorewood IL 60404, 815-744-1010

All rights reserved. This document is fully protected by copyright and nothing that appears in it may be reproduced, either wholly or in part, without special permission. Unisys Engineering, Inc. specifically excludes warranties, expressed or implied, as to the accuracy of the data and other information contained in this document and does not assume liability for any losses or damage resulting from the use of the materials or application of the data discussed in this document.

**United Engineering, Inc.**  
PROJECT ENGINEERING AND LAYOUT SERVICES  
1006 GENEVA ST. • SHOREWOOD, IL 60404  
PHONE: (815)744-1010 • FAX: (815)744-1516  
[www.unitedmep.com](http://www.unitedmep.com)

SHEET TITLE  
HVAC PLAN

M  
1

REVISIONS	
THIS DRAWING	NOT FOR COORDINATION
	FOR BIDDING
	FOR PERMIT
	NOT FOR CONTRACTING
	NOT FOR CONSTRUCTION

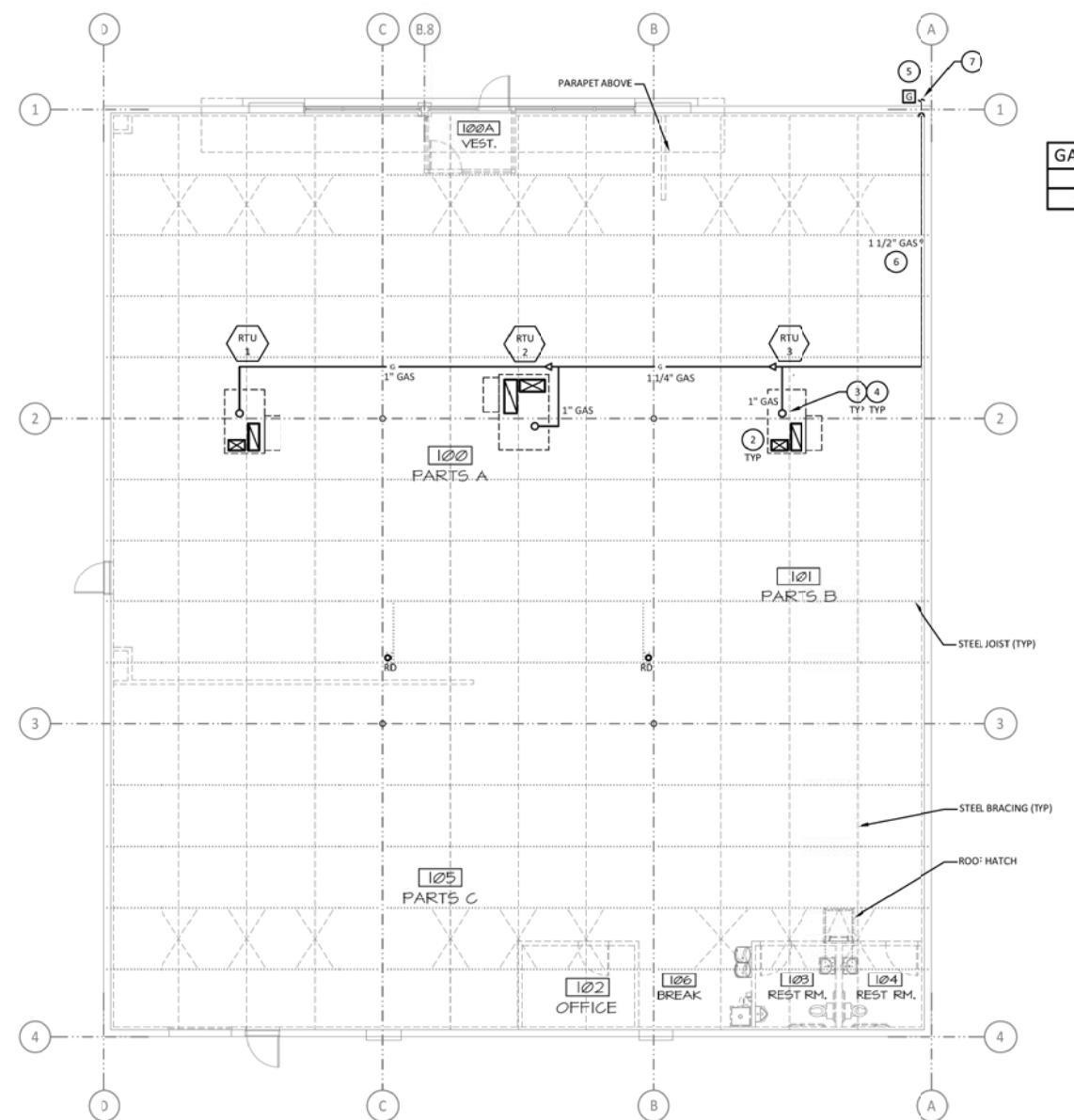
KMA & ASSOCIATES, INC. ARCHITECTS  
1121 LAKE COOK ROAD  
SUITE F  
DEERFIELD, ILLINOIS 60015-5235  
(847)45-6869  
FAX(847)945-0284



O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD.  
DOLTON, IL 60418  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
GAS PIPING PLAN  
1906

M  
2



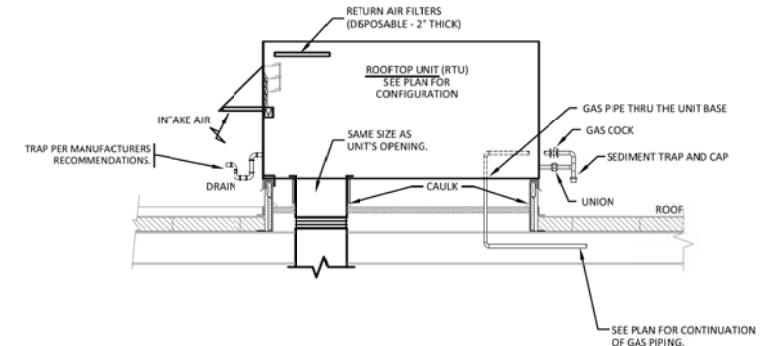
GAS PIPING PLAN

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

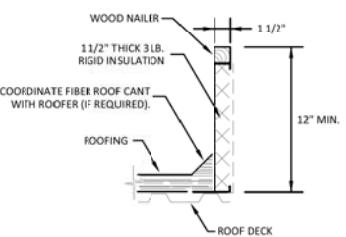
PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

PLAN NOTES	
1	SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
2	TYPICAL EQUIPMENT MOUNTED ON CURB. SEE ROOF CURB DETAIL #D-1-11A.
3	GAS PIPE UP IN CURB AND THRU UNIT BASE.
4	SEE GAS ROOF TOP UNIT DETAIL FOR GAS PIPING TRIM.
5	GAS METER LOCATION, COORDINATE METER SIZE AND LOCATION WITH GAS COMPANY. SEE GAS METER LOAD SCHEDULE.
6	RUN GAS PIPING BELOW ROOF. GAS PIPING TO BE INSTALLED ABOVE BOTTOM OF JOISTS WHEN POSSIBLE.
7	PAINT ALL EXTERIOR GAS PIPING TO MATCH COLOR OF EXTERIOR WALL.

GAS METER LOAD SCHEDULE		
TENANT	CFH	PRESSURE
100-RETAIL	480 (ALT)	6" W.C.



GAS ROOF TOP UNIT DETAIL  
(LOW PRESSURE) GAS PIPE INSIDE



RPS CORPORATION, MODEL: RC-2 OR EQUAL  
\* 18 GAUGE GALVANIZED STEEL  
\* WOOD NAILER  
\* UNITIZED CONSTRUCTION  
\* SLOPED CURB AS REQUIRED FOR ROOF PITCH  
\* INTERIOR LINING  
\* CAMPER SHELF (IF REQUIRED)

ROOF CURB DETAIL  
NO SCALE  
#D-1-11A

All rights reserved. This document is copyrighted by United Engineering, Inc. or in part, without special permission. United Engineering, Inc. specifically excludes warranties, express or implied, from this document. The information contained herein is set forth in this document and does not assume liability for any losses or damage resulting from the use of the materials or application of the data discussed in this document.

United Engineering, Inc.

PROJECT ENGINEERING AND LAYOUT SERVICES  
1006 GENEVA ST. \* SHOREWOOD, IL 60404  
PHONE: (815)744-1010 \* FAX: (815)744-1516  
www.unitedeng.com

STANDARD SYMBOLS LEGEND	
	EQUIPMENT TAG
	REVISION TAG
	COLUMN LINE TAG
N.I.C.	NOT IN CONTRACT
	POINT OF NEW CONNECTION
	PHOTO VIEW POINT
	SECTION/DETAIL IDENTIFIER
	SECTION CUT
	SHEET LOCATION
U.N.O.	UNLESS NOTED OTHERWISE

PROJECT NAME:		O'REILLY - DOLTON		PROJECT NUMBER:		1957-1										
IMC Ventilation	ROOM INPUT	OCCUPANCY				VENTILATION				EXHAUST			Equipment Note			
ROOM NUMBER & NAME	AREA (S.F.)	Ref. No.	CLASSIFICATION	P/1000	PEOPLE		Rp	Ra		Vbz	CFM	FIX	CFM/ S.F.	CFM	Equipment Note	
					CODE	ACTUAL		CFM/P	CFM							
100A-VESTIBULE	40	58	PS-CORRIDORS						0.06	2	2				RTU-2	
100-PARTS A	2,850	72	RET-SALES	15	42.8	43	7.5	323	0.12	342	665				RTU-12	
101-PARTS B	2,000	77	RET-STORAGE ROOMS							0.12	240	240				RTU-3
102-OFFICE	85	53	OFF-OFFICE SPACES	5	0.4	1	5	5	0.06	5	10					RTU-3
103-RESTROOM	60	63	PS-TOILET ROOMS (INT) (Jan Clos =: WC)										2	70	140	RTU-3, EF-1
104-RESTROOM	60	63	PS-TOILET ROOMS (INT) (Jan Clos =: WC)										1	70	70	RTU-3
105-PARTS C	1,650	77	RET-STORAGE ROOMS							0.12	198	198				RTU-12
106-BREAK	90	33	F&B-DINING ROOMS	70	6.3	4	7.5	30	0.18	16	46					RTU-3
			-													
	6,835				49	18			358		804	1,161	Vou		210	
					Ps =	48					D =	1				

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

ROOFTOP UNIT SCHEDULE				
	TAG	RTU-1	RTU-2	RTU-3
LOCATION SERVING	SALES/STOCK	SALES/STOCK	STOCK	
MANUFACTURER	CARRIER	CARRIER	CARRIER	
MODEL	48HCRAD6	48HCSD08	48HCRAD6	
TONS (NOMINAL)	5	7.5	5	
COOLING ENERGY EFFICIENCY		15.2 EER	12 EER	15.2 EER
REFRIGERANT TYPE		R-410A	R-410A	R-410A
SUPPLY FAN DATA	CFM	1,500	2,250	1,500
	ESP (DUCT ONLY)	0.75	0.75	0.75
	RPM	1173	759	1173
	BHP	0.81	0.86	0.81
COOLING CCIL DATA	MBH	59	90	59
	EAT (DB/WB)	81.5/67	81.5/67	81.5/67
	COILLAT (DB/WB)	54.5/54	54.5/53.5	54.5/54
	UNIT LAT (DB/WB)	56/55	55/54	56/55
HEATING DATA (MIN. REQ'D)	STAGES	1	2	1
	INPUT [MBH] (MAX)	115	125	115
	OUTPUT [MBH] (MAX)	93	103	93
HEATING DATA (ALTERNATE)	STAGES	2	2	2
	INPUT [MBH] (MAX)	150	180	150
	OUTPUT [MBH] (MAX)	120	150	120
ELECTRICAL DATA	STAGES	2	2	2
	MCA / MOPC	30/45	41/50	30/45
	VOLT	208	208	208
	PHASE	3	3	3
OUTDOOR AIR (CFM)		430	640	430
UNIT WEIGHT (LBS)		1,000	1,350	1,000
REMARKS / REFERENCES		1-10-21	1-10-21	1-10-21

## **SECTION 23 (HVAC)**

- SPECIFICATIONS ARE AS FOLLOWS:**  
GE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.

**WORKMANSHIP/WARRANTY -** CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS EAMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR REPAIRS ISSUED.

**EQUIPMENT MANUFACTURER INSTRUCTIONS -** CONTRACTOR TO FOLLOW EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE (IOM) MANUALS FOR ALL NEW EQUIPMENT. EQUIPMENT MANUFACTURER'S IOM INSTRUCTIONS SUPERSEDE ANY CONFLICTS WITH THESE ANNOTATIONS.

**DEBIDDED EQUIPMENT -** CONTRACTOR PRICING TO BE BASED ON THE SCHEDULED EQUIPMENT. SUBSTITUTIONS TO BE SUBMITTED AS DEDUCTS (OR ADDS) TO THE BASE CONTRACT ALONG WITH A DESCRIPTION OF THE DIFFERENCES. ALL SUBSTITUTIONS WILL REQUIRE THE CONTRACTOR TO SUBMIT DIGITAL SHOP DRAWINGS (IN AUTOCAD FORMAT) FOR REVIEW PRIOR TO INSTALLATION. THE REVISED DRAWINGS TO INCLUDE (BUT ARE NOT LIMITED TO) THE REVISED EQUIPMENT SPECIFICATION SCHEDULES, LOCATIONS, WEIGHTS, DUCTWORK, PIPING, WIRING, BREAKERS (ETC.), THE REVISED ANNOTATIONS TO SHOW THE ENTIRE SYSTEM AS THE SYSTEM WILL BE INSTALLED BY THE CONTRACTOR.

**SUBMITTALS -** CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT, AS SOON AS PRACTICABLE BEFORE CONSTRUCTION. CONTRACTOR TO EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES). NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED.

**DRAWINGS -** BEFORE INSTALLATION, PROVIDE 1/4" SCALE "SHOP DRAWINGS" FOR COORDINATION AND APPROVAL. "SHOP DRAWINGS" TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER TTEN APPROVAL FROM ENGINEER. ALL CONTRACTOR PROVIDED DRAWINGS TO BE MADE WITH "AUTOCAD" DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.]  
BUILT DRAWINGS - UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE "AS BUILT" CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, LOCATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. ALL AS BUILT DRAWING CHANGES TO BE MADE WITH AUTOCAD DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.]

**CONSTRUCTION DOCUMENTS -** CONTRACTOR TO EMAIL A MICROSOFT WORDS FORMAT FOLDER INCLUDING ALL REQUIRED PROJECT CLOSE OUT DOCUMENTS. THE WORDS FORMAT FOLDER TO INCLUDE SUB-FOLDERS AND TO BE LABELLED AS PER BELOW. [ALSO PROVIDE (3) EXACT PRINTED COPIES IN SEPARATE HARD BINDERS.]

- VADE NAME**  
**WARRANTY - WARRANTY LETTER INCLUDING THE AGREED UPON START DATE**  
**EQUIPMENT - COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT**  
**IOM - INSTALLATION, OPERATION AND/OR MAINTENANCE (IOM) MANUALS. INCLUDE PARTS LIST FOR EACH PIECE OF EQUIPMENT**  
**VENDORS LIST - LIST OF CONTACT INFORMATION INCLUDING CON'ACT NAME, PHONE NUMBER AND EMAIL ADDRESS FOR EQUIPMENT.**  
**AS BUILT DRAWING - AS BUILT DRAWING INCLUDING FINAL LOCATION FOR EACH PIECE OF EQUIPMENT**  
**TEST & BALANCE REPORT - REPORT OF ALL FINAL TESTED AND BALANCED AIR AND WATER SYSTEMS. SEE DIVISION 23 NOTES.**  
**ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. EACH TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, DAMPERS, FIRE DAMPERS, CLEAN OUTS, FROTH CONTROL ETC.**  
**STRUCTURE STRENGTH - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF ANY NEW SYSTEMS. WHERE FLOORS, STAIRS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFESTRUCTURAL CONDITION IN ACCORDANCE WITH ALL LOCAL, STATE OR NATIONAL CODES.**  
**FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING PROTECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.**  
**ACCESSIBILITY - MANUFACTURER ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.**  
**EARLY HVAC CONDITIONS:**  
• OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" AWAY FROM CONTAMINANT SOURCES.  
• B-VENTS A MINIMUM OF 3'-0" ABOVE ROOF PENETRATION AND/OR 2'-0" ABOVE ANY PART OF THE BUILDING WITHIN 10'-0". B-VENTS TO CLEAR OBSTACLES BY 3" MIN.  
• THERMOSTATS, SENSORS AND CONTROL PANELS FOR HVAC EQUIPMENT SHALL BE LOCATED IN ACCORDANCE WITH THE MECHANICAL PLANS. FURNISH INSTALL CLEAR LOCKING COVERS FOR ALL T-SLOTS. ALL COVERS TO BE KEYED THE SAME.  
• PROVIDE ENGRAVED TAGS FOR ALL HVAC EQUIPMENT.  
• PROVIDE FACTORY START UP FOR ALL EQUIPMENT.

## WORK ITEM SCHEDULE

ITEM	PROVIDED BY	INSTALLED BY	WIRED BY	NOTES/REMARKS
DET(S)	T	T	T	INSTALLED BY TENANT'S EMS CONTRACTOR (VERIFY)
SENSOR(S)	MC	MC	MC	INSTALLED BY TENANT'S EMS CONTRACTOR (VERIFY)
DETECTOR(S)	MC	MC	MC	PROVIDED WITH UNIT(S)
REMOTE TEST STATION(S)	MC	MC	MC	PROVIDED WITH UNIT(S)
REMOTE ALARM(S)/STROBE(S)	MC	MC	MC	PROVIDED WITH UNIT(S)
GRIDPOINT)	T	T	T	INSTALLED BY TENANT'S EMS CONTRACTOR
SENSOR(S)	MC	MC	MC	RTU'S (PROVIDED WITH UNITS) COORDINATE WITH EMS CONTRACTOR

MECHANICAL CONTRACTOR  
ELECTRICAL CONTRACTOR  
TENANT (MECHANICAL CONTRACTOR AND/OR GENERAL CONTRACTOR TO HIRE TENANT SUGGESTED EMS VENDOR.

## VISION 23 (HVAC-CONTROLS)

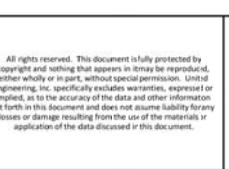
- GENERAL:**  
THE FOLLOWING ARE CONTROL SEQUENCES ONLY. CONTROLS DESIGN AND INSTALLATION TO BE BY LICENSED DESIGN/BUILD CONTROLS CONTRACTOR. CONTROL ACCESSORIES TO BE INSTALLED AND WIRED AS PER THE ORIGINAL EQUIPMENT MANUFACTURERS (OEM) REQUIREMENTS. NON-OPEN BUILT UP CONTROL EQUIPMENT TO BE HONEYWELL OR CARRIER. CONTROLS CONTRACTOR TO PROVIDE (4) SETS OF CONTROLS DIAGRAMS AND EQUIPMENT SUBMITTALS FOR APPROVAL. PRIOR TO INSTALLATION FOR ALL BUILD UP CONTROL SYSTEMS, MECHANICAL CONTRACTOR IS RESPONSIBLE FOR AND TO COORDINATE INSTALLATION OF CONTROLS, CONTROL WIRING AND CONTROLS EQUIPMENT REQUIRED FOR ALL MECHANICAL EQUIPMENT. COORDINATE

#### **LOCATION OF ALL NEW CONTROL PANELS**

- PACKAGED ROOFTOP AIR HANDLING UNITS - TO BE CONTROLLED BY GRIDPOINT EMS SYSTEM PROVIDED BY TENANT AND INSTALLED BY TENANT'S SUGGESTED GRIDPOINT EMS CONTRACTOR. MECHANICAL CONTRACTOR OR GENERAL CONTRACTOR TO HIRE EMS CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE WITH TENANT'S SUGGESTED EMS CONTRACTOR. SEE TENANT'S "VS SHEETS" FOR MORE INFORMATION.

Room Number	Common Ventilation System Correction							Ventilation Note	
	Supply (Cfm)			Ventilation (CFM)					
	Base	110% Target	110% Adjustd	110% Vpz	Voz	CFM	OA Fraction Zpz/Voz/Vpz		
101	111	100	100	1	2	2.4%	-		
1,943	2,143	2,150	2,150	1	665	30.9%	-		
908	1,002	990	990	1	240	24.2%	-		
265	292	260	260	1	10	3.9%	-		
18	20	50	50	1	-	-	-		
32	35	50	50	1	-	-	-		
1,336	1,474	1,470	1,470	1	198	13.5%	-		
156	172	180	180	1	46	25.7%	-		

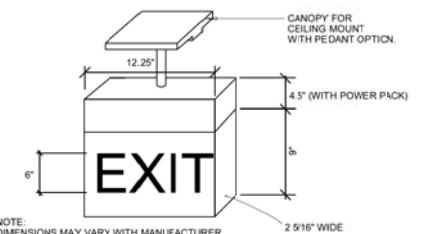
Zone = 1	4,759	5,250	5,250	5,250	1	1,161	-
100% = 2	1	Max Zp =	33.9%	O/A Percent- Critical Space	Fv =	0.8.	1,452 Corrected Total Outdoor Airflow Rate



**United Engineering, Inc.**

PROJECT ENGINEERING AND LAYOUT SERVICES  
1006 GENEVA ST. \* SHOREWOOD, IL 60404  
PHONE: (815)744-1010 \* FAX: (815)744-1516  
[www.unitedmen.com](http://www.unitedmen.com)

UNIT BATTERY EQUIPMENT NOTE:	
1. ALL UNIT BATTERIES SHALL BE INSTALLED PER LOCAL AUTHORITY EMC CODE AND IN COMPLIANCE WITH LOCAL INSPECTOR.	
2. ALL UNIT BATTERIES SHALL BE LABELED AS EMERGENCY LIGHTING EQUIPMENT. INDIVIDUAL UNIT EQUIPMENT FOR CODE REQUIRED STANDBY EMERGENCY ILLUMINATION SHALL CONSIST OF:	
A RECHARGEABLE BATTERY	
A BATTERY CHARGING MEANS	
PROVISIONS FOR ONE OR MORE LAMPS	
A RELAY DEVICE TO AUTOMATICALLY ENERGIZE LAMPS UPON FAILURE OF THE SUPPLY TO THE UNIT EQUIPMENT	
A TEST SWITCH	
A PILOT LIGHT TO INDICATE SUPPLY FROM NORMAL SOURCE AND AN ALTERNATE POWER SOURCE TO INDICATE THE BATTERY IS CHARGING. IT IS NOT PERMITTED FOR THIS PILOT LIGHT TO MARKED "READY" TO INDICATE POWER IS AVAILABLE.	
UNIT EQUIPMENT SHALL BE PERMANENTLY FIXED IN PLACE AND SUPPLIED BY HARD WIRE.	
THE BRANCH CIRCUIT FEEDING THE UNIT EQUIPMENT SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NIGHT LIGHTING ILLUMINATION IN THE AREA.	



NOTES:  
1. EXIT SIGNS SHALL BE CONNECTED TO A UNSWITCHED FUSED CIRCUIT  
2. EMERGENCY LIGHTS TO BE UL LISTED, WITH METAL HEADS  
3. EMERGENCY AND EXIT LIGHTS TO CARRY LOAD MINIMUM 1.5 HOURS, AS PER ARTICLE 700 AND AS REQUIRED BY THE VILLAGE.  
4. EXIT LIGHTING HEIGHT NOT TO EXCEED 12" ABOVE THE EGRESS DOOR OR EXIT.  
5. CIRCUIT FEEDING EXIT SIGN SHALL HAVE A LOCK-OUT DEVICE.  
6. E.C. SHALL VERIFY MOUNTING HEIGHTS OF EMERGENCY AND EXIT FIXTURES WITH THE LOCAL INSPECTOR(S) PRIOR TO INSTALLATION.

## GENERAL NOTES

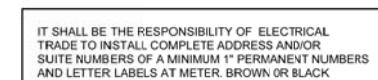
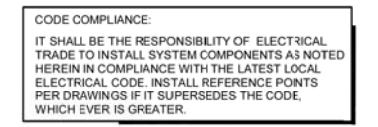
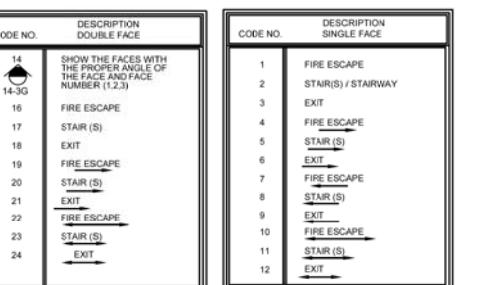
- A. LIGHTING AND EQUIPMENT BRANCH CIRCUIT BREAKERS SHALL BE SERIES RATED WITH REMOTE MAIN BREAKERS ALL IN ACCORDANCE WITH UL 489.
- B. PANELBOARD COMPONENTS INCLUDING OVERCURRENT PROTECTION DEVICES SHALL BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT. ELECTRICAL SHALL VERIFY AVAILABLE FAULT CURRENT WITH LOCAL POWER COMPANY ENGINEER.
- C. PER LOCAL AUTHORITY, PROVIDE IDENTIFICATION AT ENCLOSURE OF PANELBOARDS WHERE BREAKERS ARE APPLIED IN SERIES COMBINATION, STATING: "CAUTION -SERIES RATED SYSTEM \_\_\_\_\_ AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." CONTRACTOR TO FILL IN BLANK WITH AVAILABLE FAULT CURRENT AS PROVIDED BY POWER COMPANY.
- D. PER LOCAL AUTHORITY, PROVIDE IDENTIFICATION AT EACH DISCONNECTING MEANS FEEDING DOWNSTREAM DEVICES APPLIED IN SERIES COMBINATION, STATING: "CAUTION -SERIES RATED DEVICES ARE FEED FROM THIS REMOTE MAIN. \_\_\_\_\_ AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." CONTRACTOR TO FILL IN BLANK WITH AVAILABLE FAULT CURRENT AS PROVIDED BY POWER COMPANY.
- E. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND THE ELECTRICAL INSPECTOR.
- F. A.I.C. RATING SHOWN AT PANELBOARD IS THE MINIMUM RATING FOR OVERCURRENT PROTECTION DEVICES. EACH DEVICE SHALL BE FULLY RATED OR SERIES RATED WITH UPSTREAM DEVICES AT AFC AS SHOWN ON PANEL SCHEDULES.
- G. ELECTRICAL BOXES AND/OR CONDUIT INSTALLED IN SUSPENDED CEILINGS SHALL NOT EXCEED 100 CUBIC INCHES IN SIZE, AND THEY SHALL EITHER BE FASTENED TO THE FRAME MEMBERS BY BOLTS, SCREWS, RIVETS, OR APPROVED CLIPS, OR SECURED TO THE CEILING SUPPORT.

## ELECTRICAL BIDDERS NOTES:

- A. EXISTING CONDITIONS SHALL BE VERIFIED IN FIELD BEFORE SUBMITTING BD. CONTRACTOR SHALL ADJUST FOR ACTUAL FIELD CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- B. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL TRADES WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO COORDINATE AS REQUIRED FOR INSTALLATION OF NEW WORK AND IN COMPLIANCE WITH NEC CODES.
- C. MAINTAIN CONTINUITY OF ALL NEW CIRCUITS AS NEEDED TO PROVIDE POWER/LIGHTING TO DEVICES BEING USED AS TEMPORARY.
- D. SEE ADDITIONAL SHEETS FROM CIVIL/ARCHITECTURAL MECHANICAL PLANS AND COORDINATION WITH NEW WORK REQUIRED UNDER BASE BID.
- E. PROVIDE CADDY ADJUSTABLE FAR SIDE SUPPORTS OR EQUIVALENT ON ALL ELECTRICAL BOXES IN THE WALLS TO ASSURE TIGHT FITTING, SECURE BOXES. SECTION 21.107(A)(8).
- F. ALL ELECTRICAL WORK SHALL COMPLY WITH ADOPTED AMENDMENTS OF THE LOCAL AUTHORITY AND THE NATIONAL ELECTRICAL CODE.
- G. THE USE OF ALUMINUM SHALL NOT BE ACCEPTED IN ANY FORM.
- H. CONDUIT RUN UNDER THE ROOF SHALL COMPLY WITH NEC 300.14(E).
- I. GARVIN COVER OUTLETS SHALL HAVE A BONDING JUMPER INSTALLED TO BOX.
- J. MOUL L.B. SHALL BE USED FOR ALL CONDUCTORS LARGER THAN #8.
- K. NO TANDEM, DUPLEX, PIGGYBACK CIRCUIT BREAKERS.
- L. ALL CONDUIT SYSTEMS AND RACEWAYS AND ETC. SHALL HAVE A GREEN GROUNDING CONDUCTOR PER NEC 250.122.
- M. FLEXIBLE METAL CONDUIT, TYPE FMC, IS PERMITTED ONLY FOR INDOOR USE AND LIMITED TO A MAXIMUM OF 6'-0" IN LENGTH.
- N. WIRE TERMINATED ON RECEPTACLES OR SWITCHES SHALL BE UNDER THE SCREW OF DEVICE. BACKSTABBING NOT ALLOWED.
- O. ALL VOLTAGE OVER 24 VOLTS SHALL BE IN CONDUIT WHERE NOT ACCESSIBLE.

## EXIT SIGN DETAIL

SCALE: NONE



LIGHTING FIXTURE SCHEDULE									
SYMBOL	TYPE	MANUFACTURE/CATALOG NUMBER	LAMPS	WATT	LAMP LUMENS PER SECTION ICC 505.6.1 REQUIRED	ACTUAL	VOLTAGE	MOUNTING	DESCRIPTION
	F1	Metalex SSF-232-UVN-U	2-7832-SP35	64	N.A.	N.A.	120	SURFACE	1X4" 2 lamp Strip fixture installed at structure, used for temp security lighting. To be removed at later date.
	XR	Sure-Lites APC7TR Series - Red Letters Dual Voltage (IFC 1003.2.10.5)	LED	3	N.A.	N.A.	120	UNIVERSAL (WALL/CLG.) SINGLE OR DOUBLE FACED	Backup Batteries shall maintain 100% illumination for minimum 90 minutes to comply with article 700.12 or the NEC.
	F3	Sure-Lites APEL Dual Voltage (IFC 1003.2.10.5)	LED	1	N.A.	N.A.	120	UNIVERSAL (WALL/CLG.)	Backup Batteries shall maintain 100% illumination for minimum 90 minutes to comply with article 700.12 or the NEC.
	F4	LS-XVM-FT-LED-06-40-UE-BRZ	LED	59	N.A.	5058	120	EXTERIOR SURFACE	Exterior wall mounted fixtures, provide back boxes. See architectural for elevations.
	RH2	Sure-Lites APWR2 Dual Voltage (IFC 1003.2.10.5)	LED REMOTE HEADS	0	N.A.	N.A.	120	EXTERIOR SURFACE	Powered by Emergency "XR" fixture. illumination for minimum 90 minutes to comply with article 700.12 or the NEC.
	WP1	LS-XVM-FT-LED-06-40-UE-BRZ	LED	59	N.A.	5058	120	EXTERIOR SURFACE	Full Cut-Off Mount 12" above the egress door or exit. See architectural for elevations.

## LIGHTING FIXTURE SCHEDULE/ INSTALLATION GENERAL NOTING:

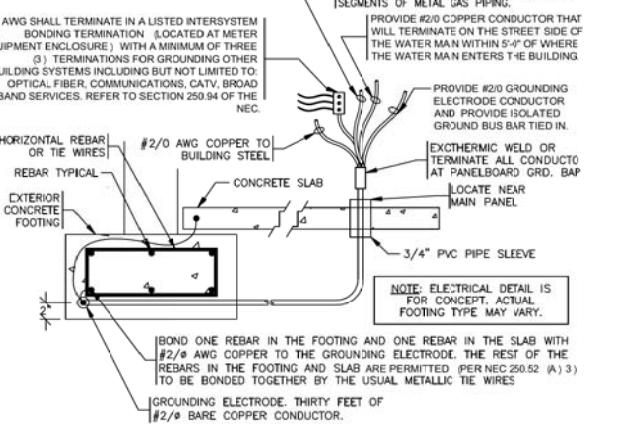
1. Furnish and install complete systems, including lighting fixtures lamps, switches, mounting facilities, wiring control equipment and other required accessories.
2. The fixture catalog numbers listed on the schedule indicate the manufacturer, fixture design, appearance and performance desired. Verify the ceiling system and coordinate the lighting fixture trim and support equipments. These fixtures shall be modified as necessary to comply with the drawing and specification requirements.
3. Fixtures shall bear the UL label and shall be wired and installed in full compliance with all applicable codes.
4. All fluorescent fixtures shall have energy saving ballasts and lamps.
5. All exit signs and battery operated emergency lighting units shall be modified as required for local code requirements.
6. Verify all fixture locations before roughing-in.
7. Where air handling fixtures are shown, they shall be furnished and installed in coordination with the mechanical trades.
8. Fixtures intended to be installed in air plenums are to be approved for such installation. Coordinate with the mechanical drawings and specifications.
9. Not used.
10. Lighting fixtures and raceways shall be installed per local code, Means of Support.
11. All cable run in ceiling to be neatly attached to cable hangers attached to building, not the ceiling.
12. Emergency lighting and exit signs shall be back-bye type. Said equipment shall be spaced and located throughout all occupied spaces to meet applicable codes and are subject to the approval of the Fire Protection District of authority. In the event of a power supply failure, the exit signs and emergency means of egress lighting shall provide power for a duration of not less than 90 minutes.
13. The wattage for screw amp holders shall be the maximum labeled wattage of the luminaries per IECC 505.1.1
14. The wattage for Low-Voltage Lighting shall be the specified wattage of the transformer supplying the system per IECC 505.1.2

NOTE: GROUNDING ELECTRODE TEST  
MEASURE AND RECORD GROUND RESISTANCE FROM SYSTEM NEUTRAL CONNECTION AT SERVICE ENTRANCE TO CONVENIENT GROUND REFERENCE POINT USING SUITABLE GROUND TESTING EQUIPMENT. MAXIMUM ACCEPTABLE RESISTANCE: 10 OHMS. WHEN RESISTANCE EXCEEDS 10 OHMS; DRIVE AND BOND (#6 COPPER MINIMUM) ANOTHER GROUND ROD, ONE GROUND ROD LENGTH AWAY (MINIMUM 6'-0") AND REPEAT TEST. CONTINUE PROCESS UNTIL RESISTANCE IS BELOW 10 OHMS.

- NOTE:  
1. SEE SITE UTILITIES PLAN FOR METER AND TRANSFORMER PAD MOUNTED LOCATIONS.  
2. BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT INCLUDING METER ENCLOSURE TO GROUNDBEING ELECTRODE AS REQUIRED PER NEC 250.92.  
3. ALL ELECTRICAL SERVICE EQUIPMENT, PANELBOARDS, CIRCUIT BREAKERS AND FUSE SWITCHES SHALL HAVE A MINIMUM 10AIC INTERRUPTING RATING IN ACCORDANCE WITH NEC CODE. NEC 250.24  
4. THE GROUNDING NEUTRAL CONDUCTOR SHALL BE RUN TC AND BONDED TO EACH SERVICE DISCONNECT MEANS ENCLOSURE IN ACCORDANCE WITH NEC CODE. NEC 250.24  
5. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC CODE. NEC 250.96  
6. ALL DEVICES SHALL BE WYE GROUNDED NEUTRAL.

- CODE COMPLIANCE:  
IT SHALL BE THE RESPONSIBILITY OF ELECTRICAL TRADE TO INSTALL COMPLETE ADDRESS AND/OR SUITE NUMBERS OF A MINIMUM 1" PERMANENT NUMBERS AND LETTER LABELS AT METER. BROWN OR BLACK

- APPROVED EQUIPMENT NOTE:  
ALL ELECTRICAL EQUIPMENT AND MATERIAL SHALL BE LISTED AND LABELED FOR INSTALLATION BY A RECOGNIZED ELECTRICAL TESTING LABORATORY. IT SHALL BE THE RESPONSIBILITY OF ELECTRICAL CONTRACTOR TO COMPLY.



NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

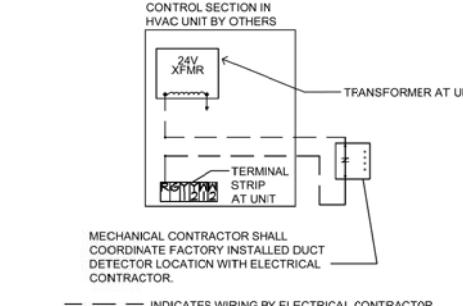
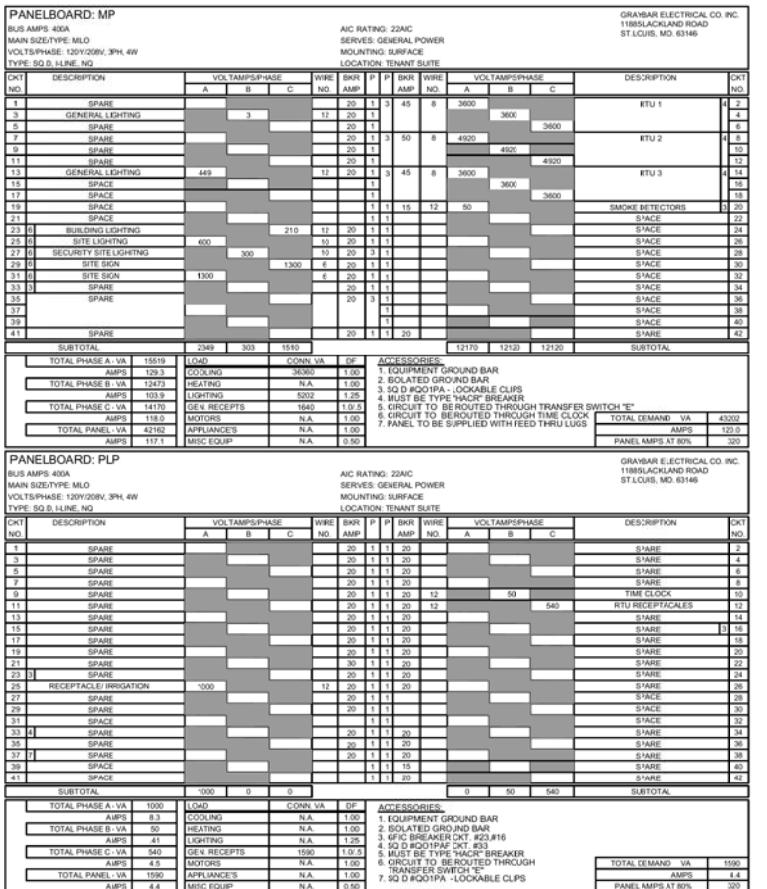
NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOTING AND ONE REBAR IN THE SLAB WITH #2/0 AWG COPPER TO THE GROUNDED ELECTRODE. THE REST OF THE REBARS IN THE FOOTING AND SLAB ARE PERMITTED (PER NEC 250.32 (A)) TO BE BONDED TOGETHER BY THE USUAL METALLIC TIE WIRES.

GROUNDING ELECTRODE, THIRTY FEET OF #2/0 BARE COPPER CONDUCTOR.

NOTE: ELECTRICAL DETAIL IS FOR CONCRETE, ACTUAL FOOTING MAY VARY.

BOND ONE REBAR IN THE FOOT

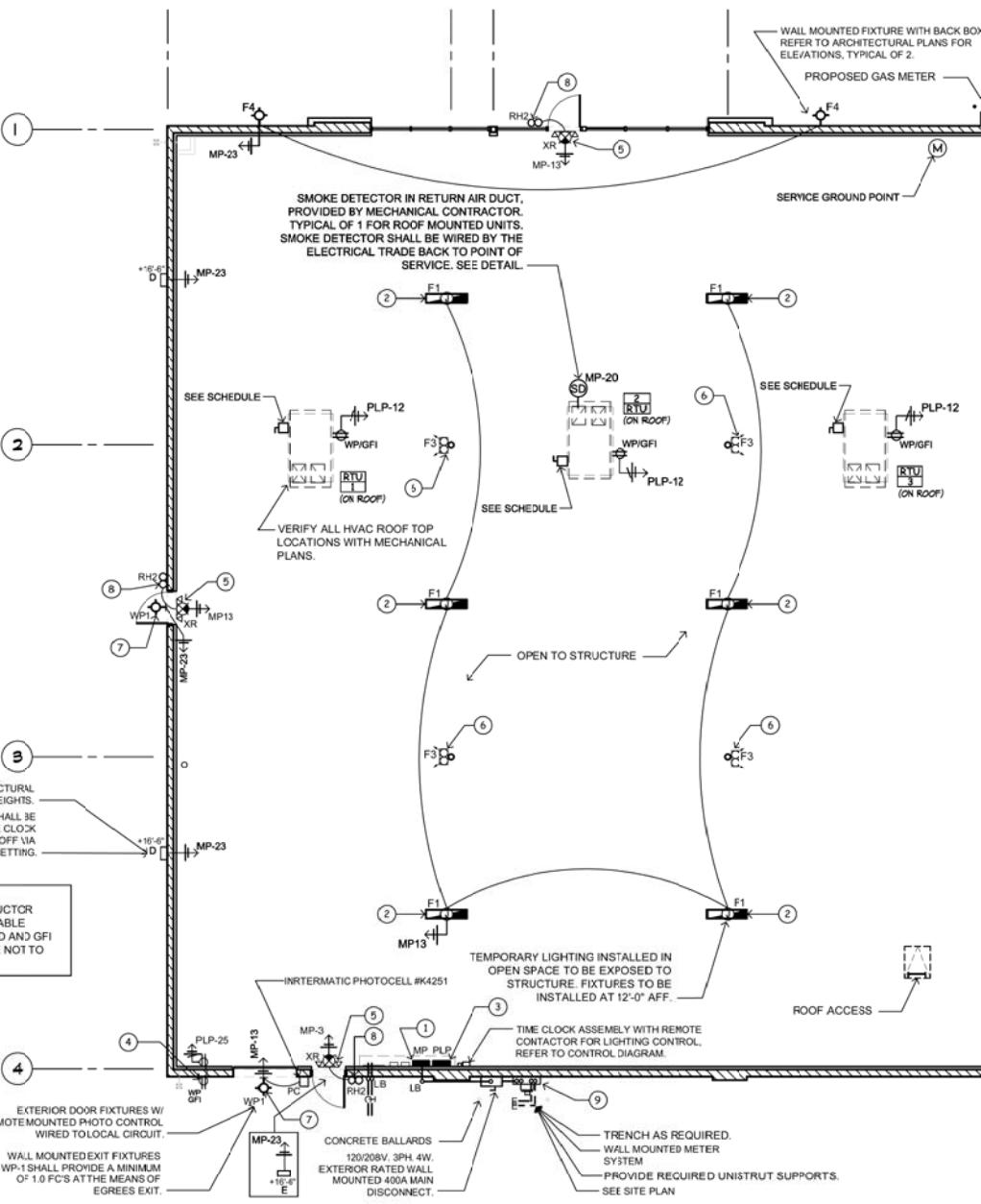


NOTES:

- A. DUCT DETECTOR SHALL BE FURNISHED BY RTU SUPPLIER AND MOUNTED BY M.C., WIRED BY THE E.C.
- B. ALL EQUIPMENT & WIRING SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

## HVAC CONTROL WIRING SCHEMATIC

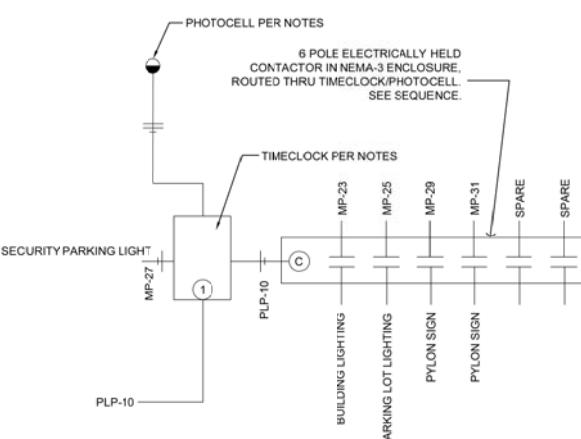
SCALE: NON



## ELECTRICAL PLAN

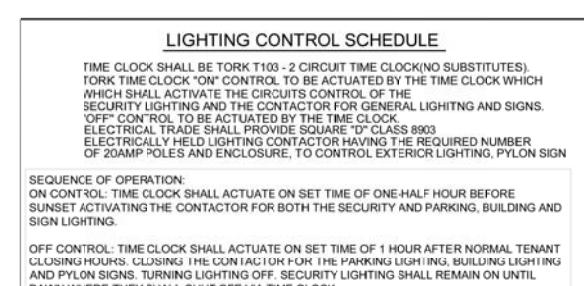
---

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



## CONTROL DIAGRAM

SCALE: NONE



OL: TIME CLOCK SHALL ACTUATE ON

TIME CLOCK SHALL BE TORK T103 - 2 CIRCUIT TIME CLOCK (NO SUBSTITUTES).  
TIME CLOCK "ON" CONTROL, TO BE ACTUATED BY THE TIME CLOCK WHICH  
HIGH SHALL ACTIVATE THE CIRCUITS CONTROL OF THE  
SECURITY LIGHTING AND THE CONTACTOR FOR GENERAL LIGHTING AND SIGNS.  
"FF" CONTROL TO BE ACTUATED BY THE TIME CLOCK.  
ELECTRICAL TRADE SHALL PROVIDE SQUARE "D" CLASS 890  
ELECTRICALLY HELD LIGHTING CONTACTOR HAVING THE REQUIRED NUMBER  
20AMP POLES AND ENCLOSURE, TO CONTROL EXTERIOR LIGHTING, PYLON SIGN

OF OPERATION:  
TIME CLOCK SHALL ACTUATE ON SET TIME OF ONE-HALF HOUR BEFORE  
ACTIVATING THE CONTACTOR FOR BOTH THE SECURITY AND PARKING, BUILDING AND  
LIGHTING.

OL: TIME CLOCK SHALL ACTUATE ON SET TIME OF 1 HOUR AFTER NORMAL TENANT HOURS. CLOSING THE CONTACTOR FOR THE PARKING LIGHTING, BUILDING LIGHTING SIGNS, TURNING LIGHTING OFF. SECURITY LIGHTING SHALL REMAIN ON UNTIL 11PM LOCAL TIME, OPENING THE CLOCK.

**DISCONNECT LOCATION**

**DISCONNECT LOCATION**

IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE A MAN BREAKER OR DISCONNECT LOCATED WITHIN 3'-0" AND IN SITE OF ANY DISTRIBUTION PANEL, SUB-PANEL, BREAKER PANEL, MOTOR, CONTROL CENTER AND FUSE PANEL. EACH DISCONNECT MEANS SHALL BE LEGIBLY MARKED TO INDICATE IT'S PURPOSE. MARKING SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED ALL TO BE IN COMPLIANCE WITH NATIONAL ELECTRICAL CODE.



O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
ELECTRICAL SPECIFICATIONS  
1906

3E

DIVISION 16  
ELECTRICAL SPECIFICATIONS  
PART 1 - GENERAL  
1.01 GENERAL CONDITIONS  
A. THE GENERAL, SPECIAL, AND OTHER CONDITIONS OF THE ARCHITECTURAL DOCUMENTS SHALL BE CONSIDERED AN INTEGRAL PART OF THESE ELECTRICAL SPECIFICATIONS.  
B. REFERENCE TO "CONTRACTOR" IN THIS SPECIFICATION SHALL MEAN "ELECTRICAL CONTRACTOR", UNLESS OTHERWISE NOTED.  
1.02 DRAWINGS AND DOCUMENTS  
A. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL FORM A SET OF PLANS FOR THE ELECTRICAL WORK. NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE COMPLETE, UNLESS THE OWNER HAS ANY NEED SHOWN ON THE DRAWINGS OR SPECIFIED IN THE SPECIFICATIONS SHALL BE CONSIDERED AS SHOWN AND SPECIFIED ON BOTH.  
B. ANY QUESTIONS REGARDING THE INTENT OF THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION AS SOON AS POSSIBLE. IF DIRECTED BY THE ENGINEER, CANVASS COULD BE CONDUCTED AT THE TIME OF COMMUNICATION LIMITATIONS, IN GREAT QUANTITY, HIGHER QUALITY OR CONDITION MOST FAVORABLE TO THE OWNER SHALL BE ASSUMED. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND MISCELLANEOUS ITEMS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION, AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THE SPECIFICATIONS.  
C. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND SPECIFICATIONS. COORDINATE ALL SHAFTS, CHASES, FURRED SPACES, SUSPENDED CEILINGS, LOCATIONS OF EQUIPMENT, ETC.  
D. ELECTRICAL CONTRACTOR SHALL COORDINATE ROUTING OF ALL CONDUIT AND WIRE WITHIN SCAFFOLDING PROVIDED BY THE GENERAL CONTRACTOR. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ALL SOFTWARE REQUIRED TO COORDINATE INSTALLATIONS NOT COORDINATED OR SPECIFICALLY APPROVED BY THE ARCHITECT AND ENGINEER.  
E. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW APPROXIMATE LOCATION ONLY. PLACEMENT OF ELECTRICAL EQUIPMENT AND DEVICES SHALL NOT INTERFERE WITH LOCATIONS OR CLEARANCES OF OTHER TRADES' MATERIALS OR EQUIPMENT.  
F. DIMENSIONS GIVEN ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DIMENSIONS, WHETHER GIVEN IN FIGURES OR SCALED, SHALL BE VERIFIED IN THE FIELD.  
G. CONTRACTOR SHALL VERIFY THAT THE EQUIPMENT TO BE FURNISHED UNDER CONTRACT WILL FIT WITHIN THE AVAILABLE SPACE.  
H. NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN ELECTRICAL, ARCHITECTURAL AND MECHANICAL DRAWINGS.  
I. VERIFY ITEMS SUCH AS DOOR SWINGS, WINDOW LOCATIONS, CASEWORK, ETC., BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT OR DEVICES. ALL DEVICES CONFLICTING WITH AND OTHER TRADES WORK DUE TO LACK OF COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.  
1.03 SCOPE OF WORK  
A. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND OTHER ITEMS NECESSARY FOR OR INCIDENTAL TO INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM AS REQUIRED FOR THIS PROJECT.  
1.04 CODES, INSPECTIONS, AND FEES  
A. THE COMPLETED ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, REGULATIONS, AND STANDARDS, INCLUDING INTERPRETATIONS OF THESE BY APPROPRIATE AUTHORITIES HAVING JURISDICTION, WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR WORKMANSHIP OR MATERIALS IN EXCESS OF CODE OR REGULATORY REQUIREMENTS, THE DRAWINGS AND SPECIFICATIONS SHALL GOVERN.  
B. THE WORK SPECIFIED HEREIN SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED REPRESENTATIVES OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION, AND THE ENGINEER. THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS TO HAVE THE ELECTRICAL WORK INSPECTED BY APPROPRIATE INSPECTORS AND SHALL PROVIDE TWO (2) COPIES OF EVERY FINALLY SIGNED "CERTIFICATE OF INSPECTION" TO THE OWNER.  
C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES AND PERMITS, PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED BY THE CONTRACTOR, AND PAY ALL FEES AND CHARGES LEVIED BY THE ELECTRIC UTILITY COMPANY FOR CONNECTION TO ELECTRIC SERVICES.  
1.05 INSPECTION OF SITE  
A. DIVISION 18 CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS IN REGARDS TO THE REQUIREMENTS OF THIS CONTRACT, ANY VISIBLY OREADLY ATTAINABLE INFORMATION AVAILABLE AT THE SITE, EVEN IF DIFFERING FROM THESE DOCUMENTS, WILL NOT RESULT IN EXTRA COMPENSATION AFTER TIME OF BID. ANY DISCREPANCIES FROM THESE DOCUMENTS, SHOULD BE REPORTED TO THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE.  
1.06 TEMPORARY ELECTRICAL SERVICE  
A. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY LIGHTING AND POWER SYSTEM AT A LOCATION SPECIFIED BY THE GENERAL CONTRACTOR. THE SERVICE SHALL BE 100-AMP, 120/208-VOLT, SINGLE-PHASE, 3-WIRE, WITH APPROPRIATE METERING AND PROTECTIVE EQUIPMENT. COMPONENTS OF THE TEMPORARY SYSTEM SHALL BE AS REQUIRED BY THE GENERAL CONTRACTOR. THE SYSTEM SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL REMOVE THE TEMPORARY SYSTEM WHEN IT IS NO LONGER NEEDED.  
1.07 MATERIALS AND EQUIPMENT  
A. UNLESS OTHERWISE SPECIFIED, ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND MANUFACTURED BY RECOGNIZED MANUFACTURERS. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF GOVERNING CODES.  
B. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC. (UL), AS CONFORMED TO ITS STANDARDS IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THAT TYPE OF MATERIAL OR EQUIPMENT.  
C. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL TO USE ANY PROPOSED SUBSTITUTE MATERIAL OR EQUIPMENT BEFORE CONTRACTING TO PURCHASE SUCH SUBSTITUTES. THE OWNER RESERVES THE RIGHT TO REQUIRE THE REMOVAL OF ANY MATERIAL OR EQUIPMENT WHICH DOES NOT HAVE THIS WRITTEN APPROVAL, AND WHICH DOES NOT COMPLY WITH THE SPECIFICATIONS, REGARDLESS OF THE STATE OF INSTALLATION OF SUCH EQUIPMENT.  
D. WHERE EQUIPMENT SUPPLIED BY THE CONTRACTOR HAS CHARACTERISTICS OTHER THAN AS SPECIFIED HEREIN, THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, MAKE ALL CHANGES IN THE ELECTRICAL WORK NECESSARY TO THE SUBSTITUTION.  
1.08 WORKMANSHIP  
A. THE INSTALLATION SPECIFIED HEREIN SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY PERSONS EXPERIENCED AND SKILLED IN THE TRADE. ONLY THE BEST QUALITY WORKMANSHIP WILL BE ACCEPTED. ALL EXPOSED COMPONENTS OF THE ELECTRICAL SYSTEMS SHALL BE SQUARE AND TRUE WITH BUILDING LINES AND SURFACES.

1.09 CORRELATION OF WORK  
A. THE CONTRACTOR SHALL GIVE CAREFUL CONSIDERATION TO THE WORK OF THE GENERAL, MECHANICAL, AND ALL OTHER CONTRACTORS AND SUBCONTRACTORS ON THE PROJECT AND SHALL ORGANIZE THE ELECTRICAL WORK SO THAT IT WILL NOT INTERFERE WITH THE WORK OF OTHER TRADES.  
B. DRAWINGS AND SPECIFICATIONS FOR OTHER TRADES AND GENERAL CONSTRUCTION DRAWINGS SHALL BE CONSULTED FOR CORRELATION INFORMATION, DETAILS, DIMENSIONS, ETC.  
C. THE LOCATION OF ALL OUTLETS, WIRING, AND EQUIPMENT SHALL BE VERIFIED.  
D. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR MOVING MISPLACED ELECTRICAL SYSTEM COMPONENTS.  
1.10 MAINTENANCE MANUAL  
A. THE CONTRACTOR SHALL FURNISH THE OWNER WITH TWO (2) COPIES OF A MANUAL COVERING THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT PROVIDED BY THE CONTRACTOR. THE MANUAL SHALL BE RING, LOOSE LEAF, HEAVY DUTY, STEEL PIANO HINGED NOTEBOOKS, HYTONE #8711 OF EQUAL, AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL. EACH MANUAL SHALL CONTAIN THE FOLLOWING:  
1. COMPLETE MANUFACTURER CATALOG DATA, MANUFACTURER'S LITERATURE, WORK PROGRAMS, DETAILS OPERATING INSTRUCTIONS, AND COPIES LETTERS, INSTRUCTIONS, CUPPLERS AND DISTRIBUTORS WHERE REPLACEMENT PARTS AND MAINTENANCE SERVICES ARE AVAILABLE FOR ALL EQUIPMENT.  
2. INSPECTION CERTIFICATES, SIGNED BY THE APPROPRIATE INSPECTOR, SHALL BE FURNISHED IN THE MAINTENANCE MANUAL.  
3. AS WORK PROGRESSES, THE CONTRACTOR SHALL MARK A SET OF CONSTRUCTION DOCUMENTS TO SHOW ACTUAL CIRCUIT ROUTING AND MAP UP EQUIPMENT LOCATIONS, CHASING, AND ANY OTHER CHANGES OR DEVIATIONS MADE DURING THE WORK. AS THE WORK IS COMPLETED, THE CONTRACTOR DOCUMENTS, MARKINGS SHALL BE NEAT, LEGIBLE, AND PERMANENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL SIMILARLY MARK A SECOND SET OF DOCUMENTS AND PROVIDE BOTH SETS OF AS-BUILT DOCUMENTS TO THE OWNER WITH THE MAINTENANCE MANUALS.  
1.12 GUARANTEE  
A. THE CONTRACTOR SHALL FURNISH THE OWNER WITH A WRITTEN GUARANTEE FOR THE PERIOD OF ONE (1) YEAR AGAINST THE FAILURE OF ANY PART OF THE ELECTRICAL SYSTEMS INSTALLED UNDER THE SPECIFICATIONS DUE TO FAULTY MATERIAL OR WORKMANSHIP. GUARANTEE PERIOD SHALL START UPON SUBSTANTIAL COMPLETION OR AS SPECIFIED UNDER GENERAL AND SPECIAL CONDITIONS. LAMP BULBS SHALL BE OPERABLE ON THE START DATE OF, BUT EXCLUDED FROM, THE GUARANTEE.  
B. THE CONTRACTOR SHALL ASSURE THAT ANY EXTENDED WARRANTIES TO WHICH THE OWNER IS ELIGIBLE ARE PASSED ON TO THE OWNER.  
1.13 CUTTING AND PATCHING  
A. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR THE COMPLETION OF THE ELECTRICAL WORK FOR THIS PROJECT. NO STRUCTURAL MEMBERS SHALL BE DISTURBED WITHOUT OBTAINING WRITTEN PERMISSION OF THE ENGINEER.  
B. ANY SURFACE WHICH IS DISTURBED IN ANY WAY BY THE CONTRACTOR SHALL BE REPAVED AND REFRESHED TO PROVIDE A SURFACE EQUAL IN STRENGTH, DURABILITY, AND APPEARANCE TO THE ORIGINAL SURFACE.  
C. WHERE IT IS NECESSARY TO DRILL OR CUT CONCRETE SURFACES, THE EDGES SHALL BE SHARPLY DEFINED. HOLES SHALL BE MADE WITH A ROTARY DRILL. CUTS SHALL BE MADE WITH A CONCRETE SAW UNLESS SOME OTHER METHOD OF MAKING SPECIFIC CUTS IS APPROVED BY THE ENGINEER.  
D. PENETRATIONS THROUGH SMOKE, FIRE, HAZARDOUS AREA OR OTHER RATED SEPARATIONS SHALL BE SEALED TO PRESERVE THE RATINGS OF THE SEPARATIONS.  
E. ALL CUTTING, DRILLING, PATCHING, REPAIRING, AND REFINISHING SHALL BE DONE BY PERSONS SKILLED IN APPROPRIATE TRADES.  
F. THE CONTRACTOR SHALL CLEAN AWAY ALL RUBBISH AND LITTER GENERATED DURING ELECTRICAL INSTALLATION.  
1.14 DEMOLITION  
A. WHERE ELECTRICAL WORK TO REMAIN IS DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY, AND FUNCTIONALITY.  
B. ACCESSIBLE WORK INDICATED TO BE DEMOLISHED: REMOVE EXPOSED ELECTRICAL INSTALLATION IN ITS ENTIRETY.  
C. ABANDONED WORK: CUT AND REMOVE BURIED RACEWAY AND WIRING INDICATED TO BE ABANDONED IN PLACE, 2 INCHES BELOW THE SURFACE OF ADJACENT CONSTRUCTION. CAP AND PATCH SURFACE TO MATCH EXISTING FINISH.  
D. REMOVAL: REMOVE DEMOLISHED MATERIAL FROM THE PROJECT SITE.  
E. TEMPORARY DISCONNECTION: REMOVE, STORE, CLEAN, REINSTALL, RECONNECT, AND MAKE OPERATIONAL COMPONENTS INDICATED FOR RELOCATION.  
1.15 GENERAL RACEWAY REQUIREMENTS  
A. ELECTRICAL CONDUCTORS INSTALLED UNDER THESE SPECIFICATIONS SHALL BE IN ELECTRICAL RACEWAY. ALL RACEWAYS SHALL BE INSTALLED IN ACCORDANCE WITH THESE GENERAL REQUIREMENTS.  
B. RACEWAY SHALL BE COMPLETE WITH NECESSARY COUPLINGS, CONNECTORS, BENDS, SUPPORTS, AND ALL OTHER REQUIREMENTS FOR ELECTRICAL AND COMPLETE AND INTEGRAL RACEWAY SYSTEM. SYSTEM COMPONENTS SHALL BE DESIGNED FOR INTERCONNECTION AND SHALL BE INSTALLED TO PROVIDE A NEAT APPEARING, MECHANICALLY FIRMLY ASSEMBLED TO CODES AND PRINCIPLES OF GOOD ELECTRICAL PRACTICE, AND CONFORMING WITH RECOMMENDATIONS OF THE RACEWAY AND CONDUCTOR MANUFACTURERS.  
C. RACEWAY RUNS SHALL ORIGINATE AND TERMINATE AT LOCATIONS APPROXIMATELY AS SHOWN ON THE DRAWINGS. RUNS SHALL BE STRAIGHT AND TRUE WITH ELBOWS, OFFSETS AND BENDS, UNIFORM AND SYMMETRICAL. IN GENERAL, EXPOSED RUNS OF RACEWAY SHALL BE PARALLEL OR PERPENDICULAR TO SURROUNDING BUILDING LINES AND SURFACES. RUNS SHALL BE INSTALLED SO THAT THEY DO NOT INTERFERE WITH AISLES, PASSAGEWAYS, DOORWAYS, HATCHWAYS, WORKING AREAS, AND FLOORS.  
D. SUFFICIENT PULL AND JUNCTION BOXES OF ADEQUATE SIZE SHALL BE LOCATED AS NECESSARY TO ENSURE EASY INSTALLATION AND EDUCATION OF CONDUCTORS. BOXES SHALL BE SIZED TO PROVIDE ADEQUATE FREE SPACE FOR ALL ENCLOSED CONDUCTORS. BOX SIZES SHALL NOT BE DETERMINED BY SCALING THE DRAWINGS.  
1.16 METAL CONDUIT RACEWAY  
A. RIGID METAL CONDUIT SHALL BE INSTALLED WHERE EXPOSED TO WEATHER, OR WHERE IMBEDDED OR PASSING THROUGH CONCRETE, NONMETALLIC CONDUIT MAY BE USED FOR PYON SIGN AND PARKING LOT LIGHTING ONLY. FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO ELECTRICAL EQUIPMENT SUBJECT TO MOVEMENT. EMT SHALL BE USED ELSEWHERE UNLESS OTHERWISE NOTED.  
B. ALL COMPONENTS OF CONDUIT RACEWAY SYSTEMS SUCH AS CONDUIT, TIGHT CONDUIT, BOXES, SUPPORTS AND FITTINGS SHALL MEET THE LATEST APPLICABLE STANDARD OF UNDERWRITERS LABORATORIES, INC. ALL STEEL COMPONENTS OF CONDUIT RACEWAY SYSTEMS SHALL BE HOT-DIPPED GALVANIZED, METALIZED, SHERADIZED, OR ZINC-COATED BY SOME OTHER APPROVED MEANS. SEAL TIGHT CONDUIT AND PVC CONDUIT SHALL HAVE SEPARATE GROUND CONDUCTOR.  
1.17 PULLBOXES  
A. PULLBOXES SHALL BE INSTALLED AS REQUIRED IN LONG RUNS OR WHEN MORE THAN FOUR QUARTER BENDS OCCUR IN ANY CONDUIT RUN. ALL PULLBOXES SHALL BE SIZED TO CONFORM TO THE REQUIREMENTS OF ARTICLE 370 OF THE NATIONAL ELECTRICAL CODE. PULLBOXES SHALL BE RECESSED IN ALL FINISHED PORTIONS OF THE BUILDING.  
1.18 OPERATING INSTRUCTIONS & TESTING  
A. THE CONTRACTOR SHALL FURNISH INSTRUCTION IN THE CARE, ADJUSTMENT, OPERATION, AND MAINTENANCE OF ALL PARTS OF THE ELECTRICAL EQUIPMENT. INSTRUCTION SHALL BE GIVEN TO EMPLOYEES DESIGNATED BY THE OWNER, AT NO ADDITIONAL COST TO THE OWNER, AND AT A TIME ACCEPTABLE TO THE OWNER, JUST PRIOR TO ACCEPTANCE OF THE EQUIPMENT BY THE OWNER.  
B. THE CONTRACTOR SHALL TEST THE EQUIPMENT INSTALLED UNDER THIS SPECIFICATION AND SHALL DEMONSTRATE ITS PROPER OPERATION TO THE ENGINEER. NO EQUIPMENT SHALL BE TESTED OR OPERATED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS DESIGNED. EQUIPMENT PROVIDED FOR NORMAL OPERATION, ANY EQUIPMENT DAMAGED BY IMPROPER OR ILL-TIMED OPERATION OR TESTING SHALL BE REPAIRED OR REPLACED, AT THE CONTRACTOR'S EXPENSE, BEFORE FINAL INSPECTION AND ACCEPTANCE.  
1.19 OTHER  
A. ALL CIRCUITS SPECIFIED ARE DESIGNED ON THE BASIS OF LOAD REQUIREMENTS AND CONTROL PROCEDURES AS INDICATED. THE CONTRACTOR SHALL MAKE THE NECESSARY CHANGES TO THE CIRCUITS AND CONTROL EQUIPMENT WHERE MOTORS, APPLIANCES, AND DEVICES FURNISHED BY THE CONTRACTOR HAVE OTHER RATINGS THAN THOSE INDICATED.  
PART 2 - PRODUCTS  
2.01 DISCONNECT SWITCHES  
A. THE CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCHES HAVING THE NUMBER OF POLES AND AMPERE RATINGS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THE EQUIPMENT SCHEDULE.  
B. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, AC, SINGLE THROW SAFETY SWITCHES, BUILT IN ACCORDANCE WITH NEMA REQUIREMENTS WITH A VISIBLE FULL COVER INTERLOCK AND QUICK-MAKE, QUICK-BREAK MECHANISM. EACH SWITCH SHALL BE FUSIBLE UNLESS NONFUSIBLE (NF) SPECIFICALLY INDICATED. SWITCHES SHALL BE IN NEMA 1 ENCLOSURES IN DRY LOCATIONS AND NEMA 3 WHERE EXPOSED TO THE WEATHER. DISCONNECT SWITCHES SHALL BE "HEAVY-DUTY" AS MANUFACTURED BY WESTINGHOUSE, OR SQUARE-D.  
C. DISCONNECT SWITCHES RATED AT 20A SHALL BE GENERAL USE, 20A, AC, SNAP SWITCH WIRING DEVICES.  
2.02 FUSES  
A. THE CONTRACTOR SHALL FURNISH AND INSTALL FUSES OF THE TYPES AND RATINGS DESIGNATED IN THE DRAWINGS AND SPECIFICATIONS IN EACH FUSIBLE DEVICE INSTALLED BY THE CONTRACTOR. IN ADDITION, THE CONTRACTOR SHALL FURNISH AND STORE, AT A LOCATION DIRECTED BY THE OWNER, THREE (3) SPARE FUSES OF EACH SIZE AND TYPE INSTALLED DURING THIS PROJECT. THE CONTRACTOR SHALL PROVIDE TWO (2) COPIES OF THE SPARE FUSE LIST TO THE OWNER FOR OWNER'S RECORDS. THE SPARE FUSE LIST SHALL BE TYPED ON THE CONTRACTOR'S LETTERHEAD.  
B. FUSES SHALL BE ONE-TIME CARTRIDGE FUSES MANUFACTURED BY BUSSMAN, GOULD SHAWMUT, OR LITTLE FUSE.  
2.03 WIRE AND CABLE  
A. ELECTRICAL CONDUCTORS SHALL BE BUILDING WIRE, EXCEPT WHERE SOME OTHER TYPE OF WIRE OR CABLE IS SPECIFICALLY INDICATED.  
B. BUILDING WIRE CONDUCTORS SHALL BE SOFT-DRAWN ANNEALED COPPER, HAVING A CONDUCTIVITY OF NOT LESS THAN 98% PURE COPPER. CONDUCTOR SIZES ARE AMERICAN WIRE GAUGE (AWG) OR CIRCULAR MILS (MCM). MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS OTHERWISE SPECIFIED. CONDUCTORS LARGER THAN #10 SHALL BE STRANDED. CONDUCTORS #10 AND SMALLER SHALL BE SOLID WIRE.  
C. BUILDING WIRE INSULATION SHALL BE 600-VOLT. CONDUCTORS SHALL HAVE TW, THW, THWN, OR THHN INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE OR REQUIRED BY CODE OR APPLICATION TO BE OTHERWISE.  
D. PROVIDE SERVICE GROUNDING A3 INDICATED ON ONE-LINE DIAGRAM.  
E. INCLUDE A SEPARATE BARE GROUND CONDUCTOR IN ALL TYPE NM CABLE OF THE SAME SIZE AS PHASE CONDUCTOR.  
F. INCLUDE A SEPARATE GROUND CONDUCTOR IN ALL PVC RACEWAY.  
2.12 IDENTIFICATION AND LABELING OF ELECTRICAL EQUIPMENT  
A. ALL CONTROL DEVICES AND DEVICE ENCLOSURES SHALL BE LABELED WITH INDIVIDUAL NAME PLATES OR LEGEND PLATES.  
B. INDIVIDUAL NAME OR LEGEND PLATES SHALL BE BLACK LAMINATED PLASTIC OR MICA PLATES WITH WHITE CUT LETTERS, PAPER, FOIL OR TAPE.  
C. MARKERS ATTACHED WITH ADHESIVES SHALL NOT BE USED.  
2.13 SERVICE TO ELECTRICALLY-POWERED EQUIPMENT  
A. THE CONTRACTOR SHALL FURNISH AND INSTALL OUTLETS FOR AND MAKE FINAL ELECTRICAL CONNECTIONS TO ALL MOTORS AND ELECTRICALLY POWERED EQUIPMENT INDICATED ON THE EQUIPMENT SCHEDULE.  
B. THE CONTRACTOR SHALL OBTAIN EXACT INFORMATION PERTAINING TO LOCATION, ELECTRICAL CHARACTERISTICS, AND WIRING FOR EQUIPMENT FURNISHED BY OTHER CONTRACTORS AND CONNECTIONS TO THE EQUIPMENT. THIS INFORMATION SHALL BE VERIFIED BY EXAMINING NAMEPLATES AND MANUFACTURER'S WIRING DIAGRAMS. ANY DISCREPANCY BETWEEN THE EQUIPMENT REQUIREMENTS AND THE PROVISIONS MADE BY THESE SPECIFICATIONS SHALL BE REPORTED. EQUIPMENT DAMAGED AS A RESULT OF THE CONTRACTOR'S FAILURE TO OBSERVE MANUFACTURER'S REQUIREMENTS SHALL BE REPAIRED OR REBUILT BY THE CONTRACTOR. THE THERMAL PROTECTION ELEMENTS IN MANUAL STARTERS SHALL BE RECHECKED WITH NAME PLATE DATA AT THE SITE BEFORE OPERATION OF THE EQUIPMENT.

C. PANELBOARDS SHALL HAVE TRIM AND FLAT LOCKING DOORS WITH BOTH HINGES AND TRIM CLAMPS COMPLETELY CONCEALED. DOOR LOCKS SHALL BE FLUSH WITH THE COVER. ALL DOOR LOCKS SHALL BE COMMON KEYED. TWO (2) KEYS SHALL BE PROVIDED FOR EACH PANELBOARD. A CLEAR PLASTIC CARD HOLDER SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. PANELBOARDS SHALL HAVE BLACK MICA PLATES WITH 1/2-INCH HIGH WHITE CUT LETTERS STATING PANELBOARD NUMBER AND VOLTAGE, WHERE PANELBOARDS ARE IN PUBLIC AREAS. IDENTIFICATION PLATES SHALL BE INSIDE DOOR.  
D. BUSSES SHALL BE MADE FROM 98 PERCENT ELECTROLYTIC COPPER. THE USE OF BRASS, ALUMINUM, AND OTHER METALS SHALL BE PROHIBITED. BUSSES SHALL BE SUPPORTED (WITHOUT DEPENDENCE UPON THE CIRCUIT BREAKERS) BY SOLDERLESS LUGS ONLY. EACH BREAKER SHALL BE PROVIDED IN ALL MAINS UNLESS NOTED OTHERWISE IN THE PANELBOARD SCHEDULE. ALL MAIN LUGS SHALL BE CRIMP COMPRESSION TYPE, WHERE BREAKERS AND/OR SWITCHES ARE LISTED IN THE SCHEDULES AS "SPACE ONLY", THIS SHALL INCLUDE EXTENDED BUS AND MOUNTING PROVISIONS.

E. CIRCUIT BREAKERS SHALL BE BOLT-ON AND SHALL HAVE BOLTED LINE AND LOAD TERMINALS. ALL BRANCH CIRCUIT BREAKERS SHALL BE QUICK-MAKE. OVERCURRENT PROTECTION SHALL BE PROVIDED ON THE LINE SIDE OF THE BREAKERS AND HAVE A MINIMUM 10,000 SHORT CIRCUIT RATING OF 10,000 SYMMETRICAL RMS IMP. EACH BREAKER SHALL HAVE ITS CURRENT RATING ENGRAVED, IN EASY TO READ NUMBERS, ON THE TOGGLE HANDLE. ALL BREAKERS USED FOR FLUORESCENT LIGHTING SWITCHING CONTROL SHALL BE LISTED "SWD" SWITCHING DUTY.  
F. CIRCUIT NUMBERS APPEARING ON DRAWINGS SHALL BE USED FOR REFERENCE IN THE FIELD. THE CIRCUIT NUMBER SHALL BE THE CIRCUIT NUMBER, THE CABINET LOAD BALANCE, AND COMMON NEUTRAL REQUIREMENTS ROOM NUMBERS OR NAMES USED FOR CIRCUIT IDENTIFICATION SHALL CORRESPOND TO NAME PLATES INSTALLED ON ROOM DOORS BY THE GENERAL CONTRACTOR OR AS SELECTED BY THE OWNER AND SHALL BE VERIFIED AS THESE MAY NOT BE THE SAME AS ROOM TITLES ON THE DRAWINGS.

2.10 LIGHTING FIXTURES  
A. ALL LIGHTING FIXTURES AND LAMPS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO LIGHT FIXTURE SCHEDULE ON DRAWINGS FOR LIGHT FIXTURE MANUFACTURES AND FEATURES. LAMPS SHALL BE BY OSRAM-Sylvania, GENERAL ELECTRIC, OR PHILLIPS.

2.11 GROUNDING SYSTEMS  
A. CIRCUITS, METAL RACEWAY SYSTEMS, AND ALL OTHER PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT SHALL BE SOLIDLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE TO FORM A CONTINUOUS, PERMANENT AND EFFECTIVE GROUNDING SYSTEM.  
B. GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE WITH SOLDERLESS PRESSURE TYPE FITTINGS WHERE WELDED CONNECTIONS ARE PRACTICAL. CONNECTIONS MAY BE MADE BY THE USE OF A SUITABLE WELDING PROCESS. ALL CONNECTIONS SHALL BE MADE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

C. CIRCUITS, METAL RACEWAY SYSTEMS, AND ALL OTHER PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT SHALL BE SOLIDLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE TO FORM A CONTINUOUS, PERMANENT AND EFFECTIVE GROUNDING SYSTEM.  
D. PROVIDE SERVICE GROUNDING A3 INDICATED ON ONE-LINE DIAGRAM.

E. INCLUDE A SEPARATE BARE GROUND CONDUCTOR IN ALL TYPE NM CABLE OF THE SAME SIZE AS PHASE CONDUCTOR.  
F. INCLUDE A SEPARATE GROUND CONDUCTOR IN ALL PVC RACEWAY.

2.12 IDENTIFICATION AND LABELING OF ELECTRICAL EQUIPMENT  
A. ALL CONTROL DEVICES AND DEVICE ENCLOSURES SHALL BE LABELED WITH INDIVIDUAL NAME PLATES OR LEGEND PLATES.

B. INDIVIDUAL NAME OR LEGEND PLATES SHALL BE BLACK LAMINATED PLASTIC OR MICA PLATES WITH WHITE CUT LETTERS, PAPER, FOIL OR TAPE.  
C. MARKERS ATTACHED WITH ADHESIVES SHALL NOT BE USED.

2.13 SERVICE TO ELECTRICALLY-POWERED EQUIPMENT

A. THE CONTRACTOR SHALL FURNISH AND INSTALL OUTLETS FOR AND MAKE FINAL ELECTRICAL CONNECTIONS TO ALL MOTORS AND ELECTRICALLY POWERED EQUIPMENT INDICATED ON THE EQUIPMENT SCHEDULE.  
B. THE CONTRACTOR SHALL OBTAIN EXACT INFORMATION PERTAINING TO LOCATION, ELECTRICAL CHARACTERISTICS, AND WIRING FOR EQUIPMENT FURNISHED BY OTHER CONTRACTORS AND CONNECTIONS TO THE EQUIPMENT. THIS INFORMATION SHALL BE VERIFIED BY EXAMINING NAMEPLATES AND MANUFACTURER'S WIRING DIAGRAMS. ANY DISCREPANCY BETWEEN THE EQUIPMENT REQUIREMENTS AND THE PROVISIONS MADE BY THESE SPECIFICATIONS SHALL BE REPORTED. EQUIPMENT DAMAGED AS A RESULT OF THE CONTRACTOR'S FAILURE TO OBSERVE MANUFACTURER'S REQUIREMENTS SHALL BE REPAIRED OR REBUILT BY THE CONTRACTOR. THE THERMAL PROTECTION ELEMENTS IN MANUAL STARTERS SHALL BE RECHECKED WITH NAME PLATE DATA AT THE SITE BEFORE OPERATION OF THE EQUIPMENT.

E. WEATHERPROOF DUPLEX RECEPTACLES SHALL BE GFCI PROTECTED WITH "WHILE-IN-USE" WEATHERPROOF COVERPLATES.

F. GROUND FAULT CIRCUIT INTERRUPTER (GFI) DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 20-AMP DEVICES, EQUAL TO HUBBELL #GF562, WIRED SO THAT EACH UNIT IS SELF CONTAINED. GFI RECEPTACLES SHALL NOT BE CONNECTED TO FEED THROUGH UNLESS SPECIFICALLY SO NOTED ON THE DRAWINGS.

F. WEATHERPROOF DUPLEX RECEPTACLES SHALL BE GFCI PROTECTED WITH "WHILE-IN-USE" WEATHERPROOF COVERPLATES.

G. COVER PLATES FOR TELEPHONE SHALL BE AS SPECIFIED ABOVE.

H. COVER PLATES FOR TELEPHONE SHALL BE AS SPECIFIED ABOVE.

2.08 PANELBOARDS

A. PANELBOARDS SHALL BE SQUARE D #1-LINE.  
B. PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE WITH ENCLOSURES OF CODE GRADE STEEL. OVERRSIZE GUTTERS SHALL BE PROVIDED FOR FEED THROUGH WHERE INDICATED OR REQUIRED. WHERE DOUBLE LUGS ARE NOT PERMITTED BY LOCAL CODE, A SUITABLE PULL BOX OR GUTTER ADJACENT TO PANELS SHALL BE PROVIDED FOR CONNECTIONS. TOP OF PANELBOARD TUBS SHALL BE 6'-6" ABOVE FINISHED FLOOR.

THIS DRAWING	NOT FOR CONSTRUCTION	FOR RIDING	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION
		1/2/14	1/2/14	

KMA